



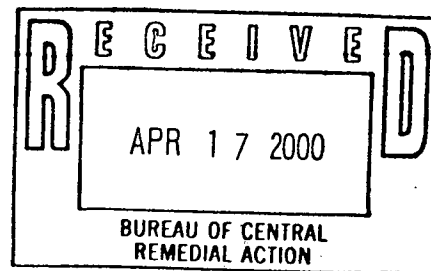
# Office of the Broome County Executive

JEFFREY P. KRAHAM  
Broome County Executive

April 13, 2000

Mr. James G. VanHoesen, P.E., Chief  
Central Field Services Section  
Bureau of Construction Services  
Division of Hazardous Waste Remediation  
NYSDEC  
50 Wolf Road  
Albany, NY 12233-7010

Mr. Brian Davidson  
Project Manager  
Bureau of Central Remedial Action  
NYSDEC  
50 Wolf Road  
Albany, NY 12233-7010



RE: COLESVILLE LANDFILL REMEDIAL PROJECT  
AMENDMENT TO CONTRACT C-093001

Dear Mr. VanHoesen and Mr. Davidson:

Broome County wishes to amend the existing NYSDEC agreement for state assistance of Stage II – Remedial Design Phase and Stage III – Remedial Action Construction and Construction Oversight as it pertains to the Colesville Landfill Groundwater Treatment Facility.

Review of the existing agreement indicates that monies have been allocated for the design, construction, and construction review of the groundwater treatment facility, however, the timelines need to be amended. It is anticipated that all work and first year of operation should be complete by December 31, 2002.

The basis for this request is that the County and GAF hired Geraghty & Miller, Inc. to perform additional study and testing for the purpose of developing a Focused Feasibility Study. The outcome of this approach has led to a modification of the ROD remedy. The design for this new action is 90% complete. Time delays associated with this work have led to this request for amending the timeline for completion.

Should you require further information or action by the County, please contact Ray L. Standish, P.E. at (607)778-2286.

Very truly yours,

Jeffrey P. Kraham  
Broome County Executive

SANDRA S. FOX  
Notary Public, State of New York  
No. 01F05036504  
Residing in Broome Co.  
My commission expires Nov. 28, 2002

JPK/yp

engineer who shall certify that the Remedial Design was prepared in accordance with this Order.

B. The Remedial Design shall include the following:

1. A detailed description of the remedial objectives and the means by which each element of the selected remedial alternative will be implemented to achieve those objectives, including, but not limited to:

- a. the construction and operation of any structures;
- b. the collection, destruction, treatment, and/or disposal of hazardous wastes and substances and their constituents and degradation products, and of any soil or other materials contaminated thereby;
- c. the collection, destruction, treatment, and/or disposal of contaminated groundwater, leachate, and air;
- d. physical security and posting of the Site;
- e. quality control and quality assurance procedures and protocols to be applied during implementation of the Remedial Design; and
- f. monitoring which integrates needs which are present on-Site and off-Site during implementation of the Department-selected remedial alternative;

2. "Biddable Quality" documents for the Remedial Design including, but not limited to, documents and specifications prepared, signed, and sealed by a professional

engineer. These plans shall satisfy all applicable local, state and federal laws, rules and regulations;

3. A time schedule to implement the Remedial Design;

4. The parameters, conditions, procedures, and protocols to determine the effectiveness of the Remedial Design, including a schedule for periodic sampling of groundwater monitoring wells on-Site and off-Site;

5. A description of operation, maintenance, and monitoring activities to be undertaken after the Department has approved construction of the Remedial Design, including the number of years during which such activities will be performed;

6. A contingency plan to be implemented if any element of the Remedial Design fails to achieve any of its objectives or otherwise fails to protect human health or the environment;

7. A health and safety plan for the protection of persons at and in the vicinity of the Site during construction and after completion of construction; (This plan shall be prepared in accordance with 29 CFR 1910 by a certified health and safety professional.) and

8. A citizen participation plan which incorporates appropriate activities outlined in the Department's publication, "New York State Inactive Hazardous Waste Citizen Participation Plan," dated August 30, 1988, and any subsequent revisions thereto, and 6 NYCRR Part 375.

**Bid Document For Drilling Services**  
**Colesville Landfill,**  
**Broome County, New York.**

## 1.0 GENERAL SPECIFICATIONS

This bid document consists of two parts, the first part provides specifications for the subject work; the second part provides a bid sheet to be utilized by firms wishing to submit a competitive bid proposal for the subject work.

All bid proposals must be submitted on the enclosed bid sheet and any additional information, which may be helpful in evaluating bids, should be attached to the bid sheet. Completed bid packages are to be received at the following address on or before [ENTER DATE]:

ARCADIS GERAGHTY & Miller, Inc.  
88 Duryea Road  
Melville, New York 11747  
Attention: David Stern

### 1.1 LOCATION AND DESCRIPTION OF SUBJECT WORK

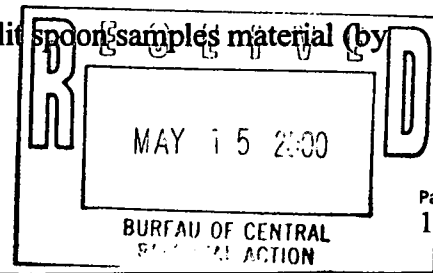
The selected bidder (hereinafter referred to as the CONTRACTOR) shall perform all operations, and provide all necessary manpower, materials, equipment, tools, and services required to drill, install, and develop 13 injection wells and 2 extraction wells at and near the Colesville Landfill located in Colesville, Broome County, New York (hereinafter referred to as the site).

The injection wells will be installed on 30-foot centers. Extraction wells will be drilled at predetermined locations. Unless field conditions warrant, work hours shall be a standard 8-hour day (8:00 a.m. to 4:00 p.m.). All work required by these specifications shall be performed under the oversight of ARCADIS Geraghty & Miller, Inc. (hereinafter referred to as the CONSULTANT). Injection wells shall be drilled, installed, and developed in the following general order, however, site-specific conditions may cause the sequence to be modified:

1. Drilling well borehole (6-inch) and collecting split-spoon core samples, as specified in section 2.1 Well Drilling, Logging and Formation Sampling).
2. Constructing well (includes setting the screen and installing the backfill materials, seals, and locking protective casing), as specified below.
3. Developing well, as specified below.

Extraction wells shall be drilled, installed, and developed in the following general order, however, site-specific conditions may cause the sequence to be modified:

1. Drilling pilot borehole (6-inch) and collecting split-spoon core samples, as specified in section 2.1 (Well Drilling, Logging and Formation Sampling).
2. Conducting sieve analysis of selected split spoon samples material (by CONTRACTOR).



3. Reaming borehole to proposed total diameter (between 12 inches and 14-inches) and total depth.
4. Selection of screen interval and slot size (by CONSULTANT) and ordering screen and casing (by CONTRACTOR).
5. Constructing well (includes setting the screen and installing the filter pack materials, seals, and locking protective casing), as specified below.
6. Developing well, as specified below.
7. Conducting one four-hour step-drawdown test of each extraction well.

Utility markouts to be coordinated by CONSULTANT through the Underground Facilities Protective Organization (UFPO) prior to drilling. As several locations will be near overhead lines, CONSULTANT will either arrange for power to be shut off while the drilling rig is in proximity (as defined in 16 NYCRR Part 753) to overhead lines or identify a suitable alternate location.

### 1.2 SITE CONDITIONS AND HYDROGEOLOGY

The Colesville Landfill is an inactive (closed) landfill. The entirety of the work will be conducted on-site (property owned by Broome County). Site topography is relatively flat at the top of the landfill (where the majority of the injection wells will be installed) to steeply sloping further from the landfill perimeter. The generalized geologic sequence at the landfill from land surface downward is as follows:

- Unconsolidated man-made fill overlying glacial till consisting of unstratified clayey silt to silt and clay, little gravel and little sand.
- glacial outwash consisting of brown sand to gravel, with varying amounts of silt.
- glaciolacustrine clay consisting of brown silt to silt and clay, trace fine sand, varved, laminated.

Depth to water across the study area varies between 12 feet below land surface (ft bls) furthest from the landfill to approximately 50 ft at the landfill perimeter.

Additional information on the site hydrogeology is available from CONSULTANT for inspection by interested bidders. It is the bidder's responsibility to be familiar with the site and conditions that shall affect his bid.

### 1.3 EXPERIENCE AND QUALIFICATIONS

All bidders must have experience in installing wells similar to those described herein and be licensed well drillers in the State of New York. Upon request, a statement of experience and qualifications shall be provided. No portion of this work may be subcontracted unless CONSULTANT grants prior approval, in writing. A statement of experience and qualifications may be requested before subcontractor approval is granted.

Bidders must have drilled a minimum of ten wells of the type and depth described herein, and upon request, must furnish a list of these wells showing the owner, location, construction, and depth of the wells.

#### **1.4 PERMITS AND REGULATIONS**

CONTRACTOR, at his expense, shall procure all necessary permits, bond applications, and/or licenses from the appropriate authorities to conduct the work described herein.

CONTRACTOR shall comply with all local, state, and federal regulations. If CONTRACTOR believes that the specifications provided herein are at variance with any law or regulation, he shall promptly notify CONSULTANT, in writing, and any necessary adjustments shall be made as provided in the Contract or Agreement under "Changes in the Work".

#### **1.5 EQUIPMENT AND MATERIAL DELIVERY, STORAGE, AND HANDLING**

All arrangements for delivery and handling of equipment and material, throughout the prosecution of the work, shall be the CONTRACTOR'S responsibility. CONTRACTOR shall store equipment and materials on-site so as to ensure the preservation of their quality and fitness for the work. When considered necessary by the CONSULTANT, they shall be placed on wooden platforms, or other hard, clean surfaces, and shall be placed under cover when directed. Materials shall be stored at the location(s) designated by CONSULTANT, and shall be arranged so as to facilitate prompt inspection by the on-site CONSULTANT representative.

#### **1.6 QUALITY ASSURANCE/QUALITY CONTROL**

Quality Assurance/Quality Control measures shall conform to the requirements of the conditions of the Contract, except as modified below.

1. Upon request, CONTRACTOR, at his expense, shall furnish copies of certificates from suppliers/manufacturers showing that all casings, screens, and backfill materials (i.e., gravel pack, bentonite pellets, bentonite slurry, etc.) conform to the requirements of these specifications.
2. Materials for well construction shall comply with the American Society for Testing and Materials (A.S.T.M.).

#### **1.7 TECHNICAL INSPECTION**

All work conducted under these specifications shall be subject to inspection by the CONSULTANT; however, such inspection shall not relieve the CONTRACTOR from any obligation to perform said work in accordance with specifications or any modification thereof, as herein provided. Work not done in strict accordance with the specifications or any modification thereof, as herein provided, shall be corrected and made good by the CONTRACTOR at his expense whenever so ordered by CONSULTANT, without reference to any previous oversight or error in inspection.

If the CONTRACTOR has made all possible efforts, used proper methods for drilling the wells/borings (including boreholes for which a specific drilling method was requested by CONSULTANT) and in the opinion of CONSULTANT has taken all the required and necessary

precautions, but nevertheless the required results cannot be obtained, the well/boring will be abandoned and the drilling rig moved to a nearby location and a replacement well/boring will be drilled. Payment, computed on the basis of unit bid price per linear foot, will be made to the CONTRACTOR for the actual length of well/boring (abandoned and replacement) drilled. However, if a well/boring has to be abandoned for fault, negligence, or incompetence of the drilling crew, faulty or improper equipment, loss of tools, or collapse of the casing or borehole, no payment shall be made to the CONTRACTOR for drilling or abandoning the well/boring and moving to another location to drill a new well/boring. The decision of CONSULTANT shall be final and binding.

All directions given to the CONTRACTOR by CONSULTANT pertaining to the scope of work during routine inspection shall be binding on the CONTRACTOR.

### **1.8 SUBMITTALS**

Upon request by CONSULTANT, the CONTRACTOR shall submit the following:

1. Well driller's logs.
2. Qualifications of drillers, mechanics, and technicians.
3. Well construction details.

## **2.0 Specifications For Drilling, Installing, And Developing Injection And Extraction Wells**

The work specified herein is required to meet methods that have been approved by the New York State Department of Environmental Conservation (NYSDEC). Well drilling, installing, and developing specifications are given below.

### **2.1 WELL DRILLING, LOGGING, AND FORMATION SAMPLING**

A total of thirteen (13) injection and two (2) extraction wells will be drilled, installed, and developed. Table 1 summarizes the anticipated borehole diameter, well total depths, and anticipated drilling methodologies; CONSULTANT shall determine final well depths. Except as described below, drilling methodologies will be dictated by site conditions and the proposed well depths. Formation samples will be collected using a two-inch diameter, two-foot long split-spoon core-sampling device. Refer to Table 1 for estimated number of split spoon samples to be collected per well. In general, formation sample will be collected as follows:

1. Injection Wells: Collect at the estimated water table interface and at the midpoint of the screened interval for an estimated total of two (2) split spoons per well. However site conditions may warrant a change in this number.
2. Extraction Wells: Collect at four-foot intervals to the water table (approximately 12 ft bls), and continuously until lacustrine deposits are encountered (approximately 30 ft bls) for an estimated total of twelve (12) split spoons per well. However, site conditions may warrant a change in this number. Up to four (4) of the split-spoon samples per well will be submitted for sieve analysis by the CONTRACTOR.

## **2.2 WELL CONSTRUCTION AND INSTALLATION**

In accordance with the specifications provided herein, the well screen and casing, and all backfill materials shall be installed within the hollow-stem augers. The augers shall be removed as well installation proceeds. CONSULTANT shall determine final screen setting.

## **2.3 WELL CASING AND SCREEN**

Only new, undamaged, and domestically manufactured well casing and screen, meeting API and ASTM water well standards, shall be used. A vented PVC well cap and threaded PVC bottom cap shall be installed on each well. The well casing and screen specifications are as follows:

1. Injection Wells shall be constructed of 2-inch inside diameter, schedule 40, NSF-grade polyvinyl chloride (PVC) well casing and screen. All well screens (slotted construction) will be 10 slot (0.010 inches). Initially, wells will be completed approximately 2 ft above grade and to permit installation of pitless adaptors (to be completed by others). Once the below grade piping is installed by others, the well will be completed by CONTRACTOR with a flush-mounted wellhead assembly in conformance with ASTM.
2. Extraction Wells shall be constructed of 6-inch inside diameter, schedule 80, NSF-grade polyvinyl chloride (PVC) well casing and screen. Well screen slot sizes will be selected by CONSULTANT based on the sieve analysis report, and screens will be ordered by CONTRACTOR. Initially, wells will be completed approximately 2 ft above grade and to permit installation of pitless adaptors (to be completed by others).

## **2.4 WELL CASING AND SCREEN JOINTS**

All casing and screen sections shall be flush-joint, internally threaded. Joints shall be made up so that when tight, all threads are buried within the casing walls. No coupling, solvents, glues, or chemical cleaners shall be used in well construction.

## **2.5 INSTALLATION OF GRAVEL AND SAND PACK**

After setting the well screen and casing, the appropriately sized gravel pack shall be emplaced within the borehole annulus, to a depth as agreed to by the CONTRACTOR, in consultation with CONSULTANT. For purposes of this bid, well gravel will be assumed to be emplaced to a minimum of 3 ft above the top of the screen.

A fine sand layer (finer than gravel pack) will be emplaced in the annulus on top of the gravel pack in the same manner as the gravel pack, at a thickness as agreed to by the CONTRACTOR, in consultation with CONSULTANT. For purposes of this bid, fine sand thickness is assumed to be emplaced to 2 ft above the top of the gravel pack.

The gravel and fine sand pack shall be carefully poured down the annulus and its depth shall be carefully checked during emplacement to be sure that it has not bridged. If, in the opinion of the CONSULTANT, bridging has occurred (based on the calculated volume of pack required versus the volume used), the CONTRACTOR shall be required to correct the situation, at his expense, either by using compressed air to remove the gravel pack, or by removing the well, cleaning the hole, and beginning well construction again.

## **2.6 WELL SEALANT**

A 100 percent polymer-free bentonite seal (ratio of bentonite (lbs) to water (gal) – 1.25:1) shall be installed by tremie pipe (slurry only) within the annular space above the fine sand layer. The bentonite seal shall be a minimum of 2-ft thick as measured immediately after placement, without allowance for swelling. The tremie pipe shall be gradually removed from the annular space as the slurry is added from the bottom up.

A polymer-free bentonite slurry (VOCLAY) shall be installed within the annular space above the bentonite seal using a tremie pipe. In all wells, the slurry shall be installed to approximately 5 ft below land surface in one continuous operation. Manufacturer's specifications for all bentonite products must be submitted and approved by CONSULTANT prior to use.

## **2.7 PROTECTIVE CASING**

At the direction of CONSULTANT, injection wells shall be completed at grade by cementing a 6-inch diameter, locking curb box in place over the wells. A fine sand shall be installed above the top of the bentonite slurry and inside the curb box to permit any water which may accumulate inside the curb box to drain.

## **2.8 ABANDONMENT OF BORINGS OR WELLS**

In the event that the CONTRACTOR should fail to drill a hole or place the well to the depth specified, or should abandon the hole or well because of loss of tools or for any other cause, he shall remove all salvageable casing and equipment and fill the abandoned hole with a bentonite and cement mixture using a tremie pipe. The CONTRACTOR shall then move the drill rig to a new location approved by CONSULTANT and begin drilling a new borehole. This work shall be done at the CONTRACTOR'S expense who may use salvaged materials, if usable, at the discretion of CONSULTANT. No payment shall be made to the CONTRACTOR for installing or abandoning unsuccessful borings or wells, except as described above in Section 1.7 (Technical Inspection).

## **2.9 WELL PLUMBNESS, ALIGNMENT, AND ACCEPTANCE**

The completed monitoring wells, including well casing and screen, shall be free from mechanical defects and sufficiently straight and plumb to permit the installation of a permanent pneumatic submersible pump. It is the responsibility of the CONTRACTOR to ensure that the well construction meets the requirements of the pump supplier and these Technical Specifications.

## **2.10 WELL DEVELOPMENT**

Following installation, all wells shall be developed by pumping (and backwashing) with a submersible pump, mechanical surging, pumping with air, air/water jet, or any combination of the above. Development will continue until the well responds to water-level changes in the formation and the well produces clear, sediment-free water, to the extent practical. CONSULTANT will determine when development is complete.

Dispersing agents, acids, disinfectants, or other additives will not be used. During development, water will be removed throughout the entire column of water standing in the well by periodically lowering and raising the pump intake.

Well development will include rinsing the interior well casing above the water table by using only water from that well. The well will be covered with a clean well cap, which will be rinsed with distilled water prior to installation. The result of this operation will be a well casing free of extraneous materials (grout, bentonite, sand, etc.).

In compliance with NYSDEC policy, every effort will be made to develop wells until turbidity (as measured in the field) is less than 50 nephelometric turbidity units (NTUs). However, CONSULTANT is aware that the 50 NTU standard may not be attainable, as the observed turbidity may be the result of the formation screened, and not inefficiencies in well design, installation, or development. Therefore, if after a "best well development effort," the 50 NTU standard cannot be attained and turbidity stabilizes (above the 50 NTU standard), the well will be acceptable, provided the integrity of the well is satisfactorily proven.

### **3.0 Decontamination of Equipment And Materials**

When drilling on-site, all downhole equipment and materials used in the drilling, installing, and developing of the wells shall be decontaminated using high pressure/temperature steam cleaning at a centrally located (on Broome County property) decontamination pad via steam cleaning prior to use, between wells, and before leaving the site at the completion of work.

### **4.0 Disposal of Waste Materials**

CONTRACTOR is responsible for proper management of all waste streams generated during well drilling, installation, and development, and will ensure that all wastes are stored in a manner acceptable to CONSULTANT. All cuttings generated from drilling shall be staged next to the drilling location and raked out after the well is complete, or at the direction of CONSULTANT. All development water shall be discharged to land surface.

### **5.0 Site Maintenance and Restoration**

The CONTRACTOR shall, at all times, maintain the work site in a clean, workable condition. Prior to well acceptance, the CONTRACTOR shall be required to level off any trenches and/or pits, dispose of all material as directed by CONSULTANT, and restore the site to its original condition, to the extent possible.

### **6.0 Health And Safety**

Based on a site hazard evaluation, it is anticipated that all operations described herein shall be conducted using Level D or modified Level D protection, unless on-site monitoring (by CONSULTANT) indicates a necessity for upgrading. Level D protection consists of a hard hat, safety glasses, rubber boots, and gloves (i.e., latex, nylon, or PVC). Modified Level D protection consists of Level D equipment plus Tyvek coveralls (blue or green) or rain gear and an inner glove, as well as taping coveralls to the boots and gloves. Level C upgrade is not anticipated; costs for this contingency should be developed, but not included in the total bid price. A copy of the Health and

Table 1. Injection and Extraction Well Drilling and Installation Specifications, Colesville Landfill, Broome County, New York.

Well Identification	Borehole Depth (ft bls)	Pilot Borehole Diameter (inches)	Well Borehole Diameter (inches)	Nominal Tool Inner Diameter and Well Drilling Method	Well Casing/ Screen Diameter (inches)	Well Casing/ Screen Composition	Well Total Depth (ft bls)	Screened Interval (ft bls)	Number of Split-Spoons	Top Gravel Pack (ft bls)	Top Fine Sand (ft bls)	Top Bentonite Seal (ft bls)	Total Development Time (hours)
<b>Extraction Wells</b>													
GMPW-4	35	6	13½	10-inch ID HSA	6/6	Sch. 80 PVC/0.010 slot	35	15 - 30	12	12	10	8	16
GMPW-5	35	6	13½	10-inch ID HSA	6/6	Sch. 80 PVC/0.010 slot	35	15 - 30	12	12	10	8	16
<b>Injection Wells</b>													
IW-3	70	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	70	50 - 70	2	47	45	43	8
IW-4	70	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	70	50 - 70	2	47	45	43	8
IW-5	75	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	75	55 - 75	2	52	50	48	8
IW-6	75	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	75	55 - 75	2	52	50	48	8
IW-7	75	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	75	55 - 75	2	52	50	48	8
IW-8	75	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	75	55 - 75	2	52	50	48	8
IW-9	80	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	80	60 - 80	2	57	55	53	8
IW-10	80	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	80	60 - 80	2	57	55	53	8
IW-11	80	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	80	60 - 80	2	57	55	53	8
IW-12	80	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	80	60 - 80	2	57	55	53	8
IW-13	80	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	80	60 - 80	2	57	55	53	8
IW-14	80	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	80	60 - 80	2	57	55	53	8
IW-15	80	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	80	60 - 80	2	57	55	53	8

Ft bls      feet below land surface



Broome County

## Department of Public Works

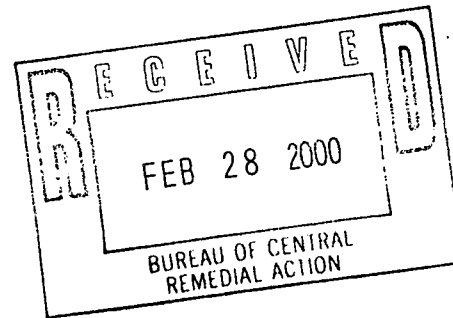
Edwin L. Crawford County Office Building / P.O. Box 1766 / Binghamton, New York 13902 / (607) 778-2909 / Fax (607) 778-6051

JEFFREY P. KRAHAM  
Broome County Executive

WILLIAM A. SCZESNY  
Commissioner

February 25, 2000

Mr. Brian Davidson  
Special Projects Section  
Bureau of Central Remedial Action  
Division of Hazardous Waste Remediation  
NYS Dept of Environmental Conservation  
50 Wolf Road  
Albany, NY 12233-7010



Re: Reimbursement Justification for Arcadis Geraghty & Miller, Inc.

Dear Brian:

This letter is a follow-up to our recent phone conversation regarding the EQBA funding reimbursement the County receives for design and construction work associated with the Colesville Landfill Remediation Project.

As you are aware, once the landfill cap was designed and constructed GAF and the County decided to hire a firm for a focused feasibility study due to the increase in scope for the ROD remedy regarding groundwater treatment. EMCON (Wehran) had been performing the study/design work, however the County and GAF felt a need for a new firm to handle the groundwater treatment issue.

Enclosed is a copy of the DEC list used to select firms for the RFQ/RFP package. Also enclosed is a copy of the request and a list of the firms selected to receive it.

Once all the submittals were received the County and GAF interviewed a short list and jointly selected Geraghty & Miller, Inc. Once selected Geraghty & Miller reviewed the work performed by EMCON, accomplished additional studies, developed a focused feasibility study and developed a pilot ERD zone project. All the study and pilot project work has indicated that a reduced groundwater extraction system in combination with a large scale ERD zone system would enhance the aquifer cleanup in close proximity to the landfill where VOC levels are the highest. The outer reaches of the plume will be allowed to naturally attenuate.

The ERD zone technology is a specialized groundwater treatment system developed by Geraghty & Miller. The system has been used in sites with similar hydrogeophysical attributes as Colesville with a high success rate. Because of the specialized nature of

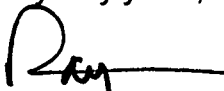
the ERD system and the fact that Geraghty & Miller are pioneers in the field, GAF and Broome County wish to have Geraghty & Miller design build the groundwater treatment facilities at the Colesville Landfill. It is the County's understanding that Geraghty & Miller will bid portions of the work to subcontractors (i.e. well installation, excavation, building construction, etc.). The County will require Geraghty & Miller to maintain exacting records management to allow the County to apply for and receive proper reimbursement funding from the DEC.

The County has reviewed the preliminary cost estimate for the anticipated work and is satisfied that the costs are reasonable. Considering Geraghty & Miller's experience in groundwater remediation work and their development of this specific technology, their cost estimates should be relatively accurate.

Should this letter not adequately address the DEC's concerns regarding the selection of Geraghty & Miller and the anticipated groundwater treatment facilities construction/installation methodology, please notify me of the same and the County will respond to any concerns.

Should you have any questions or require further information regarding the above please contact me at 607-778-2286.

Very truly yours,



Ray L. Standish, P.E.  
Deputy Commissioner of Engineering

cc: W. Barber-Deputy County Executive  
W. Sczesny-Commissioner of Public Works  
H. Clifford-Director of Administration, Solid Waste Management  
R. Behnke-Sr. County Attorney  
S. Feldman-Geraghty & Miller  
C. Wells-GAF

**DIVISION OF HAZARDOUS WASTE REMEDIATION  
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
50 WOLF ROAD  
ALBANY, NEW YORK 12233-7010**

Post-It™ brand fax transmittal memo 7671		# of pages
To: Mike McElhara	From: D. J. Miller	
Co.	Co.	
Dept.	Phone #	518 457 9279
Fax #	Fax #	607 778 2395

**"QUALIFIED REMEDIATION CONSULTANTS LIST"**

This "Qualified Remediation Consultants List" ("QRC List") is for use by municipalities on Title 3 work funded from the 1986 New York State Environmental Quality Bond Act for remediation of their hazardous waste landfills. It is effective immediately and has no expiration date. It is compiled in alphabetical order. This does not represent an endorsement by NYSDEC of any of these firms.

<u>PRIME FIRM AND ADDRESS</u>	<u>CONTACT PERSON/PHONE #</u>	<u>TEAM MEMBER</u>	<u>AUTHORIZED TO PRACTICE ENGINEERING IN NEW YORK STATE (Yes or No)</u>
ABB Environmental Services, Inc. P.O. Box 7050 110 Free Street Portland, ME 04112	William J. Weber, P.E. (207) 775-5401	NONE	YES (Contract to be with William R. Fisher Engineering, P.C.)
Acres International Corp. 140 John James Audubon Parkway Amherst, NY 14228-1180	William Lamb Principal in Charge (716) 689-3737	Env. Serv. of America	YES
Atec Associates, Inc. 62 Accord Park Drive Norwell, MA 02061	Joseph Dorsett, Sr. Construction Manager (617) 878-6200	NONE	YES
B & V Waste Sci. & Tech., Corp. The Curtis Center, Suite 705 601 Walnut Street Philadelphia, PA 19106	John R. Ponton Office Manager (215) 928-2238	The Earth Technology Corp. OR GZA Geo Environmental of New York	NO
Michael Baker, Jr. of NY, Inc. 400 Executive Boulevard Elmsford, NY 10523	George Brosius Manager (914) 333-5300	Baker/TSA, Inc.	NO
Barton & Loguidice, P.C. Box 3107 290 Elwood Davis Road Syracuse, NY 13220	Frank A. Loguidice, P.E. President (315) 457-5200	Wehran Engineering, P.C.	YES

Blasland & Bouck Engineers, P.C. 6723 Towpath Road, Box 66 Syracuse, NY 13214	Edward R. Dwyer, P.E. Vice President (315) 446-9120	NONE	YES
Burns & Roe Ind. Services Co. 700 Kinder Kamaack Road Oradell, NJ 07649	Armand J. Lucania Director of Proposals (201) 265-2000	S&D Eng. Services, Inc. Moretrench Environ.	YES
C & S Engineers, Inc. 1020 Seventh North Street Liverpool, NY 13088	Scott McClintock, P.E., CVS Environmental Div. Manager (315) 457-6711	NONE	YES
Camp, Dresser & McKee, Inc. One Wall Street Court, 15th Fl. New York, NY 10005	Robert F. Schwartz, P.E. Associate (212) 943-1000 Ext. 100	NONE	YES
Clough, Harbour & Associates P.O. Box 5269 3 Winners Circle Albany, NY 12205	William A. Harbour, P.E. Partner (518) 453-4500	The Earth Technology Corp. OR Lorier/Groundwater Assoc. (J-V) H2M Group	YES
Consulting Environmental Engrs., Inc. 80 Shield Street West Hartford, CT 06110	James Owens Manager of Geological Services (203) 728-0023	Recon Systems, Inc. Gradient Corporation	NO
Dames & Moore One Blue Hill Plaza, Suite 530 Pearl River, NY 10965	James G. Cline Partner (914) 735-1200	NONE	YES
Donohue & Assoc. Eng. & Arch., P.C. 1200 MacArthur Boulevard Mahwah, NJ 07430	James J. Kennedy, P.E. President (201) 512-0070	NONE	YES
Dunn Corp. 12 Metro Park Road Albany, NY 12205	James Behan (518) 458-1913	NONE	YES (Contract to be with Dunn Geoscience Engineering, Co., P.C.)

Dvirka & Bartilucci 6800 Jericho Turnpike Syosset, NY 11791	Thomas F. Mahar  (516) 364-9892	C.C. Johnson & Malhorta, P.C.	YES
E.A. Engineering, P.C. The Maple Building 3 Washington Center Newburgh, NY 12550	David S. Santoro, P.E. President (914) 565-8100	NONE	YES
EBASCO Services, Inc. 160 Chubb Avenue Lyndhurst, NJ 07071	William D. Kitto  (201) 460-1900	NONE	YES
Ecology & Environment, Inc. Buffalo Corporate Center 368 Pleasantview Drive Lancaster, NY 14086	Gerald A. Strobel, P.E. Executive Vice President (716) 684-8060	NONE	YES (Contract to be with Ecology & Environment Engineering, P.C.)
Eder Assoc., Cons. Eng., P.C. 480 Forest Avenue Locust Valley, NY 11560	Gary Rozmus, P.E. Vice President (516) 671-8440	NONE	YES
Elson T. Killam Assoc., Inc. P.O. Box 1008 27 Bleeker Street Millburn, NY 07041	Eugene J. DeStefano  (201) 379-3400	Geomet Technologies, Inc.	NO
Empire Soils Investigation, Inc. P.O. Box 297 140 Telegraph Road Middleport, NY 14105	Stanley J. Blas, Jr.  (716) 735-3502	Twin City Testing Corp.	NO
Engineering Enterprises, Inc. Suite 5 1215 West Baltimore Pike Media, PA 19063	David Side Geologist (215) 566-3660	NONE	NO
Engineering-Science, Inc. Suite 312 290 Elwood Davis Road Liverpool, NY 13088	W. Gary Christopher, P.E. Vice President (315) 451-9560	NONE	YES

Envirodyne Engineers, Inc. of NY 144 East 44th Street New York, NY 10017	Neal J. Forshner, P.E. President (212) 682-6340	NONE	YES
Environmental Science & Eng., Inc. P.O. Box ESE Gainesville, FL 33602	D. Mason Wells  (904) 332-3318	NONE	NO
Erdman, Anthony & Assoc., Inc. <del>P.O. Box 99589</del> 259 Monroe Avenue Rochester, NY 14604	Michael S. Lemesh, P.E. Senior Vice President (716) 325-1866	GZA Geo Environmental of New York Diversified Technologies Corp.	YES
ERM-Northeast Engineers, P.C. 175 Froelich Farm Boulevard Woodbury, NY 11797	John A. DeFilippi, P.E.  (516) 349-0050	NONE	YES (Contract to be with ERM-Northeast Engineers, P.C.)
Pannings, Phillips & Molnar 909 Marconi Avenue Ronkonoma, NY 11779	Gary A. Molnar  (516) 737-6200	GAI Consultants, Inc.	NO
GAI Consultants, Inc. 570 Beatty Road Monroeville, PA 15146	James E. Niece Vice President (412) 856-6400	Duncan, Lagnese & Assoc., Inc.	NO
Gibbs & Hill, Inc. 11 Penn Plaza New York, NY 10001-2059	Robert Woods Vice President Power & Environmental Groups (212) 216-6703	NONE	YES
GMCE of New York, P.C. 125 East Bethpage Road Plainview, NY 11803	Ellis Koch Vice President (516) 249-7600	Geraghty & Miller, Inc. Geraghty & Miller Cons. Eng., Inc. (J-V)	YES
Groundwater Technology, Inc. 1245 Kings Road Schenectady, NY 12303	Todd G. Schwenedeman District Manager (518) 456-2444	NONE	NO
GZA Geo Environmental, Inc. 320 Needham Street Newton Upper Falls, MA 02164	Irvine G. Reinig, II, P.E. Associate & District Mgr. (617) 969-0050	NONE	YES (Contract to be with GZA GeoEnvironmental of NY)

H&A of New York 189 North Water Street Rochester, NY 14604	Joseph J. Rixner Partner (716) 232-7386	NONE	YES
Halliburton NUS Env. Corporation P.O. Box 6032 910 Clopper Road Gaithersburg, MD 20877	Peter D. Arrowsmith  (301) 258-5859	NONE	YES (Contract to be with NUS of New York, P.C.)
Harza Engineering Company Sears Towers 233 South Wacker Drive Chicago, IL 60606-6392	John Scoville Chairman of the Board (312) 831-3000	Tetra Tech, Inc.	NO
Henningson, Durham & Richardson Suite 212E 701 Westchester Avenue White Plains, NY 10604-3087	M. Ramanathan  (914) 328-8505	S & ME, Inc.	NO
HRP Associates, Inc. 125 Wolf Road Albany, NY 12205	Dudley W. Alleman Senior Project Manager (518) 438-8091	NONE	YES
H2M Group (Holzmacher, McLendon & Murrell, P.C.) 575 Broad Hollow Road Melville, NY 11747-5076	John J. Molloy, P.E. Vice President (516) 756-8000 Ext. 400	NONE	YES
HMM Associates, Inc. 196 Baker Avenue Concord, MA 01742	Peter J. Frascino, P.E. Vice President (508) 371-1692	NONE	NO
HydroQual, Inc. 1 Lethbridge Plaza Mahway, NJ 07430	Thomas J. Mulligan President (201) 529-5151	PRC Environmental Management, Inc. R.E. Wright Assoc., Inc.	YES (Contract to be with HydroQual Engrg., Inc.)
ICF Technology, Inc. 399 Thornall Street, 6th Floor Edison, NJ 08837-0001	Bruce H. Laswell Executive Vice President (201) 906-2400	URS Corporation OR H2M Group	YES (Contract to be with ICF Technology Engineers Group, P.C.)

IMS Engineers-Architects, P.C. 115 Metro Park Rochester, NY 14623	Iqbal Singh, P.E. President (716) 427-0690	Environmental Sci. & Engineering, Inc. OR C.T. Main	YES
IT Corporation P.O. Box 7809 165 Fieldcrest Avenue Edison, NJ 08818-7809	Dana Boyadjian Program Coordinator (201) 225-2000	NONE	YES (Contract to be with IT Engineering of NY, P.C.)
C.C. Johnson & Malhorta, P.C. 601 Wheaton Plaza South Silver Spring, MD 20902	Charles C. Johnson President (301) 942-5600	Dvirka & Bartilucci	YES
Lawler, Matusky & Skelly Eng. P.O. Box 1509 One Blue Hill Plaza Pearl River, NY 10965	Michael J. Skelly, Ph.D., P.E. Partner (914) 735-8300	NONE	YES
Lockwood, Kessler & Bartlett, Inc. One Aerial Way Syosset, NY 11791	Paul Lappano, P.E. Project Manager (516) 938-0600	C.A. Rich Consultants, Inc. OR Converse Consultants Recra Research	YES
Lozier-Groundwater Associates 1050 Pittsford-Victor Road Pittsford, NY 14534	Wayne P. Ackart, P.E. Chairman (716) 223-7610	NONE	YES
MacLarentech Engineering, Inc., P.C. 2235 Sheppard Avenue East Willowdale, Ontario CANADA M2J5A6	Art Seanor President (416) 756-9453	MacLaren Eng., Inc. (J-V) MacLaren Plan Search, Inc. Geocon, Inc., Lavalin Env., Inc.	YES
Malcolm Pirnie, Inc. P.O. Box 1938 S. 3515 Abbott Road Buffalo, NY 14219	Robert R. Martens Vice President (716) 828-1300	NONE	YES

<b>Metcalf &amp; Eddy of NY, Inc.</b> 60 East 42nd Street New York, NY 10165	<b>James Anderson</b> President (212) 867-3076	NONE	YES
<b>Mittelhauser Corporation</b> 23272 Mill Creek Road, Suite 300 Laguna Hills, CA 92653	<b>Daniel E. Erdman, P.G.</b> CPGS, Manager of Geotech. Serv. (215) 545-5380	NONE	NO
<b>MK - Ferguson Company</b> One Erieview Plaza Cleveland, OH 44114	<b>John P. Johnson</b> Dir. of Business Development (216) 523-5286	NONE	YES
<b>Moretrench Environmental Services</b> P.O. Box 316 100 Stickle Avenue Rockaway, NJ 07886	<b>B. Tod Delany</b>  (201) 627-2100	NONE	NO
<b>O'Brien &amp; Gere Engineers, Inc.</b> Box 4873 5000 Brittonfield Parkway Syracuse, NY 13221	<b>Cornelius B. Murphy, Jr., Ph.D</b> Sr. Vice President (315) 437-6100	NONE	YES
<b>Proctor &amp; Redfern Group</b> 45 Green Belt Drive Don Mills, Ontario CANADA M3C3K3	<b>W.D. Goodings</b>  (416) 688-4272	NONE	NO
<b>Radian Corporation</b> 13595 Dulles Technology Drive Herndon, VA 22071	<b>Kathryn S. Makeig</b> Program Manager (703) 713-1500	NONE	YES (Contract to be with Radian Engineering of New York, Inc.)
<b>Rizzo Associates, Inc.</b> 235 West Central Street Natick, MA 01760	<b>Richard J. Hughto, Ph.D., P.E.</b> Vice President (508) 651-3401	SAIC, Inc. OR Gradient Corporation Weston Geophysical Corp.	YES (Contract to be with Rizzo Assoc. Engr., P.C.)
<b>RMT, Inc.</b> Suite 124 1406 East Washington Avenue Madison, WI 53703	<b>Thomas P. Kunes</b>  (605) 255-2134	NONE	NO

D.W. Ryckman Associates, Inc. P.O. Box 27310 2208 Welsch Industrial Court St. Louis, MO 63141	Stewart Ryckman (314) 569-0991	NONE	NO
SAIC Engineering, Inc. 109 Rhode Island Road Lakeville, MA 02347	Richard J. Rheauie President (508) 946-0700	SAIC Corporation	YES (Contract to be with SAIC Engineering of NY, Inc.)
S&D Environmental Services, Inc. 2 Gourmet Lane Edison, NJ 08837	William E. McCracken (201) 549-8778	NONE	NO
SMC Martin, Inc. P.O. Box 859 900 West Valley Forge Road Valley Forge, PA 19482	Grover H. Emrich (215) 265-2700	NONE	NO
Stearns & Wheeler 1 Remington Park Drive Cazenovia, NY 13035	David W. Stoner Principal (315) 655-8161	NONE	YES
Stetson-Harza 181 Genesee Street Utica, NY 13501	John S. Brady (315) 797-5800	Tetra Tech, Inc.	YES
Storch Engineers Jericho Executive Plaza 30 Jericho Turnpike Jericho, NY 11753	William L. Dean, P.E. Partner (516) 338-4500	NONE	YES
Sverdrup & Parcel Consultants, Inc. 261 Madison Avenue New York, NY 10016	Salvatore Vitale, Jr., P.E. Vice President (212) 983-1111	NONE	YES
TAMS Consultants, Inc. The TAMS Building 655 Third Avenue New York, NY 10017	E. Patrick Sorensen Vice President (212) 867-1777	NONE	YES

Tighe & Bond, Inc. 53 Southampton Road Westfield, MA 01085-1371	Michael R. Parsons, P.E. Assistant Chief Engineer (413) 527-5600	Leggette, Brashears & Graham, Inc.	NO
TRC Environmental Consultants, Inc. 800 Connecticut Boulevard East Hartford, CT 06108	H. Kawaters Vice President (203) 289-8631	MK-Ferguson Co. Alliance Technologies Corp.	NO
United Engineers & Const., Inc. P.O. Box 8223 30 South 17th Street Philadelphia, PA 19101	H.J. Bove Vice President (215) 422-3484	Radian Corp.	YES
URS Company, Inc. 282 Delaware Avenue Buffalo, NY 14202	John C. Gorton, Jr. Vice President (716) 856-5636	NONE	YES
Velzy/Weston Sutton Park, Suite 180 465 Columbus Avenue Valhalla, NY 10594	Edward K. Davis  (914) 749-5400	NONE	YES (Contract to be with Charles R. Velzy Assoc., Inc.)
Wehran - New York, Inc. P.O. Box 2006 666 East Main Street Middletown, NY 10940	Anthony Savino <i>BARRY CWANEY</i> (914) 343-0660	NONE	YES
Woodward-Clyde Consultants, Inc. 363 7th Avenue, 11th Floor New York, NY 10001	Michael Akerbergs Project Manager (212) 926-2878 Ext. 282	NONE	YES
YWC Engineering, P.C. 200 Monroe Turnpike Monroe, CT 06468	Keith Warner Manager of Engineering (203) 452-8279	Loureiro Engineering Assoc.	YES

No. of Consultants on List = 77

TOTAL P.09

C & S Engineers, Inc.

Attn: Scot McClintock, P.E., CVS

1099 Airport Blvd.

North Syracuse, NY 13212

Camp, Dresser & McKee, Inc.

Attn: Robert Schwartz

One Wall Street Court, 15<sup>th</sup> Floor

New York, NY

Clough Harbour & Assoc.

Attn: William Harbour, P.E.

PO Box 5269

3 Winners Circle

Albany, NY 12205

Dames & Moore

Attn: James Cline

One Blue Hill Plaza, Suite 530

Pearl River, NY 10965

GMCE of New York, P.C.

Attn: Ellis Koch

125 East Bethpage Road

Plainview, NY 11803

Stearns & Wheeler

Attn: Howard LaFever

1 Remington, Park Drive

Cazenovia, NY 13035

Emcon

Attn: Michael O'Hara

666 E. Main Street



Broome County

**DIVISION OF SOLID WASTE MANAGEMENT**

Broome County Office Building / Government Plaza / Box 1766 / Binghamton, New York 13902 / Fax (607) 778-2395 / (607) 778-2250

John P. Kowalchuk, Director

Timothy M. Grippen, County Executive

**COLESVILLE LANDFILL  
BROOME COUNTY, NEW YORK**

**REQUEST FOR PROPOSALS**

Broome County (the "County") and GAF Corporation ("GAF") are interested in receiving a proposal from your firm for a Focused Feasibility Study and Related Groundwater Monitoring/Sampling regarding the Colesville Landfill Remediation Project.

**GENERAL**

A Record of Decision ("ROD") has been issued regarding the remediation of the Colesville Landfill. The ROD requires closure of the landfill with a Part 360 cap on approximately 35 acres and installation of a seep collection system, a groundwater pump and treat system, and a new water system for four (4) residences.

USEPA and NYSDEC have indicated a willingness to consider a proposal to make implementation of groundwater collection and treatment at the Colesville Landfill (the remedy approved in the ROD) a "contingent remedy." For such a remedy to be acceptable a practical groundwater monitoring system capable of providing early warning of impact to surface water is necessary. The landfill is in close proximity to two (2) bodies of water: the Susquehanna River and the North Stream. A monitoring system defining trigger concentrations in existing groundwater monitoring wells that, if reached, are predicted to result in exceedances of applicable limitations some time after six (6) months has been developed. Based on the analysis, should the trigger concentrations be reached, six (6) months provides ample time to establish whether such concentrations are real, and, if necessary, to have the remedial pump and treat system operational. An interim remedy involving carbon treatment is also part of the proposed contingent remedy.

**SUBMITTAL REQUIREMENTS**

Interested firms will be required to submit a two (2) part package, a qualifications section and a project proposal section. The package must include the following:

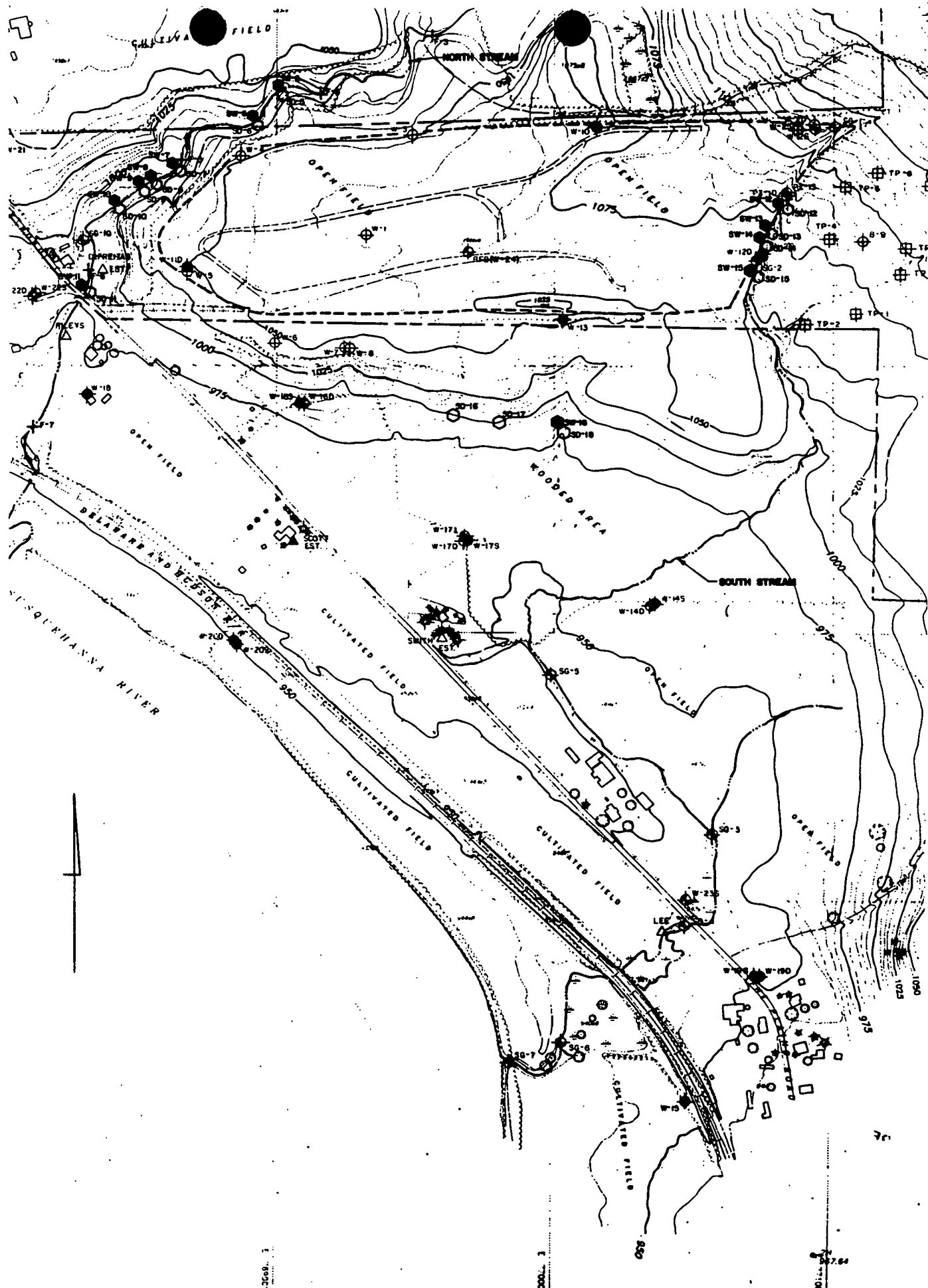
**TASK 2C**      **Groundwater Sampling:** Concurrent with the flow measurements and surface water sampling, groundwater samples would be obtained from seventeen (17) wells for VOC analysis by USEPA Method 8010/8020. The wells would be: W-1, 3, 4, 5, 6, 7, 8, 10, 13, 16S, 17S, 17I, 18, 20S, 22S, 24 and the Riley well (see Figure 1).

**TASK 2D**      **Interim Report:** The flow and analytical results will be summarized in a letter report to the County and GAF explaining relevant observations. A conference call with the County and GAF regarding the results would be scheduled.

**TASK 2E**      **Additional Modeling:** If the data collected show that ambient surface water quality standards are not being exceeded, the additional data, especially the stream flow data, will be used to calibrate the model and predict future groundwater and surface water quality in the North Stream in the local area of concern. In addition to the actual field data, this modeling would provide predictions of future conditions that would help assure NYSDEC and USEPA that future exceedances will not occur. This modeling effort would be included in the Focused Feasibility Study ("FFS").

**TASK 3**      **Focused Feasibility Study:** If the data collected are favorable, a FFS would be prepared. The remedy approved in the ROD for the site and the proposed contingent remedy would be subject to the nine (9) criteria FS detailed evaluation. The information generated in the field and modeling efforts, described under Task 2, would be incorporated into the FFS. Other topics to be included would be an Introduction, the ARAR analysis, an explanation of the contingency remedy (groundwater trigger levels and interim treatment), long term cost analyses and long term monitoring provisions. The FFS would include a proposal to continue the flow monitoring and surface water and groundwater sampling for three more quarters. During the low flow period, intermediate locations would also be sampled to provide additional information. The additional monitoring and sampling is necessary to confirm any conclusions reached in the FFS and to refine the model and trigger concentrations. Two (2) review meetings -- one with the County and GAF and one with NYSDEC and USEPA would be scheduled. Draft and final FFS reports would be generated.

**TASK 4**      **Activities Following Submission of the FFS**



SERVICES AGREEMENT

CA 1732-377

THIS AGREEMENT, made this                      day of                      , 2000, by and between the COUNTY OF BROOME, a municipal corporation duly organized and existing under the laws of the State of New York and having offices at the Edwin L. Crawford County Office Building, Government Plaza, PO Box 1766, Binghamton, New York 13902, ATTN: Ray Standish, Broome County Division of Solid Waste Management, (hereinafter "County"), and GAF CORPORATION, a Delaware Corporation authorized to do business in the State of New York and having its principal place of business at 1361 Alps Road, Wayne, New Jersey 07470, ATTN: Celeste Willis, (hereinafter "GAF"); and ARCADIS, GERAGHTY AND MILLER, P.C., a corporation having its principal place of business at 88 Duryea Road, Melville, NY 11747, (hereinafter "G&M").

WITNESSETH:

WHEREAS, the County and GAF has heretofore executed an order on consent with the New York State Department of Environmental Conservation (hereinafter "DEC"), dated April 14, 1987, effective May 20, 1987 and bearing Index No. T010687 (hereinafter "Consent Order"), and

WHEREAS, the pursuant to the terms of such Consent Order, the County and GAF has agreed to undertake certain response activities (the "Remedial Program") at a site commonly known as the Colesville Landfill located in the Town of Colesville, County of Broome and State of New York, and

WHEREAS, in order to implement such remedial program, the County and GAF have executed two companion agreements, the "Colesville Landfill Remedial Agreement" and the "Colesville Landfill Remedial Fund Agreement", and

WHEREAS, pursuant to the terms of the aforesaid Colesville Landfill Remedial Fund Agreement, the County and GAF have appointed Robert J. Smith, Esq., to serve as their Escrow Agent (hereinafter "Escrow Agency") on the terms and conditions therein set forth, and

WHEREAS, in order to continue the Remedial Program at the Colesville Landfill, the County and GAF have authorized the

execution of this Agreement on the terms and conditions hereinafter set forth,

NOW, THEREFORE, in consideration of the mutual promises contained herein, the County, GAF and G&M hereby agree as follows:

1. GENERAL

A. Captions

The titles or captions of articles and paragraphs of this Agreement are intended for convenience and reference purposes only and in no way define, limit or describe the scope or intent thereof or of the agreement or in any way affect the agreement.

B. Nomenclature

Materials, equipment, methodologies, or other work described in words which have a well-known, technical, or trade meaning shall be interpreted as having such meaning in connection with this Agreement.

C. Entire Agreement

This Agreement constitutes the entire agreement between the parties hereto and no statement, promise, condition, understanding, inducement or representation, oral or written, expressed or implied, which is not contained herein shall be binding or valid, and this Agreement shall not be changed, modified or altered in any manner except by an instrument in writing executed by the parties hereto.

D. Successors and Assigns

This Agreement shall bind the successors, assigns, and representatives of the parties hereto. G&M shall not assign any right or interest in this Agreement or delegate, sublet or transfer any obligation hereunder without the written permission of the County and GAF, and any attempted assignment or deletion without written permission shall be wholly void and totally ineffective for all purposes.

E. Invalid Provisions

If any term or provision of this Agreement or the application thereof to any agency, person, firm or corporation or circumstance shall, to any extent, be invalid or unenforceable, the remainder of

the Agreement, or the application of such terms or provisions to agencies, persons, firms or corporations or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby and each term or provision of this Agreement shall be valid and be enforced to the fullest extent permitted by law.

F. Notices

Any written notice required hereunder shall be deemed properly given, delivered and service thereof completed when said notice is delivered to the party to whom it is addressed or their authorized representatives. The addresses and individuals of the County, GAF and G&M set forth in the beginning of this Agreement shall be deemed the place to which written notice to them shall be directed; provided, however, that any such party or parties may by written notice to the others given pursuant to this paragraph designate a different address to which notices to it shall be directed or designate the name and address of another person, firm or corporation to whom notices to it may be directed.

II. RESPONSIBILITIES OF G & M

A. G&M acknowledges that the County and GAF are relying upon the experience and expertise of G&M. G&M shall furnish its best professional skill and judgment and shall exercise maximum cooperation in furthering the best interests of the County and GAF.

The services to be rendered by G&M pursuant to this Agreement shall be performed in a professional manner and executed with due care and in accordance with sound consulting practices and procedures.

B. G&M shall be responsible for the quality, technical accuracy, timely completion, and the coordination of all plans, studies, designs, drawings, specifications, reports and other services necessary for the design, construction, operation and maintenance of the groundwater remediation system furnished by G&M under this Agreement. G&M shall, without additional compensation, correct or revise any errors, omissions or other deficiencies in

its plans, studies, designs, drawings, specifications, reports and other services.

The plans, drawings, specifications, reports, renderings, models and other documents prepared and furnished by G&M shall become the property of the County and GAF. All documents prepared by G&M pursuant to this Agreement are instruments of service in respect of the project.

C. G&M shall perform such services as may be necessary to accomplish the work required to be performed under this Agreement, under the Consent Order, in accordance with this Agreement, and applicable requirements of the County and GAF in effect on the date of execution of this Agreement.

D. Approval by the County and GAF of plans, studies, designs, specifications, reports, and all work furnished hereunder shall not in any way relieve G&M of responsibility for the technical adequacy of its work. The approval or acceptance of, or payment for, any of the services shall not be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement.

E. G&M shall be and remain liable in accordance with applicable law for all damages to the County and GAF caused by the negligent performance by G&M, its agents, employees or subcontractors of any of the services furnished under this Agreement.

F. In performing the services hereunder, G&M shall observe, comply with, and take into account all applicable laws, ordinances, codes rules, orders and regulations of any governmental authority or governmental agencies, including federal, state, municipal, and local governing bodies having jurisdiction of the same (collectively the "Law and/or Regulations"). All of G&M's services must be performed in accordance with said Laws and Regulations. G&M shall defend, indemnify and hold the County and GAF, their affiliates and their respective officers, directors, employees, and agents harmless from and against any and all claims, damages, losses, demands, causes of action, liabilities, fines, penalties,

and consequences and any and all related costs and expenses (including without limitations, reasonable attorneys' fees) occurring, arising out of, incidental to, or resulting directly or indirectly from any non-compliance with or violations of said Laws and/or Regulations.

G. Without limiting the generality of the foregoing, G&M shall comply with all Laws and/or Regulations with respect to labor employed during the performance of G&M's services, including but not limited to Equal Opportunity statutes and shall defend, indemnify and hold the County and GAF, their affiliates, and their respective officers, directors, employees, and agents harmless from and against any and all claims for payroll taxes or contributions imposed with respect to any employees of G&M or any of G&M's subcontractors by any Laws and/or Regulations dealing with old age or other benefits, unemployment compensation, accident compensation, health insurance, and related subjects.

### III. RESPONSIBILITIES OF THE COUNTY AND GAF

A. The County and GAF shall provide information as to their requirements for this project. The County and GAF shall assist G&M by placing at its disposal all available information pertaining to the project, including previous reports and any other data relevant to the completion of the project.

B. The County shall furnish G&M, as appropriate, with any property boundary, right of way, topographic and utility surveys and any other similar reports or documents which it may have in its possession.

C. The County hereby designates Ray Standish of the Broome County Division of Solid Waste to act as its representative with respect to work to be performed under this Agreement. GAF hereby designates Neal Johnson as its representative with respect to the work to be performed under this Agreement.

D. The County and GAF shall give prompt written notice to G&M when they observe or otherwise become aware of any defect in the project.

E. Nothing in Article III shall relieve G&M of its obligations to request information which it believes is necessary to perform the services furnished by G&M under this Agreement.

#### IV. ADMINISTRATION

##### A. Revision of Scope of Work

(1) The County and GAF may, at any time, by written order, make changes within the general scope of this Agreement and the services for work to be performed. If such changes cause an increase or decrease in G&M's cost of, or time required for, performance of any services under this Agreement, whether or not changed by any order, an equitable adjustment shall be made and this Agreement shall be modified in writing accordingly. Any claim of G&M for adjustment under this clause must be asserted in writing prior to exceeding any of the assumptions set forth in the cost estimate annexed hereto as Exhibit "C".

(2) No services for which any additional compensation is sought by G&M shall be paid without the written authorization of the County and GAF.

##### B. Acceptability of Work

The County and GAF shall, in all cases, determine the amount, quality, acceptability, and fitness of the work being performed hereunder and shall determine every question which may arise relative to the fulfillment of this Agreement on the part of G&M and their decision shall be final, conclusive, and binding upon G&M, except that if such decision is arbitrary or capricious, G&M may have such decision reviewed by a court of competent jurisdiction within the State of New York.

##### C. Orders for Change, Revision, Termination & Compensation

All orders to G&M directing changes in the project, revisions within the scope of services, termination of the project, regular payments upon the project, and payments representing increases or decreases in compensation due to changes, revisions or termination shall be made jointly by the County and GAF and submitted to G&M in writing through its duly authorized representative.

##### D. Supervision

Supervision of the progress of this work shall be conducted by the County through its duly authorized representative and by GAF through its Environmental Counsel, or such other representative as GAF may designate.

V. SCOPE OF SERVICES

The services to be rendered under this Agreement shall include all services described in the Scope of Services, said Scope of Services being annexed hereto as Exhibit "B".

All work on this project shall be performed in accordance with the Site Safety Plan and Quality Control/Quality Assurance Plan. The Site Safety Plan, Quality Assurance/Quality Control Plan are hereby incorporated by reference as if fully set forth in this document, and all terms and conditions contained therein are deemed to apply to and be part of this Agreement.

Furthermore, all such services shall be rendered in accordance with and G&M shall be charged with knowledge of, the applicable terms and provisions of the Consent Order and the Record of Decision dated March, 1991.

VI. TIME OF PERFORMANCE

A. Date of Commencement

G&M agrees that it will begin work herein embraced immediately and that it will prosecute the same with such diligence that all work covered by this Agreement under the control of G&M shall be entirely completed and performed in acceptance with the schedule set forth in the Work Plan attached hereto as Exhibit B, the requirements of the Consent Order and the Record of Decision, and such other schedule as the County and GAF may from time to time impose. Where a conflict exists between the schedules set forth in the Consent Order and the Record of Decision and the schedule set forth in the Work Plan or imposed by the County and GAF the schedule in the Work Plan or imposed by the County and GAF shall apply.

B. Best Efforts

G&M acknowledges that the services to be performed are essential to the County's and GAF's fulfillment of its obligations under the Consent Order and Record of Decision and that time is of the essence. Therefore, G&M will exercise its best efforts to complete the services called for under this Agreement in the minimum time possible, and in accordance with the provisions of the Consent Order, and within the time specified in such work orders as may be issued by the County and GAF. In the event that G&M for good cause shown cannot complete the services for a particular task or phase within the time agreed to, G&M shall make a written request to the County and GAF, in accordance with Paragraph C below.

C. Notice of Conditions Causing Delay

(1) Within ten (10) working days after the commencement of any condition which is causing or may cause delay in completion G&M must notify the County and GAF in writing of the effect, if any, of such condition upon the time progress schedule, and must state why and in what respects, if any, the condition is causing or may cause such delay.

(2) Failure to strictly comply with this requirement may, in the discretion of the County and GAF, be deemed sufficient cause to deny any extension of time on account of delay in completion arising out of or resulting from any change, extra work, suspension, or other condition.

(3) An extension or extensions of time for the completion of the work may be granted by the County and GAF subject to the provisions of this section, and to the requirements of the Consent Order.

(4) G&M shall be entitled to an extension of time only for unforeseeable supervening conditions entirely beyond the control of any party hereto (such as, but not limited to, act of God or the public enemy, war or other national emergency making performance temporarily impossible or illegal, or strikes or labor disputes) and only for the number of calendar days of delay which the County and GAF may determine to be due solely to such causes. The County

and GAF shall make such determination within ninety (90) calendar days after receipt of G&M's application for an extension of time for such cause.

(5) G&M shall not be entitled to receive a separate extension of time for each one of several causes of delay operating concurrently, but, if at all, only for the actual period of delay in completion of the work as determined by the County and GAF, irrespective of the number of causes contributing to produce such delay. If one of several causes of delay operating concurrently results from any act, fault, or omission of G&M or of its agents, employees or subcontractors, if any, and would of itself (irrespective of the concurrent causes) have delayed the work, no extension of time will be allowed for the period of delay resulting from such act, fault or omission.

(6) The granting of an application for an extension of time for causes of delay other than those herein referred to shall be subject to the requirements of the Consent Order and Record of Decision and shall be entirely within the discretion of the County and GAF.

(7) If G&M shall claim to have sustained any damages by reason of delays, extraordinary or otherwise, or hindrances which are demonstrated to the satisfaction of the County and GAF to be due to any action, omission, direction or order by the County and GAF, G&M shall be entitled to a reasonable extension of time and any reasonable and necessary associated cost which can be shown to be a direct result of those occurrences attributable to the County and GAF as set forth in this Section (7).

## VII. SCHEDULE OF PAYMENTS

### A. Amount of Compensation

For the full and faithful performance of the work of this Agreement and its acceptance by the County and GAF, the County and GAF shall pay to G&M an amount not to exceed Eight Hundred Four Thousand, Three Hundred Dollars (\$804,300) unless there is a change in scope, character, or complexity of work agreed to by all parties and made a supplemental to this Agreement. As hereinabove noted,

the maximum amount payable under this contract has been established in accordance with the cost estimate annexed hereto as Exhibit "C". Payment for services shall include:

1. Reimbursement of subcontracted services shall be at cost.
2. Reimbursement of the following other expenses shall be at cost: Reasonable and necessary Travel/Subsistence allowance, travel and vehicle costs, on site document reproduction, phone/communications, and miscellaneous project/job trailer related expenses.

B. Method of Payment

Fees shall be paid in the following manner: G&M shall once in each month submit to the Escrow Agency a requisition for a progress payment along with copies of a progress report for that work which was performed in the preceding month including a detailed billing statement, copies of this requisition shall be sent to the County and GAF. The Escrow Agent shall verify the propriety of payment and shall make payment in accordance with the Colesville Landfill Remedial Fund Agreement.

Payment of final invoice for all services shall be made upon sign off by the DEC pursuant to the annexed Consent Order, provided no lawful or proper direction given by the County and GAF or their representatives regarding said services remains uncomplied with. Prior to final payment for said services, or prior to settlement upon termination of this Agreement, and as a condition precedent thereto, G&M shall execute and deliver to the County and GAF a release from any further payments from the County and GAF as a result of services provided by G&M and/or its subcontractors or vendors under this Agreement, other than such claims, if any, as may be specifically excepted by G&M.

C. Value of Revisions of Work

(1) The amount by which the Agreement consideration is to be increased or decreased by any revision shall be determined by the County and GAF by one or more of the following methods:

- (a) By accepting an amount agreed upon by the parties; or

(b) By estimating the fair and reasonable cost of (1) Personnel (including all wages, fringe benefits, required wage supplements and insurance required by law (Workers' Compensation, Social Security, Disability, Unemployment, etc.) employed pursuant to the work; (2) reasonable and necessary technical subcontractors; and (3) reimbursable expenses.

(c) By determining the actual cost of the revision in the same manner as in the above Subdivision B except that actual costs of the personnel shall be utilized in lieu of estimated costs. The County and GAF shall have the option to utilize this method, provided they notify G&M of their intention to do so prior to the time G&M commences performance of such revision.

(2) Irrespective of the method used or to be used by the County and GAF in determining the value of a revision G&M within thirty (30) working days after a request for the same, must submit to the County and GAF a detailed breakdown of G&M's estimate of the value of the revision.

(3) Unless otherwise specifically provided for in a revision, the compensation specified therein for revised work includes full payment for both the revised work covered thereby and for any damage or expense caused G&M by any delays to other work to be done under this Agreement resulting from or on account of said revised work, and the Consultant waives all rights to any other compensation for said revised work, damage or expense.

#### D. Limitation of Actions

(1) No action or proceeding shall lie or be maintained by G&M or anyone claiming under or through G&M against the County and/or GAF upon any claim arising out of or based upon this Agreement or any breach hereof or by reason of any act or omission or requirement of the County and/or GAF or its officers, agents, servants or employees, unless:

(a) Such action or proceeding is instituted in a court of competent jurisdiction in the State of New York; and

(b) G&M or the person claiming under or through it shall have strictly complied with all requirements relating to the giving of notices and information with respect to such claim; and

(c) If this Agreement is terminated or G&M declared in default by the County and GAF, such action is commenced within six (6) months after the date of such termination or declaration of default by the County and GAF.

(2) Notwithstanding anything in the laws of the State of New York to the contrary, G&M or anyone claiming under or through G&M, shall not be entitled to any additional time to begin anew any other action if an action commenced within the times herein specified be dismissed or discontinued for any reason whatsoever.

(3) The County and/or GAF shall not be precluded or estopped by an inspection, acceptance, application for payment or payments, final or otherwise, issued or made under this Agreement or otherwise issued or made by it, or any officer, agent or employee of the County and/or GAF, from showing at any time the true amount and character of the work performed, or from showing that any such inspection, acceptance, application for payment or payments is incorrect, or was improperly issued or made; and the County and/or GAF shall not be precluded or estopped, notwithstanding any such inspection, acceptance, application for payment or payments, from recovering from G&M any damages which it may sustain by reason of any failure on G&M's part to comply strictly with this agreement and any monies which may be paid to it or for its account in excess of those to which it is lawfully entitled.

(4) Neither the acceptance of all or any part of the work covered by this Agreement, nor any payment therefore, nor any order or application for payment issued under this Agreement or by the County and GAF, nor any permission or direction to continue with the performance of this Agreement before or after its specified completion date, nor any performance by the County and GAF of any of G&M's duties or obligations, nor any aid lent to G&M by the County and GAF in the performance of any of G&M's duties or obligations, nor any delay or omission by the County and/or GAF to

exercise a right or remedy accruing to it under the terms of this Agreement or existing at law or in equity or by statute or otherwise, nor any other thing done or omitted to be done by the County and/or GAF, their officers, agents, or employees, shall be deemed to be a release to G&M or its sureties, if any, from any obligations, liabilities, or undertakings in connection with this Agreement or a waiver of any provision of this Agreement or of any rights or remedies to which the County and/or GAF may be entitled because of any breach thereof, excepting only a written instrument expressly providing for such release or waiver signed on behalf of County and/or GAF is applicable. No termination, revision or annulment hereof, in whole or as to any part of this Agreement, because of any breach hereof, shall be deemed a waiver of any money damages to which the County and/or GAF may be entitled because of such breach. No waiver by the County and/or GAF of any breach of this Agreement shall be deemed to be a waiver of any other or any subsequent breach.

#### VIII. TERMINATION

A. This Agreement may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this Agreement through no fault of the terminating party: Provided, that no such termination may be effected unless the other party is given (1) not less than seven (7) calendar days written notice (delivered by certified or registered mail, return receipt requested) of intent to terminate, and (2) an opportunity for consultation with the terminating party prior to termination.

B. This Agreement may be terminated in whole or in part in writing by the County and GAF for their convenience: Provided, that such termination is for good cause and that G&M is given (1) not less than seven (7) calendar days written notice (delivered by certified or registered mail, return receipt requested) of intent to terminate, and (2) an opportunity for consultation with the County and GAF prior to termination.

C. If termination is effected by the County and GAF, G&M shall be entitled to receive "termination compensation" which means payment for services rendered and expenses incurred prior to the termination, in addition to termination settlement costs reasonably and necessarily incurred by G&M relating to commitments which have become firm prior to the termination, but (1) no amount shall be allowed for anticipated profits on unperformed services or other work; and (2) any payment due to G&M at the time of termination may be adjusted by County and GAF to the extent of any and all additional costs occasioned to the County and GAF by reason of G&M's default.

D. If, after termination for failure of G&M to fulfill contractual obligations, it is determined by a court of competent jurisdiction as provided in VII(D)(1)(a) above and after all appeals have been decided that G&M had not so failed, the termination shall be deemed for purposes of Paragraph C of this article to have been effected for the convenience of the County and GAF, except that the County and GAF may instead elect to reinstate G&M and to continue this Agreement, and G&M shall be entitled to reimbursement for any deductions made by the County and GAF pursuant to Paragraph C92) of this Article.

E. Upon receipt of a notice pursuant to Paragraphs A or B above, G&M shall (1) promptly discontinue all services effected (unless the notice directs otherwise), and (2) deliver or otherwise make available to the County and GAF all data, plans, studies, drawings, specifications, reports, estimates, summaries and such other information and documents as may have been prepared, furnished or accumulated by or on behalf of G&M in performing this Agreement, whether completed or in process.

#### IX. PROVISIONS REQUIRED BY LAW

Each and every provision required by law to be inserted in this Agreement shall be deemed to be inserted herein and the Agreement shall be read and enforced as though it were included herein and in the event any such provision is not inserted or is not correctly inserted, then, upon the application of any party,

this Agreement shall forthwith be physically amended to make such insertion or correction.

X. SPECIAL PROVISIONS PERTAINING TO RECEIPT OF GRANT FUNDS  
FROM NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL  
CONSERVATION

It is acknowledged and understood by the parties hereto that in accordance with Article XLIII of the Consent Order the County is receiving state aid reimbursement from New York State Department of Environmental Conservation for a portion of the work to be prosecuted hereunder. As a condition of the receipt of such grant funding, the County is obligated to comply with certain regulations and requirements of the New York State Department of Environmental Conservation, particularly with respect to hiring and employment practices. Accordingly, G&M agrees to be bound by any and all applicable terms of the grant agreement between the New York State Department of Environmental Conservation and the County, and as the County's subcontractor, will satisfy the County's obligations under such agreement. Any questions, ambiguities, or interpretations that G&M may have regarding the grant agreement shall be discussed with the County and GAF only.

XI. INSURANCE

Acceptance and execution of this Agreement by the County and GAF is expressly conditioned upon compliance by G&M with the following article relating to insurance requirements.

G&M shall procure and thereafter until final acceptance of the project keep in full force and effect insurance of the kind and in the amounts specified in the "Insurance Requirement Form" attached hereto, marked Exhibit "D". Such insurance shall provide all coverages specified in said Exhibit "D", including, but not limited by way of enumeration herein, coverage for comprehensive general liability, comprehensive automobile liability, statutory Workers' Compensation and employer's liability. It is understood and agreed that, in the event of a conflict between the terms and conditions required and the provisions contained in the Insurance Requirements Form, the provisions contained in the Insurance

Requirements Form shall control. Upon execution of this Agreement by G&M, and prior to acceptance by the County and/or GAF and commencement of any work by G&M, G&M shall furnish to the County and/or GAF a certificate or certificates of insurance, in form acceptable to the County and/or GAF, evidencing that G&M has obtained the insurance required by this Agreement. Said certificate or certificates shall provide that the policies listed therein shall not be changed or canceled unless the County and/or GAF is given thirty (30) days prior written notice of such proposed change or cancellation. Upon request of the County and/or GAF G&M shall provide the County and/or GAF with a duly certified copy of each policy of insurance.

In the event that any insurance required by this Agreement shall be canceled, terminated, modified or not renewed, such that said insurance is no longer in effect as required herein, the County and/or GAF may direct that G&M suspend all or any part of the work specified in the Work Plan. If such work is so suspended, no extension of time shall be granted by reason of such suspension and G&M shall have no right, claim, action or cause of action by reason of such suspension of work. In the alternative, the County and/or GAF may, in its sole and absolute discretion terminate this Agreement for cause, unless the cancellation, termination, modification or failure to renew such policy or policies of insurance is due to the unavailability of such insurance throughout the industry, in which event the County and/or GAF may, at its option, terminate this Agreement for its convenience.

All insurance required under this Agreement shall be obtained from insurance companies authorized to conduct an insurance business under the laws of the State of New York. G&M shall, as to all liability insurance policies, name as additional insureds the County and GAF and any other party designated on the Insurance Requirements Form. G&M hereby waives any and all rights of subrogation against the County and/or GAF and those other parties named as additional insureds on the Insurance Requirements Form, together with their officers, employees, agents, invitees, and

licensees for any injury, death, or property damage sustained by G&M, its employees, agents, invitees and licensees to the extent covered by any insurance. G&M shall require that all subcontractors shall waive their rights of subrogation against the County and/or GAF and those other parties listed as additional insureds on the Insurance Requirements Form, including their officers, employees, agents, invitees and licensees for any injury, death or oprperty damage sustained by the contracting party, its employees, agents, licensees and invitees.

### XII. INDEMNIFICATION

G&M agrees to indemnify and hold the County and GAF and their officers, directors, employees and agents free and harmless from and against any and all losses, penalties, damages, settlements, costs, charges, professional fees or other expenses or liabilities of every kind and character arising out of or relating to any and all claims, liens, demands, obligations, actions, proceedings or causes of action of every kind and character (hereinafter "Claims") in connection with, or arising directly or indirectly out of, negligent acts and/or errors and/or omissions by G&M, its employees, agents and/or subcontractors in the performance of this Agreement. Without limiting the generality of the foregoing, any and all such claims, relating to personal injury, death, damage to property, or any actual or alleged violation of any applicable statute, ordinance, administrative order, rule or regulation, or decree of any court, in connection with, or arising directly or indirectly out of, negligent acts and/or errors and/or omissions by G&M, its employees, agents, and/or subcontractors as aforesaid, shall be included in the indemnity hereunder. G&M further agrees to investigate, handle, respond to, provide defense for and defend any such claims, at its sole expense even if such Claim is groundless, false or fraudulent. In any case in which such indemnification would violate Section 5-322.1 of the New York General Obligations Law, or any other applicable legal prohibition, the foregoing provisions concerning indemnification and associated defense shall not be construed to indemnify the County and GAF for

damage arising out of bodily injury to persons or damage to property solely caused by or resulting from the negligence of the County and GAF, or their employees. This provision shall indefinitely survive the expiration or termination of this Agreement.

G&M shall defend, indemnify and hold GAF, its affiliates and their respective officers, directors, employees and agents harmless from and against any and all liens and claims upon any services performed by G&M hereunder or upon the premises to which G&M services relate or otherwise arising out of the performance of such services by G&M or any subcontractors. If at any time there shall be evidence of any such lien or claim for which GAF or the said premises might become liable, GAF shall have the right to retain out of any payment then due or thereafter to become due under this Agreement, an amount sufficient to discharge such lien or claim. Should there prove to be any such lien or claim after all payments are made to G&M hereunder, then G&M shall pay to GAF all monies that GAF may be compelled to pay in discharging any such lien or claim, including but not limited to, all costs and expenses and reasonable attorneys' fees.

#### XIII. ATTORNEY'S FEES

G&M shall be responsible for and will pay to the County and GAF all reasonable fees and attorney's fees in the event that:

A. G&M breaches its duty to defend the County and/or GAF as set forth in Article XII herein;

B. G&M brings an action against the County and/or GAF for an alleged breach of this Agreement and G&M fails to prevail in the litigation; or

C. The County and/or GAF brings an action against G&M for an alleged breach of the Agreement and the County and/or GAF prevails in the litigation.

#### XIV. COPYRIGHTS AND PATENTS

G&M shall defend actions or claims charging infringement of any copyright or patent by reason of the use or adoption of any plans, studies, designs, drawings or specifications supplied by it

and shall indemnify and hold harmless the County and GAF, their officers, directors, employees and agents from any loss or damages resulting therefrom. This provision shall indefinitely survive the expiration or termination of this Agreement.

XV. AUDIT, ACCESS TO RECORDS

G&M shall maintain books, records, documents and other evidence directly pertinent to performance under this Agreement in accordance with generally accepted accounting principles and practices consistently applied and in effect on the date of execution of this Agreement and shall permit the County and GAF access to such information on reasonable notice and conditions.

XVI. CONTINGENT ON APPROVALS

The parties agree that the implementation of this Agreement shall be contingent upon appropriate and/or necessary approvals from the NYSDEC and/or the United States Government, and shall be subject to the applicable orders, rules and regulations of said agency(ies).

XVII. APPLICABLE LAW

This Agreement shall be governed by the laws of the State of New York.

IN WITNESS WHEREOF, the parties hereto have set their hands and seal the date and year first above written.

COUNTY OF BROOME

By \_\_\_\_\_  
JEFFREY P. KRAHAM  
Broome County Executive

G&M

By \_\_\_\_\_

Title \_\_\_\_\_

GAF CORPORATION

By \_\_\_\_\_

Title \_\_\_\_\_

COUNTY OF BROOME) :

Notary Public

COUNTY OF ) :

NOTARY PUBLIC

STATE OF NEW YORK :  
COUNTY OF :  
SS. :

On this            day of            in the year 2000, before me, the undersigned, a notary public in and for said state, personally appeared            , personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

NOTARY PUBLIC

Intro No. 27  
Date 4/20/00  
Reviewed by lms  
Co. Attorney  
Date 3/28/00

**RESOLUTION**  
**BROOME COUNTY LEGISLATURE**  
BINGHAMTON, NEW YORK

Permanent No 00-209  
Date Adopted 4/20/00  
Effective Date 4/22/00

**PUBLIC WORKS and FINANCE COMMITTEES**

Introduced by \_\_\_\_\_

Seconded by HON. VINCENT A. PASQUALE

**RESOLUTION AUTHORIZING AGREEMENT WITH ARCADIS GERAGHTY & MILLER, INC. FOR PROFESSIONAL ENGINEERING SERVICES ASSOCIATED WITH THE COLESVILLE LANDFILL REMEDIATION FOR THE DIVISION OF SOLID WASTE MANAGEMENT FOR 2000-2001**

WHEREAS, the Commissioner of Public Works requests authorization for an agreement with Arcadis Geraghty & Miller, Inc. for professional engineering services associated with the Colesville Landfill Remediation for the Division of Solid Waste Management at a cost not to exceed \$804,300 (County's share \$402,150), for the period January 1, 2000 through December 31, 2000, and

WHEREAS, said services are necessary for the design, construction and operation and maintenance of the groundwater remediation system and minor tasks associated with the ongoing negotiations with the U. S. Environmental Protection Agency, and

WHEREAS, the County and the GAF Corporation are required to each pay one-half the cost of this remediation project, now, therefore, be it

RESOLVED, that this County Legislature hereby authorizes an agreement with Arcadis Geraghty & Miller, Inc., 88 Duryea Road, Melville, New York 11747, for professional engineering services associated with the Colesville Landfill Remediation for the Division of Solid Waste Management for the period January 1, 2000 through December 31, 2000, and be it

FURTHER RESOLVED, that in consideration of said services, the County shall pay the Contractor an amount not to exceed \$804,300 with the County and the GAF Corporation each paying an equal share of \$402,150 for the term of the agreement, and be it

FURTHER RESOLVED, that the payments hereinabove authorized shall be made from budget line 235036.4545.501128 (Contracted Services), and be it

FURTHER RESOLVED, that the County Executive or his duly authorized representative is hereby empowered to execute any such agreements, documents, or papers, approved as to form by the Department of Law, as may be necessary to implement the intent and purpose of this Resolution.

COUNTY OF BROOME } ss.:  
STATE OF NEW YORK

I, the undersigned, Clerk of the Legislature of the County of Broome, DO HEREBY CERTIFY that the above is an original resolution of such Legislature, duly adopted on the 20th day of April, 2000, by a majority of the members elected to the Legislature of said County at a regular meeting of said Legislature.

I FURTHER CERTIFY that at the time said resolution was adopted said Legislature was comprised of nineteen members.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of said Legislature this 21st day of April, 2000.

Date sent to County Executive April 21, 2000

Approved \_\_\_\_\_  
County Executive

Date 4/22/2000

Louis P. Augustino  
Clerk, County Legislature  
County of Broome

# ARCADIS GERAGHTY & MILLER



Mr. Ray L. Standish, P.E.  
Broome County - Division of Solid Waste Management  
P.O. Box 1766  
44 Hawley Street  
Binghamton, New York 13902

Mr. Nelson Johnson  
GAF Corporation  
1361 Alps Road  
Wayne, New Jersey 07470

Subject:  
Estimated Year 2000 Budget, Colesville Landfill, Broome County, New York.  
ARCADIS Geraghty & Miller Project No. NY000949.0013.00001

Dear Messrs. Standish and Johnson:

ARCADIS Geraghty & Miller is providing Broome County and GAF Corporation with a budget estimate for fiscal year 2000 (Table 1), which includes the design, construction, and operation and maintenance (O&M) of the groundwater remediation system, manual injections in the pilot test injection wells (until the ERD system is constructed), and minor tasks associated with ongoing negotiations with the U.S. Environmental Protection Agency (USEPA). A detailed breakout of costs for the design, construction, and O&M, which is the basis for the year 2000 budget estimate, is provided in Table 2. A description of the tasks included in each table is provided below.

Table 1 lists three tasks that comprise the budget estimate for 2000. Task 1 includes capital costs for design and installation of the ERD/PT system (estimated to occur between January to September 2000) and three months of O&M (October to December 2000). Task 1 O&M includes the baseline sampling event and reporting, ERD/PT system performance monitoring, and one quarterly groundwater monitoring round. Task 2 includes continuation through September 2000 of molasses injections and monitoring of wells used for the pilot study. Also included are costs for injections performed during the last three months of 1999 that were not included in the September 29, 1999 Supplemental Agreement. Task 3 includes costs associated with the sediment, surface water, and seep water sampling event as part of the five-year review, agency meetings, and project management (not related to the ERD/PT system). The total budget for 2000 is estimated at \$804,300.

ARCADIS Geraghty & Miller, Inc.  
88 Duryea Road  
Melville  
New York 11747  
Tel 631 249 7600  
Fax 631 249 7610

ENVIRONMENTAL

Date,  
21 January 2000

Contact:  
Steve Feldman

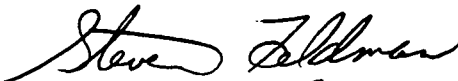
Direct Dial:  
(631) 391-5284

Table 2 includes the capital costs for the design and installation of the ERD/PT system, system startup troubleshooting, and preparation of supporting documentation. Also included are costs for one full year (Year 1) of O&M (estimated to occur between September 2000 and September 2001), and program management associated with the ERD/PT system. The total cost for implementation and management of ERD/PT system design, installation, startup, and Year 1 O&M is estimated at \$806,000. This table is for information purposes only.

We anticipate that annual O&M costs can be reduced over time as the pump-and-treat system is phased out and groundwater monitoring requirements are scaled back. Please contact us if you have any questions.

Respectfully Submitted,

ARCADIS Geraghty & Miller, Inc.



Steven M. Feldman  
Principal Scientist/Project Manager



Thomas Lobasso  
Vice President/Project Officer

Enclosures

# ARCADIS GERAGHTY & MILLER

Table 1. Schedule of Tasks and Budget Estimate for 2000, Colesville Landfill, Broome County, New York.

Task Number	Task Description	Projected Duration	Estimated Cost
1	<u>Proposed ERD/P&amp;T System</u> <sup>1</sup>	January to December 2000	
1a	Remedial System Design and Construction	January to September 2000	\$645,000
1b	ERD and P&T System O&M and Monitoring <sup>2</sup>	October to December 2000	\$56,200
Task 1 Subtotal:			\$701,200
2	<u>Existing ERD Injections and Monitoring</u> <sup>3</sup>	October 1999 to September 2000	
2a	Molasses Injections, O&M, and Sampling		\$59,000
2b	Data Management and Reporting		\$19,400
Task 2 Subtotal:			\$78,400
3	<u>Additional Tasks</u>		
3a	Seep/Sediment/Surface Water Sampling as part of Five-Year Review	To Be Determined	\$8,000
3b	Project Management/Action Items <sup>4</sup>		\$8,700
3c	Meetings <sup>5</sup>	To Be Determined	\$8,000
Task 3 Subtotal:			\$24,700
GRAND TOTAL:			\$804,300

<sup>1</sup> Includes preparation of ESD Support Document, Long-Term Monitoring Plan, Remedial Action Work Plan, and Baseline Sampling Data Report.

<sup>2</sup> Includes the baseline groundwater sampling event, system performance monitoring, one hydraulic measurement round, and one quarterly groundwater quality monitoring round.

<sup>3</sup> Estimate also includes costs for injections performed from October to December 1999 not included in the existing Supplemental Agreement, dated September 29, 1999.

<sup>4</sup> Includes management of tasks not associated with the ERD/P&T system design, installation, or O&M; based on 10 percent of total cost of Tasks 2a, 2b, and 3a.

<sup>5</sup> Meeting budget estimate includes costs for one meeting held in New York City, and two on-site meetings.

ERD Enhanced Reductive Dechlorination  
P&T Pump and Treat  
O&M Operation and Maintenance  
ESD Explanation of Significant Differences

Table 2. Cost Estimate for Groundwater Remediation System, Colesville Landfill, Broome County, New York.

Description	Quantity	Units	Unit Cost (\$)	Total Cost (\$)	Descriptions
<b>ERD System</b>					
1. Site Clearing/Grading	1	ea	\$6,500	\$6,500	Clearing, grading, and debris disposal.
2. Equipment Enclosure	1	ea	\$15,000	\$15,000	20' X 24' Pre-Engineered Building.
3. Foundation Preparation	480	SF	\$25	\$12,000	Crushed stone, Concrete Foundation, and Footings.
4. Molasses injection system	1	ls	\$25,000	\$25,000	Includes mixing tank, pumps, solenoids & meter.
5. Injection/Monitoring Wells	17	ea	\$4,900	\$83,300	2" diameter.
6. Drilling/Redevelopment Oversight	7	wks	\$4,500	\$31,500	
7. Underground PE pipe feed line	4,000	ft	\$5	\$20,000	3/4" dia. PE piping.
8. Trenching for Underground PE pipe feed line	500	ft	\$40	\$20,000	
9. Distribution boxes	17	ea	\$400	\$6,800	
10. Electrical Contractor	1	ls	\$15,000	\$15,000	
11. PLC based control system	1	ls	\$30,000	\$30,000	
12. Electrical Components					
Electrical Service	1	ea	\$4,000	\$4,000	
Building Controls and Distribution	1	ea	\$500	\$500	
Process Controls	1	ea	\$500	\$500	
13. Phone service & Auto dialer	1	ls	\$10,500	\$10,500	
14. Site restoration	1	ls	\$3,000	\$3,000	
15. Surveyor	1	ls	\$3,200	\$3,200	
16. Construction Oversight	8	ea	\$5,000	\$40,000	1 Engineer for 8 weeks @ 100% oversight + expenses.
17. Design & Engineering	1	ea	\$15,000	\$15,000	Design Package and PM.
18. Bid Package	1	ea	\$3,000	\$3,000	Specs & Bid process management
19. Permitting, Easements and Administrative Costs	1	ea	\$525	\$525	
20. System Startup Troubleshooting and Sampling	1	ls	\$15,000	\$15,000	1 Engineer for 1 week, startup system O&M sampling.
<b>ERD System Subtotal</b>				<b>\$360,000</b>	
<b>Pump &amp; Treat System</b>					
1. Well Box (3' x 3')	3	ea	\$500	\$1,500	
2. Trenching	1,500	LF	\$50	\$75,000	Trenching and piping.
3. Major Process Equipment Items					
Low Profile Air Stripper	1	ea	\$8,500	\$8,500	
Pump	3	ea	\$1,600	\$4,800	
Filters	2	ea	\$800	\$1,600	
Compressor	1	ea	\$4,000	\$4,000	2 hp 110/230 Volts @ 90 psi, including shipping.
Installation	3	ea	\$650	\$1,950	
4. Mechanical Components					
Process Piping	1	ea	\$500	\$500	Includes labor and piping.
Piping Appurtenances	1	ea	\$3,500	\$3,500	Includes valve, gauges, controls, sensors, flowmeters etc.
5. Redevelop Existing Recovery Wells (and PW-6)	4	ea	\$2,400	\$9,600	
6. Construction Oversight	2	ea	\$5,000	\$10,000	1 Engineer for 2 weeks @ 100% oversight + expenses.
7. Bid Package	1	ea	\$3,000	\$3,000	Specs & Bid process management
8. Design & Engineering	1	ea	\$15,000	\$15,000	Design and Specifications Package and PM.
9. Permitting, Easements & Administrative Costs	1	ea	\$525	\$525	
<b>Pump &amp; Treat System Subtotal</b>				<b>\$139,000</b>	
<b>Reporting</b>					
1. ESD Support Document	1	ls	\$6,000	\$6,000	
2. Long-Term Monitoring Plan	1	ls	\$12,000	\$12,000	
3. Remedial Action Report	1	ls	\$12,000	\$12,000	
4. Baseline Sampling Data Report	1	ls	\$8,000	\$8,000	
<b>Reporting Subtotal</b>				<b>\$38,000</b>	
<b>Capital Cost Subtotal</b>				<b>\$537,000</b>	
<b>Program Management</b>				<b>\$54,000</b>	10% of total costs
<b>Tax</b>				<b>\$0</b>	8.50%
<b>Contingency</b>				<b>\$54,000</b>	10% of total costs
<b>TOTAL CAPITAL COST</b>				<b>\$645,000</b>	

Table 2. Cost Estimate for Groundwater Remediation System, Colesville Landfill, Broome County, New York.

Description	Quantity	Units	Unit Cost (\$)	Total Cost (\$)	Descriptions
<b>Annual O&amp;M</b>					
1. Molasses	4,400	gal	\$5.40	\$24,000	10 gallons in each well 2 times a month.
2. Electricity	15	kw	\$1,300	\$19,500	Electricity for PLC, pumps, etc.
3. ERD System O&M and Monitoring	4	ea	\$2,400	\$9,600	Site visits to check system operation, perform O&M, sample wells.
4. ERD Well Maintenance	1	ea.	\$4,000	\$4,000	Well Redevelopment.
5. P&T System O&M and Monitoring	14	ea	\$750	\$10,500	Monitoring of treatment system influent and effluent conducted concurrently with ERD system O&M.
6. P&T Well Maintenance	0	ea	\$0	\$0	No P&T well maintenance schedule for 2000.
7. Long-Term Groundwater Monitoring	1	ea	\$47,000	\$47,000	3 quarterly rounds (7 wells), 1 annual round (16 wells), and 2 hydraulic measurement rounds (26 wells).
8. Quarterly Reports	3	ea	\$5,000	\$15,000	Quarterly reports summarizing groundwater quality and system performance.
9. Annual Report	1	ea	\$12,000	\$12,000	Annual report summarizing groundwater quality and system performance.
10. Major Equipment Replacement	1	ea	\$3,695	\$3,695	Based on 5 % of overall equipment budget.
11. Minor Equipment Replacement	1	ea	\$1,000	\$1,000	
<b>Annual O&amp;M Subtotal</b>				<b>\$146,000</b>	
<b>Program Management</b>				<b>\$15,000</b>	10% of total cost
<b>Tax</b>				<b>\$0</b>	8.50%
<b>TOTAL ANNUAL O&amp;M COST</b>				<b>\$161,000</b>	Over 1 year of operation.
<b>TOTAL ONE-YEAR COST (Capital, Reporting, and O&amp;M)</b>				<b>\$806,000</b>	

Assumptions / Notes:

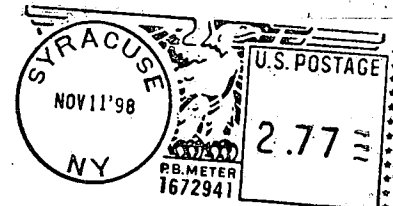
- Estimated costs are based on Means and cost indices factors, engineering experience, and/or the following vendor information:
  - Vendor quotes received from Shields Sales Corp., September 1999.
  - Vendor quotes received from Clean Environment, September 1999.
  - Vendor quotes from KAMCO Flow Solutions, September 1999.
  - Contractor quote received from AC Spear Electric, Inc., February 1998.
- Calculations and back-up for cost estimates are located in back-up calculations file.
- Subcontractor costs are based on New York State wage rates.
- Sales tax is not included because of exempt status of Broome County.

LAW OFFICE OF  
THOMAS S. BRETT  
SUITE 500  
108 WEST JEFFERSON STREET  
SYRACUSE, NEW YORK 13202

CERTIFIED

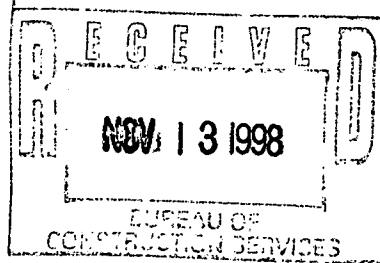
Z 466 367 886

MAIL



Mr. Craig Lapinski  
New York Department of  
Environmental Conservation  
50 Wolf Road  
Room 267  
Albany, New York 12233

260A  
7010



Fold at line over top of envelope to  
the right of the return address

LAW OFFICE OF  
**THOMAS S. BRETT**

SUITE 500  
108 WEST JEFFERSON STREET  
SYRACUSE, NEW YORK 13202

(315) 471-0126  
FAX (315) 471-2056

November 11, 1998

**VIA CERTIFIED MAIL**

Mr. Craig Lapinski  
New York Department of Environmental Conservation  
50 Wolf Road  
Room 267  
Albany, New York 12233

**Re: Tug Hill Construction, Inc. v. County of Broome and GAF Corporation**  
**Index No. CA1996-002762**

Dear Mr. Lapinski:

This letter is to confirm the recent conversation that you had with our co-counsel, Erica S. Beardsley, Esq., that you would accept service of the enclosed Judicial Subpoena to appear at a deposition December 3, 1998, at 10:00 a.m. at the New York State Department of Environmental Conservation.

Also enclosed is a check in the amount of \$15 for the appearance fee.

Very truly yours,



THOMAS S. BRETT  
TSB/lkc

Enclosures

cc: Robert G. Behnke, Esq.  
Francis Maloney, Esq.  
Erica S. Beardsley, Esq.

STATE OF NEW YORK  
SUPREME COURT      COUNTY OF BROOME

---

**TUG HILL CONSTRUCTION, INC.,**

Plaintiff,

**JUDICIAL SUBPOENA**

vs.

Index No. CA1996-2762

**COUNTY OF BROOME and  
GAF CONSTRUCTION,**

Defendants.

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**THE PEOPLE OF THE STATE OF NEW YORK**

TO: **CRAIG LAPINSKI**

New York Department of Environmental Conservation  
50 Wolf Road  
Room 267  
Albany, New York 12233

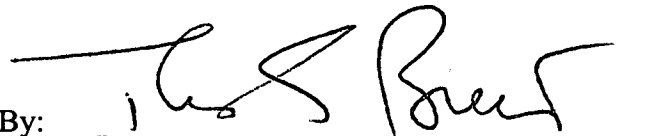
WE COMMAND YOU, that all business and excuses being laid aside, you and each of you appear and attend before a Notary Public at New York State Department of Environmental Conservation, 50 Wolf Road, Room 267, Albany, New York 12233, on the 3<sup>rd</sup> day of **December, 1998**, at **10 o'clock** in the forenoon, and at any recessed or adjourned date to give evidence as a witness on examination before trial by deposition upon oral questions in the above entitled action, now pending in the Supreme Court, County of Broome.

Failure to comply with this subpoena is punishable as a contempt of Court and shall make you liable to the person on whose behalf this subpoena was issued for a penalty not to exceed fifty dollars and all damages sustained by reason of your failure to comply.

WITNESS, Honorable Robert S. Rose, one of the Justices of said Court, at Binghamton, New York, the 10<sup>th</sup> day of November, 1998.

**LAW OFFICE OF THOMAS S. BRET**

By:



**THOMAS S. BRET**

Attorney for Plaintiff

108 West Jefferson Street

Suite 500

Syracuse, New York 13202

Telephone: (315) 471-0126

STATE OF NEW YORK  
SUPREME COURT

COUNTY OF BROOME

---

TUG HILL CONSTRUCTION, INC.,

Plaintiffs,

vs.

COUNTY OF BROOME and  
GAF CORPORATION,

Defendants.

---

*Original*

JUDICIAL SUBPOENA

---

LAW OFFICE OF  
THOMAS S. BRETT

*Attorney for*

Plaintiffs

SUITE 500  
108 WEST JEFFERSON STREET  
SYRACUSE, NEW YORK 13202  
(315) 471-0126

---

PLEASE TAKE NOTICE

☐  
NOTICE OF  
ENTRY

that the within is a (certified) true copy of a  
entered in the office of the clerk of the within named Court on

19

Dated:

LAW OFFICE OF  
THOMAS S. BRETT  
*Attorney for*

SUITE 500  
108 WEST JEFFERSON STREET  
SYRACUSE, NEW YORK 13202  
(315) 471-0126

New York State Department of Environmental Conservation  
50 Wolf Road, Albany, New York 12233-7010

R. Standish



OCT 05 1995

Michael Zagata  
Commissioner

Mr. Timothy M. Grippen  
Broome County Executive  
Broome County Office Building  
Box 1766  
Binghamton, New York 13912

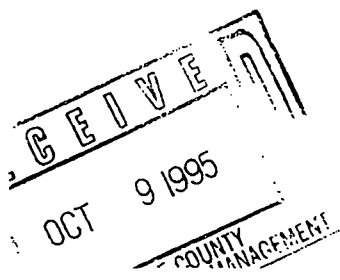
Dear Mr. Grippen:

Re: Colesville Landfill  
Broome County  
Site No. 7-04-010

This correspondence is being written to provide guidance to Broome County (grantee) by the New York State Department of Environmental Conservation (Department) on eligibility of costs under the Title 3 program regarding the Tug Hill Construction (contractor) construction claim at the above referenced site. The claim requests additional money for work within the borrow/wetlands area which the contractor insists is beyond the scope of services of the original contract documents.

Even though the Department is not a party to the Colesville contract, Title 3 money is involved and we must make a determination as to what is eligible under the program. The following are some general rules regarding eligibility:

1. All legal and administrative costs are ineligible unless prior approval by the Department of any contracts or force account work by municipality.
2. All interest costs are ineligible.
3. All contractor costs necessary to document and support the claim are ineligible.
4. Costs attributable to punitive damages, or the pursuit or defense of punitive damages, are ineligible.
5. Construction costs, due to defects in plans and specifications or other documents, are eligible only to the extent that the costs would have been incurred if the documents had been free of defects and all items in 6. below are met. Costs due to rework, delay, acceleration or disruption caused by such defects are not eligible.



735

Mr. Timothy M. Grippen

Page 2

6. For costs to be eligible, all the following items must be met:
  - a. Costs must result from a timely and meaningful negotiation process with no evidence of grantee mismanagement. Documentation is required;
  - b. Claims must arise from work within the scope of the grant and the eligible portion of the contract;
  - c. Costs cannot be caused by the grantee's vicarious liability for the improper actions of others (i.e., actions of others for which the grantee is responsible as part of its general management responsibility);
  - d. No costs are the result of actions by the parties to the contract(s) (i.e., grantee, engineer, contractor(s) or others for which they are responsible). If delay costs are claimed, it must be shown that the delay occurred along the critical path; i.e., there was not another concurrent overriding delay. Documentation is required: and
  - e. The claim could not be settled expeditiously or without litigation or arbitration (if applicable); i.e., documentation is required of timely response and of negotiations that were completed in a timely and meaningful manner.

In order to insure that Broome County/GAF is proceeding correctly during the claim process, the above information must be followed. Also, it is very important that all correspondence which Tug Hill Construction submits is responded to in a timely manner. As of the date of this letter, the Department has received no copies of county responses to letters sent by the contractor in late July and early August. We suggest that this should be remedied.

Mr. Timothy M. Grippen

Page 3

If there are any questions, please call Craig Lapinski, project manager, or myself at (518) 457-9280.

Sincerely,



James Van Hoesen, P.E.  
Chief, Central Field Services Section  
Bureau of Construction Services  
Div. of Hazardous Waste Remediation

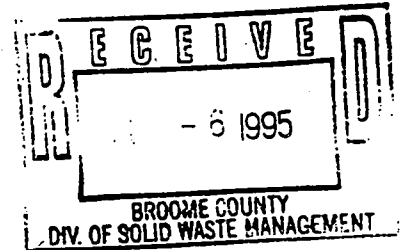
cc: R. Standish, P.E. - Broome County  
K. Sheehy - GAF  
J. Dickens - C & S Engineers



## Engineers, Inc.

1099 Airport Boulevard, North Syracuse, New York 13212  
(315) 455-2000 Fax: (315) 455-9667

June 5, 1995



Mr. Brian Backus  
Project Administrator  
Tug Hill Construction Co.  
30802 NYS Route 3  
P.O. Box 158  
Felts Mill, New York 13638

Re: Colesville Landfill Closure  
Submittal (01501-1B)

File: 157.008.001

Dear Mr. Backus:

C&S Engineers, Inc. has reviewed the above referenced submittal and have no further comments.

As discussed in your letter, dated May 31, 1995, It is our understanding that Addendum No. 1 shall be considered as a part of, and incorporated into, the Revised Health and Safety Plan for the Colesville Landfill project.

In addition, on June 1, 1995, Mr. Craig LaPinski, of the NYSDEC Region 7 Office, informed Mr. Richard Lockwood (C&S) that the NYSDEC and NYSDOH do not have any additional comments with regard to the Revised Health and Safety Plan (Addendum No.1 included).

Please be advised that our review of your plan submitted pursuant to various specification sections is only for general verification that the items required to be included with the plan, as provided in each specification section, are addressed. Our review does not extend to the accuracy or completeness of details such as quantities, dimensions, weights, or gauges, fabrication processes, construction means or methods, coordination of the work with other trades or specific construction safety precautions, all of which are the sole responsibility of the Contractor. It is your obligation and responsibility to develop and implement the required plans in compliance with the specifications.

Mr. Brian Backus

June 5, 1995

Page 2

If you have any questions or require additional information, please feel free to contact me.

Very truly yours,

C&S ENGINEERS, INC.



Andrew J. Calderwood  
Hydrogeologist

/ajc

cc: Michael M. Buzzell (Tug Hill Construction)  
[REDACTED]  
Kevin Sheehy, Esq. (ISP/GAF)  
Dick Lockwood, RPR (C&S)



## Engineers, Inc.

1099 Airport Boulevard, North Syracuse, New York 13212  
(315) 455-2000 Fax: (315) 455-9667

MEMO TO: Those in attendance

FROM: Richard Lockwood, Resident Project Representative

RE: Broome County Division of Solid Waste Management and GAF Corporation--- Closure Action of the Broome County Colesville Landfill Remedial Design

SUBJECT: Progress Meeting No. 3

FILE: 157.008.001

DATE: May 24, 1995

---

### ATTENDEES:

Ray L. Standish, P.E.	Broome County	607-778-2286
Edwardo Gonzalez	USEPA	
Craig M Lapinsky	NYSDEC	518-457-9280
John A. May	NYSDEC	315-426-7551
Mark D. Boss	Tug Hill Construction Co., Inc.	315-773-4011
Richard Clark	Tug Hill Construction Co., Inc.	315-773-4011
Darren M. Fuller	Tug Hill Construction Co., Inc.	607-693-1616 (field) 607-693-1606 (fax)
Michael M. Buzzell	Tug Hill Construction Co., Inc.	315-773-4011
Charles Rhoades	Chenango Contracting Co.	For QA/QC portion
Frank Purritano	Chenango Contracting Co.	For QA/QC portion
Michael Kessler	PSI	For QA/QC portion
James Dickens	C&S Engineers, Inc.	315-455-2000
Richard Lockwood	C&S Engineers, Inc.	607-693-1599 (field) 607-693-1488 (fax)

---

Progress Meeting No. 3 for the above referenced project was held at 10:00 am, May 24, 1995 at the Resident Project Representative's field office. The following is a summary of items discussed. In the event the following does not accurately reflect the sum and substance of what transpired at this meeting, please provide an addendum or corrections immediately.

The next meeting is scheduled for Wednesday, June 7, 1995 at 10:00 am at the RPR's field office. On the agenda will be to review the Contractor's Health and Safety Plan. /

Comments for the Previous Meeting Minutes were on the final paragraph of the minutes for Progress Meeting No. 2. The contractor took exception to "With reference to the grading plan and cutting into the existing soil, any cutting into waste will not be permitted. Any encounter with the waste will be cause to discontinue operation until such time as levels of protection can be determined, and further work be assessed. Adjusting subgrade may be necessary to assure no cutting into waste."

The contractor stated that his Health & Safety Plan will deal with any encounter with waste and would expect to have such a situation monitored within minutes. His on-site Health and Safety Office will be on site full time once any intrusive work is going on. A determination would be made as to evaluating level of PPE and progressing on with the work. He further stated that the contract documents do not prevent him from cutting into waste. The RPR will make a post-meeting review of the documents and comment on Waste Excavation and relevant information.

A post-meeting review of this matter was made by the RPR. The Bid Documents and Final Specifications do not deal with this with specific wording. However the technical specification, Section 02223 2.2 SUBGRADE FILL states "A. Materials used as subgrade fill shall be provided by the contractor from an approved borrow source. The soil to be used shall be tested by the Contractor with the following tests: grain size, Modified Proctor, and natural moisture content. Additionally, the Contractor shall not place fill prior to the completion of testing, and only after testing with the approval of the Engineer. Soil from a new source location shall not be included in the work prior to the written acceptance of test results by the Engineer. Depending on the results, the Engineer shall accept or reject the soil or require further testing. The contractor shall not proceed with construction using this material, prior to acceptance by the Engineer....."

2.4 of this section shows the testing requirements of the source of material. Paragraph C. further states "The contractor shall not proceed with soil placement operations until the Engineer has approved the proposed material." Paragraph D. states "If in the opinion of the Engineer the Contractor's proposed soil is unsuitable for the proposed application, the Contractor shall submit the above evidence for soil of another type or from another source for consideration by the Engineer." Material used for fills must be suitable to obtain a minimum density of 90% of maximum dry density (Modified Proctor Test ASTM D1557).

Since Broome County and the NYSDEC will not permit the "waste" to be hauled offsite and the "waste" is not suitable to be used in the fill, then the obvious conclusion is that there is to be no cutting into the "waste". Other existing soil cover material, organic, topsoil, roots, oversized stones, traces of garbage and debris, etc. that will not meet the testing requirements also cannot be used for filling. Therefore not all material that is cut from the existing landfill cover will automatically be allowed in the fill area. Only fill material that will meet testing requirements and approved by the Engineer may be used. Therefore due to this reasoning the last paragraph of Progress Meeting No. 2 is valid.

Work accomplished since the last meeting is:

1. Survey--Original ground elevations have been taken at the Borrow Area and Landfill. TBM's and Bench Marks have been placed along the perimeter. The edge of cap previously staked now have offset stakes to assist in replacing the edge location of the liner.
2. Clearing--The subcontractor, completed clearing work on May 12. The contractor has provided survey data and computer print out information for these points with area computations to established acreage of clearing and grubbing.
3. Grubbing and stripping topsoil--generally done in the sediment basin area and vicinity of the 36" RCP.
4. Excavation--On 5-19-95 work started at the sediment basin site with filling for haul road over the 36" RCP. Some material has been used to construct an erosion control berm near the downchute area (NW corner of Landfill). Some has been disposed of in the "Trench" along the South property line.
5. FML--The subcontractor has prepared a stockpile of sandbags in the storage area.
6. Erosion and sedimentation control--Work on silt fence and check dams with hay bales has continued. A temporary pipe and a diversion channel was used around the 36" RCP to dewater the pipe location during installation.
7. The 36" Class III RCP was installed on May 16, 17, and backfilled on May 17 & 18. PSI and Soil and Material Testing, Inc. had representatives on site for Moisture-Density (Nuclear Gage) testing. Tests results were passing based on proctor of 127.5 lbs/cf. Documentation was presented for this and other proctor tests of material sources. Calibration documentation for the nuclear gage should be presented for the record.
8. The off-site Gravel Borrow Source has been stripped and preparation has been made for location of a processing screen to be in place later.
9. The yellow water truck is on site and has been used this week to assist in dust control.

The contractor advises that he has stripped the topsoil of hydric soils from the sediment basin location.

The contractor has provided a posting board outside his office and posting has been made.

A change order for extending the monitoring wells has been initiated.

Payroll submissions from Tug Hill and Monroe Tree Service have been made in a timely manner.

Health and Safety Plan --(Copies are to be distributed to all employees.) Revisions were presented to the NYSDEC at the meeting. The DOH & DEC will review and return their assessment of these as soon as possible. No intrusive work is to be started on the landfill until DOH is satisfied.

Visitors Section 01501 page 3--16. Establish recordkeeping system for logging personnel and visitors on daily basis. (Sign in, Sign Out)

Shop Drawings: Some resubmittals were presented. These will be reviewed..

The letters relative to the contractor's proposed grading plan and the Wetlands Mitigation were discussed. This had to do with the limited amount of cutting into the existing soil of the landfill and the need to construct the wetland mitigation. The contractor has presented his position to this in the form of a letter. Broome County has responded to this. The contractor has re-responded. A discussion was held to review potential of constructing the grading of the Wetland Mitigation as detailed on the plans with 1 on 3 or 1 on 4 backslopes. The USEAP desires the full Wetland Mitigation but will allow backslopes of 1 on 3 or flatter. The contractor has contended that this will result in an excess of excavation material than what he needs to fulfill his embankment requirements and based on addendum Nos. 1 & 5 would be entitled to additional compensation. This matter was not resolved at the meeting. This writer will let the letters written and future expected letters to speak for themselves so as to clarify and bring this matter to a conclusion. The contractor has worked on the periphery of the landfill until now (actual discontinuance of work was 4:30 pm, May 25, 1995.) He is expected to resume when he receives a directory on how to proceed in the Borrow Area and when the Health and Safety Plan is satisfactory. A revised schedule was submitted.

Work that could be done is installation of Gabions at 36" RCP Outlet; Downchute construction at the NW corner of the Landfill; Silt fence near Wetlands "A"; Excavation at the vicinity of the Sediment Basin with filling at the "Trench" along the South Property Line. The contractor indicated that some of this would not be economical or source of materials for gabions and rip rap has not yet been determined fully.

Correspondence that is sent to Broome County should also be copied to, Kevin Sheehy, Esq. (ISP/GAF).

Application for Payment-- certifications, copies of invoices, photos and computations. Whenever possible it will help on the "turn around" time to provide these as the month progresses. Close out dates for the payments will be May 27, June 24, July 29, August 26, September 30, & October 28. November date will be considered later.

Carbonate Testing--The contractor requested that the test required by ASTM C586 be substituted with test designated by ASTM D3042. A letter dated 5-16-95 relative to this and the angular stone has clarify this.

The QA/QC grid requirements for the Wetland Mitigation Areas for survey and testing is 50' x 50'. Thickness requirements on other layers of the landfill also call for a 50' x 50' grid and at break points (tops and toes).

The Engineers field office requires a legal size cabinet with lock and two keys. Also a recording thermometer, a recording barometer, and an anemometer.

The Sediment Basin Berm Tie-in Detail as shown on sheet 9 of plans, should be implemented when constructing berm.

A sketch of the Final Cover Anchor Detail For Slopes Less Than 4 to 1 is attached with the Drainage Layer shown. It was decided to bring the drainage layer to a point 1' from the 4" Tee along the solid outlet pipe. This was to clarify the outside limit of drainage material. Sand bags, if ultimately to be left permanently on the FML, must be filled with material meeting the drainage layer specification.

Since the outlet treatment of the 36" RCP is included in the LF of pipe, it was agreed to pay for 130' of the 150' of 36" RCP in the first application for payment.

The remainder of the meeting was used to coordinate the QA/QC requirements of the contract. Messrs. Rhoades, Purritano, and Kessler joined the meeting as their particular job interest was discussed.

The contractor's general mode of operation for placing layers of material on the landfill was discussed. If using scrapers care should be used so as not to damage the FML. The contractor will keep hauling equipment on top of his placement of the Barrier Protection Layer and push material over the drainage layer. This in essence will keep a minimum depth of 2' over the FML. The contractor expects to work his layers of various material in a progressive fashion one by one. To allow for survey work, testing, and to assure no overlapping of layered material a minimum buffer of at least 50' should be maintained between layers.

The Contractor's Testing Service is PSI, Professional Services Inc.

The Contractors Laboratory is AGP.

The Third Party Testing Services is SMT, Soils and Materials Testing, Inc.

The Third Party Laboratory is Precision Laboratories.

The following Sections were covered in detail so as to permit coordination for implementing the specifications regarding Quality Assurance and Quality Control.

**Section 01050 FIELD ENGINEERING**--This section includes Project Record Documentaion, survey, photographs, and test results.

- a. Record documents--log of control and survey work
- b. Drawings 1"=50', with 2' contours--signed and sealed, Licensed Land Surveyor--2 prints
- c. Layers--finished subgrade, finished gas venting layer, surface, finished drainage layer surface in lieu of FML, finished barrier protection layer surface, finished topsoil layer surface, and finished drainage feature drawing.
- d. Spot elevations at each construction grid point location (50 x 50) and break points (tops and toes).
- e. Photographs for site clearing, grubbing, and topsoil stripping, subgrade fill, gas venting installation, FLM installation, barrier protection, layer installation, sediment basin, wetland mitigation, and final completion. Color, three prints of each view, smooth surface, glossy, Size: 8x10 inch, identify on back, negatives, deliver within 3 days of application for payment. (01300)
- d. Test results--written within 48 hours (copy in field office at end of each day)

**Section 01400 QUALITY CONTROL**--This section pertains to quality control testing by the contractor. It includes complying with manufactureres' instructions, specified standards and individual technical specification for each item.

- a. Laboratory service
- b. Field sampling--restore area
- c. Field testing
- d. Reporting-in duplicate, results, and indicating compliance or non-compliance
- e. Scheduling of tests (48 hour prior) advanced communication
- f. Retesting--Report failures and show retests (Do not leave failures open-ended.)
- g. Engineer generally one test for every eight. Will probably do more.

**Section 01410 TESTING LABORATORY SERVICE**--Laboratory reports, 2 copies within 48 hours. should include date issued, project title and number, name of inspector, date and time of sampling, ID of product and specification section., location, type of test, date of test, results, Pass or Failure--(retest). Contractor is to provide incidental labor and facilities, curing of test samples (concrete), and access to site.

**Section 01420 INSPECTION SERVICES**--Note E. Supplementary and Other Testing--test results to be considered shall be certified by an independent testing laboratory acceptable to the Owner.

## SOILS RELATED:

### Section 02223 BACKFILL AND FILL--

- a. Maximum particle size--one half layer thickness (12" lift, max. size is 6"-- screenings can be placed in "Trench" according to Final Design Report, Section 4-6, pg. 4-2, but not under liner cap.)
- b. Structural fill--coarse granular
- c. Density minimum--90%
- d. Backfill for piped utilities compacted in 12' lifts (max. size is 6"). (None)
- e. Subgrade fill--tests: grain size, Modified Proctor, and natural moisture content. Unstable soils require torvane and pocket penetrometer testing. Gradation (ASTM D422), Atterberg Limits (ASTM D4318), Modified Proctor (ASTM D1557) 100 lbs. of each for different soil sources Minimum test per 15000 cy. On-site field moisture and field density tests on 100-foot by 100-foot area (Nuclear) each lift.
- f. Trench backfill--Pipe to be bedded. Care to compact material under pipe haunches. 6" max. lift, therefore max size to be 3". Proper moisture content. Tests for field density and field moisture for 100' of trench per lift (Berms are similar). Discussed nuclear testing in trenches (backscatter etc--not expected to be applicable on this project).
- g. Failures to be reworked, recompact, and retested until passing.
- h. Accuracy of Nuclear Gage to be certified (Calibration)
- i. Tests for subgrade filling should be coded and numbered in consecutive order throughout the entire project.

### Section 02233 SUBANGULAR STONE

- a. Grain size (ASTM D422)
- b. Durability (AASHTO T96)
- c. Carbonate Content (ASTM D3042 substituted for ASTM C586- letter 5-16-95)  
Discussed use of filter material and geotextile.
- d. 100 lb. sample
- e. Placing and compacting (plate vibrator) was discussed. No compaction tests required.

### Section 02235 TOPSOIL

- a. Grain size--(ASTM D422) Nothing larger than 2"
- b. pH--(ASTM D422) 5.8 to 7.6
- c. Organic Content--(ASTM D2974) Minimum of not less than 2.0 % by weight
- d. 1 sample for each 5000 CY (5) a 50 lb sample for the Engineer (1)
- e. Analyze to ascertain % of nitrogen, phosphorus, potash, soluble salt content, organic matter content, and pH value. Use this analysis to determine fertilizer rate of application. see Seeding 02936.

#### Section 02236 BARRIER PROTECTION LAYER

- a. Tolerance minus 0.1 foot and maximum tolerance (slope and elevation)
- b. Maximum particle size 8"
- c. Clear, subangular sand material reference in specifications not applicable since the Contractor has chosen Alternate 1 for his Final Cover Detail. Material for this will come from the Borrow Area.
- d. Control grid (50') for thickness and for break points
- e. Mech. Analysis-D422 1 for each 10,000 cy (in-place)
- f. Density D1557 1 for 10,000 cy (in-place)

#### Section 02240 DRAINAGE LAYER

- a. Tolerance for finished elevation plus 0.5' with no minus tolerance
- b. Minimum thickness 1.0' (50' grid and tops & toes of slopes, break points)
- c. Minimum permeability  $1 \times 10^{-3}$  cm/sec.
- d. No more than 10% by weight shall pass the No. 200 sieve
- e. Maximum particle size is 1 inch
- f. Grain size--ASTM D422 1 for 2000 cy
- g. Permeability--USCOE EM 1110-2-1906 1 for 5,000 cy (in-place)
- h. Relative Density--ASTM D4254 1 test
- i. Carbonate Content--ASTM D3042 less than 15% 1 test
- j. PCPE drainage pipe placed during installation of the drainage layer
- k. Always have a minimum of 12" between FML and the spreading equipment.
- l. Filling operation will proceed from the bottom of slope to the top. Some adjustment may be allowed in the field where minimum grades are encountered.
- j. Smooth drum roller using a single pass over the upper surface (except over piping)

#### Section 02241 GAS VENTING LAYER

- a. 6" soil layer with tolerance of plus 0.5' for finished elevation
- b. Minimum thickness is 0.5'
- c. Minimum permeability shall be  $2 \times 10$  (to the minus 3)
- d. Maximum particle size is 1". No more than 10% passing the #200 sieve
- e. Grain size (ASTM D422) 1 for 2000 cy
- f. Permeability (USCOE EM1110-2-1906) 1 for 5,000 cy
- g. Relative Density (ASTM D4254) 1 test (If same source as Drainage Layer, one test will be sufficient for both items.)
- h. Cover soils, gas collection trenches, PCPE placed, trenches-subangular stone, geotextile, prior to placing material Discuss Gas Vents
- i. Control grid for thickness (50') and break points
- j. Upper surface to be rolled with smooth drum roller (except areas over piping)
- k. Surface to be prepared satisfactory for FML (see 02597 specs for subbase)
- l. Gas trench detail--The contractor desires to run Type A geotextile continuously across the trench with Type B used to envelop the bottom and sides.

Section 02950 WETLAND MITIGATION

- a. Low permeability soil liner--shall not exceed  $1 \times 10^{-7}$  cm/sec.
- b. The moisture-density/permeability relationship for the soil will be established through the lab testing. (5 point comparison test)
- c. Moisture-density performed on 50' grid; at least one for each day of placement.
- d. Initially--
  - Atterberg Limits (ASTM D4318) 1 sample
  - Grain size (ASTM D422) 1 sample
  - Natural Moisture Content (ASTM D221) 1 sample
  - Classification (ASTM D2487) 1 sample
  - Specific Gravity (ASTM D854) 1 sample
  - pH (ASTM D2976) 1 sample (Water) discuss
  - Modified Proctor (ASTM D1557) 1 sample
  - Permeability (USACOE EM 1110-2-1906)--(Wet and Dry Density, Moisture Content and Porosity) 1 sample
- e. One/Acre/Lift--
  - Permeability on Shelby tubes (ASTM D2922/D3017) 1 sample
  - Atterberg Limits (ASTM D4318) 1 sample
  - Gradation (Grain size) (ASTM D422) 1 sample
  - Specific Gravity (Hydraulic Conductivity) (ASTM D854) 1 sample
  - Seal holes with bentonite
- f. Survey drawing-elevations; thickness --50' grid
- g. Maximum lift thickness shall be 12"

Section 03002 FIELD CONCRETE

Tests expected is Compression test , Entrained Air, and Slump as per the specifications.

Section 02272 GABIONS

Tests according to the specifications as source is defined.

Section 02271 STONE RIP RAP

Tests according to the specifications as source is defined.

Section 02595 GEOTEXTILE

Contractor expects to sew seams rather than heat fusion. Will perform according to specification.

## Section 02597 FLEXIBLE MEMBRANE LINERS

### FML Destructive Samples

Fed Ex 4 to 6 PM pick up (Must call by 4:00 pm)-OR to the Colesville Rd. (near Route 17) office prior to 7 PM  
Priority Shipping required to get to Lab by 10 am next day for test results by that afternoon.

Markings on liner--Chenango Contracting will use white. The Engineer will use yellow.

This section was reviewed page by page along with the Poly-flex Manual covering the Dura-Flex VLDPE Specifications. Due to the extensiveness of this, we will not outline these in the minutes.

The contractor will use Electric power equipment. "Columbine" vacuum boxes will be used for non-destructive testing on extrusion welding. Leister hot air blower equipment will be used in conjunction with the extrusion welder. Spark tests will be performed around boots at penetrations of Gas Vents and Monitoring Wells. Random destructive samples will be taken for each 500' of seam. These will require two 1" field samples and 3 12"x15" samples (15" along the seam). 1 sample for archive, one for Engineers Lab and 1 for Contractors Lab. Air pressure testing will be performed for the split hot wedge seams. Pre-weld testing will be performed at daily start-up and every 4 hours for individual welder and machine. Three cutouts for shear and three cutouts for peel are required. These various tests to be monitored by the Engineer. Daily coordination and advance notice will be required for staffing by the Engineer. Methods for dealing with test failures (field and Lab), defects and repairs are outlined in the Poly-flex Manual, pages 17 and 18.

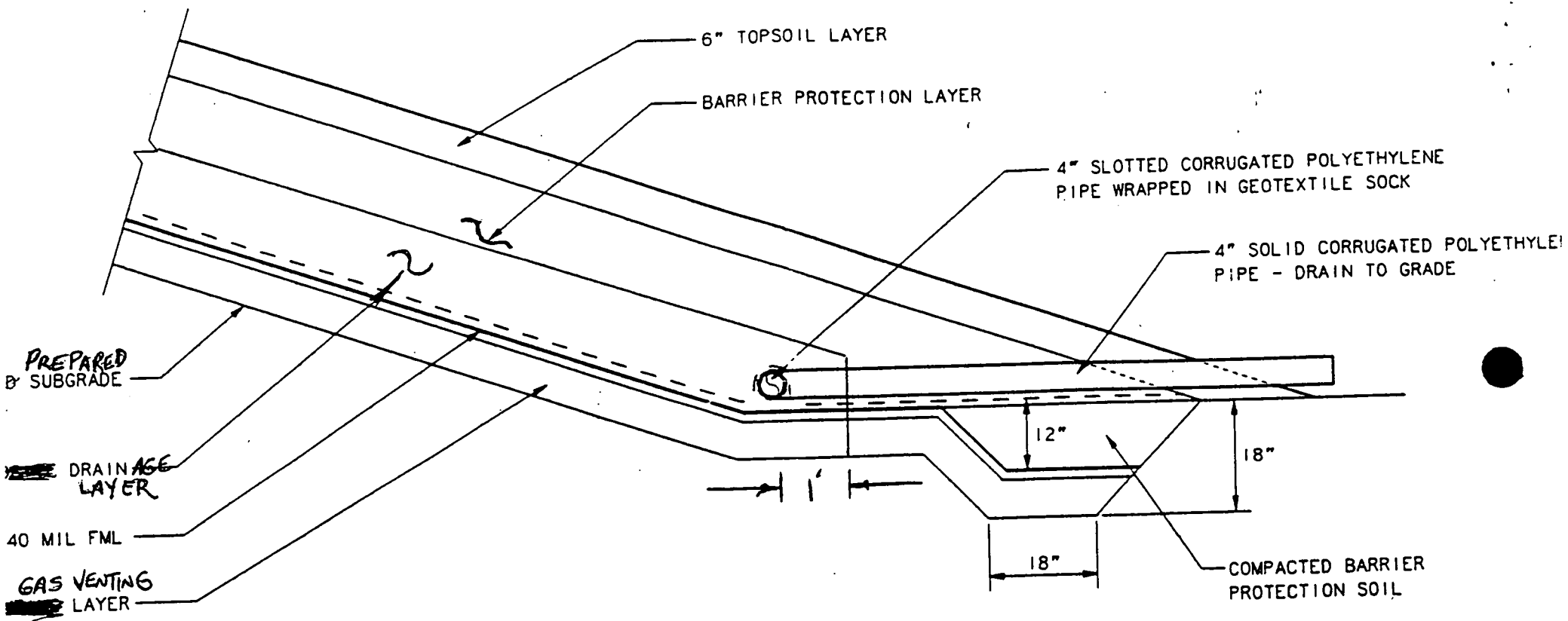
The destructive samples must be cut in a timely manner to allow for scheduled air shipment.

The contractor advises that lifting of rolls will employ an insert with picking devices at the end.

Contractor will attempt to start his daily work at 5:30 am. Project is allowed a 12 hour-six day per week dispensation.

The liner is not to be covered until all specification requirements are met. Information needed for as-builts, documentation, etc. must be determined prior to cover.

Required daily reports, logs, test reports, etc. are to be submitted in a timely manner. Samples of contractor's reporting forms have been submitted.

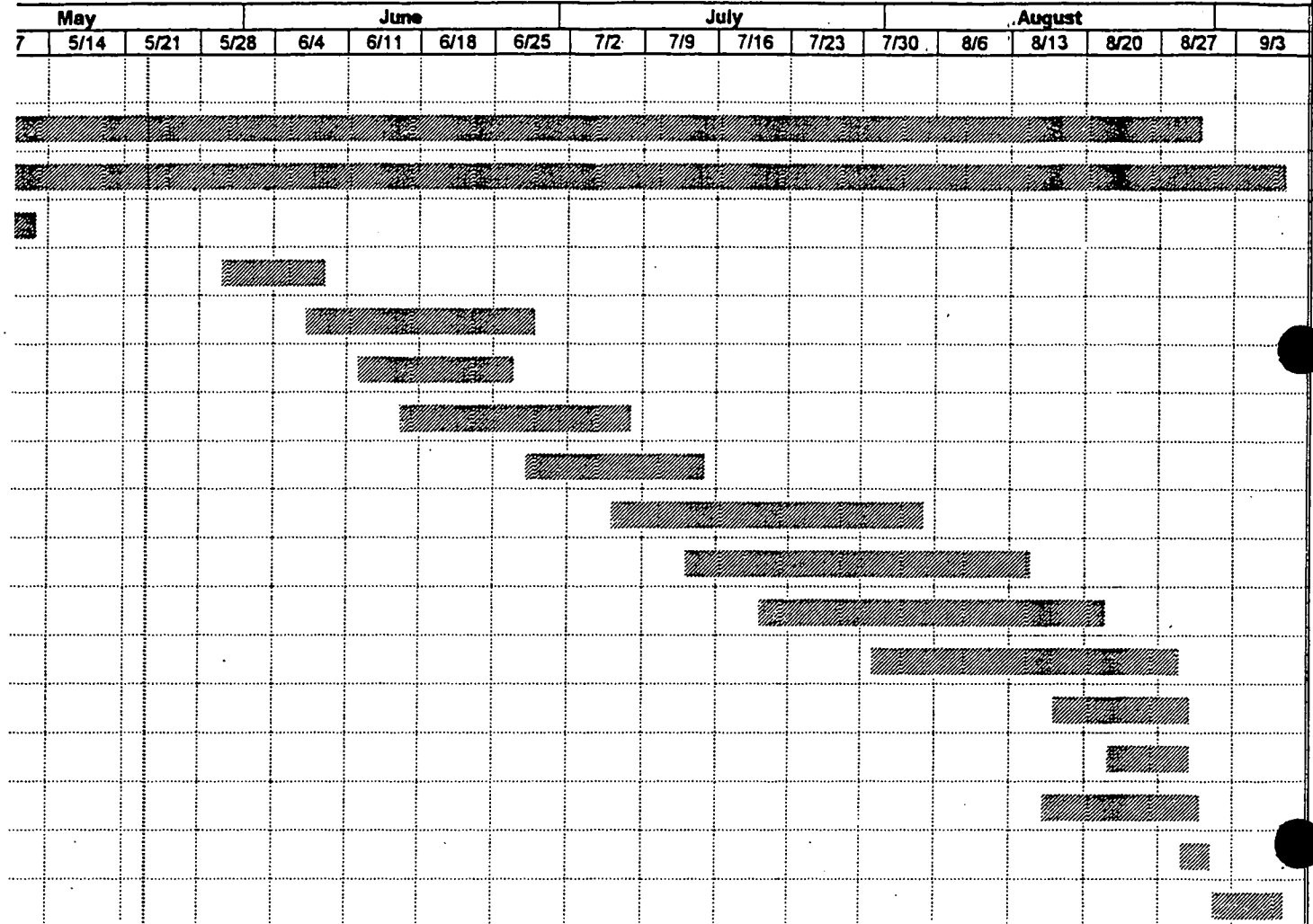


FINAL COVER ANCHOR DETAIL FOR  
SLOPES LESS THAN 4 TO 1  
 SCALE: 1"=2'

CS00047



OPOSED CONSTRUCTION SCHEDULE  
 COLESVILLE LANDFILL CLOSURE  
 TUG HILL CONSTRUCTION, INC.



Milestone



Rolled Up Task

Rolled Up Progress



Summary



Rolled Up Milestone





## Engineers, Inc.

1099 Airport Boulevard, North Syracuse, New York 13212  
(315) 455-2000 Fax: (315) 455-9667

MEMO TO: Those in attendance

FROM: Richard Lockwood, Resident Project Representative

RE: Broome County Division of Solid Waste Management and GAF  
Corporation--- Closure Action of the Broome County Colesville Landfill  
Remedial Design

SUBJECT: Progress Meeting No. 2

FILE: 157.008

DATE: May 10, 1995

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### ATTENDEES:

Ray L. Standish, P.E.	Broome County	607-778-2286
Craig M Lapinsky	NYSDEC	518-457-9280
John A. May	NYSDEC	315-426-7551
Jeff Kellogg	Tug Hill Construction Co., Inc.	315-773-4011
Mark D. Boss	Tug Hill Construction Co., Inc.	315-773-4011
Richard Clark	Tug Hill Construction Co., Inc.	315-773-4011
Darren M. Fuller	Tug Hill Construction Co., Inc.	315-773-4011
Michael M. Buzzell	Tug Hill Construction Co., Inc.	315-773-4011
James Dickens	C&S Engineers, Inc.	315-455-2000
Richard Lockwood	C&S Engineers, Inc.	315-455-2000

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Progress Meeting No. 2 for the above referenced project was held at 10:30 am, May 10, 1995 at the Resident Project Representative's field office. The following is a summary of items discussed. In the event the following does not accurately reflect the sum and substance of what transpired at this meeting, please provide an addendum or corrections immediately.

There were no comments for the Previous Meeting Minutes. Continuing discussions on some of the subjects are noted within. The next meeting is scheduled for Wednesday, May 24, 1995 at 10:00 am at the RPR's field office. Representatives of the USEPA are expected to be present. The meeting will also consider the QA/QC requirements. The persons directly responsible for QA/QC for soils, FML, testing laboratory services, and the full time on-site control person for placing the liner are expected to be present.

Work accomplished to date is:

1. Setting up the field offices--NYSEG connected electrical service on 4-28-95.
2. Survey--The grid and base line have been laid out on the landfill. The Clearing and Grubbing limits are marked. The perimeter fence and edge of cap have been staked. The contractor has submitted Lafave, White, & McGiven, PC, 133 Commercial Street, Theresa, NY 13691 (315-628-4414)---Darren Morgan, Licensed Land Surveyor (No.49479) for field engineering.
3. Clearing--The contractor has begun to chip trees and brush from his clearing operations. Clearing debris is placed in the trench along the South side of the landfill as noted in the preconstruction meeting. The clearing limits have been reviewed for payment designation by the Contractor's Superintendant and the RPR. The contractor will provide survey data and computer print out information for these points with area computations to established acreage of clearing and grubbing.
4. FML--The Contractor has prepared a stockpile area for storage of the liner, using sand for a base. Delivery of a portion (48 rolls) of the Flexible Membrane Liner has been made. Rolls are wrapped with blue plastic cover.
5. Erosion and sedimentation control--Work on silt fence and check dams with hay bales, and the diversion channel around the Borrow Area continues. The sediment basin needs to be installed. The contractor will initially provide one at the designated area. The complete final installation is pending resolution of this and the wetland mitigation as noted later in these minutes.
6. 36" Class III RCP has been delivered to the site (300 L.F.).
7. Off-site Borrow Source-- A copy of the Mining Permit for the Gravel, Sand, and Topsoil Borrow Source near Dyers Flat Road has been given to the RPR. Topsoil has been stripped. Preparation is underway to process material using screening equipment. A haul road from the Gravel Borrow Area to Plains Road has been constructed. To distinguish the on-site Borrow Area from this off-site source, we will refer to the off-site source as "Gravel Borrow". Plains Road will be used by the contractor for over the road hauling. The contractor will strip and stockpile the topsoil from the on-site Borrow Area and use it for restoration of the wetlands mitigation and finished slopes of the borrow area. Topsoil from the Gravel Borrow is intended for the final landfill cover.

The Final Access Roads are noted on the plans. Drainage berms in two locations will run across the designated road. Some provision of piping will be needed to allow a smooth, continuous grade on the road. The 18" RCP designated for the project may have its location adjusted to assist in this drainage. The contractor does not anticipate placing this soon.

Health and Safety Plan --(Copies are to be distributed to all employees.) This, along with the Community Protection Plan and the Emergency Contingency Plan has been forwarded to the NYSDEC and the State Department of Health for review and comment. These comments have been given to the contractor and he will respond to these. The DOH & DEC will review and return their assessment of these as soon as possible. No intrusive work is to be started on the landfill until DOH is satisfied.

The Erosion and Sedimentation Plan is now complete with "No exception taken"

Overtime dispensation has been approved by the NYSDOL for six-12 hour days. Effective dates are from April 24, 1995 to November 15, 1995.

The necessary posting as required by the contract has not been posted. This will be done shortly.

Monroe Tree Service should be submitted as a subcontractor.

Monitoring Test wells-- A formal change order will be forthcoming for extending the wells.

Shop Drawings and submittals: A status sheet is attached to these minutes.

The Engineer's letter to the contractor relative to his proposed grading plan and the Wetlands Mitigation was discussed. This had to do with the limited amount of cutting into the existing soil of the landfill and the need to construct a wetland. The contractor will present his position to this in the form of a letter.

The amount of soil expected to be taken from the Borrow Area was discussed. The following is noted to supplement the minutes of Progress Meeting No. 1 with regards to the statement made in "Sediment Basin" on page 3. The breakdown of amount of Borrow proposed in the contract documents is:

65,000 CY for fill to subgrade

50,000 CY for potential subsidence of landfill

46,000 CY for Alternate No. 1 (Barrier Protection Layer)

46,000 CY additional for Alternate 2 (Barrier Protection Layer)

161,000 CY If Alternate 1 is selected, which is the case.

This taken from Section 4.0 Landfill Design. It is noteworthy that this section discusses that screening is anticipated for the barrier material and the usable fraction of borrowed soil will be reduced by 50%. It further notes that screenings could be used in the subgrade fill.

Carbonate Testing--The contractor requested that the test required by ASTM C586 be substituted with test designated by ASTM D3042. A letter relative to this and the angular stone will clarify this in the near future.

The contractor's attention was called to the requirement of the maximum particle size for Items 9.1 Drainage Layer and 6.1 Gas Vent Layer is 1". This is different than a specification requiring 100 % passing a 1" screen.

The contractor will use AGP Laboratories for geomembrane testing. The Engineer will use Precision Laboratories. Arrangements were made to bill the contractor for the Engineer's shipments. This will be reimbursed to the contractor with a new item line on the payment voucher at the conclusion of the work. Copies of the shipment invoices will be progressively presented to the contractor for bookkeeping purposes.

Certifications for FML and the 36" RCP deliveries are being sent to the Engineer.

The contractor may wish to get Proctor samples from existing borrow sources soon so as to be ready for Moisture-Density testing.

The QA/QC grid requirements for the Wetland Mitigation Areas for survey and testing is 50' x 50'.

Work hours at the present time on the contract is generally 7:00 am to 5:30 pm.

The contractor surveyors have made a Bench run based on the six Bench Marks on Monitoring Wells as presented by the designer. Results have shown that 2 of these Bench Marks are outliers and will be discounted. Other bench marks are within .03 and .04 feet of the one at the West end of the project. This one is on Monitoring Well W11-D with an elevation of 1050.30. The location of this is in existing natural soil and appears less likely to be subject to frost or settlement action. It was agreed that W11-D would be used as a basis for vertical control on the project. Other TBM's will be established throughout the perimeter of the landfill area for establishing and checking grades.

Gas venting system will involve encountering some waste material in the land fill. This waste will be placed within the landfill and must be covered with 6" fill on a daily basis. Such work shall have air monitoring on a regular basis and PPE Level established appropriately. With reference to the contractor's grading plan and cutting into the existing soil, any cutting into waste will not be permitted. Any encounter with the waste will be cause to discontinue operation until such time as levels of protection can be determined, and plan for further work be assessed. Adjusting subgrade may be necessary to assure no cutting into waste.

Monitor  
Health & Safety Mike Bogart  
Monitor  
Deal with Health & Safety Plan 4

## SHOP DRAWING SUBMITTAL LOG

[illegible]

CS00036

09-May-95

New York State Department of Environmental Conservation  
50 Wolf Road, Albany, New York 12233-7010

Post-It™ brand transmittal memo 7671		# of pages • 4
To	James Dickens	
Co.	Craig Lapinski	
Dept.	Phone # 457-9280	
Fax # (315) 455-9667	Fax # (518) 457-7743	

MAY 05 1995

Michael Zagata  
Commissioner

Mr. James A. Dickens  
C & S Engineers, Inc.  
1099 Airport Boulevard  
North Syracuse, New York 13212

Dear Mr. Dickens:

Re: Colesville Landfill (Site No. 7-04-013)  
Health and Safety Plan

The Department of Environmental Conservation and Department of Health have reviewed the Health and Safety Plan for Tug Hill Construction, Inc. at the above referenced site and offers the following comments:

1. Since the generation of fugitive dust must be prevented, the implementation of real-time dust monitoring program according to DEC TAGM 4031 is necessary. The action level is established at 150 mcg/m<sup>3</sup> over an integrated period not to exceed 15 min.
2. It is stated in the Health and Safety Procedure that, "If the Health and Safety Manager, relying on observations and odor, determines that a condition exists in which workers may be exposed to airborne hazardous materials, monitoring will be performed to ensure appropriate personal protective measures are employed during site activities." It is not acceptable to rely on visual or olfactory evidence to determine the use of protective gear. Real time air monitoring, for Volatile Organic Compounds and particulate levels at the perimeter of the work area is necessary during any intrusive work (i.e., gas vent installation, monitoring well decommissioning, etc. . .). Volatile organic compounds must be monitored at the downwind perimeter of the work zone on a continuous basis. If total organic vapor levels exceed 5 ppm above background, work activities must be halted and monitoring continued under the provisions of a Vapor Emission Response Plan. Enclosed are guidelines which may be used in developing such a plan. This is generic in nature and should be modified to be more site specific.
3. We request literature on the Thermo Electron Photoionization Detector, which will be utilized to monitor the volatile organic compounds. This

CS03748

Mr. James A. Dickens

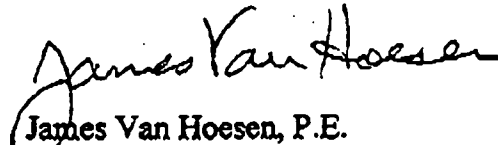
Page 2

will enable us to have an overview of the operation, technical description, capability and detection limits of this device.

- 4) The contractor should state the action level which will require site personnel to upgrade from level D PPE to level C. This is briefly addressed in section 12.2(II) but no specifics are mentioned.
- 5) The Safety and Health Manager should conduct daily meetings at the site prior to work to ensure proper safety procedures will be used that day.

If you have any questions, please call Mr. Craig Lapinski at (518) 457-9280.

Sincerely,



James Van Hoesen, P.E.  
Chief, Central Field Services Section  
Bureau of Construction Services  
Div. of Hazardous Waste Remediation

Enc.

cc: R. Standish - Broome County  
C. Branagh - NYSDEC, Region 7  
G. Litwin - NYSDOH

CS03749



## Engineers, Inc.

1099 Airport Boulevard, North Syracuse, New York 13212  
(315) 455-2000 Fax: (315) 455-9667

MEMO TO: Those in attendance

FROM: Richard Lockwood, Resident Project Representative

RE: Broome County Division of Solid Waste Management and GAF Corporation  
Closure Action of the Broome County Colesville Landfill Remedial Design

SUBJECT: Preconstruction Meeting

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FILE: 157.008

DATE: April 11, 1995

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### ATTENDEES:

E

Ray L. Standish, P.E.	Broome County	607-778-2286
Vincente Alfonso	NYSDEC BMWBP	518-457-0749
Craig M. Lapinski	NYSDEC	518-457-9280
John A. May	NYSDEC	315-426-7551
Mark D. Boss	Tughill Construction Co., Inc.	315-773-4011
Richard Clark	Tughill Construction Co., Inc.	315-773-4011
Darren M. Fuller	Tughill Construction Co., Inc.	315-773-4011
Michael M. Buzzell	Tughill Construction Co., Inc.	315-773-4011
James Dickens	C&S Engineers, Inc.	315-455-2000
Richard Lockwood	C&S Engineers, Inc.	315-455-2000

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A preconstruction meeting for the above referenced project was held at 1:00 pm, April 11, 1995 at the Broome County Office Building. The following is a summary of items discussed. In the event the following does not accurately reflect the sum and substance of what transpired at this meeting, please provide an addendum or corrections immediately.

### PROJECT DESCRIPTION

Title: Broome County Division of Solid Waste Management and GAF Corporation  
Closure Action of the Broome County Colesville Landfill Remedial Design

The work includes clearing, grubbing, excavation and disposal of unsuitable material, provide dewatering as necessary, backfill, grading, site cleanup and restoration, construct landfill cap, drainage features, maintain drainage and erosion control, perform site survey, quality assurance, quality control, and preparation of record drawings. This site is designated by NYSDEC as a Class II site.

#### STATUS OF CONTRACT

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1. The contract has been awarded to Tug Hill Constructors, Inc., P.O. Box 158, Route 3, Felts Mill, New York 13638, (315) 773-4011
  2. The contract has been signed by the Contractor and has been executed by the Owner on March 7, 1995.
  3. Bonds and insurance have been issued by the Contractor to the Owner and are acceptable. Each subcontractor shall maintain the same kinds and amounts of insurance as the Prime. The Prime shall maintain a copy of all subcontractors' proofs of insurance and make them available to the Owner as requested.  
Bid bond \_\_\_\_\_  
Performance Bond \_\_\_\_\_  
Payment Bond \_\_\_\_\_  
Insurance \_\_\_\_\_

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The Engineer requested a copy of these along with a copy of the Owner-Contractor Agreement.

4. Notice to proceed, pending action by the Broome County legislature on April 20, 1995, to be issued by the Owner, to facilitate a tentative start date of April 24, 1995.
5. The contractor shall submit a list of Subcontractors and Suppliers to be used on the project to the Engineer for review and approval by the Owner. Approval is required prior to being utilized on the project.
6. List of products, Schedule of Values, and construction work schedule are to meet the requirements of Sections 01300.
7. Pre-bid meeting was held on September 16, 1994.
8. Letting date was on October 12, 1994.

## COMMENCEMENT AND COMPLETION

1. The contractor is reminded that the time of completion is of the essence. Work shall commence on the date stated in the Notice to Proceed. The time of Total Completion for the project is 200 calendar days (SFG-8).
2. In the event the Contractor exceeds the contract time as specified, including all extensions and adjustments as provided by the Standard Form Construction Agreement, the contract allows for the assessment of liquidated damages in the amount of \$760 per consecutive calendar day (SFG-14 and SGC-1).

## PROJECT MANAGEMENT

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### 1. RELATIONSHIPS

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- a. Owner has an EQBA Grant from NYSDEC--Title III (Environmental Quality Bond Act) Reimbursement Program.
- b. Owner & Engineer will have an Inspection Agreement.
- c. Owner and Contractor have a Construction Contract.
- d. The Owner is the County of Broome, New York, and the GAF Corporation, Wayne, New Jersey.
- e. NYSDEC is providing partial funding and will inspect work; However NYSDEC will not be a party to this contract.

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2. ENGINEER & HIS AUTHORITY - The engineer for this project is C&S Engineers, Inc. The Project Manager is James Dickens (315) 455-2000. The Resident Project Representative is Richard Lockwood, who with his staff will be the Owner's representative on the project site and through whom all project business is to be conducted. The home office for C&S Engineer's, Inc. is located at 1099 Airport Boulevard, North Syracuse, New York, 13212, and the telephone number is 315-455-2000. The on site field office telephone number is (607) 693-1599 and FAX is (607) 693-1488. See (GC-6).

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3. CONTRACTOR'S REPRESENTATIVE - The Contractor's Project Manager is Mark D. Boss, and Project Site Superintendent is Richard Clark, who will supervise the construction and shall be authorized to receive and fulfill instructions from the Engineer. The Contractor's home office phone number is (315) 773-4011 and home FAX is (315) 773-4175. His project site telephone number is (607) 693-1616 and his on site FAX is (607) 693-1606.

Contractor's Emergency Personnel & Telephone Numbers:

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The 911 location for on site field offices is 1538 East Windsor Road.

4. The Owner's Project Representative will be Mr. Ray Standish, P.E., Deputy for Engineering Services. His office is located at Broome County Division of Solid Waste Management, Edward L. Crawford County Office Building, 44 Hawley Street, P.O. Box 1766, Binghamton, New York 13902. Telephone Number is (607) 778-2286/2250. Fax is (607) 778-2395.
5. SUBCONTRACTORS AND THEIR RELATIONSHIP - The Owner and the Engineer will not deal directly with Subcontractors. All business shall be conducted through the Prime Contractor who shall also be represented on the project site whenever any Subcontractor is performing work.

#### **M** EQUAL EMPLOYMENT OPPORTUNITY (GC-36 and SGC-9)

1. Addendum to MBE Policy--Good faith effort to contract at least 15% of dollar value to MBE and 5% of dollar value to WBE--Good faith effort to employ minorities and women for at least 10% and 10% respectively of the work force hours--Reporting according to the requirements of Title 1 of Article 52 of the EQBA. (MBE-1 addendum) See also reporting requirements--MBE-11 at 30% completion point. It was agreed that the actual reporting take place with Form 101, a Quarterly report. This report to be submitted by the contractor by the 7<sup>th</sup> of the month and to be in the office of NYSDEC no later than the 15<sup>th</sup> of the month following the quarter. The report is to include the work force of any and all subcontractors used during the quarter. The contractor will address a letter to NYSDEC to review the WBE policy in that the prime is a WBE.
2. The County MBE requirements (MBE-1) is 3.5%, and shall be met unless otherwise approved by the Owner. The same goals applies to all Subcontractors and shall be in their contracts by the Prime. The Contractor has submitted his plan.

#### **M** LABOR REQUIREMENTS (GC-35)

1. The Contractor shall post required State Labor Department posters/notices in a conspicuous place at the job site (e.g. Workman's Compensation, Company Equal Employment Opportunity Policy, State Wage Rates, etc.).
2. The contractor shall pay the minimum wage in accordance with the appropriate State Wage rate.
3. Copies of Certified Weekly Payrolls shall be submitted directly to the Resident Project Representative on a weekly basis so as to be available on site for NYSDOL review. Each payroll must provide each persons name, Social Security Number, address, classification, rate of pay, hours worked, and deductions made (WH-347 format). They must be signed. How the fringe benefits are paid is to be noted. If benefits are paid to

an approved plan, a copy of this plan is requested by the Resident Engineer along with a letter from the Contractor showing that the plan meets the requirements of the contract. The contractor indicated that no plan will be used and that the fringe benefits will be paid directly to the employee. C&S Engineers, Inc. will not be responsible for payroll review or to make wage rate investigations.

4. All the Contractor's Subcontractors are under the same obligations as the Prime.

#### SAFETY DURING CONSTRUCTION

- M
1. The Contractor was advised that all his personnel and Subcontractors must be conscious of safety. The contractor is responsible to maintain a safe work place and to monitor working conditions at all times. Personnel are to have had the 40 hour Hazardous Waste Operation Training Program.
2. Health and Safety Provisions are part of the contract (Section 01501 and SGC-4).
3. Health and Safety Plan must be submitted and approved.
- E
4. Community Protection Plan must be submitted and approved.
5. These two plans will be subject to a continuous review. The intent being that they will continually evolve as site conditions and knowledge of the site work activities develop.
- M
6. Site safety plan is to be distributed to all personnel and discussed with them prior to excavation, scraping, and grading of soils.
7. Section 01500 1.7 notes First-Aid Facilities and Accidents.
8. Contractor is to have an Emergency Contingency Plan. Also must designate emergency coordinators with at least one at the site during work hours. See Section 8

O

#### ENVIRONMENTAL

1. Section 01502 considers the environmental protection for the project.
2. Prior to commencement of the work, the contractor shall submit in writing his plans for implementing the section for environmental protection.
3. Also prior to initiation of work, the contractor shall submit for approval a detailed erosion and sedimentation plan.
4. Section 01500 discusses construction facilities and temporary controls relative to environmental protection.

5. Reference documents are noted at Section 01090, 1.5, relative to NYSDEC Part 360 (5-28-91), NYSDOT Specifications (1986), and to NYS Guidelines for Urban Erosion and Sediment Control (1991).
6. On site work must be kept within Broome County Property.
7. Wetlands Mitigation, Item 23, section 01025 and Addendum No. 5 and Appendix A, list requirements. The Contractor expressed that the Limit of Wetland Mitigation is noted as "sediment basin". Contract Plans, Sheet No. 4, details the limit to be the Contour of 1058. Wetlands Mitigation must be maintained to this limit regardless of the borrow taken from the designated Borrow Area.
- M 8. Permits: Mining permits will be required for soil sources offsite. No mining permit will be required for the on site designated borrow area (02223 2.2 B).
9. Test wells--Mark these in the field. NYSDEC will immediately pursue a determination resolving the disposition of these.

#### E CONSTRUCTION CONTROL

1. The Contractor is required to submit a written Construction Schedule in duplicate within 5 days after date of Owner-Contractor Agreement for review. The schedule shall be in a format as specified (01300 and 01311). An update schedule was presented at the meeting.
- M 2. A complete listing of all submittals is required (01300) and has been presented by the contractor and updated to April 7, 1995. Class III RCP not listed todate.
3. Quality control procedures, sampling, and testing--Manufacturer's certifications and test results where specified--shall be the basis for acceptance for materials along with daily field measurements. Sections 01050 1.3, 1.9; 01400; 01410; 01420; and Section 7.0 considers QA/QC effort. Contractors Testing Lab and Inspection Services is PSI, Professional Services, Inc. Laboratory reports and test results are to be provided on a timely basis. A progress meeting should be scheduled early on to go thoroughly over all requirements of QA/QC.
- O 4. Shop drawing procedures are outlined in Sec 01340, Sec 01300 and GC-11, 12. Shop drawings and manufacturer's certifications shall be submitted for all materials incorporated in the project. The Contractor is to identify all submittals and approval must be obtained from the Engineer prior to the start of any work item. No estimates shall be prepared for payment of work done on items lacking such submittals and approvals.

5. Shop drawings are to be mailed with a transmittal letter to C & S Engineer's home office, Attn: Mr. James Dickens. The Contractor shall submit a minimum of five (5) copies. Also 5 copies of product data.
- two for the Owner
  - two for C&S
  - one (or more if desired) for return to the Contractor
6. Manufacturer's certifications as materials are delivered, are to be given to the Resident Project Representative in the field office.
7. Bi-weekly project meetings are required. A tentative meeting time of Wednesday at 10:00 AM was established. First field progress meeting will be scheduled for April 26, 1995. Attendance of the meetings by the Contractor's Superintendent, major Subcontractors and suppliers as appropriate, Owner, and Engineer, is required.
8. The Engineer's field office is to be in place--fully equipped prior to start of work. Two incoming telephone lines are required, one for telephone with answering service and the other for fax machine. Daily janitorial service is to be provided (01590).
9. Construction photographs is required by the contractor as per schedule in section 01300 1.10.
10. The contractor submitted a 12 hour, 6 day a week dispensation request for overtime. This was discussed due to the contract provisions for no overtime and no work on Saturday and Sunday. Concern about this was the EQBA Grant not permitting premium time payment to the Resident Project Representative. The RPR reimbursement rate for overtime is straight time. Therefore Dispensation requested was recommended and will be forwarded to the NYSDOL. The Engineer is required to be at the site during the work hours.

#### CONTRACTOR PAYMENT (AP-1, GC-19, SGC-10, and Section 01025)

1. Work completed shall be measured in place on a daily basis and payment estimates prepared monthly as noted in sec. 01025. Payment will be subject to revision of work schedule if necessary, submittal of the appropriate plans, sufficient survey work performed to verify quantities, presentation of required construction photograph, tabulation of principal items, submittals of shop drawings, certifications, payrolls, etc. to the Resident Project Representative. Reference is made to section 01027 (Does not seem to be part of the proposal) See Section Application for Payment, AP-1. Schedule for close out dates for monthly payments is the last Saturday of the month. Must be reviewed by the Engineer and to Broome County by the 10<sup>th</sup> of the month for processing with payment to the contractor in about 20 days.

2. Process requests for substitutions and change orders through the Engineer. Any Change Orders that may be required shall be prepared by the Engineer and must be approved by the Owner prior to the performance of work (01041 and SGC-5).
3. The contractor has had liner agreement since last October with his supplier. He must take delivery of material this week or lose out on this. This material will not be manufactured in the future. Proposal allows for partial payment on deliveries--criteria for paid invoices, certifications, etc. must be met. The contractor expects to check his agreement with the County, take delivery to assure availability of the material, and make a partial payment request by the end of this month. The contractor advises that if this shipment is not fulfilled that the cost could be 3 times as much which would greatly increase the cost of the project and cause potential delay in the progress of the work.

M

#### CONTRACT CLOSEOUT (Section 01700 and 01041 1.7; GC-14)

Written certification that documents have been reviewed, work has been inspected, and complete and ready for Engineer's inspection. Provide submittals. Submit final application for payment, etc. Execute final cleaning. Submit project record documents.

E

Discussed schedule and Contractor's plan of operation.

Erosion control devices.

Sediment Basin first prior to clearing.

M

Install water diversion channel above clearing limit of Borrow Area.

No ROW Easement expected--documents say to keep work within ROW.

Permanent drainage--Class III RCP culverts and ditch linings.

O

Sources of sand and other granular material--must meet gradation, quality and permeability criteria. Contractor will use off-site source. He is pursuing a mining permit. No mining permit is required for on-site designated borrow area.

Contractor may chip trees, brush, and stumps--will dispose of on site possibly in swale area along south side of landfill or back slope of Borrow area. This disposal will not take place in the structural fill area or other areas that are not to be disturbed or in any designated wetlands. Disposal must take place on County property. This will be reviewed later in the field.

Prior to start work requirements.

Detailed Work Schedule.

Sedimentary and Erosion Control Plan (will review with NYSDEC).

Health and Safety Plan - copy to be sent directly to NYSDEC.

Community Protection Plan.

Emergency Contingency Plan.

First Aid facilities.

Survey.

Test Monitoring Wells are not to be disturbed until reviewed by NYSDEC and appropriate measures taken to abandon, extend or preserve, etc.

## M SITE MOBILIZATION CONFERENCE

1. Conference to be held at site.

2. Attendance required: Owner, Engineer, Special Consultants, and Contractor Superintendent, and major subcontractors.

3. AGENDA

Use of premises by Owner and Contractor (01010 pg. 2 Staging and stockpile areas is to be approved by the Owner).

Owner's requirements and partial occupancy (01010).

Construction facilities and controls provided by the Owner (01500).

Temporary Utilities provided by Owner, if any. (01500).

Survey layout (Section 01025 B. Item 2 and 01050).

Security and Housekeeping procedures (01500, 01010 M&P of T, SGC-3).

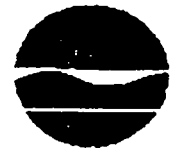
Schedules (01041 1.5).

Procedures for Testing (SGC-3; Sections 01201 and 01300 1.11 Test Results).

Procedures for Maintaining record documents (Section 01050 SGC-5 GC-14).

copy: To all those in attendance

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
58 Wolf Road, Albany, New York 12233



Langdon Marsh  
Commissioner

DEC 16 1994

Mr. David Decker  
Metcalf & Eddy of New York, Inc.  
P.O. Box 357  
Rensselaer, New York 12144

Post-it* Fax Note	7571	Date	12/16	# of pages	2
To	Dave Decker		From	Craig Lapinski	
Co./Dept.	M & E		On	NYS DEL	
Phone #			Phone #	457-9280	
Fax #	427-5921		Fax #		

Dear Mr. Decker:

Re: Engineering Agreement  
Colesville Landfill  
Site No. 7-04-010

In response to your November 17, 1994 letter and recent telephone conversation with Craig Lapinski of this Department, this letter is written to address the remaining issues regarding the engineering agreement between Metcalf & Eddy (M&E) and Broome County at the above referenced site. These issues are as follows:

1. An updated organizational chart with the staff names and corresponding resumes need to be submitted to the Department for review.
2. Throughout the document and in your various cover letters, M&E states that construction "observers" will be overseeing the day to day activities at the site. However, the Department requires inspection services for Title 3 grant contracts. Therefore, the word "observer" needs to be changed to "inspector".
3. The construction coordinator, as specified in the Final Engineering Design report, does not need to be a NYS Professional Engineer.
4. There should be two inspectors working through the duration of the project. One inspector, the Construction Coordinator, is the full time Geotechnical inspector that is at the site every day. The 1,248 hours budgeted for this person appears reasonable. The second inspector, the Geosynthetic Construction Inspector is only needed during the installation of the landfill liner to inspect proper placement and seaming. For a 35 acre landfill, this inspector is required for approximately 70 days. Thus, the total hours budgeted for CO/GT on the cost estimate should be reduced from 1,248 hours to 560 hours.

1413

5. The contractor, under state law, cannot work more than eight hours a day with out receiving overtime pay. Since overtime is not allowed for title III work, 10 hour days should not be budgeted. Please adjust all schedules accordingly.
6. Contract Award/Notice to Proceed is listed two separate times on the cost estimate. An explanation should be provided for this item being budgeted twice.

Once the above comments have been addressed, please send one complete final engineering agreement to my attention for review. Without an approved agreement, the County cannot be reimbursed for M&E services on the Colesville project.

If there are any questions, please call Craig Lapinski at 457-9285.

Sincerely,



James Van Hoesen, P.E.  
Chief, Central Field Services Section  
Bureau of Construction Services  
Div. of Hazardous Waste Remediation

cc: R. Standish - Broome County  
C. Branagh - NYSDEC, Region 7  
T. Grippen - Broome County

CLAs

bcc: J. Van Hoesen  
R. Cozzy  
C. Lapinski  
Dayfile

TOTAL P.02

1414



An Air & Water Technologies Company

**FOR IMMEDIATE DELIVERY**

P.O. BOX 1500  
SOMERVILLE, NEW JERSEY 08876

FAX NUMBER (908) 685-6103  
VERIFICATION NUMBER (908) 685-6062

**TELEFAX MESSAGE BEING SENT BY:**

*Diana Trimboli for GREG PIKUL*

DATE 12/19

FAX NUMBER 607-778-2395

COMPANY Broome Cty

TO Ray Standish

TOTAL PAGE BEING TRANSMITTED (including cover) 3

MESSAGE \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

☐ Please call upon receipt

☐ As requested

☒ For review and comment

☐ For your information/use

charge# \_\_\_\_\_

1415



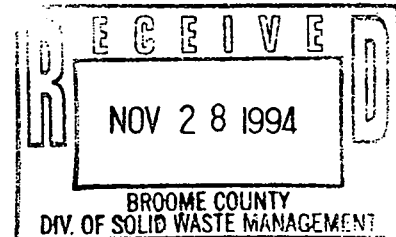
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
50 Wolf Road, Albany, New York 12233



*Langdon Marsh*  
**Commissioner**

**NOV 23 1994**

Ray L. Standish, P.E.  
Broome County Division of Solid  
Waste Management  
Broome County Office Building  
Government Plaza  
Box 1766  
Binghamton, New York 13902



Dear Mr. Standish:

Re: Addendum #1-6 to Contract Documents  
for Colesville Landfill Closure Action  
Site #7-04-010

We have reviewed Addenda #1-6 to the above referenced contract and found them acceptable. I enclosed an approved copy of each Addenda for your records.

If you have any questions, please call Craig Lapinski at, (518) 457-9280.

Sincerely,

James Van Hoesen, P.E.  
Chief, Central Field Services Section  
Bureau of Construction Services  
Div. of Hazardous Waste Remediation

Enclosure

cc: w/enc. C. Branagh - NYSDEC, Region 7  
R. Cozzy, NYSDEC,  
A. Carlson, NYSDOH  
D. Decker, M&E  
w/o enc. T. Grippen - Broome County



An Air & Water Technologies Company

(VIA FACSIMILE TRANSMISSION)

September 22, 1994

Re: Broome County Colesville Landfill Closure Action

To: All Prospective Bidders/Attendees at the  
Mandatory Pre-Bid Meeting of September 16, 1994

Attached are the questions and corresponding answers as were posed by the attendees at the Mandatory Pre-Bid Meeting for the Colesville Landfill Closure Action Project. These questions and answers should be incorporated into your proposal/bid preparation as appropriate.

Very truly yours,

METCALF & EDDY

David J. Decker, P.E.  
Project Principal

Enclosure (Question & Answers - BROOME\PREBID.02) Addendum #1

c: Ray Standish, P.E.  
Broome County Division of Solid Waste

BROOME\PREBID.03

MANDATORY PRE-BID MEETING

SEPTEMBER 16, 1994

COLESVILLE LANDFILL REMEDIAL ACTION & LANDFILL CLOSURE

QUESTIONS/COMMENTS BY CONTRACTOR/BIDDERS

1. Q. Up until what date will Bidder/Contractor questions be accepted by Broome County?

A. Bidders/Contractors may submit questions in writing (only) up to and including 10 business days prior to the bid due date. Accordingly, the last day for questions will be September 22, 1994. (This announcement was also made to all attendees at the time of the pre-bid meeting.)

2. Q. Must the performance bond be the same "form" as that included in the bid specification package, or may so called standard form "AIA" substitutes be used?

A. Only the form of performance bond included in the bid package will be accepted. Bidders using other forms of bond will be considered non-responsive.

3. Q. What level of (PPE) protective equipment will be minimum for use by the contractors on this job?

A. Section 01501 of the General Conditions, covering Health & Safety Provisions, paragraph E (8) addresses the question of Levels of Protective Equipment to be worn during operations. As indicated, the Contractor is to prepare a site specific Health & Safety Plan, which will specify therein, action levels for successive levels of protection dependent upon monitoring results encountered in the breathing zone.

4. Q. What is the DEC (or EPA) classification for this site?

A. This site is designated as a Class II site.

5. Q. The specifications call for quantities of broken or crushed glass to be placed in an around the gas venting system. Will the quantities as projected be available and where can they be obtained?

A. Quantities of recycled glass will be available at the Broome County MRF (Materials Recycling Facility). Contractors/bidders should contact that facility as to specifics of obtaining same, e.g. hours of operations, costs of material, processing etc. The points of contact at the MRF are Bob Adams and/or Bob Taylor. They can be reached by calling (607) 724-3805.

6. Q. What is the anticipated time frame of notification to the apparent low bidder?

A. It is planned that the apparent low bidder will be notified of same within five (5) business days of the bid opening date.

7. Q. Will the award to the successful contractor be contingent upon approval by any agencies?

A. Yes. The award recommendation will be reviewed and approved by the Broome County Legislature, GAF Corporation and the NYSDEC.

8. Q. The contract drawings indicate tie-in to two monitoring wells, namely PW-12 and PW-13, yet the specifications speak to only one well. Which is correct?

A. The contract drawings in this case, are correct and both wells need to be connected as shown. Inadvertently, reference to PW-13 was left out in the specifications.

9. Q. Would the County of Broome consider the on site disposal of trees and stumps that are to be cleared as part of the clearing and grubbing effort, if these were chipped and/or ground? It may be a substantial savings to the County.

A. Section 02110 - Site Clearing, of the General Conditions, Division 2 - Site Work, specifies the treatment (and ultimate disposal) of stumps, trees, limbs, and brush.

10. Q. The specifications indicate that the bidder should assume an additional 50,000 cubic yards of grading in conjunction with the preparation of the subgrade. What is this figure based on?

A. Section 4.6 - On Site Borrow Evaluation of the Final Engineering Design Report for the Closure Action addresses the subject of quantity of soils required for subgrade fill and the referenced 50,000 cubic yard quantity.

11. Q. What, if any contractor personnel on site must have participated in health and safety training?

A. Section 01501 - Health & Safety Provisions, paragraph 1.1 (E)(7) addresses this question. OSHA 29 CFR 1910.120 (b)(4)(e)(3)(ii) further addresses the level of training required for "occasional" on site workers.

12. Q. Do the final grades as shown on the contract drawings reflect the Alternate No. 1 or Alternate No 2 final cap designs?

A. The design (contract) does not require that specific grades be met, but rather that the material thicknesses of the respective layers be met and that finished slopes be in the 2% to 33% required range.

13. Q. The contract drawings call for installation of a 4 inch (piped) drainage system as part of the drainage layer installation. Where is the contractor to price the cost of this work, i.e. in what payment (line) item?

A. The cost of this work should be included in the contract items for the Drainage Layers, either Item 9.1 or 9.2, respectively, depending upon the bidder's choice to price one or both of these items.



An Air & Water Technologies Company

(VIA FACSIMILE TRANSMISSION AND FIRST CLASS U.S. MAIL)

October 6, 1994


Re: Broome County Colesville Landfill Closure Action  
Transmission of Contract/Specification Addendum No 5

To: All Prospective Bidders/Attendees at the  
Mandatory Pre-Bid Meeting of September 16, 1994

Attached herewith please find Addendum No 5 to the "Bid Documents and Final Technical Specifications". Bidders are reminded to acknowledge receipt of this and all previous Addenda, via submission of the (Addenda) Acknowledgement Forms with their proposals. It should also be noted that while new Itemized Proposal Forms are being sent via this facsimile transmission, that "clean copies" will also be sent via first class mail for use in submission of bids.

Very truly yours,

METCALF & EDDY

  
David J. Decker, P.E.  
Project Principal

Enclosure (Addendum No 5)

c: Ray Standish, P.E.  
Broome County Division of Solid Waste

BROOME\PREBID.06

**ADDENDUM NO. 5**  
**TO THE CONTRACT DOCUMENTS**  
**FOR**  
**BROOME COUNTY COLESVILLE LANDFILL CLOSURE ACTION**

**TO ALL HOLDERS OF THE CONTRACT DOCUMENTS:**

Your attention is directed to the interpretation of, and additions to, the Contract Documents for the final closure of the Colesville.

This addendum is to be considered as, and shall form a part of the aforementioned Contract.

1. Contract Drawings, sheet 5 of 9, Gas Trench Details:

So as to have the contract pay item descriptions as contained in Section 01025, Measurement and Payment, consistent with the Itemized Proposal Form contained in the Proposal General Construction section of the Contract Bid Documents and the Notes contained therein, it is necessary to re-number the Gas Trench Details as currently shown. Accordingly, Alternate 1 will be re-numbered as Alternate 2 and (current) Alternate 2 will be renumbered as Alternate 1, as a result of this Addendum Nos. 5.

2. Technical Specifications, Division I - General Requirements, Section 01025 - Measurement and Payment, Paragraph 2.1 (F.) - Item No. 6.1 - Alternate Gas Venting Layer (6 inches).

Add: New subparagraph 4.

Paragraph 4: This payment item will also include payment in full for providing materials and installation of Geotextile Type A above the subgrade, (below the 6 inches of gas vent sand) in accordance with the Plans and Specifications, and in conformance with the lines, grades and typical cross sections shown in the Plans.

3. Technical Specifications, Section 02831, Chain Link Fence and Gates:

Delete: Paragraph 2.1 (D), Metal Lattice - Aluminium

Delete: Paragraph 3.1 (O), "Provide and install...as recommended by the manufacture".

4. Contract Drawings, Sheet 4 of 9, Borrow Area Grading Plan: In the Event excavation quantity differences cause a grade change in the proposed borrow area, elevations and grades depicted on the contract drawings in the sediment basin must be held. Modifications, if needed can be realized in the balance of the area, within the balance of the borrow area, but out side of the sediment basin proper.

5. Technical Specifications, Section 02599, Geocomposite Drain:

Paragraph 2.2 (A) (4) should now read:

4. Tensile Strength 200 ppf ASTM 638

6. Contract Drawings, Sheet 5 of 9, Final Cover Drainage Pipe:

Add the following notes to the Final Cover Drainage Pipe:

1. This piping is required (only) in areas of greater than 10% slope.
2. The pipe shall meet the requirements of ASTM F405.

7. Technical Specifications, Section 02240, Drainage Layer:

Add: Paragraph 2.1 (C), as follows:

- C. Drainage sand shall be a mixture of sand and fine gravel such that no more than 10% material by weight shall pass the No. 200 sieve and maximum particle size is 1 inch.

8. Technical Specifications, Section 02241, Gas Venting Layer:

Add: Paragraph 2.1 (D), as follows:

- D. The material used for the gas venting layer shall have a maximum particle size of 1 inch.

9. Proposal - General Construction, Itemized Proposal (Form)

Replace the Itemized Proposal Form as provided in "Bid Documents and Final Technical Specifications", dated (Revised) July 1994, with the Itemized Proposal Form enclosed herewith and made a part hereof, Addendum No. 5.

10. Contract Drawings, Sheet 6 of 9, Drainage Details:

Add the following general note to this page.

Note: 1. All reinforced concrete culvert pipe shall be Class III.

11. Technical Specifications, Section 02670 - Slotted Corrugated Polyethylene Pipe:

Add Paragraph 2.1 (D) as follows:

D. The pipe shall meet the requirements of ASTM F405.

12. Contract Drawings, Sheet 6 of 9, Drainage Details, Gabion Lined Channels:

Add: The table below specifies the length of the four Gabion Lined Channels listed, respectively:

CHANNEL	LENGTH
DC-6 Outlet	35'
DC-2A Outlet	25'
Basin Spillway	12'
Basin Outlet	50'

**ITEMIZED PROPOSAL**  
**BROOME COUNTY DIVISION OF SOLID WASTE MANAGEMENT / GAF CORPORATION**  
**BROOME COUNTY COLESVILLE LANDFILL**  
**CLOSURE ACTION OF THE REMEDIAL DESIGN**

Item No.	Item and Unit Price (price in words)	Approximate Quantities		Unit Price		Total Price	
		Quantity	Unit	Dollars	Cents	Dollars	Cents
1	Mobilization and General Conditions per LS	1	LS				
2	Survey per LS	1	LS				
3	Clearing and Grubbing a. First 17 AC per AC b. Over 17 AC per AC	17 2	AC AC				
4	Soil Erosion and Sediment Control per LS	1	LS				
5	Subgrade Preparation, Fill Soils, and Fine Grading a. First 158,000 SY per SY b. Over 158,000 SY per SY	158,000 16,000	SY SY				
6.1	Alternate 1 Gas Venting Layer (6 In Sand) a. First 139,000 SY per SY b. Over 139,000 SY per SY	139,000 14,000	SY SY				
6.2	Alternate 2 Gas Venting Layer (Geocomposite Drain) a. First 1,250,000 SF per SF b. Over 1,250,000 SF per SF	1,250,000 125,000	SF SF				
7	Slotted Corrugated Polyethylene Gas Pipe, Subangular Stone, Geotextile Type B, and Gas Vents per LS	1	LS				
8	40 mil Flexible Membrane Liner a. First 1,224,000 SF per SF b. Over 1,224,000 SF per SF	1,224,000 122,000	SF SF				

**ITEMIZED PROPOSAL**  
**BROOME COUNTY DIVISION OF SOLID WASTE MANAGEMENT / GAF CORPORATION**  
**BROOME COUNTY COLESVILLE LANDFILL**  
**CLOSURE ACTION OF THE REMEDIAL DESIGN**

Item No.	Item and Unit Price (price in words)	Approximate Quantities		Unit Price		Total Price	
		Quantity	Unit	Dollars	Cents	Dollars	Cents
9.1	Alternate 1 Drainage Layer (12 In Sand)						
	a. First 139,000 SY	139,000	SY				
	_____ per SY						
	b. Over 139,000 SY	14,000	SY				
	_____ per SY						
9.2	Alternate 2 Drainage Layer (Geocomposite Drain)						
	a. First 1,250,000 SF	1,250,000	SF				
	_____ per SF						
	b. Over 1,250,000 SF	125,000	SF				
	_____ per SF						
10.1	Alternate 1 Geotextile Type A						
	a. First 1,250,000 SF	1,250,000	SF				
	_____ per SF						
	b. Over 1,250,000 SF	125,000	SF				
	_____ per SF						
11.1	Alternate 1 Barrier Protection Layer (12 In)						
	a. First 139,000 SY	139,000	SY				
	_____ per SY						
	b. Over 139,000 SY	14,000	SY				
	_____ per SY						
11.2	Alternate 2 Barrier Protection Layer (24 In)						
	a. First 139,000 SY	139,000	SY				
	_____ per SY						
	b. Over 139,000 SY	14,000	SY				
	_____ per SY						
12	Topsoil (6 Inches)						
	a. First 139,000 SY	139,000	SY				
	_____ per SY						
	b. Over 139,000 SY	14,000	SY				
	_____ per SY						
13	Seeding and Mulch						
	a. First 49 AC	49	AC				
	_____ per AC						
	b. Over 49 AC	5	AC				
	_____ per AC						
14	Gravel Access Road						
	_____ per LS	1	LS				

**ITEMIZED PROPOSAL**  
**BROOME COUNTY DIVISION OF SOLID WASTE MANAGEMENT / GAF CORPORATION**  
**BROOME COUNTY COLESVILLE LANDFILL**  
**CLOSURE ACTION OF THE REMEDIAL DESIGN**

Item No.	Item and Unit Price (price in words)	Approximate Quantities		Unit Price		Total Price	
		Quantity	Unit	Dollars	Cents	Dollars	Cents
15	Grass-Lined Drainage Channel						
	a. First 4,300 LF	4,300	LF				
	_____ per LF						
	b. Over 4,300 LF	430	LF				
16	Rip-Rap Lined Drainage Channel						
	a. First 280 LF	280	LF				
	_____ per LF						
	b. Over 280 LF	30	LF				
17	Gabion-Lined Channel						
	a. First 120 LF	120	LF				
	_____ per LF						
	b. Over 120 LF	10	LF				
18	Step Downchute						
	a. First 130 LF	130	LF				
	_____ per LF						
	b. Over 130 LF	15	LF				
19	Energy Dissipator Pads	2	EA				
	_____ per EA						
20	Dual 36-Inch Diameter RCP Culvert						
	a. First 150 LF	150	LF				
	_____ per LF						
	b. Over 150 LF	15	LF				
21	18-Inch Diameter RCP Culvert						
	a. First 68 LF	68	LF				
	_____ per LF						
	b. Over 68 LF	10	LF				
22	Sediment Basin	1	LS				
	_____ per LS						
23	Wetland Mitigation	1	LS				
	_____ per LS						
24	Perimeter Fence						
	a. First 5,200 LF	5,200	LF				
	_____ per LF						
	b. Over 5,200 LF	520	LF				
	_____ per LF						



An Air & Water Technologies Company

October 6, 1994

Ray L. Standish, P.E.  
Deputy for Engineering Services  
Division of Solid Waste Management  
Broome County Office Building - Government Plaza  
Box 1766  
Binghamton, New York 13902

RE: Colesville Landfill Closure  
Addendum No 5 to the Contract Documents

Dear Ray:

Please find attached hereto a copy of Addendum No. 5 as was transmitted earlier this evening. The documents were distributed to the enclosed list of addressees as well as Wehran and C. Lopinski at NYSDEC.

As the day progressed, it became apparent that many of the unit quantities that Wehran had listed on the Itemized Proposal Form were incorrect as to amounts indicated. We raised this question with Wehran and it was confirmed that this in fact was the case. The comment (from them) was that the "latest" bid (take off) sheets had not been incorporated into the Bid Documents, for whatever reason. Wehran agreed to correct the problem, rather than M & E retyping the bid sheet, and faxed same to us late this afternoon. We incorporated same into Addendum 5 and indicated in the cover letter that transmitted the Addendum that a clean "hard copy" would be mailed to all bidders on Friday such that they would have a clean, corrected copy on which to submit their bids. (Given the lateness in the day, it was not possible to mail the forms to all bidders today.)

Absent from Addendum 5 was reference to the relaxation of the Bonding Requirements...purposefully. Do you feel it important to reiview this item with counsel? On an associated matter, one of the contractors posed the following question today, relative to the fact that by earlier addendum, we had added the Pollution Liability Insurance Requirement. They cited the fact that in the Contract, Paragraph X, it was stipulated that the contractor "waive any and all rights of subrogation against the County...", and inquired as to whether this provision was also to apply to the Pollution Liability Protection that the County was (now) requiring. Since this is not a technical question we didn't feel comfortable answering same. (Should be addressed by your insurance department staff, probably.) Hence, I waited to advise the bidders of the Performance Bonding Requirements until this (Insurance) question was answered.

Page Two..  
Ray Standish  
October 6, 1994

I will be out of the office until approximately 11:00 a.m. on Friday, but can be reached by calling my office and having them reach me on my beeper. Hopefully, by the time I return, you might have had the opportunity to surface these two questions with the appropriate County staff members.

Sincerely,

METCALF & EDDY



David J. Decker, P.E.  
Project Principal

BROOMEADDENDA.06

Please deliver to person indicated for your company. Thank you.

Geo Con, Inc	John Esmet	609-772-2009
CRS, Inc.	Jack Miller	412-327-5946
Tug Hill	Jim Baker	315-773-4175
SLC	Arthur McDonough	716-433-0802
Polyfelt Americas	Tim Woodlee	603-686-4557
Solmax Geosynthetics	Paul Payeur Denis DeHarme	315-853-8944
IT Corporation	Peter Romocki Frank Pescatore	716-271-0251
American Waste Service	Dennis Newton	216-856-8480
Marcy Excavation Crankfeet	Christopher Hale	315-724-5099
DiGiulo/Engineering Tech	Nick Rena	434-7300
Conti Environmental, Inc.	John Steinhilber A. Gaecas	908-561-7247
F.S. Loping Cont.	Dan Purtell	717-623-200
A. Servidone, Inc.	Mark Servidone Vince Mazzone	732-2732
PT&L Environmental	Jim Murphy Matt Kaskoun	201-262-6778
Haseley Trucking	Kevin Haseley	716-297-5464
Vacri Construction	Ken Ellsworth	607-723-9539
Gorick Construction Co.	Al Gorick	607-775-1608
Laberge/Suburban	George Peters	315-454-0636
Integrated Waste Systems	Tom Reynolds	716-458-0931
Burton F. Clark, Inc.	Paul Roach	607-746-3107
McLaren & Hart	Keith Decker	869-3971
Gundle Lining	Chad Weigman	713-875-6010
Fluid Systems	Tracy Tanner	708-898-1179



An Air & Water Technologies Company

(VIA FACSIMILE TRANSMISSION AND FIRST CLASS U.S. MAIL)

October 6, 1994

Re: Broome County Colesville Landfill Closure Action  
Transmission of Contract/Specification Addendum No 5

To: All Prospective Bidders/Attendees at the  
Mandatory Pre-Bid Meeting of September 16, 1994

Attached herewith please find Addendum No 5 to the "Bid Documents and Final Technical Specifications". Bidders are reminded to acknowledge receipt of this and all previous Addenda, via submission of the (Addenda) Acknowledgement Forms with their proposals. It should also be noted that while new Itemized Proposal Forms are being sent via this facsimile transmission, that "clean copies" will also be sent via first class mail for use in submission of bids.

Very truly yours,

METCALF & EDDY

David J. Decker, P.E.  
Project Principal

Enclosure (Addendum No 5)

c: Ray Standish, P.E.  
Broome County Division of Solid Waste

BROOME/PRESID.06

**ADDENDUM NO. 5**  
**TO THE CONTRACT DOCUMENTS**  
**FOR**  
**BROOME COUNTY COLESVILLE LANDFILL CLOSURE ACTION**

**TO ALL HOLDERS OF THE CONTRACT DOCUMENTS:**

Your attention is directed to the interpretation of, and additions to, the Contract Documents for the final closure of the Colesville.

This addendum is to be considered as, and shall form a part of the aforementioned Contract.

1. Contract Drawings, sheet 5 of 9, Gas Trench Details:

So as to have the contract pay item descriptions as contained in Section 01025, Measurement and Payment, consistent with the Itemized Proposal Form contained in the Proposal General Construction section of the Contract Bid Documents and the Notes contained therein, it is necessary to re-number the Gas Trench Details as currently shown. Accordingly, Alternate 1 will be re-numbered as Alternate 2 and (current) Alternate 2 will be renumbered as Alternate 1, as a result of this Addendum Nos. 5.

2. Technical Specifications, Division I - General Requirements, Section 01025 - Measurement and Payment, Paragraph 2.1 (F.) - Item No. 6.1 - Alternate Gas Venting Layer (6 inches).

Add: New subparagraph 4.

Paragraph 4: This payment item will also include payment in full for providing materials and installation of Geotextile Type A above the subgrade, (below the 6 inches of gas vent sand) in accordance with the Plans and Specifications, and in conformance with the lines, grades and typical cross sections shown in the Plans.

3. Technical Specifications, Section 02831, Chain Link Fence and Gates:

Delete: Paragraph 2.1 (D), Metal Lattice - Aluminium

Delete: Paragraph 3.1 (O), "Provide and install...as recommended by the manufacture".

4. Contract Drawings, Sheet 4 of 9, Borrow Area Grading Plan: In the Event excavation quantity differences cause a grade change in the proposed borrow area, elevations and grades depicted on the contract drawings in the sediment basin must be held. Modifications, if needed can be realized in the balance of the area, within the balance of the borrow area, but out side of the sediment basin proper.

5. Technical Specifications, Section 02599, Geocomposite Drain:

Paragraph 2.2 (A) (4) should now read:

4. Tensile Strength 200 ppf ASTM 638

6. Contract Drawings, Sheet 5 of 9, Final Cover Drainage Pipe:

Add the following notes to the Final Cover Drainage Pipe:

1. This piping is required (only) in areas of greater than 10% slope.
2. The pipe shall meet the requirements of ASTM F405.

7. Technical Specifications, Section 02240, Drainage Layer:

Add: Paragraph 2.1 (C), as follows:

- C. Drainage sand shall be a mixture of sand and fine gravel such that no more than 10% material by weight shall pass the No. 200 sieve and maximum particle size is 1 inch.

8. Technical Specifications, Section 02241, Gas Venting Layer:

Add: Paragraph 2.1 (D), as follows:

- D. The material used for the gas venting layer shall have a maximum particle size of 1 inch.

9. Proposal - General Construction, Itemized Proposal (Form)  
Replace the Itemized Proposal Form as provided in "Bid Documents and Final Technical Specifications", dated (Revised) July 1994, with the Itemized Proposal Form enclosed herewith and made a part hereof, Addendum No. 5.
10. Contract Drawings, Sheet 6 of 9, Drainage Details:  
Add the following general note to this page.  
Note: 1. All reinforced concrete culvert pipe shall be Class III.
11. Technical Specifications, Section 02670 - Slotted Corrugated Polyethylene Pipe:  
Add Paragraph 2.1 (D) as follows:  
D. The pipe shall meet the requirements of ASTM F405.
12. Contract Drawings, Sheet 6 of 9, Drainage Details, Gabion Lined Channels:  
Add: The table below specifies the length of the four Gabion Lined Channels listed, respectively:

CHANNEL	LENGTH
DC-6 Outlet	35'
DC-2A Outlet	25'
Basin Spillway	12'
Basin Outlet	50'

**BROOME COUNTY DIVISION OF SOLID WASTE MANAGEMENT / GAF CORPORATION**  
**BROOME COUNTY COLESVILLE LANDFILL**  
**CLOSURE ACTION OF THE REMEDIAL DESIGN**

1	Mobilization and General Conditions	per LS	1	LS			
2	Survey	per LS	1	LS			
3	Clearing and Grubbing						
	a. First	17 AC	17	AC			
		per AC					
	b. Over	17 AC	2	AC			
		per AC					
4	Soil Erosion and Sediment Control	per LS	1	LS			
5	Subgrade Preparation, Fill Soils, and Fine Grading						
	a. First	158,000 SY	158,000	SY			
		per SY					
	b. Over	158,000 SY	16,000	SY			
		per SY					
6.1	Alternate 1 Gas Venting Layer (6 in Sand)						
	a. First	138,000 SY	138,000	SY			
		per SY					
	b. Over	138,000 SY	14,000	SY			
		per SY					
6.2	Alternate 2 Gas Venting Layer (Geocomposite Drain)						
	a. First	1,250,000 SF	1,250,000	SF			
		per SF					
	b. Over	1,250,000 SF	125,000	SF			
		per SF					
7	Slotted Corrugated Polyethylene Gas Pipe, Subangular Stone, Geotextile Type B, and Gas Vents	per LS	1	LS			
8	40 mil Flexible Membrane Liner						
	a. First	1,224,000 SF	1,224,000	SF			
		per SF					
	b. Over	1,224,000 SF	122,000	SF			
		per SF					

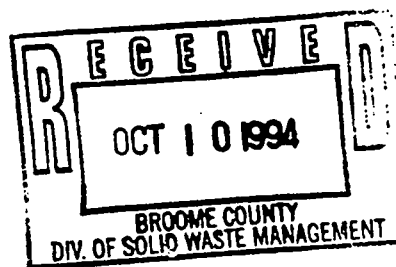
## ITEMIZED PROPOSAL

**BROOME COUNTY DIVISION OF SOLID WASTE MANAGEMENT / GAF CORPORATION**  
**BROOME COUNTY COLEVILLE LANDFILL**  
**CLOSURE ACTION OF THE REMEDIAL DESIGN**

9.1	Alternate 1 Drainage Layer (12 in Sand)						
	a. First 100,000 SY	100,000	SY				
	per SY						
	b. Over 100,000 SY	14,000	SY				
	per SY						
9.2	Alternate 2 Drainage Layer (Geocomposite Drain)						
	a. First 1,250,000 SF	1,250,000	SF				
	per SF						
	b. Over 1,250,000 SF	125,000	SF				
	per SF						
10.1	Alternate 1 Geotextile Type A						
	a. First 1,250,000 SF	1,250,000	SF				
	per SF						
	b. Over 1,250,000 SF	125,000	SF				
	per SF						
11.1	Alternate 1 Barrier Protection Layer (12 in)						
	a. First 100,000 SY	100,000	SY				
	per SY						
	b. Over 100,000 SY	14,000	SY				
	per SY						
11.2	Alternate 2 Barrier Protection Layer (24 in)						
	a. First 100,000 SY	100,000	SY				
	per SY						
	b. Over 100,000 SY	14,000	SY				
	per SY						
12	Topsoil (6 inches)						
	a. First 100,000 SY	100,000	SY				
	per SY						
	b. Over 100,000 SY	14,000	SY				
	per SY						
13	Seeding and Mulch						
	a. First 40 AC	40	AC				
	per AC						
	b. Over 40 AC	5	AC				
	per AC						
14	Gravel Access Road						
	per LS	1	LS				



October 5, 1994



Ray L. Standish, P.E.  
Deputy for Engineering Services  
Division of Solid Waste Management  
Broome County Office Building - Government Plaza  
Box 1766  
Binghamton, New York 13902

RE: Colesville Landfill Closure  
Addendum No 5

Dear Ray:

As discussed this morning, we are in the midst of preparing Addendum 5 to the Contract Documents for the above referenced project. The "plan" is to have the addendum prepared this afternoon, circulate in final draft form to yourself as well as Craig Lopinski and Mark Swyka, (both of these individuals are out of their respective offices today), and then distribute the final form of the Addendum to the bidders mid to late morning on October 6, 1994.

While we are "clear" on most all the items listed in my October 3, 1994 letter, there remains one item that as yet we do not agree with the observations taken by Mark Swyka at Wehran. The purpose of this letter is to communicate a diagram I have prepared, (since, "a picture is worth a thousand words") and solicit input from Mark and Craig on this question. This diagram will be transmitted to their attention via copy of this letter.

Based on this diagram, which depicts the various combinations that are called for in the specification and the contract drawings, it remains our position that the numbering of the "Gas Trench Details" are reversed of what they should be in order to be consistent with the descriptions listed in the specifications, specifically on the Itemized Proposal Bid Sheet and the explanation of the unit pay/bid items.

It is requested that each of the "cc" addressees as shown below contact the undersigned in the morning to review these diagrams as they relate to the bid documents mentioned above and resolve this discrepancy, (or mis-understanding on our part).

On an unassociated matter, I have received yet another series of calls from contractors and their sureties that have raised objection to the form of bond included in the contract documents. These additional contractors/sureties have indicated that if the form of bond remains as is, they will not be able to participate in the bidding process.

CS03113

Page Two...  
Ray Standish  
October 5, 1994

They have indicated that if the so called "AIA Standard" form of bond is adopted, (apparently as was used by the County for the closure efforts at the Nanticoke Landfill), this problem would be eliminated. I presume that this is something that should be discussed between the County and NYSDEC? Please provide my you direction in this regard.

Sincerely,

METCALF & EDDY



David J. Decker, P.E.  
Project Principal

c: C. Lapinski  
M. Swyka  
R. Miller

BROOME\ADDENDA.05A

CS03114

ITEM No 1/16" Top Soil12" Barrier12" Drainage6" Gas Vent Sand

FML

Geotextile "A"

ITEM No 2/16" Top Soil24" BarrierDrainage Geocomposite  
FML6" Gas Vent Sand

Geotextile "A"

ITEM No 1/26" Top Soil12" Barrier12" DrainageFML  
Gas Vent-GeotextITEM No 2/26" Top Soil24" BarrierDrainage Geocomposite  
FML  
Gas Vent-Geocomposites

**TUG  
HILL Construction, Inc.**

October 4, 1994

Route 3, P.O. Box 158  
Felts Mills, NY 13638  
(315) 773-4011  
FAX (315) 773-4175

Mr. David Decker, P.E.  
Metcalf & Eddy  
P.O. Box 357  
Rensselaer, New York 12144

RE: Broome County Colesville Landfill Closure Action

Dear Mr. Decker:

Attached please find a memo from our bonding company regarding the form of performance bond and the changed conditions provisions for the project. (The author is Mr. Ray Lorah of Reliance Surety Company).

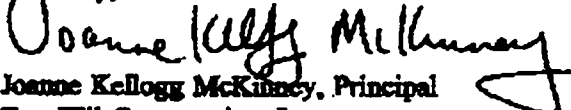
I regret that I was not informed of these concerns at an earlier date so that I could have relayed them to you in a more timely manner. However, they are valid concerns and I am aware that these questions have also been posed by other contractors bidding on this project.

We request that Metcalf & Eddy review these areas to see if the contract requirements could be modified to address these concerns.

Ninety percent of our projects in the last five years have been landfills or other environmental earthwork and this is the first time we have encountered these particular problems. Therefore we don't view Reliance's request to review these areas as unreasonable; hopefully Metcalf & Eddy will not view it that way either.

Again, I apologize that these issues were not raised sooner. However, we request that you consider our concerns and respond, if possible, to myself or to Mr. Lorah of Reliance at (215) 864-4173.

Sincerely,

  
Joanne Kellogg McKinney, Principal  
Tug Hill Construction, Inc.

Enclosure

(w/attached/enclosure)

*An Equal Opportunity Employer*



October 3, 1994

Ray L. Standish, P.E.  
Deputy for Engineering Services  
Division of Solid Waste Management  
Broome County Office Building - Government Plaza  
Box 1766  
Binghamton, New York 13902

RE: Colesville Landfill Closure

Dear Ray:

As discussed earlier today, it is apparent that many of the contractors and suppliers have (recently) looked at the specification for the first time...given the number of questions that are being generated over the past couple of days. Aside from the question concerning the specification for the barrier protection material and how it interfaces with the composite drainage and membrane liner layers, (that gave rise to delaying the bid opening date by a week), there have been several other valid questions raised as well.

It is the purpose of this correspondence to review these items for all parties concerned, propose an answer or solution, discuss them between now and close of business on Tuesday and thereafter, disseminate an addendum which properly addresses same.

1. Contract Drawings, Sheet 5 of 9, Landfill Cap Details: Upon review of this sheet, specifically the "Gas Trench Details", and "Final Cover Details" and how they relate to the summary bid items on the Itemized Proposal Forms, as well as the Notes contained thereon, it would appear that Gas Trench Details 1 and 2, as they are labeled respectively should have their referent numbers reversed, i.e. that "Alternate 1" should be labeled "Alternate 2" and visa versa.
2. Itemized Proposal Detail Sheet: Recognizing the observations made in (1) above, Note 2 as it relates to Alternate 2/1 should not exclude Item 10.1, as this alternative contemplates the use of 6" of gas collection layer (sand) and thereby includes Geotextile Type A. However, the explanation for Alternative 2/1, unless changed, excludes this item 10.1 (Geotextile Type A).

110

3. Contract Drawings, Sheet 5 of 9, Landfill Cap Details: Review of the detail entitled, "Typical Gas Vent Detail" indicates that a (40 mil FML) boot will be clamped and welded to the 6" Dia. PVC Vent Pipe. The HDPE Liner cannot be welded to the PVC Vent Pipe. Either an alternate to welding must be proposed or alternately, a HDPE Vent Pipe extender or riser could be employed.

4. Technical Specifications, Section 02960: This specification section speaks to the pumping well connections. However, nowhere in the proposal form or in the bid item explanations is there a specific place where the contractor is to price his work for this item. (It is suggested that perhaps Bid Item No 7, itself an Lump Sum item, be redefined to include the contractors fee for accomplishing this work.)

5. Technical Specifications, Section 02831, Chain Link Fence and Gates: The specifications in the "Materials" paragraph calls for aluminum metal lattice, the "Components" paragraph does not indicate the lattice as a component, while "Installation" paragraph speaks to its (lattice) installation. It is not clear to all vendors that this material is needed. In checking with several vendors, the (additional) cost of this lattice above and beyond the cost of the fence itself is approximately \$12.00 per lf, (\$7.50/lf materials and \$4.50/lf installation). With an approximate length of perimeter fencing of 5250 feet, this item adds a cost of \$63,000.00 to the project. Given there is some confusion on the part of the vendors, does the County want to consider eliminating the call for this item? Its (apparent) sole purpose is to prevent vision through the chain link fencing.

6. Contract Drawings, Sheet 4 of 9, Borrow Area Grading Plan: Presumably this sheet depicts the final grading plan for the retention (sediment) basin as well as the balance of the borrow area. As one does a material takeoff, one gets the approximate volume of required excavation as depicted on Table 4.4-1, Capping Material Requirements as contained in the Final Design Report, last revised July, 1994, i.e. 200,000 +/- cubic yards. However, if alternate 1 is chosen, thereby only using 46,000 cy of barrier material and, if one does not encounter the problem of settlement, ( approximated to be as much as 50,000 cy), then what are the then final grades, if only as little as 100,000 cy is needed? Presumably this selection of alternates will also impact the invert elevations of the drainage appurtenances/improvements that are contemplated for the sediment basin as well. If so these differences should also be addressed.

7. Technical Specifications, Section 02599, Geocomposite Drain: Paragraph 2.2(A)(4) addresses the Tensile Strength of the Geocomposite Drainage Material as being 200 ppi. Several vendors have expressed the fact that this requirement is "orders of magnitude" above that which is commonly seen in these applications. Perhaps this value or the unit of measure should be confirmed to verify that this level of tensile strength is in fact needed/required.

8. Contract Drawings, Sheet 5 Of 9, Final Cover Drainage Pipe: This detail appears to indicate that drainage piping is required to be placed every 50 feet with corresponding cross drains also every 50', thereby forming an extensive network of drainage piping across the complete face of the landfill foot print. If this is the case, there will be several miles of this drainage piping to be installed. (Likewise, proof rolling and or compaction would be virtually impossible.)

Telephonic inquiry to the design engineer, (Wehran) this date indicates that what was intended is that this piping be placed on the landfill (only) in areas where there is a greater than 10% slope. If this is in fact the case, this will make a substantial difference in the cost of the project and needs to specifically clarified to the bidders.

9. Technical Specifications, Section 02240, Drainage Layer: This section speaks to the required permeability of the material for use in this layer, but does not address the maximum or minimum size of the material gradation. Given the fact that the liner manufacturers have specific provisions in their warranties covering maximum size, should not these parameters be specified?

10. Technical Specifications, Section 02241, Gas Venting Layer: Same as comment as in paragraph 9 above, however, only with regard to the maximum gradation size, (as the specification addresses the amount of material allowable passing a No. 200 sieve).

This letter is simultaneously being sent to list of distributees as indicated below to expedite the review and discussion process. It is assumed that there will be comments and questions, please contact the undersigned with same.

Sincerely,

METCALF & EDDY



David J. Decker, P.E.  
Project Director/Principal

c: NYSDEC, Attn: G. Lopinski  
Wehran, Attn: M. Swyka ✓  
D. Ryder  
B. Mead  
R. Miller, P.E.  
G. Pikul

**M&E Metcalf & Eddy**September 20, 1994 **An Air & Water Technologies Company**

Ray L. Standish, P.E.  
Deputy for Engineering Services  
Division of Solid Waste Management  
Broome County Office Building - Government Plaza  
Box 1766  
Binghamton, New York 13902

RE: Colesville Landfill Closure and Groundwater Treatment Facility  
Construction Review Services

Dear Ray:

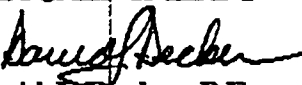
As requested, we attach herewith various documents relating to the Mandatory Pre-Bid Meeting held this past Friday, September 16, 1994 at the Broome County Office Building in Binghamton, New York. The attachments hereto are listed as follows:

1. Copy of the Pre-Bid Meeting Agenda that was followed to conduct the meeting.
2. Copy of the Sign-in Roster indicating those firms/individuals that were in attendance at the meeting.
3. Copy of the Pre-Bid Meeting Attendance Voucher that was completed by each attending firm and duly signed by yourself before the end of the meeting such that each bidder would be able to enclose a copy of same as required.
4. Tabulation of the questions presented by the bidders at the meeting and suggested or proposed answers where same are known at this time. Where the input to the answer is more appropriate to come from another source, i.e. Wehran Environmental or Broome County Legal Dept, no answer has been proposed or suggested by M & E.

It is our suggestion that these questions be reviewed and formalized for facsimile transmission to the bidders in attendance not later than COB on Thursday, September 22, 1994. Via copy of this letter, I am transmitting this same information to Mr. Greg Lopinski, at the NYSDEC, as the designated Project Manager with that Department.

Sincerely,

METCALF & EDDY

  
David J. Decker, P.E.  
Project Director/Principal

c: NYSDEC, Attn: Greg Lopinski

**MANDATORY PRE-BID MEETING****SEPTEMBER 16, 1994****COLESVILLE LANDFILL REMEDIAL ACTION & LANDFILL CLOSURE****QUESTIONS/COMMENTS BY CONTRACTOR/BIDDERS**

1. Q. Up until what date will Bidder/Contractor questions be accepted by Broome County?

A. Bidders/Contractors may submit questions in writing (only) up to and including 10 business days prior to the bid due date. Accordingly, the last day for questions will be September 22, 1994. (This announcement was also made to all attendees at the time of the pre-bid meeting.)

2. Q. Must the performance bond be the same "form" as that included in the bid specification package, or may so called standard form "AIA" substitutes be used?

A. Only the form of performance bond included in the bid package will be accepted. Bidders using other forms of bond will be considered non-responsive.

3. Q. What level of (PPE) protective equipment will be minimum for use by the contractors on this job?

A. Section 01501 of the General Conditions, covering Health & Safety Provisions, paragraph E (8) addresses the question of Levels of Protective Equipment to be worn during operations. As indicated, the Contractor is to prepare a site specific Health & Safety Plan, which will specify therein action levels for successive levels of protection dependent upon monitoring results encountered in the breathing zone.

4. Q. What is the DEC (or EPA) classification for this site?

A. This site is designated as a Class II site. ~~(NYSDEC Inactive Hazardous Waste Disposal Sites in New York State - April, 1992)~~

5. Q. The specifications call for quantities of broken or crushed glass to be placed in an around the gas venting system. Will the quantities as projected be available and where can they be obtained?

A. (Answer to this question to come from Ray Standish)

6. Q. What is the anticipated time frame of notification to the apparent low bidder?

A. It is planned that the apparent low bidder will be notified of same within five (5) business days of the bid opening date.

Page Two...  
Pre Bid Questions

7. Q. Will the award to the successful contractor be contingent upon approval by any agencies?

A. Yes. The award recommendation will be reviewed and approved by the Broome County Legislature, the NYSDEC and the EPA. <sup>CAF</sup>

8. Q. The contract drawings indicate tie-in to two monitoring wells, namely PW-12 and PW-13, yet the specifications speak to only one well. Which is correct?

A. Answer to be provided by Wehran... (Note: Section 02960 - Pumping Well Connection does address the work associated with PW -12. No mention is made of other wells.)

9. Q. Would the County of Broome consider the on site disposal of trees and stumps that are to be cleared as part of the clearing and grubbing effort, if these were chipped and/or ground? It may be a substantial savings to the County.

A. Section 02110 - Site Clearing, of the General Conditions, Division 2 - Site Work, specifies the treatment (and ultimate disposal) of stumps, trees, limbs, and brush.

10. Q. The specifications indicate that the bidder should assume an additional 50,000 cubic yards of grading in conjunction with the preparation of the subgrade. What is this figure based on?

A. Section 4.6 - On Site Borrow Evaluation of the Final Engineering Design Report for the Closure Action addresses the subject of quantity of soils required for subgrade fill and the referenced 50,000 cubic yard quantity.

BROOME PREBID 02

MANDATORY PRE-BID MEETING  
BROOME COUNTY COLESVILLE LANDFILL CLOSURE ACTION

Broome County Office Building

September 16, 1994

Welcome

Introductions

Sign-in Sheet

Recap of the Legal Notice

Overview of the Project Work

Review Selected Points of Information

- Deposit Required
- Prevailing Wages will be Paid
- Bids Must be Received in Sealed Envelopes
- QUALIFICATION STATEMENTS MUST BE SUBMITTED WITH PROPOSAL
- No "or equals" are to be considered/submitted as part of the contractor's bid
- Pre-Bid Voucher
- Contract Time of 200 days
- MBE Participation Forms to be signed by prospective MBE Firms (10 days)
- Liquidated Damages - \$760.00 per day
- No overtime allowed (SGC-1)
- QA/QC Laboratory
- All Operation employees must have participated in health and safety training IAW OSHA 29 CFR 1910.120 (e)

Site Visit today

Questions

COLSVILL\PREBID:01



Broome County

**DIVISION OF SOLID WASTE MANAGEMENT**

Broome County Office Building / Government Plaza / Box 1766 / Binghamton, New York 13902 / (607) 778-2482

John P. Kowalchuk, Director

Timothy M. Grippen, County Executive

Colesville Landfill  
Closure Action of the Broome County  
Colesville Landfill Remedial Design  
Town of Colesville  
County of Broome  
State of New York

**PRE-BID MEETING ATTENDANCE VOUCHER**

This voucher must be completed and presented with bid proposals. Failure to do so will render the proposal invalid.

Contractor Name \_\_\_\_\_

Company Name \_\_\_\_\_

Company Address \_\_\_\_\_

Signature \_\_\_\_\_

Project Engineer

Date

Ray Standish, P.E.

Deputy for Engineering Services

Broome County Division of Solid Waste Management

(607) 778-2286, FAX (607) 778-2395

## COLESVILLE LANDFILL PRE-BID MEETING

## SIGN-IN ROSTER

Name	Organization/Address	Phone	Prime or Sub?
1 JOHN STEINWARTER	SOUTH PLAINFIELD, NJ CONTI ENVIRONMENTAL, INC.	(908) 755-3155	PRIME
2 A. GABLER	" " "	" "	"
3 DAN PISTACH	F.S. LOCKE CONT.	717 823-2001	"
4 MARK SERVIDONE	A. SERVIDONE INC	518- 732-7773	PRIME
5 VITO MAZZONE	A. SERVIDONE INC	518- 732-7773	PRIME
6 JIM MURPHY	PT&L ENVIRONMENTAL	201- 262-4141	PRIME
7 MATT KASKOUN	P.T. & L. ENVIRONMENTAL	201- 262-4141	PRIME
8 FRANK RESCOTTE	I.T. CORPORATION	412 312-7701	PRIME
9 KEVIN HASELEY	HASELEY TRUCKING COV.	716-297-1550	PRIME
10 KEN ELKAYATH	VACRI Construction	607 763-4319	PRIME
11 AL GORICK	GORICK CONST. CO., INC	601 715-1705	PRIME
12 C. PETERS	LABERGE / SUBURBAN	315 434-4441	PRIME
13 TOM REYNOLDS	T.W.S.S. - 150 AC Rd. Rockwell, NJ	716 458-5680	PRIME
14 PAUL ROACH	Burton F. Clark, Inc. Delhi, NY	607 746-2727	PRIME
15 KENH DOCKER	McLAREN / HANET	518 869-6772	PRIME
16			
17			
18			
19			

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3

To: Dave Decker	From: [Signature]
Co: M & E	Co: Br. Co. Decker
Dept:	Phone: 607-778-2286
Fax: 518-427-8921	Fax: 607-778-2395

## COLESVILLE LANDFILL PRE-BID MEETING

## SIGN-IN ROSTER

Name	Organization/Address	Phone	Prime or Sub?
1 John STEINHILBER	SOUTH PLAINFIELD, NJ CONTI ENVIRONMENTAL, INC.	(908) 755-3155	PRIME
2 A. GARCIA	" " "	" "	"
3 DAN PURCELL	F. S. LORRA CONT.	717 623-2001	"
4 MARK SERVIDONE	A. SERVIDONE INC	518 732-7773	PRIME
5 VINCE MAZZONE	A. SERVIDONE INC	518 732-7773	PRIME
6 JIM MURPHY	PT&L ENVIRONMENTAL	201 262-4141	PRIME
7 MATT KASKOUN	P.T. & L. ENVIRONMENTAL	201 262-4141	PRIME
8 BRIAN FELLEUXE	E.T. CORPORATION	412 912-7701	PRIME
9 KEVIN HASELEY	HASELEY TRUCKING CORP.	716 297-1550	PRIME
10 Ken Elgarath	VACIL Construction	607 725-4319	PRIME
11 Al Grube	Grube Inc. - I.C.	215-1705	PRIME
12 C. PETERS	LABORIE / SUBURBAN	315 434-4441	PRIME
13 Tom Reynolds	Twiss - 150 Kc Rd. Hudson, NY	716 438-5680	PRIME
14 Paul Roche	" " " " " "	607 746-4727	PRIME
15 Keith Decker	McLaren/Hart	518 885-6992	PRIME
16 Craig Standish	FG Lien Construction	(607) 863-3620	Sub
17			
18			
19			

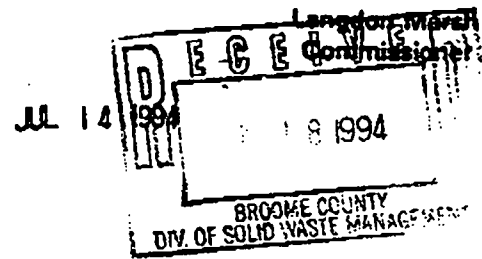
## COLESVILLE LANDFILL PRE-BID MEETING

## SIGN-IN ROSTER

Name	Organization/Address	Phone	Prime or Sub?
1 JOHN V. EGGST	GEO CON INC. 1000 WHITEHALL RD YORKTOWN, NJ CRS, INC	609 772-1188	PRIME
2 JACK MILLER	ONE TRIANGLE DR, EXPT PA 15632	412-793- 1009	PRIME
3 JIM BAKER	TUG HILL PO BOX 158 FELTS MILL NY	315-973 4011	PRIME
4 Dale Risher	SLC Consultants/Construction 636E Redwood Rd. Richmond NY	716-439- 0716	PRIME
5 Tim Woodlee	POLYFELT AMERICAS 61 NORTH ST. MANCHESTER NH	603-672- 5510	—
6 PAUL PAYEUR	Solmax Geosynthetic Inc Box 154 Newburgh NY	518 783-7926	Sub
7 DENIS DURHAM	Solmax Newburgh NY	518 783-7926	Sub
8 PETER ROMOCKI	IT CORPORATION 140 ALLEN LANE RD. RICH. NY	716 271-6430	PRIME
9 DENNIS NEWTON	AMERICAN WASTE SERVICE ONE AMERICAN WAY, WATKINS	216 856-6900	PRIME
10 William Demaree	ACF Inc MARCY EXCAVATION LEANING	518 426-9849	Sub
11 Christopher Hale	131 EAST BROAD ST 22F	315-738 4062	PRIME
12 Nick Penna	DI GIULIO CONSTRUCTION 60 N. LAMARCA AVE. MARYSVILLE	414-4813	PRIME
13			
14			
15			
16			
17			
18			
19			

New York State Department of Environmental Conservation  
50 Wolf Road, Albany, New York 12233-7010

Mr. Timothy M. Grippen  
County Executive  
Broome County Office Building  
PO Box 1766  
Binghamton, New York



Mr. Mark Buckstein  
General Counsel  
International Specialty Products  
1361 Alps Road  
Wayne, NJ 07470

Dear Sirs:

RE: Colesville Landfill - Site No. 704010  
Contract No. 1 - Final Design  
Dated July 11, 1994

The Final Engineering Design Report, Construction Plans, Bid Documents and Technical Specifications for the Closure Action at the Colesville Landfill (Contract No. 1) have been determined to be acceptable. Therefore, the Department authorizes Broome County to proceed with the advertisement for bids for Contract No. 1.

Please note that the following is required before the County can award Contract No. 1:

1. All contract addenda must be reviewed and approved by the Department before bid opening.
2. A legal opinion that any property access and easements necessary for Contract No. 1 have been obtained.
3. The engineering contract with Metcalf and Eddy must be executed and approved by the Department.
4. Authorization to award must be issued by the Department.
5. A bid tabulation of all bids received including the engineer's pre-bid estimate, certified by a registered New York State Professional Engineer.

Post-It™ brand fax transmittal memo 7671		# of pages • 3
To	David Decker, PE.	From
Co.	Metcalf & Eddy	Co.
Dept.		Phone #
Fax #	518-427-8921	Fax #
		607-773-2236
		607-773-2395

Mr. Timothy M. Grippen  
Mr. Mark Buckstein

Page 2

6. A copy of the apparent low bid, including a signed copy of the proposed Affirmative Action Work Plan (Please note that DEC Bureau of Affirmative Action approval of the Affirmative Action Work Plan is a condition of award).
7. Evidence of intent of surety to issue necessary performance and labor and material bonds and evidence of intent to obtain the required insurance for the apparent low bidder.
8. A statement from the authorized municipal official indicating the names of the bidders to whom contracts are to be awarded, the amount of the contracts and discussion of bid and recommendation for award.
9. Proof of advertising indicating the circulation of the publication and time allowed for preparation and receipt of bids.
10. A copy of each addendum issued during the bidding period and acknowledgement of receipt by all the bidders.
11. Signed copies of the certification by the apparent low bidder regarding compliance with non-collusive bidding requirements.
12. An explanation and evaluation of any substantial variance from the pre-bid estimate.
13. Other documents required to conform with applicable state and local laws and ordinances.

The Department recommends obtaining approval of the executed engineering contract with Metcalf and Eddy as soon as possible in order to ensure the eligibility of costs.

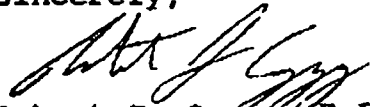
At this juncture, all project management responsibilities for Contract No. 1 will be assumed by Mr. Lech Dolata of the Bureau of Construction Services. Mr. Brian Davidson will be responsible for Contract No. 2 project management until that contract is approved.

Mr. Timothy M. Grippen  
Mr. Mark Buckstein

Page 3

If you have any questions regarding Contract No. 1, please  
contact Mr. Lech Dolata at 518-457-9280.

Sincerely,

  
Robert J. Cozzy, P.E.  
Chief

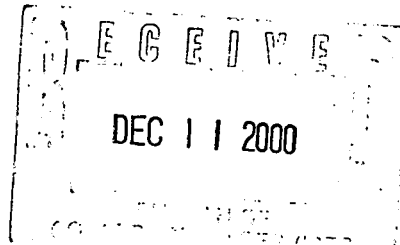
Municipal Projects Section  
Bureau of Central Remedial Action  
Division of Hazardous Waste  
Remediation

cc: E. Gonzalez, USEPA  
N. Kaye, ISP  
R. Standish, Broome Co.  
R. Benke, Broome Co.  
C. Jones-Rafferty, NYSDOH  
M. O'Hara, Wehran

# ARCADIS GERAGHTY & MILLER



Mr. George Jacob  
U.S. Environmental Protection Agency Region II  
19th Floor  
290 Broadway  
New York, NY 10007



ARCADIS Geraghty & Miller, Inc.  
88 Duryea Road  
Melville  
New York 11747  
Tel 631 294 7600  
Fax 631 249 7610

Subject:  
Status of Remedial Construction and Seep/Surface Water Quality,  
Colesville Landfill, Broome County, New York.  
ARCADIS Geraghty & Miller Project No. NY000949.0012.00003

ENVIRONMENTAL

Dear Mr. Jacob:

Date  
8 December 2000

ARCADIS Geraghty & Miller (AGM) has prepared this letter based on our November 13, 2000 telephone conversation regarding the status of the groundwater remediation system construction and appropriate measures to monitor seep/surface water quality at the Colesville Landfill, Broome County, New York. Stage 1 of the remedial construction, which involved installation of 13 new injection wells and two extraction wells, was completed on November 7, 2000. The installation of extraction wells had been delayed by approximately two weeks because the well screens with a slot size of 0.004 inch had to be custom ordered. As discussed, we will proceed with Stage 2 of the remedial construction as soon as weather permits following this winter. The schedule for construction completion and system start-up is shown on Figure 1. A description of measures that AGM believes are warranted for an ongoing evaluation of seep/surface water quality is provided below.

Contact:  
Steven M. Feldman

Extension:  
(631) 391-5244

## Seep/Surface Water Quality

Since completion of the landfill cap in November 1995, water level elevations have remained relatively stable in the glacial outwash aquifer, but seep quality (both visually and based on analytical results) has shown improvement (Table 1). The seep/surface water sampling locations are shown on Figure 2. During the most recent seep sampling effort on February 9, 2000, volatile organic compounds (VOCs) were not detected at locations F-6, SP-1, SP-3 and SP-4. At location SP-2, concentrations of 1,1-dichloroethane (57 ppb), chlorobenzene (24 ppb), and chloroethane (15 ppb) were detected. The SP-2 seep sample was collected from an area adjacent to the stream bank that was the most highly impacted based on visual observations. Although sample SP-2 was not collected from the same exact location as samples collected in 1995, the results are generally consistent with previous results. Obtaining seep water quality data on an ongoing basis at the SP-2 location

**ARCADIS GERAGHTY & MILLER**

will be helpful in evaluating the effectiveness of the groundwater remediation system.

Overall, the results showed that any VOCs that discharge into the North Stream are rapidly attenuated through the processes of dilution and volatilization. In addition, the planned groundwater remediation effort will improve seep quality by reducing concentrations of VOCs in groundwater prior to discharging into the North Stream. Based upon visual observations of seep occurrences since 1995, historic water quality data from seep and surface water locations, and the planned groundwater remediation effort, AGM concludes the following:

- The groundwater remediation effort will improve seep/surface water quality in the North Stream beyond what has already been accomplished through capping of the landfill.
- There is no need to take any actions at the present time to address water quality at the seeps because surface water quality in the North Stream (a Class C water body) is presently in compliance with NYSDEC Ambient Water Quality Standards and Guidance Values for surface water (SW-SGVs).
- Seep/surface water quality in the North Stream should be monitored as part of the Long-Term Monitoring Program to evaluate the overall effectiveness of the remedial effort.

A description of the proposed seep/surface water monitoring recommendations are provided below.

### **Monitoring Objectives**

The seep/surface water monitoring will be performed on a semi-annual basis (i.e., in March and September) each year, preferably to coincide with the seasonal high and low OF the water table. The data obtained from the sampling effort will be evaluated each round to assess the effectiveness of the monitoring program and to determine whether additional action is warranted.

### **Monitoring Plan**

The plan will incorporate existing sampling locations as defined in the RI (Wehran 1992), and the locations sampled during the five-year review completed in February

2000. Seep SP-2 and SP-3 will be sampled as part of the long-term plan; Seep SP-4 will be sampled once to confirm the February 2000 results that showed no detection of VOCs. If Seep SP-4 exhibits no exceedences of SW-SGVs, then it will be removed from the sampling plan. Downstream surface water sampling point F-6 will be sampled as part of the long-term plan.

All samples will be submitted under chain of custody protocols to a NYS-certified laboratory for analysis of VOCs using USEPA Method 8260.

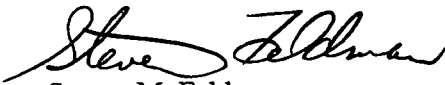
### Reporting

Upon receipt of the analytical results, the data will be provided in tabular format and included in the next quarterly monitoring report that will also document the associated groundwater quality data and evaluation. Findings, conclusions and recommendations for changes in the seep/surface water quality monitoring program will be made in the quarterly reports, as appropriate.

If you have any questions, please do not hesitate to call.

Sincerely,

ARCADIS Geraghty & Miller, Inc.



Steven M. Feldman  
Principal Scientist/Project Manager



Michael Wolfert  
Associate Vice President/Project Director

Copies:

Joel Singerman, USEPA  
Brian Davidson, NYSDEC  
Joe Yavonditte, NYSDEC  
Ray Standish, Broome County  
Celeste Wills, GAF Corporation

Table 1. Volatile Organic Compounds Detected in Seep Water Samples Collected on February 9, 2000, Colesville Landfill, Broome County, New York.

Constituent (ug/L)	Site ID: Date:	SP-1 9/26/95	SP-1 3/11/96	SP-1 2/9/00	SP-2 9/26/95	SP-2 12/12/95	SP-2 2/9/00
1,1,1-Trichloroethane	<	1	< 1	< 5	< 1	< 1	< 5
1,1,2,2-Tetrachloroethane	<	1	< 1	< 5	< 1	< 1	< 5
1,1,2-Trichloroethane	<	1	< 1	< 5	< 1	< 1	< 5
1,1-Dichloroethane		42.9	3.8	< 5	6.2	33.8	57
1,1-Dichloroethene		--	--	< 5	--	--	< 5
1,2-Dichloroethane	<	1	< 1	< 5	< 1	0.2 J	< 5
1,2-Dichloropropane	<	1	< 1	< 5	< 1	< 1	< 5
2-Butanone		--	--	< 5	--	--	< 5
2-Hexanone		--	--	< 5	--	--	< 5
4-Methyl-2-pentanone		--	--	< 5	--	--	< 5
Acetone		--	--	< 5	--	--	< 5
Benzene		4.9	< 1	< 5	2	7.5	< 5
Bromodichloromethane	<	1	< 1	< 5	< 1	< 1	< 5
Bromoform	<	1	< 1	< 5	< 1	< 1	< 5
Bromomethane		--	--	< 5	1	< 1	< 5
Carbon disulfide		--	--	< 5	--	--	< 5
Carbon tetrachloride	<	1	< 1	< 5	< 1	< 1	< 5
Chlorobenzene		37	0.8 J	< 5	27.3	13.3	24
Chloroethane		3.8	< 1	< 5	4.6	8.2	15
Chloroform	<	1	< 1	< 5	< 1	< 1	< 5
Chloromethane		--	--	< 5	--	--	< 5
cis-1,2-Dichloroethene		--	--	< 5	--	--	< 5
cis-1,3-Dichloropropene	<	1	< 1	< 5	--	--	< 5
Dibromochloromethane	<	1	< 1	< 5	< 1	< 1	< 5
Ethylbenzene		99	< 1	< 5	38	27.5	< 5
m,p-Xylene		273	< 1	< 5	126	2	< 5
Mirthychloride	<	1	< 1	< 5	< 1	< 1	< 5
o-Xylene		182	< 1	< 5	71.1	1	< 5
Styrene	<	1	< 1	< 5	< 1	< 1	< 5
Tetrachloroethene		--	--	< 5	--	--	< 5
Toluene		3.7	< 1	< 5	3.5	1.1	< 5
trans-1,2-Dichloroethene		--	--	< 5	--	--	< 5
trans-1,3-Dichloropropene	<	1	< 1	< 5	< 1	< 1	< 5
Trichloroethene		--	--	< 5	--	--	< 5
Vinyl chloride	<	1	< 1	< 5	--	3.3	< 5

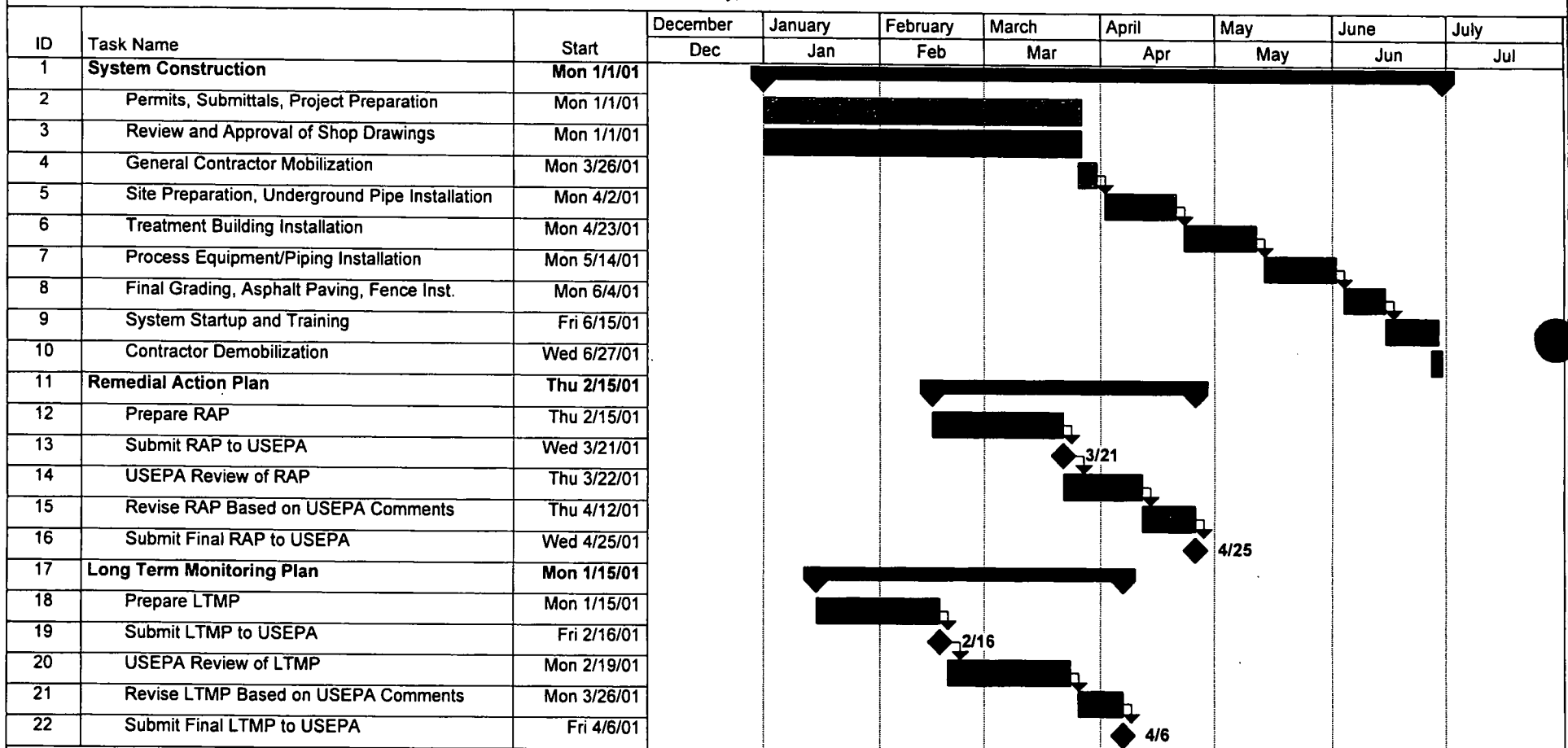
ug/L Micrograms per liter.  
 -- Not analyzed.

Table 1. Volatile Organic Compounds Detected in Seep Water Samples Collected on February 9, 2000, Colesville Landfill, Broome County, New York.

Constituent (ug/L)	Site ID: Date:	SP-3 9/26/95	SP-3 12/12/95	SP-3 3/11/96	SP-3 2/9/00	SP-4 2/9/00
1,1,1-Trichloroethane		3	< 1	< 1	< 5	< 5
1,1,2,2-Tetrachloroethane	<	1	< 1	< 1	< 5	< 5
1,1,2-Trichloroethane	<	1	< 1	< 1	< 5	< 5
1,1-Dichloroethane		68.1	< 1	1.7	< 5	< 5
1,1-Dichloroethene		--	--	--	< 5	< 5
1,2-Dichloroethane	<	1	< 1	< 1	< 5	< 5
1,2-Dichloropropane	<	1	< 1	< 1	< 5	< 5
2-Butanone		--	--	--	< 5	< 5
2-Hexanone		--	--	--	< 5	< 5
4-Methyl-2-pentanone		--	--	--	< 5	< 5
Acetone		--	--	--	< 5	< 5
Benzene		2.8	2.2	< 1	< 5	< 5
Bromodichloromethane	<	1	< 1	< 1	< 5	< 5
Bromoform	<	1	< 1	< 1	< 5	< 5
Bromomethane		--	--	--	< 5	< 5
Carbon disulfide		--	--	--	< 5	< 5
Carbon tetrachloride	<	1	< 1	< 1	< 5	< 5
Chlorobenzene		49.1	12.2	2	< 5	< 5
Chloroethane		25.4	7.7	< 1	< 5	< 5
Chloroform	<	1	< 1	< 1	< 5	< 5
Chloromethane					< 5	< 5
cis-1,2-Dichloroethene					< 5	< 5
cis-1,3-Dichloropropene	<	1	< 1	< 1	< 5	< 5
Dibromochloromethane	<	1	< 1	< 1	< 5	< 5
Ethylbenzene	<	1	18.4	0.2	J < 5	< 5
m,p-Xylene		1.6	51.3	0.7	J < 5	< 5
Methylchloride	<	1	< 1	< 1	< 5	< 5
o-Xylene		2.1	25.8	0.3	J < 5	< 5
Styrene	<	1	< 1	< 1	< 5	< 5
Tetrachloroethene		--	--	--	< 5	< 5
Toluene	<	1	0.5	J 0.4	J < 5	< 5
trans-1,2-Dichloroethene		--	--	--	< 5	< 5
trans-1,3-Dichloropropene	<	1	< 1	< 1	< 5	< 5
Trichloroethene		--	--	--	< 5	< 5
Vinyl chloride		1.2	0.4	J < 1	< 5	< 5

ug/L Micrograms per liter.  
 -- Not analyzed.

Figure 1. Construction and Report Preparation Schedule, Colesville Landfill, Broome County, New York.



Project: Colesville Landfill  
Date: Tue 12/5/00  
Project Manager: Steve Feldman

Task



Milestone



External Tasks



Split



Summary



External Milestone



Progress



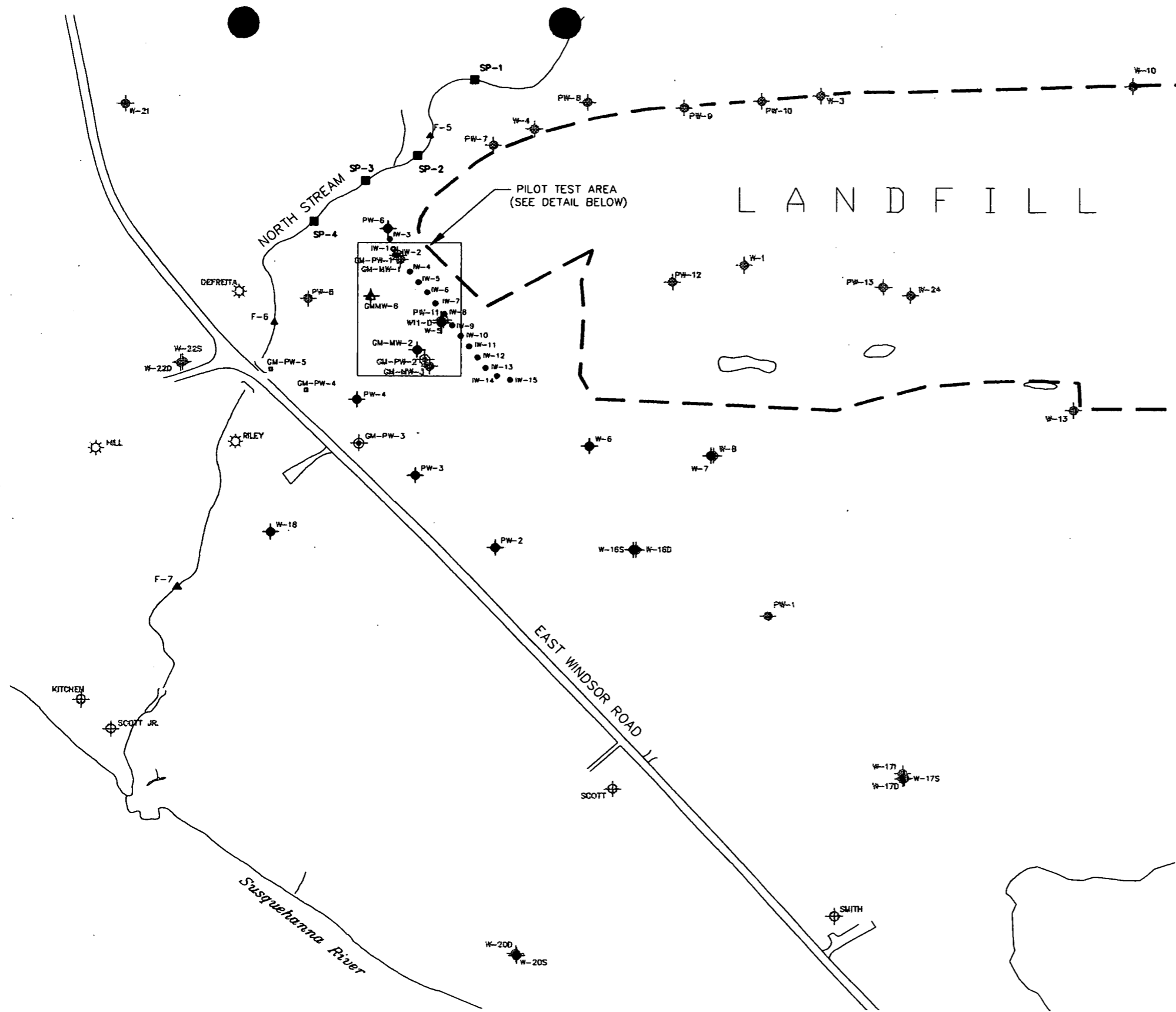
Project Summary



Deadline

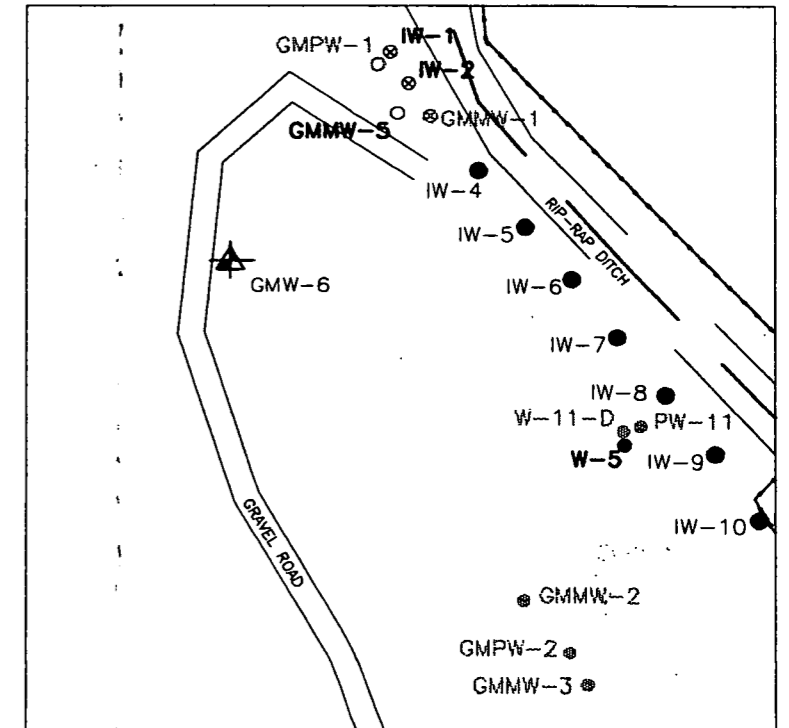


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# EXPLANATION

- GM-PW-2 LOCATION AND DESIGNATION OF EXISTING PRODUCTION WELL
- W-24 LOCATION AND DESIGNATION OF EXISTING MONITORING WELL
- SCOTT LOCATION AND DESIGNATION OF EXISTING HOMEOWNER WELL
- HILL LOCATION AND DESIGNATION OF FORMER HOMEOWNER WELL
- IW-2 LOCATION AND DESIGNATION OF PILOT TEST INJECTION WELL
- GMMW-4 LOCATION AND DESIGNATION OF PILOT TEST MONITORING WELL
- GMMW-6 LOCATION AND DESIGNATION OF PROPOSED MONITORING WELL
- IW-10 LOCATION AND DESIGNATION OF PROPOSED INJECTION WELL
- GM-PW-4 LOCATION AND DESIGNATION OF PROPOSED EXTRACTION WELL
- LOCATION AND DESIGNATION OF SEEP SAMPLING POINT
- LOCATION AND DESIGNATION OF STREAM SAMPLING POINT



SCALE: 1"=80'-0"

NOTE: ALL LOCATIONS ARE APPROXIMATE

0 250  
SCALE IN FEET

ARCADIS GERAGHTY & MILLER



COLESVILLE LANDFILL  
COLESVILLE, NEW YORK

DRAWN A.G.	DATE 8/25/00	PROJECT MANAGER S. FELDMAN	DEPARTMENT MANAGER
LOCATION OF REMEDIAL WELLS MONITORING WELLS AND SEEP/ SURFACE WATER SAMPLING LOCATIONS		LEAD DESIGN PROF.	CHECKED D. STERN
		PROJECT NUMBER NY09490012T5	DRAWING NUMBER 2

NO.	DATE	REVISION DESCRIPTION	BY
			CKD

# ARCADIS GERAGHTY & MILLER



Mr. George Jacob  
U.S. Environmental Protection Agency  
290 Broadway  
New York, New York 10007

ARCADIS Geraghty & Miller, Inc.  
88 Duryea Road  
Melville  
New York 11747  
Tel 631 249 7600  
Fax 631 249 7610

Subject:

Awarding of Drilling Contract for Groundwater Remediation System Construction,  
Colesville Landfill, Broome County, New York  
ARCADIS Geraghty & Miller Project No. NY000949.0014.00001

ENVIRONMENTAL

Dear Mr. Jacob:

As requested, I am forwarding a copy of the signature page of the Drilling Contract between ARCADIS Geraghty & Miller and Parratt Wolff. Mobilization at the site and the start of drilling began on September 11, 2000.

Date,  
18 September 2000

Contact:  
Steve Feldman

Please call me if you have any questions.

Sincerely,

ARCADIS Geraghty & Miller, Inc.

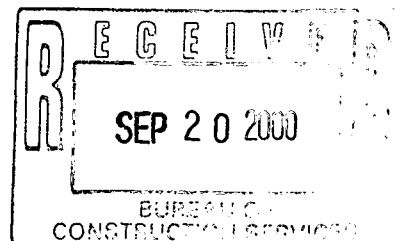
Extension:  
(631) 391-5244

Steven M. Feldman  
Principal Scientist/Project Manager

Enclosure

Copies:

Joe Yavonditte, NYSDEC ✓  
Ray Standish, Broome County  
Celeste Wills, GAF Corporation



**EXHIBIT A**  
**WORK ORDER**

Pursuant to  
General Contract

Dated September 7, 2000

between

ARCADIS Geraghty & Miller, Inc.

and

Parratt Wolff, Inc.

Work Order No. 090100

AG&M Job No. NY000949.0014.00002

Clients: Broome County  
Government Plaza  
P.O. Box 1766  
Binghamton, NY 13902

GAF Corporation  
1361 Alps Road  
Wayne, New Jersey 0747

Site: Colesville Landfill  
East Windsor Road  
Colesville, New York

Pursuant to the terms and conditions of the General Contract dated February 18, 1998, including all Exhibits, which is incorporated herein by reference, Parratt Wolff, Inc. shall perform the Work as provided in the Scope of Work as specified in Attachment I. The Work shall commence on September 11, 2000 and be completed by November 30, 2000 for the cost as specified in Attachment II.

**Parratt Wolff, Inc.**

By: Will. Moran  
Title: Sr. Project Manager  
Date: 9/8/2000

**ARCADIS Geraghty & Miller, Inc.**

By: [Signature]  
Title: Vice President  
Date: 9/11/00

**Bid Document For Drilling Services**  
**Colesville Landfill,**  
**Broome County, New York.**

**1.0 GENERAL SPECIFICATIONS**

ARCADIS Geraghty & Miller, on behalf of Broome County and GAF Corporation, is soliciting bids for well drilling services in and around the area of the Colesville Landfill, Town of Colesville, Broome County, New York. This bid document consists of two parts, the first part provides specifications for the subject work; the second part provides a bid sheet to be utilized by firms wishing to submit a competitive bid proposal for the subject work.

Broome County is funding this project; therefore all estimates must be based on prevailing New York State wage rates. All bid proposals must be submitted on the enclosed bid sheet and any additional information, which may be helpful in evaluating bids, should be attached to the bid sheet. Please refer to the attached schedule for milestones to be met as part of submittal of this bid. Completed bid packages are to be received at the following address:

ARCADIS GERAGHTY & Miller, Inc.  
88 Duryea Road, 1<sup>st</sup> floor  
Melville, New York 11747  
Attention: Mr. David Stern

**1.1 LOCATION AND DESCRIPTION OF SUBJECT WORK**

The selected bidder (hereinafter referred to as the CONTRACTOR) shall perform all operations, and provide all necessary manpower, materials, equipment, tools, and services required to drill, install, and develop 13 injection wells and 2 groundwater extraction wells and redevelop existing Extraction Well PW-3. The subject work will be performed at and near the Colesville Landfill located in Colesville, Broome County, New York (hereinafter referred to as the site).

The injection wells will be installed on 30-foot centers along the southwest perimeter of the landfill. Extraction wells will be drilled at predetermined locations in the southwest portion of the site. Unless field conditions warrant, work hours shall be a standard 8-hour day (8:00 a.m. to 4:00 p.m.). All work required by these specifications shall be performed under the oversight of ARCADIS Geraghty & Miller, Inc. (hereinafter referred to as the CONSULTANT). Injection wells shall be drilled, installed, and developed in the following general order, however, site-specific conditions may cause the sequence to be modified:

1. Drilling well borehole (6-inch) and collecting split-spoon core samples, as specified in Section 2.1 (Well Drilling, Logging, and Formation Sampling).
2. Constructing well (includes setting the well casing and screen and installing the backfill materials, seals, and locking protective casing), as specified below.
3. Developing well, as specified below.

Extraction wells shall be drilled, installed, and developed in the following general order, however, site-specific conditions may cause the sequence to be modified:

1. Drilling pilot borehole (6-inch) and collecting split-spoon core samples, as specified in Section 2.1 (Well Drilling, Logging, and Formation Sampling).
2. Conducting sieve analysis of selected split spoon samples material (by CONTRACTOR).
3. Reaming borehole to proposed total diameter (between 12 inches and 14-inches) and total depth.
4. Selection of screen interval and slot size (by CONSULTANT) and ordering screen and casing (by CONTRACTOR).
5. Constructing well (includes setting the well casing and screen and installing the filter pack materials, seals, and locking protective casing), as specified below.
6. Developing well, as specified below.
7. Conducting one four-hour step-drawdown test of each extraction well.

Utility markouts will be coordinated by CONSULTANT through the Underground Facilities Protective Organization (UFPO) prior to drilling. As several locations will be near overhead lines, CONSULTANT will either arrange for power to be shut off while the drilling rig is in proximity (as defined in 16 NYCRR Part 753) to overhead lines or identify a suitable alternate location.

## **1.2 SITE CONDITIONS AND HYDROGEOLOGY**

The Colesville Landfill is an inactive (closed) landfill. The entirety of the work will be conducted on-site (property owned by Broome County). Site topography is relatively flat at the top of the landfill (where the majority of the injection wells will be installed) to steeply sloping further from the landfill perimeter (where the extraction wells will be installed). The generalized geologic sequence at the landfill from land surface downward is as follows:

- Unconsolidated man-made fill overlying glacial till consisting of unstratified clayey silt to silt and clay, little gravel and little sand.
- glacial outwash consisting of brown sand to gravel, with varying amounts of silt.
- glaciolacustrine clay consisting of brown silt to silt and clay, trace fine sand, varved, laminated.

Depth to water across the study area varies between 12 feet below land surface (ft bls) furthest from the landfill (where the extraction wells will be installed) to approximately 50 ft at the landfill perimeter (where the injection wells will be installed).

Additional information on the site hydrogeology is available from CONSULTANT for inspection by interested bidders. It is the bidder's responsibility to be familiar with the site and conditions that shall affect his bid.

### **1.3 EXPERIENCE AND QUALIFICATIONS**

All bidders must have experience in installing wells similar to those described herein and be licensed well drillers in the State of New York. A statement of experience and qualifications is required and must be submitted with the bid price. No portion of this work may be subcontracted unless CONSULTANT grants prior approval, in writing. A statement of subcontractor experience and qualifications may be requested before subcontractor approval is granted.

Bidders must have drilled a minimum of ten wells of the type and depth described herein, and upon request, must furnish a list of these wells showing the owner, location, construction, and depth of the wells.

### **1.4 PERMITS AND REGULATIONS**

CONTRACTOR, at his expense, shall procure all necessary permits, bond applications, and/or licenses from the appropriate authorities to conduct the work described herein.

CONTRACTOR shall comply with all local, state, and federal regulations. If CONTRACTOR believes that the specifications provided herein are at variance with any law or regulation, he shall promptly notify CONSULTANT, in writing, and any necessary adjustments shall be made as provided in the Contract or Agreement under "Changes in the Work".

### **1.5 EQUIPMENT AND MATERIAL DELIVERY, STORAGE, AND HANDLING**

All arrangements for delivery and handling of equipment and material, throughout the prosecution of the work, shall be the CONTRACTOR'S responsibility. CONTRACTOR shall store equipment and materials on-site so as to ensure the preservation of their quality and fitness for the work. When considered necessary by the CONSULTANT, they shall be placed on wooden platforms, or other hard, clean surfaces, and shall be placed under cover when directed. Materials shall be stored at the location(s) designated by CONSULTANT, and shall be arranged so as to facilitate prompt inspection by the on-site CONSULTANT representative.

### **1.6 QUALITY ASSURANCE/QUALITY CONTROL**

Quality Assurance/Quality Control measures shall conform to the requirements of the conditions of the Contract, except as modified below.

1. Upon request, CONTRACTOR, at his expense, shall furnish copies of certificates or other pertinent documents from suppliers/manufacturers showing that all materials using during well drilling, installation and development including, but not limited to, casings, screens, and backfill materials (i.e., gravel pack, bentonite pellets, bentonite slurry, etc.) conform to the requirements of these specifications.
2. Materials for well construction shall comply with the American Society for Testing and Materials (A.S.T.M.).

## **1.7 TECHNICAL INSPECTION**

All work conducted under these specifications shall be subject to routine inspection by the CONSULTANT; however, such inspection shall not relieve the CONTRACTOR from any obligation to perform said work in accordance with specifications or any modification thereof, as herein provided. Work not done in strict accordance with the specifications or any modification thereof, as herein provided, shall be corrected and made good by the CONTRACTOR at his expense whenever so ordered by CONSULTANT, without reference to any previous oversight or error in inspection.

If the CONTRACTOR has made all possible efforts, used proper methods for drilling the wells/borings (including boreholes for which a specific drilling method was requested by CONSULTANT) and in the opinion of CONSULTANT has taken all the required and necessary precautions, but nevertheless the required results cannot be obtained, the well/boring will be abandoned and the drilling rig moved to a nearby location and a replacement well/boring will be drilled. Payment, computed on the basis of unit bid price per linear foot, will be made to the CONTRACTOR for the actual length of well/boring (abandoned and replacement) drilled. However, if a well/boring has to be abandoned for fault, negligence, or incompetence of the drilling crew, faulty or improper equipment, loss of tools, or collapse of the casing or borehole, no payment shall be made to the CONTRACTOR for drilling or abandoning the well/boring and moving to another location to drill a new well/boring. The decision of CONSULTANT shall be final and binding.

All directions given to the CONTRACTOR by CONSULTANT pertaining to the scope of work during routine inspection shall be binding on the CONTRACTOR.

## **1.8 SUBMITTALS**

Upon request by CONSULTANT, the CONTRACTOR shall submit the following:

1. Well driller's logs.
2. Qualifications of drillers, mechanics, technicians, and subcontractors.
3. Well construction details.
4. Well Permits

## **2.0 Specifications For Drilling, Installing, And Developing Injection And Extraction Wells**

The work specified herein is required to meet methods that have been approved by the New York State Department of Environmental Conservation (NYSDEC). Well drilling, installing, and developing specifications are given below.

### **2.1 WELL DRILLING, LOGGING, AND FORMATION SAMPLING**

A total of thirteen (13) injection and two (2) extraction wells will be drilled, installed, and developed. Additionally, one (1) existing extraction well and four (4) existing injection wells will be redeveloped. Table 1 summarizes the anticipated borehole diameter, well total depths, and

anticipated drilling methodologies; CONSULTANT shall determine final well depths. Except as described below, drilling methodologies will be dictated by site conditions and the proposed well depths. Formation samples will be collected using a two-inch diameter, two-foot long split-spoon core-sampling device. Refer to Table 1 for estimated number of split spoon samples to be collected per well. In general, formation sample will be collected as follows:

1. Injection Wells: Collect at the estimated water table interface and at the midpoint of the screened interval for an estimated total of two (2) split spoons per well. However site conditions may warrant a change in this number.
2. Extraction Wells: Collect at four-foot intervals to the water table (approximately 12 ft bls), and continuously until lacustrine deposits are encountered (approximately 30 ft bls) for an estimated total of twelve (12) split spoons per well. However, site conditions may warrant a change in this number. Up to four (4) of the split-spoon samples per well will be submitted for sieve analysis by the CONTRACTOR.

## **2.2 WELL CONSTRUCTION AND INSTALLATION**

In accordance with the specifications provided herein, the well screen and casing, and all backfill materials shall be installed within the hollow-stem augers. The augers shall be removed as well installation proceeds. Well installation shall be a continuous process until all sealant materials are emplaced. CONSULTANT shall determine final screen setting.

## **2.3 WELL CASING AND SCREEN**

Only new, undamaged, and domestically manufactured well casing and screen, meeting API and ASTM water well standards, shall be used. A vented PVC well cap and threaded PVC bottom cap shall be installed on each well. The well casing and screen specifications are as follows:

1. Injection wells shall be constructed of 2-inch inside diameter (ID), schedule 40, NSF-grade polyvinyl chloride (PVC) well casing and screen. All well screens (slotted construction) will be 10 slot (0.010 inches). Initially, wells will be completed approximately 2 ft above grade and to permit installation of pitless adaptors (to be completed by others). Once the below-grade piping is installed by others, the well will be completed by CONTRACTOR with a flush-mounted wellhead assembly in conformance with ASTM.
2. Extraction Wells shall be constructed of 6-inch ID, schedule 80, NSF-grade polyvinyl chloride (PVC) well casing and screen. Well screen slot sizes will be selected by CONSULTANT based on the sieve analysis report, and screens will be ordered by CONTRACTOR. Initially, wells will be completed approximately 2 ft above grade and to permit installation of pitless adaptors (to be completed by others).

## **2.4 WELL CASING AND SCREEN JOINTS**

All casing and screen sections shall be flush-joint, internally threaded. Joints shall be made up so that when tight, all threads are buried within the casing walls. No coupling, solvents, glues, or chemical cleaners shall be used in well construction.

## **2.5 INSTALLATION OF GRAVEL AND SAND PACK**

After setting the well screen and casing, the appropriately sized gravel pack shall be emplaced within the borehole annulus, to a depth as agreed to by the CONTRACTOR, in consultation with CONSULTANT. For purposes of this bid, well gravel will be assumed to be emplaced to a minimum of 3 ft above the top of the screen.

A fine sand layer (finer than gravel pack) will be emplaced in the annulus on top of the gravel pack in the same manner as the gravel pack, at a thickness as agreed to by the CONTRACTOR, in consultation with CONSULTANT. For purposes of this bid, fine sand thickness is assumed to be emplaced to 2 ft above the top of the gravel pack.

The gravel and fine sand pack shall be carefully poured down the annulus and its depth shall be carefully checked during emplacement to be sure that it has not bridged. If, in the opinion of the CONSULTANT, bridging has occurred (based on the calculated volume of pack required versus the volume used), the CONTRACTOR shall be required to correct the situation, at his expense, either by using compressed air to remove the gravel pack, or by removing the well, cleaning the hole, and beginning well construction again.

## **2.6 WELL SEALANT**

A high-solids, 100 percent polymer-free bentonite seal (ratio of bentonite (lbs) to water (gal) – 1.25:1) shall be installed by tremie pipe (slurry only) within the annular space above the fine sand layer. The bentonite seal shall be a minimum of 2-ft thick as measured immediately after placement, without allowance for swelling. The tremie pipe shall be gradually removed from the annular space as the slurry is added from the bottom up.

A polymer-free bentonite slurry (VOCLAY) shall be installed within the annular space above the bentonite seal using a tremie pipe. In all wells, the slurry shall be installed to approximately 5 ft below land surface in one continuous operation. Manufacturer's specifications for all bentonite products must be submitted and approved by CONSULTANT prior to use.

## **2.7 PROTECTIVE CASING**

As described in Section 2.3 (Well Casing and Screen), injection wells will be fitted with pitless adaptors (by others) prior to completing the wellhead assembly. At the direction of CONSULTANT, injection wells shall be completed at grade by cementing a 6-inch diameter, locking curb box in place over the wells. A fine sand shall be installed above the top of the bentonite slurry and inside the curb box to permit any water which may accumulate inside the curb box to drain.

## **2.8 ABANDONMENT OF BORINGS OR WELLS**

In the event that the CONTRACTOR should fail to drill a hole or place the well to the depth specified, or should abandon the hole or well because of loss of tools or for any other cause, he shall remove all salvageable casing and equipment and fill the abandoned hole with a bentonite and cement mixture using a tremie pipe. The CONTRACTOR shall then move the drill rig to a new location approved by CONSULTANT and begin drilling a new borehole. This work shall be done at the CONTRACTOR'S expense who may use salvaged materials, if usable, at the discretion of

CONSULTANT. No payment shall be made to the CONTRACTOR for installing or abandoning unsuccessful borings or wells, except as described above in Section 1.7 (Technical Inspection).

## **2.9 WELL PLUMBNESS, ALIGNMENT, AND ACCEPTANCE**

The completed wells, including well casing and screen, shall be free from mechanical defects and sufficiently straight and plumb to permit the installation of a permanent pneumatic submersible pump. It is the responsibility of the CONTRACTOR to ensure that the well construction meets the requirements of the pump supplier and these Technical Specifications.

## **2.10 WELL DEVELOPMENT/RE-DEVELOPMENT**

Following installation, all wells shall be developed by pumping (and backwashing) with a submersible pump, mechanical surging, pumping with air, air/water jet, or any combination of the above. The existing wells (Table 1) will be redeveloped using the same methods following completion of the new injection/extraction well network. Development will continue until the well responds freely to water-level changes in the formation and the well produces clear, sediment-free water, to the extent practical. CONSULTANT will determine when development is complete.

Dispersing agents, acids, disinfectants, or other additives will not be used. During development, water will be removed throughout the entire column of water standing in the well by periodically lowering and raising the pump intake.

Well development will include rinsing the interior well casing above the water table by using only water from that well. The well will be covered with a clean well cap, which will be rinsed with distilled water prior to installation. The result of this operation will be a well casing free of extraneous materials (grout, bentonite, sand, etc.).

In compliance with NYSDEC policy, every effort will be made to develop wells until turbidity (as measured in the field) is less than 50 nephelometric turbidity units (NTUs). However, CONSULTANT is aware that the 50 NTU standard may not be attainable, as the observed turbidity may be the result of the formation screened, and not inefficiencies in well design, installation, or development. Therefore, if after a "best well development effort," the 50 NTU standard cannot be attained and turbidity stabilizes (above the 50 NTU standard), the well will be acceptable, provided the integrity of the well is satisfactorily proven.

## **3.0 Decontamination of Equipment And Materials**

When drilling on-site, all downhole equipment and materials used in the drilling, installing, and developing of the wells shall be decontaminated using high pressure/temperature steam cleaning at a centrally located (on Broome County property) decontamination pad via steam cleaning prior to use, between wells, and before leaving the site at the completion of work.

## **4.0 Disposal of Waste Materials**

CONTRACTOR is responsible for proper management of all waste streams generated during well drilling, installation, and development, and will ensure that all wastes are stored in a manner acceptable to CONSULTANT. All cuttings generated from drilling shall be staged next to the drilling location and raked out after the well is complete, or at the direction of CONSULTANT. All

development water shall be discharged to land surface, preferably away from the well network location, as directed by CONSULTANT.

## **5.0 Site Maintenance and Restoration**

The CONTRACTOR shall, at all times, maintain the work site in a clean, workable condition. Prior to well acceptance, the CONTRACTOR shall be required to level off any trenches and/or pits, dispose of all material as directed by CONSULTANT, and restore the site to its original condition, to the extent possible.

## **6.0 Health And Safety**

Based on a site hazard evaluation, it is anticipated that all operations described herein shall be conducted using Level D or modified Level D protection, unless on-site monitoring (by CONSULTANT) indicates a necessity for upgrading. Level D protection consists of a hard hat, safety glasses, rubber boots, and gloves (i.e., latex, nylon, or PVC). Modified Level D protection consists of Level D equipment plus Tyvek coveralls (blue or green) or rain gear and an inner glove, as well as taping coveralls to the boots and gloves. Level C upgrade is not anticipated; costs for this contingency should be developed, but not included in the total bid price. A copy of the Health and Safety Plan (HASP) is available upon request from CONSULTANT for interested bidders. Bidders shall be responsible for providing crews with necessary personal protection to conform to the site-specific HASP requirements or their own plan, which must be as stringent as the site-specific HASP. CONSULTANT shall provide air monitoring and monitor worker health and safety.

## **7.0 Standby Time**

CONTRACTOR standby time shall be charged when CONSULTANT stops work for reasons other than is specified in the preceding sections of this bid document. Standby time will only be charged upon verbal approval from CONSULTANT. If for any reason, CONTRACTOR believes standby time is warranted, he shall immediately notify CONSULTANT. If standby time is warranted, it will be charged according to the rate specified in the bidsheet. Accordingly, CONTRACTOR should develop costs for standby time, but should not include any costs in his bid price. CONSULTANT is not responsible for standby time incurred by the bidder's subcontractors that is not directly the result of CONSULTANT's direction.

### Bidsheet for Drilling Services

Item	Item Description	Estimated Quantity	Unit Cost (\$)	Subtotal (\$)	Driller Initials
1	Mobilization/Demobilization	Lump Sum			
2	Overburden Drilling, 4 1/4" ID HSA	1,100 ft.			
3	Overburden Drilling, 10" ID HSA	70 ft.			
4	2" Split Spoons	50 units			
5	Sieve Analysis	8 units			
6	2"-dia Sch. 40 PVC Casing	770 ft.			
7	2"-dia. Sch. 40 PVC 0.010-Slot Screen	260 ft.			
8	6"-dia. Sch. 80 PVC Casing	35 ft.			
9	6"-dia. Sch. 80 PVC Screen (Slot size to be determined)	30 ft.			
10	Gravel Pack (Filpro #0)	Injection Wells	300 l.f.		
		Extraction Wells	36 l.f.		
11	Fine Sand Pack (Filpro #00)	Injection Wells	26 l.f.		
		Extraction Wells	4 l.f.		
12	Bentonite Seal	Injection Wells	26 l.f.		
		Extraction Wells	4 l.f.		
13	Bentonite (VOCLAY)	600 l.f.			
14	6"-dia. Flush-mount protective casing	13 units			
15	8"-dia temporary protective casing	2 units			
16	4"-dia temporary protective casing	Max. 13 units			
17	Well Development/Re-Development	170 hours			
18	Step Testing (Extraction Wells)	10 hours			
19	Decontamination	40 hours			
20	Standby Time (do not include in total bid)	---			
21	Level C upgrade (do not include in total bid)	---			
<b>All prices should not include sales tax.</b> <b>All estimates to be based on New York State wage rates.</b>			<b>TOTAL BID:</b>		

\_\_\_\_\_  
Contractor's Signature

**Bid Schedule**

<b>Milestone</b>	<b>Date</b>
Distribution of Bid Packages	July 21, 2000
Pre-Bid Site Walkthrough	July 27, 2000
Final Bids Due at AG&M's Melville, NY office	August 4, 2000
Contract Awarded	August 11, 2000
Mobilization to Site to Begin Work	August 21, 2000
Estimated Project Completion Date	October 20, 2000

Table 1. Injection and Extraction Well Drilling and Installation Specifications, Colesville Landfill, Broome County, New York.

Well Identification	Borehole Depth (ft bls)	Pilot Borehole Diameter (inches)	Well Borehole Diameter (inches)	Nominal Tool Inner Diameter and Well Drilling Method	Well Casing/ Screen Diameter (inches)	Well Casing/ Screen Composition	Well Total Depth (ft bls)	Screened Interval (ft bls)	Number of Split-Spoons	Top Gravel Pack (ft bls)	Top Fine Sand (ft bls)	Top Bentonite Seal (ft bls)	Total Development Time (hours)
<b>Proposed Extraction Wells</b>													
GMPW-4	35	6	13½	10-inch ID HSA	6/6	Sch. 80 PVC/0.010 slot	35	15 - 30	12	12	10	8	16
GMPW-5	35	6	13½	10-inch ID HSA	6/6	Sch. 80 PVC/0.010 slot	35	15 - 30	12	12	10	8	16
<b>Existing Extraction Wells (Redevelopment only)</b>													
GMPW-3	35	N/A	11	6-5/8 ID HSA	4/4	SS / 0.012 slot	35	15 - 30	N/A	N/A	N/A	N/A	10
<b>Proposed Injection Wells</b>													
IW-3	70	N/A	6	4 -in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	70	50 - 70	2	47	45	43	8
IW-4	70	N/A	6	4 -in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	70	50 - 70	2	47	45	43	8
IW-5	75	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	75	55 - 75	2	52	50	48	8
IW-6	75	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	75	55 - 75	2	52	50	48	8
IW-7	75	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	75	55 - 75	2	52	50	48	8
IW-8	75	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	75	55 - 75	2	52	50	48	8
IW-9	80	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	80	60 - 80	2	57	55	53	8
IW-10	80	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	80	60 - 80	2	57	55	53	8
IW-11	80	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	80	60 - 80	2	57	55	53	8
IW-12	80	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	80	60 - 80	2	57	55	53	8
IW-13	80	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	80	60 - 80	2	57	55	53	8
IW-14	80	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	80	60 - 80	2	57	55	53	8
IW-15	80	N/A	6	4-in. ID HSA	2/2	Sch. 40 PVC/0.010 slot	80	60 - 80	2	57	55	53	8

Table 1. Injection and Extraction Well Drilling and Installation Specifications, Colesville Landfill, Broome County, New York.

Well Identification	Borehole Depth (ft bls)	Pilot Borehole Diameter (inches)	Well Borehole Diameter (inches)	Nominal Tool Inner Diameter and Well Drilling Method	Well Casing/ Screen Diameter (inches)	Well Casing/ Screen Composition	Well Total Depth (ft bls)	Screened Interval (ft bls)	Number of Split-Spoons	Top Gravel Pack (ft bls)	Top Fine Sand (ft bls)	Top Bentonite Seal (ft bls)	Total Development Time (hours)
<b>Existing Injection Wells (Redevelopment Only)</b>													
IW-1	74	N/A	8½	4¼ ID HSA	2/2	Sch. 40 PVC/ 0.010 slot	74	34 – 74	N/A	N/A	N/A	N/A	8
IW-2	70	N/A	8½	4¼ ID HSA	2/2	Sch. 40 PVC/ 0.010 slot	74	50 – 65	N/A	N/A	N/A	N/A	8
GMMW-1	70	N/A	8½	4¼ ID HSA	2/2	Sch. 40 PVC/ 0.010 slot	70	50 – 65	N/A	N/A	N/A	N/A	8
PW-6	68	N/A	8½	4¼ ID HSA	2/2	Sch. 40 PVC/ 0.010 slot	68	53 – 63	N/A	N/A	N/A	N/A	8

N/A Not Applicable  
 -- Data not available  
 Ft bls feet below land surface

# ARCADIS GERAGHTY & MILLER



Mr. William Morrow  
Parratt Wolff, Inc.  
P.O. Box 56  
5879 Fisher Road  
East Syracuse, New York 13057

ARCADIS Geraghty & Miller, Inc.  
89 Duryea Road  
Melville  
New York 11747  
Tel 631 249 7800  
Fax 631 249 7810

Subject:  
Award of Well Drilling Contract, Colesville Landfill, Broome County, New York.  
ARCADIS Geraghty & Miller Project No. NY000949.0014.00001

ENVIRONMENTAL

Dear Mr. Morrow:

As discussed in our conversations, ARCADIS Geraghty & Miller (AG&M) has awarded the extraction/injection well drilling project at the Colesville Landfill (site) to Parratt Wolff. The project startup date is September 11, 2000. Parratt Wolff will make every effort to start the field project on September 11, 2000.

Date,  
29 August 2000

Contact  
David Stern

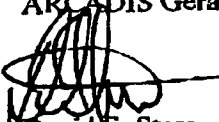
Enclosed, please find Amendment I and Work Order 090100 and associated attachments that were prepared pursuant to our existing Master Drilling Contract dated February 18, 1998. Please review the terms and conditions and contact us with any questions. Once you have verbally approved the terms and conditions, AG&M will mail two copies of the contract for your signature. Please sign and return both copies of the contract to David Stern in our Melville office by September 5, 2000. We will send you a copy of the fully executed copy of the contract prior to the start of drilling.

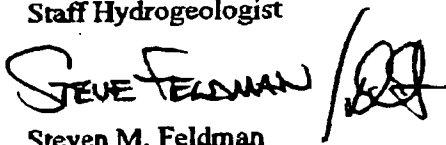
Extension:  
(631) 391-5284

If you have any questions, please contact David Stern at (631) 391-5284. We look forward to working with you.

Sincerely,

ARCADIS Geraghty & Miller, Inc.

  
David E. Stern  
Staff Hydrogeologist

  
Steven M. Feldman  
Project Manager

Enclosures

g:\project\broome\ny000949.0014\corres\contract award.doc

# ARCADIS GERAGHTY & MILLER



Brian Davidson  
Bureau of Central Remedial Action  
New York State Department of Environmental Conservation  
50 Wolf Road  
Albany, New York 12233-7010

ARCADIS Geraghty & Miller, Inc.  
88 Duryea Road  
Melville  
New York 11747  
Tel 631 249 7600  
Fax 631 249 7610

Subject:  
Groundwater Remediation System Final Design Package, Colesville Landfill,  
Broome County, New York.  
ARCADIS Geraghty & Miller Project No. NY000949.0013.00001

ENVIRONMENTAL

Dear Mr. Davidson:

Date,  
28 July 2000

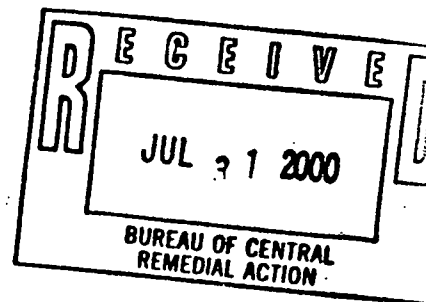
Enclosed are ten copies of the groundwater remediation system final design package, which includes the Groundwater Remediation System Engineering Report, Design Drawings, Technical Specifications, and Bid Document for Drilling Services. Based on the NYSDEC comment letter dated July 12, 2000, the design package has been revised to include a construction schedule for the remediation system, and the technical specifications have been revised to indicate that we, rather than the client, will be holding the contracts for the system construction. The Bid Document for Drilling Services has also been revised to indicate that the existing extraction well GM-PW-3 will be redeveloped by the drilling contractor.

Contact:  
Steve Feldman

Direct Dial:  
(631) 391-5244

Our response to the remaining comments regarding the treatment system capacity and groundwater monitoring network are as follows:

- Although the influent capacity for the treatment system was designed for approximately 1 gpm, the actual treatment system capacity is up to 15 gpm. The pneumatic pumps in the three extraction wells each have a maximum capacity of 3.5 gpm.
- As discussed with the USEPA, the groundwater monitoring well network to be used for performance monitoring will be described in a Long-Term Monitoring Plan for the site. We estimate that two additional monitoring wells will be required. We are currently evaluating where the monitoring wells may need to be located, and will submit to the USEPA and NYSDEC a map showing proposed well locations for approval prior to remedial construction. The Long-Term Monitoring Plan will be submitted for Agency review in November 2000.



Brian Davidson  
28 July 2000

**ARCADIS** GERAGHTY & MILLER

Please do not hesitate to call if you have any questions.

Sincerely,

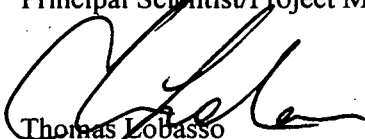
ARCADIS Geraghty & Miller, Inc.



Glenn Netuschil, P.E.  
Senior Engineer



Steven M. Feldman  
Principal Scientist/Project Manager



Thomas Lobasso  
Vice President/Project Officer

Copies:

G. Jacob, USEPA

R. Standish, Broome County

C. Wills, GAF Corporation

New York State Department of Environmental Conservation

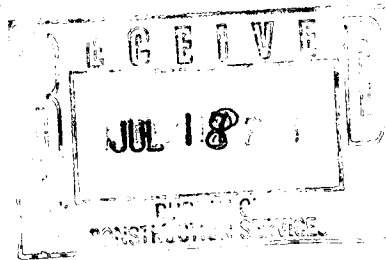
Division of Environmental Remediation

Bureau of Central Remedial Action, Room 228

50 Wolf Road, Albany, New York 12233-7010

Phone: (518) 457-7894 • FAX: (518) 457-7925

Website: [www.dec.state.ny.us](http://www.dec.state.ny.us)



July 14, 2000

Mr. Jeffrey P. Kraham  
Broome County Executive  
County Office Building  
P.O. Box 1766  
Binghamton, New York 13902

Re: Extension of Time for the Colesville Landfill Site, Contract No. C093001, Broome County, Site No. 7-04-010 (Title 3 Assistance Contract)

Dear Mr. Kraham:

Your request to extend the State Assistance Contract for the Colesville Landfill Site to December 31, 2002 was approved by the Office of State Comptroller on June 22, 2000. Enclosed is a copy of your approved requested.

If you have any questions regarding this State Assistance Contract, please do not hesitate to contact me at (518) 457-5677.

Sincerely,

Brian H. Davidson  
Project Manager  
Bureau of Central Remedial Action  
Division of Environmental Remediation

bcc: D. Smith  
J. Yavonditte

cc: R. Standish



## MEMORANDUM

TO: Richard K. Randles, Director, Division of Management and Budget Services

FROM: Michael J. O'Toole, Jr., Director, Division of Environmental Remediation *DLJ/MOT*

SUBJECT: Extension of Time for the Colesville Landfill Site, Contract No. C093001, Broome County, Site No. 7-04-010 (Title 3 Assistance Contract)

DATE: JUN - 2 2000

Please amend the referenced contract completion date to December 31, 2002. This extension is necessary for the County to complete the installation of the groundwater treatment system and assure proper operation of the remediation.

Division of Budget exemption approval is not necessary because this contract is funded by the Bond Act; also, the time extension will not increase the contract amount.

Broome County's request for a time extension is attached. The Federal Identification Number for the County is 15-6000449.

If there are any questions, please contact Brian Davidson at 7-5677.

Attachment

bcc: M. O'Toole (2)  
W. Daigle  
D. Smith  
B. Davidson  
J. Yavonditte  
R. Knizek  
C. Linder-Cantwell  
T. Wolosen  
J. Agresta



# Office of the Broome County Executive

JEFFREY P. KRAHAM  
Broome County Executive

April 13, 2000

Mr. James G. VanHoesen, P.E., Chief  
Central Field Services Section  
Bureau of Construction Services  
Division of Hazardous Waste Remediation  
NYSDEC  
50 Wolf Road  
Albany, NY 12233-7010

NEW YORK STATE DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION

Approved by: *Richard K. Kane*  
Director of Management & Budget

Date: 6/6/00

Mr. Brian Davidson  
Project Manager  
Bureau of Central Remedial Action  
NYSDEC  
50 Wolf Road  
Albany, NY 12233-7010

RE: COLESVILLE LANDFILL REMEDIAL PROJECT  
AMENDMENT TO CONTRACT C-093001

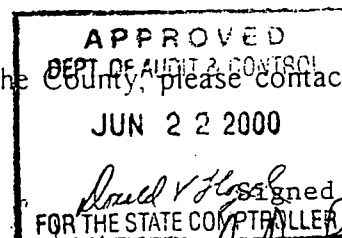
Dear Mr. VanHoesen and Mr. Davidson:

Broome County wishes to amend the existing NYSDEC agreement for state assistance of Stage II – Remedial Design Phase and Stage III – Remedial Action Construction and Construction Oversight as it pertains to the Colesville Landfill Groundwater Treatment Facility.

Review of the existing agreement indicates that monies have been allocated for the design, construction, and construction review of the groundwater treatment facility, however, the timelines need to be amended. It is anticipated that all work and first year of operation should be complete by December 31, 2002.

The basis for this request is that the County and GAF hired Geraghty & Miller, Inc. to perform additional study and testing for the purpose of developing a Focused Feasibility Study. The outcome of this approach has led to a modification of the ROD remedy. The design for this new action is 90% complete. Time delays associated with this work have led to this request for amending the timeline for completion.

Should you require further information or action by the County, please contact Ray L. Standish, P.E. at (607)778-2286.



Very truly yours,

*Jeffrey P. Kraham*  
Jeffrey P. Kraham  
Broome County Executive

Signed on 5/5/00.

*Sandra S. Fox*  
SANDRA S. FOX  
Notary Public, State of New York  
No. 01F05036504  
Residing in Broome Co.

My commission expires Nov. 28, 2000

JPK/yp

Edwin L. Crawford County Office Building / P.O. Box 1766 / Binghamton, New York 13902

# ARCADIS GERAGHTY & MILLER



ARCADIS Geraghty & Miller, Inc.  
88 Duryea Road  
Melville  
New York 11747  
Tel 631 249 7600  
Fax 631 249 7610

**VIA FACSIMILE**

Brian Davidson  
Bureau of Central Remedial Action  
New York State Department of Environmental Conservation  
50 Wolf Road  
Albany, New York 12233-7010

ENVIRONMENTAL

Subject  
Start of Construction, Groundwater Remediation System, Colesville Landfill,  
Broome County, New York.  
ARCADIS Geraghty & Miller Project No. NY000949,0014,00001

Dear Mr. Davidson:

Date,  
7 September 2000

George Jacob has informed me that the NYSDEC has given the USEPA their written approval for the issuance of an Explanation of Significant Difference (ESD) by the USEPA. Mr. Jacob indicated that the ESD is awaiting final sign-off by his senior management.

Contact  
Steve Feldman

On Monday, September 11<sup>th</sup>, ARCADIS Geraghty & Miller will begin construction of the groundwater remediation system that was approved by the NYSDEC and USEPA. The initial phase of work will involve installation of the injection wells.

Direct Dial:  
(631) 391-5244

Please do not hesitate to call if you have any questions.

Sincerely,

ARCADIS Geraghty & Miller, Inc.

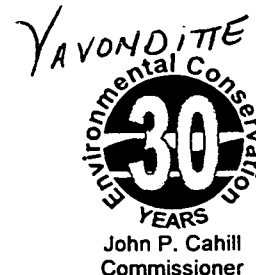
Steven M. Feldman  
Principal Scientist/Project Manager

Copies:

G. Jacob, USEPA  
J. Yavonditte, NYSDEC  
R. Standish, Broome County  
C. Wills, GAF Corporation

g:\proj\albroome\190949.013\corres\EPACov\_Final Design.doc

New York State Department of Environmental Conservation  
Division of Environmental Remediation  
Bureau of Central Remedial Action, Room 228  
50 Wolf Road, Albany, New York 12233-7010  
Phone: (518) 457-5677 • FAX: (518) 457-7925  
Website: www.dec.state.ny.us



VIA FAX & US MAIL

JUL 12 2000

July 12, 2000

Mr. Steven M. Feldman  
ARCADIS Geraghty & Miller, Inc.  
88 Duryea Road  
Melville, New York 11747

Re: Colesville Landfill - Site # 704010  
Groundwater Remediation System  
Draft Final Design

Dear Mr. Feldman:

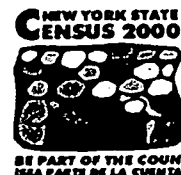
The Groundwater Remediation System Engineering Report, Technical Specifications for The Groundwater Remediation System, and the Bid Document for Drilling Services (Draft Remedial Design), dated May, 2000, prepared by ARCADIS Geraghty & Miller, Inc. for the above-referenced site have been reviewed by the United States Environmental Protection Agency and this Department. The following comments were generated:

#### GENERAL COMMENTS

##### Groundwater Remediation System Engineering Report

##### Treatment System Capacity

The estimated total influent capacity for the groundwater treatment system, one gallon per minute (gpm), may be too low. While the estimated capacity seems reasonable, based on the results of the aquifer pump tests conducted in upgradient wells in 1998, it is possible that the actual capacity of the extraction wells will exceed 1 gpm. The system capacity should be expanded to accommodate potential increased extraction rates resulting from seasonal fluctuations, larger well diameters, and unknown yield of proposed extraction wells GM-PW-4 and GM-PW-5.



## Groundwater Monitoring Network

The design must include a description of the groundwater monitoring well network to be used for regular performance monitoring. In order to properly evaluate the success of the ERD system, monitoring wells should be located parallel to and downgradient of the injection well network (i.e., GMMW-4 and GMMW-5). Please include a plan that shows existing and proposed monitoring well locations to be used for regular monitoring.

## Schedule

The proposed design and construction schedule must be revised and updated.

## SPECIFIC COMMENTS

### Bid Document for Drilling Services

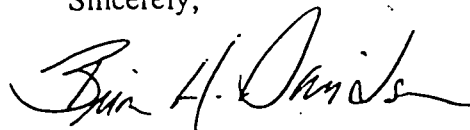
Page 1, Section 1.1, Location and Description of Subject Work, first paragraph:

The selected bidder shall develop the two new extraction wells AND redevelop the third existing extraction well PW-3.

The formatting of the contract should also be clarified (whether the contracts will be with Broome County or ARCADIS Geraghty & Miller, Inc.)

If you have any questions, please do not hesitate to contact me at (518) 457-5677.

Sincerely,



Brian H. Davidson  
Project Manager  
Division of Environmental Remediation

bcc: D. Smith  
J. Yavonditte

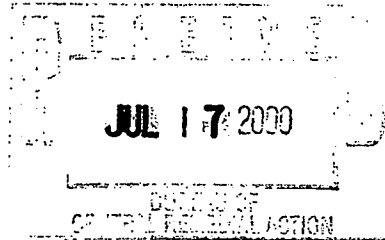
cc: N. Johnson, GAF  
R. Standish, Broome County  
G. Jacob, USEPA

# ARCADIS GERAGHTY & MILLER



Brian Davidson  
New York State Department of Environmental Conservation  
Bureau of Central Remedial Action  
50 Wolf Road  
Albany, New York 12233-7010

Subject:  
Information on GM Consulting Engineers, P.C.  
ARCADIS Geraghty & Miller Project No. NY000949.0005



ARCADIS Geraghty & Miller, Inc.  
88 Duryea Road  
Melville  
New York 11747  
Tel 631 249 7600  
Fax 631 249 7610

ENVIRONMENTAL

Dear Mr. Davidson:

ARCADIS Geraghty & Miller is forwarding this information on GM Consulting Engineers, P.C. (GM Consulting) to clarify how we are providing engineering services for the Colesville Landfill Site in Colesville, New York.

Melville,  
14 July 2000

Contact:  
Steve Feldman

The laws of New York State require that corporations which render engineering services in New York be owned by individuals licensed to practice engineering in the state. ARCADIS Geraghty & Miller cannot meet that requirement. Therefore, all engineering services rendered for this project are being performed by GM Consulting, a New York professional corporation qualified to render professional engineering services in New York. GM Consulting has no professional license, per se, rather its officers and owners are licensed engineers in the state.

Extension:  
(631) 391-5244

GM Consulting uses ARCADIS Geraghty & Miller staff to fulfill project-and management-related functions. This includes project management, accounting, administrative functions, and all other non-engineering technical activities, such as investigations, analyses, etc. Therefore, the Colesville Landfill project is an ARCADIS Geraghty & Miller project in which the engineering is subcontracted to GM Consulting. All correspondence will pass through the ARCADIS Geraghty & Miller project manager and officer, and use ARCADIS Geraghty & Miller letterhead. Only engineering-related recommendations, final reports, contracts, and other official documents will receive the signature of one of the officers of GM Consulting, and would be accompanied by the customary ARCADIS Geraghty & Miller signatures. Engineering documents such as design documents, plans and specifications, and engineering reports will be signed and sealed by a New York State licensed professional engineer. ARCADIS Geraghty & Miller is performing all those services which do not constitute professional engineering. All matters relating to the administration of the contract are being performed by ARCADIS Geraghty & Miller

Brian Davidson  
14 July 2000

**ARCADIS** GERAGHTY & MILLER


pursuant to its amended and restated services agreement with GM Consulting.  
Insurance is provided to GM Consulting through this agreement.

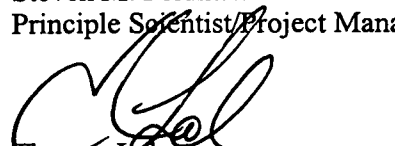
Refer to the attachments for information related to the incorporation of GM Consulting in the state of New York and relevant insurance coverage.

Please call if you have any additional questions regarding this matter.


Sincerely,

ARCADIS Geraghty & Miller, Inc.

  
Steven M. Feldman  
Principle Scientist/Project Manager

  
Thomas Lobasso  
Vice President/Project Director

GM Consulting Engineers, P.C.

  
Glenn Netuschil, P.E.  
Vice President/Engineer of Record

Encl:

Copies:

George Jacob, USEPA  
Ray Standish, Broome County  
Celeste Wills, GAF

State of New York } ss:  
Department of State }

*I hereby certify that I have compared the annexed copy with the original document filed by the Department of State and that the same is a correct transcript of said original.*

*Witness my hand and seal of the Department of State on*

DEC 20 1994



*Secretary of State*

N. Y. S. DEPARTMENT OF STATE  
DIVISION OF CORPORATIONS AND STATE RECORDS

162 WASHINGTON AVENUE  
ALBANY, NY 12231

FILING RECEIPT

=====

ENTITY NAME : GM CONSULTING ENGINEERS, P.C.

DOCUMENT TYPE : AMENDMENT (DOMESTIC BUSINESS)  
NAME

COUNTY: NEWY

SERVICE COMPANY : \*\* NO SERVICE COMPANY \*\*

SERVICE CODE: 00

=====

FILED: 12/20/1994 DURATION: \*\*\*\*\* CASH #: 941220000240 FILM #: 941220000220

ADDRESS FOR PROCESS  
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REGISTERED AGENT  
-----



=====

FILER

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ARNOLD S. VERNICK PRESIDENT  
GMCE OF NEW YORK, P.C.  
201 WEST PASSAIC ST THIRD FL  
ROCHELLE PARK, NJ 07662

FEES

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FILING : 60.00  
TAX : 0.00  
CERT : 0.00  
COPIES : 10.00  
HANDLING: 0.00

70.00

PAYMENTS

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CASH : 0.00  
CHECK : 70.00  
BILLED: 0.00  
  
REFUND: 0.00  
-----

70.00

**ACORD. CERTIFICATE OF INSURANCE**DATE (MM/DD/YY)  
02/19/99**PRODUCER**J&H MARSH & McLENNAN  
1225 17TH STREET SUITE 2100  
DENVER CO 80202ATTN HELEN HAGEN  
33320-12345 10M ARC**INSURED**ARCADIS GERAGHTY & MILLER  
ATTN TERRI YOUNG  
1099 18TH STREET SUITE 2100  
DENVER CO 80202THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION  
ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE  
HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR  
ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.**COMPANIES AFFORDING COVERAGE**

COMPANY A	LUMBERMENS MUTUAL CASUALTY
COMPANY B	AMERICAN MOTORISTS INS CO/ARABELLA
COMPANY C	LUMBERMENS MUTUAL INSURANCE COMPANY
COMPANY D	NATIONAL UNION FIRE INSURANCE CO

**COVERAGES**THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD  
INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS  
CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS,  
EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> OWNERS & CONTRACTORS PROT	4LS000012	01/01/99	01/01/00	GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 PERSONAL & ADV INJURY \$ 1,000,000 EACH OCCURRENCE \$ 2,000,000 FIRE DAMAGE (Any one fire) \$ 100,000 MED EXP (Any one person) \$ 10,000
B	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS	F3R 011309-03 (AOS) X3P 082989-04 (MA) F3R 011272-03 (TX)	01/01/99 01/01/99 01/01/99	01/01/00 01/01/00 01/01/00	COMBINED SINGLE LIMIT \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE \$
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN AUTO ONLY: \$ EACH ACCIDENT \$ AGGREGATE \$
D	EXCESS LIABILITY <input checked="" type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM	BE7011319	01/01/99	01/01/00	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY  THE PROPRIETOR/ PARTNERS/EXECUTIVE OFFICERS ARE: <input type="checkbox"/> INCL <input type="checkbox"/> EXCL	3BG04081101-03	01/01/99	01/01/00	<input checked="" type="checkbox"/> STATUTORY LIMITS EACH ACCIDENT \$ 1,000,000 DISEASE - POLICY LIMIT \$ 1,000,000 DISEASE - EACH EMPLOYEE \$ 1,000,000
C	OTHER CLAIMS-MADE PROFESS- IONAL&OCC FORM EXCESS LIABILITY W/POLLUTION	Q584699	02/14/99	02/14/00	\$10,000,000

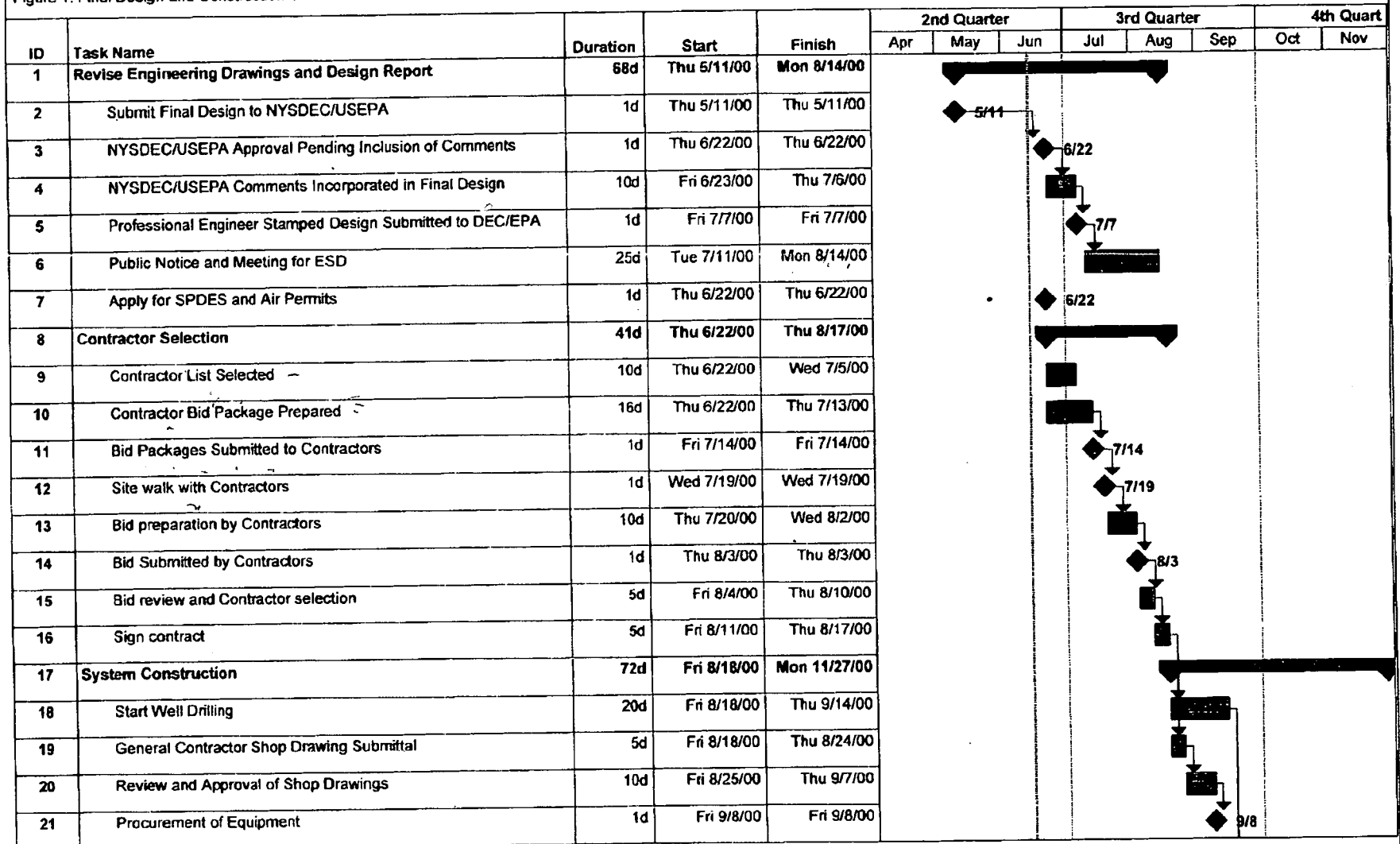
DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS (LIMITS MAY BE SUBJECT TO RETENTIONS)

**CERTIFICATE HOLDER**

SPECIMEN

**CANCELLATION**SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE  
EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL  
30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT,  
BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY  
OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.AUTHORIZED REPRESENTATIVE  
Vla ... O A ...

Figure 1. Final Design and Construction Schedule for the Groundwater Remediation System, Colesville Landfill, Broome County, New York.



Project: Colesville Landfill  
Date: Wed 6/14/00

Task

Progress

Milestone

Summary

Rolled Up Task

Rolled Up Milestone

Rolled Up Progress

**DRAFT**

Figure 1. Final Design and Construction Schedule for the Groundwater Remediation System, Colesville Landfill, Broome County, New York.

ID	Task Name	Duration	Start	Finish	2nd Quarter			3rd Quarter			4th Quart	
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
22	General Contractor Mobilization	5d	Fri 9/15/00	Thu 9/21/00								
23	Site Work	45d	Fri 9/22/00	Thu 11/23/00								
24	Contractor Demobilization	2d	Fri 11/24/00	Mon 11/27/00								

Project: Colesville Landfill  
Date: Wed 6/14/00

Task

Progress

Milestone

Summary

Rolled Up Task

Rolled Up Milestone

Rolled Up Progress

**DRAFT**

New York State Department of Environmental Conservation  
Division of Environmental Remediation  
Bureau of Central Remedial Action, Room 228  
50 Wolf Road, Albany, New York 12233-7010  
Phone: (518) 457-1741 • FAX: (518) 457-7925  
Website: www.dec.state.ny.us



## MEMORANDUM

**TO:** Michael J. O'Toole, Director, Division of Environmental Remediation

**FROM:** P. David Smith, Chief, Remedial Section C, *BHD for PDS*  
**THRU:** William Daigle, Director, Bureau of Central Remedial Action *[Signature]*

**SUBJECT:** Extension of Time for the Colesville Landfill Site, Contract No. C093001, Broome County, Site No. 7-04-010 (EQBA Title 3 Assistance Contract)

**DATE:** April 18, 2000

Attached is a request from Broome County to extend the Title 3 State Assistance Contract for the Colesville Landfill Site until December 31, 2002. This contract actually expired on December 31, 1998.

Although capping of the landfill was completed in October 1995, the groundwater pump and treat component of the ROD remedy was never implemented. The PRPs, USEPA, and the Department have now come to agreement that the ROD remedy should be modified to provide for in-situ groundwater treatment by enhanced reductive dechlorination (ERD). The USEPA is currently preparing an Explanation of Significant Differences (ESD) to document the modification to the ROD remedy. The construction contract will include an initial start up operation period for the treatment system.

We recommend that you sign the attached request.

Attachment

cc: B. Davidson  
J. Yavonditte



**New York State Department of Environmental Conservation**  
**Division of Environmental Remediation Room 260B**  
50 Wolf Road, Albany, New York 12233-7010  
Phone: (518) 457-5861 FAX: (518) 485-8404  
Website: [www.dec.state.ny.us](http://www.dec.state.ny.us)



## **MEMORANDUM**

**TO:** Richard K. Randles, Director of Management and Budget

**FROM:** Michael J. O'Toole, Director, Division of Environmental Remediation

**SUBJECT:** Extension of Time for the Colesville Landfill Site, Contract No. C093001, Broome County, Site No. 7-04-010 (Title 3 Assistance Contract)

**DATE:**

Please amend the referenced contract completion date to December 31, 2002. This extension is necessary for the County to complete the installation of the groundwater treatment system and assure proper operation of the remediation.

Division of Budget exemption approval is not necessary because this contract is funded by the Bond Act; also, the time extension will not increase the contract amount.

Broome County's request for a time extension is attached. The Federal Identification Number for the County is 15-6000449.

If there are any questions, please contact Brian Davidson at 7-5677.

Attachment



bcc: M. O'Toole  
W. Daigle  
D. Smith  
B. Davidson  
J. Yavonditte  
R. Knizek  
C. Linder-Cantwel



# Office of the Broome County Executive

JEFFREY P. KRAHAM  
Broome County Executive

April 13, 2000

Mr. James G. VanHoesen, P.E., Chief  
Central Field Services Section  
Bureau of Construction Services  
Division of Hazardous Waste Remediation  
NYSDEC  
50 Wolf Road  
Albany, NY 12233-7010

Mr. Brian Davidson  
Project Manager  
Bureau of Central Remedial Action  
NYSDEC  
50 Wolf Road  
Albany, NY 12233-7010

RE: COLESVILLE LANDFILL REMEDIAL PROJECT  
AMENDMENT TO CONTRACT C-093001

Dear Mr. VanHoesen and Mr. Davidson:

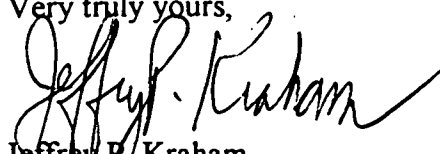
Broome County wishes to amend the existing NYSDEC agreement for state assistance of Stage II – Remedial Design Phase and Stage III – Remedial Action Construction and Construction Oversight as it pertains to the Colesville Landfill Groundwater Treatment Facility.

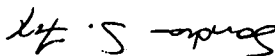
Review of the existing agreement indicates that monies have been allocated for the design, construction, and construction review of the groundwater treatment facility, however, the timelines need to be amended. It is anticipated that all work and first year of operation should be complete by December 31, 2002.

The basis for this request is that the County and GAF hired Geraghty & Miller, Inc. to perform additional study and testing for the purpose of developing a Focused Feasibility Study. The outcome of this approach has led to a modification of the ROD remedy. The design for this new action is 90% complete. Time delays associated with this work have led to this request for amending the timeline for completion.

Should you require further information or action by the County, please contact Ray L. Standish, P.E. at (607)778-2286.

Very truly yours,

  
Jeffrey P. Kraham  
Broome County Executive

  
SANDRA S. FOX  
Notary Public, State of New York  
No. 01F0036504  
Residing in Broome Co.  
My commission expires Nov. 28, 2002

JPK/yp

**New York State Department of Environmental Conservation**  
**Division of Environmental Remediation**  
**Bureau of Central Remedial Action, Room 228**  
50 Wolf Road, Albany, New York 12233-7010  
Phone: (518) 457-7894 • FAX: (518) 457-7925  
Website: www.dec.state.ny.us



**VIA FAX & US MAIL**

March 21, 2000

Mr. Steven M. Feldman  
ARCADIS Geraghty & Miller, Inc.  
88 Duryea Road  
Melville, New York 11747

Re: Colesville Landfill - Site # 704010  
Groundwater Remediation System  
95 % Complete Design

Dear Mr. Feldman:

The Groundwater Remediation System Engineering Report (95% Remedial Design), dated January 25, 2000, prepared by ARCADIS Geraghty & Miller, Inc. for the above-referenced site has been reviewed by the United States Environmental Protection Agency and this Department. The following specific technical comments were generated:

**Page 6, Section 4.1.2, Molasses Delivery System:**

*"A portion of the treated water from the groundwater recovery system will be stored in holding tank in the treatment building for use in producing the molasses and water solution."*

The treated water to be used for the molasses and water solution will be saturated with oxygen as a result of the air stripping process. Since the goal of molasses injection is to enhance anaerobic biodegradation, the potential negative effects of using oxygen rich water for the molasses solution should be considered.

**Page 6, Section 4.2.1, Recovery Wells and Piping:**

According to the construction details listed in this Section, the casing diameters for the extraction wells are 2". Small diameter extraction wells are not appropriate for low



yielding aquifers unless a large number of wells are installed, i.e., placing an extraction well every 20 feet across the plume. In order to maximize potential yield the three proposed extraction wells should be installed with 6" casing diameters. In low hydraulic conductivity aquifers, the potential yield increases resulting from increased screen diameter may be significant.

Please refer to the Municipal Assistance Program Hazardous Waste Site Remediation Procedures Handbook for questions regarding Broome County's eligible construction costs.

If you have any additional questions, please do not hesitate to contact me at (518) 457-5677.

Sincerely,



Brian H. Davidson  
Project Manager  
Bureau of Central Remedial Action  
Division of Environmental Remediation

cc: N. Johnson, GAF  
R. Standish, Broome County  
G. Jacob, USEPA

bcc: D. Smith  
J. Yavonditte ✓

*J. Yavonditte*  
**New York State Department of Environmental Conservation**  
**Division of Environmental Remediation**  
**Bureau of Construction Services, Room 267**  
50 Wolf Road, Albany, New York 12233-7010  
**Phone: (518) 457-9280 • FAX: (518) 457-9285**  
**Website: www.dec.state.ny.us**



March 10, 2000

Jeff T. Raupp  
Murphy & Maconachy, Inc.  
3900 Jermantown Road, Suite 360,  
Fairfax, VA 22030

Re: Coleville Landfill  
Site No. 7-04-010  
Foil Request No. 00-190  
MMI #5023-5000

Dear Mr. Raupp:

I am responding to your FOIL request regarding the subject landfill. All the records which this Bureau had for this subject project have been transferred to the Division of Environmental Enforcement. Your letter was also copied to that Division which should be responding directly to you regarding your review of the available files.

If I can be of assistance, please contact me.

Sincerely,

*Joseph A. Yavonditte*  
Joseph A. Yavonditte  
Environmental Engineer 2  
Eastern Field Services  
Bureau of Construction Services

cc: R. Earl, Rm 602  
T. Wolosen, Rm 284



DATE: 2/28/00

REFERENCE NO.: 00-190

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
Division of Environmental Remediation

**FOIL REQUEST**

28

TO:

Lauren MacDonald, Bureau of Central Remediation Action		Kathy Follett Bureau of Western Remedial Action
Patrick Pagano Bureau of Hazardous Site Control	X	Tom Vickerson / Joseph Yavonditte Bureau of Construction Services
Denise Livingston Bureau of Eastern Remedial Action		Morris Leno Bureau of Spill Prevention and Response

\_\_\_\_\_ Request forwarded to more than one unit for consideration

FROM: Tim Wolosen, Division FOIL Coordinator, Fiscal Management Section, BPM

Requestor: Jeff T. Raupp from Murphy & Maconachy, Inc.

Re: Colesville Municipal Landfill 7-04-010

Response Due Date: 3/6/00

Please respond directly to the requestor and send copies (w/out Encls.) to:

1. Ruth Earl, Press Office, Room 602 (-1016)
2. Tim Wolosen, Fiscal Mgmt. Section, Room 284 (-7010)

If you do not maintain records which are responsive to this request then please advise the requestor accordingly in your response.

=====

Please check below if appropriate and return to me:

\_\_\_\_\_ There are additional unit(s)/individual(s) who maintain or may maintain records responsive to this request:

cc: Bureau Director(s) w/out Atts. Richard Hoelling  
FOIL File

TO: Mr. Tim Wolosen - Environmental Remediation  
50 Wolf Road, Room 276  
Albany, NY 12233-7010  
FROM: Ruth L. Earl - Press Office  
DATE: 02/28/00

The attached FOIL request 00-190 was received by us on 02/28/00.  
If you have records which are responsive to this request, please send them directly to the requestor and a copy of your transmittal letter to me.

Please let me know before 03/06/00 if you do NOT have records, which are responsive to this request, and/or if you know of ADDITIONAL UNITS, not listed below, which may have relevant records. If I have not heard from you before 03/06/00, I will send an acknowledgment to the requestor indicating that I have referred the request to you.

I have also referred this request to:

M. Rozelle - REGION 7  
E. Armater - ENVIRONMENTAL ENFORCEMENT  
P. Kuster - SOLID AND HAZARDOUS MATERIALS

---

TO: Ruth L. Earl - Press Office  
50 Wolf Road  
Albany, NY 12233-1016  
Ph.: 518-457-5400  
FROM: Mr. Tim Wolosen  
FOIL Request No. 00-190

\_\_\_ I do not maintain records which are responsive to this request

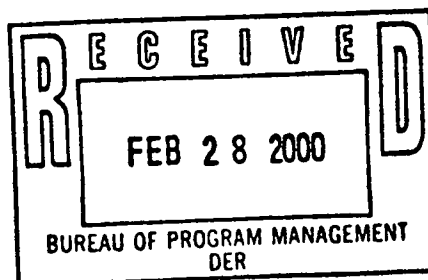
\_\_\_ There are additional unit(s)/individual(s) who maintain or probably maintain records responsive to this request.

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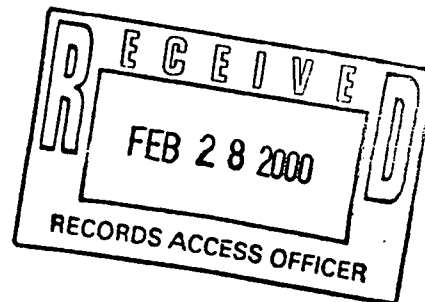
**MURPHY & MACONACHY, INC.**

A CARCO Group, Inc. Affiliate

00-190

February 24, 2000

Ruth Earl  
Records Access Officer  
New York State Dept. of Environmental Conservation  
50 Wolf Rd.  
Albany, NY 12233-1016



RE: FREEDOM OF INFORMATION LAW REQUEST  
MMI # 5023-5000

Dear Ms. Earl:

Murphy & Maconachy, Inc. has been retained by insurance companies to investigate alleged environmental contamination at the below listed site:

*Colesville Municipal Landfill  
East Windsor Rd.  
Colesville, NY 13787*

*EPA ID# NYD980768691*

Pursuant to the Freedom of Information Law, Murphy & Maconachy, Inc. would like to obtain access to all available public files and documents concerning the activities at this site.

The files and documents we are seeking might include: Records of Decision, Administrative Consent Orders, preliminary site assessments, RIFS reports, correspondence, PRP investigations and responses, waste allocation/waste-in reports, applications, permits, investigation and inspection reports, notices of violation, complaints, diagrams and photographs.

We would like to obtain copies of this information at the earliest possible opportunity. Please advise if an in-person review of your files will be necessary.

Should you have any questions or require further information to process this request, please feel free to call at any time. Thank you in advance for your assistance.

Sincerely yours,

MURPHY & MACONACHY, INC.

*Jeff T. Raupp*  
Jeff T. Raupp

JTR/cjc

cc: NYDEC Region 7  
615 Erie Boulevard West  
Syracuse, NY 13204-2400

5023-50000\FOIA\Foil-ColesvilleLandfill.2.24.00

*Elissa Amato*  
*Deborah Christ*

**Essential Information for Key Business Decisions**

3900 Jermantown Road, Suite 360, Fairfax, VA 22030

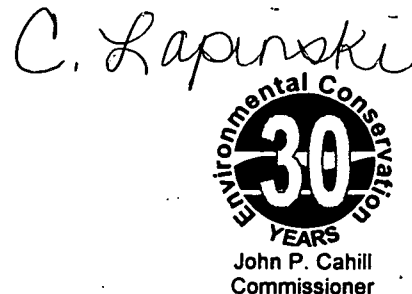
703/218-8000

FAX: 703/218-8012

E-Mail: [mmi@murphymac.com](mailto:mmi@murphymac.com)

License I.D. #11-1700

**New York State Department of Environmental Conservation**  
**Division of Environmental Remediation**  
**Bureau of Construction Services, Room 267**  
50 Wolf Road, Albany, New York 12233-7010  
**Phone: (518) 457-9280 • FAX: (518) 457-7743**  
**Website: www.dec.state.ny.us**



**MEMORANDUM**

**TO:** Brian Davidson, Remedial Section C, BCRA

**FROM:** Craig Lapinski, Western Field Services Section, BCS *CL*

**SUBJECT:** Site No. 7-04-010, Colesville Landfill, Broome County

**DATE:** FEB 04 2000

The BCS has reviewed the 95% Design document dated January 25, 2000 and offers the following comments:

1. Is this work a separable operable unit? If so, BCRA needs to designate pump and treat work as OU2 so it can be tracked separately.
2. The in-situ enhanced reductive dechlorination (ERD) technology described in this design report involves the use of a carbohydrate solution (molasses and water) that is injected into the groundwater aquifer. In theory, the molasses acts as a carbon/energy source for existing microorganisms which use dissolved oxygen to degrade the molasses and turn the subsurface anaerobic. The anaerobic conditions can cause certain VOCs to degrade.

However, this is by no means a proven technology. This, coupled with the fact that an explanation of significant difference has not yet been written by the USEPA makes it difficult to justify that ERD will be an effective final remedy. Therefore, does BCRA believe that this will work and should be eligible for Title 3 funding? Also, does Mike O'Toole know about this and does he agree with BCRA's opinion?

3. Assuming that EPA writes an ESD and both BCRA and Mike O'Toole agree that the final remedy is acceptable, the Department must concern itself with a number of cost issues since 50% of this project is being funded through the Title 3 program. First, Broome County has hired ARCADIS Geraghty and Miller as their design and construction oversight consultant without soliciting other engineering firms. Second, the municipality plans on using ARCADIS Geraghty and Miller to perform the construction work without publicly bidding the work to qualified contractors.



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In order for Broome County to ensure that the project is 100% eligible, the Department will need the following written justification:

- a. An explanation as to why ARCADIS Geraghty and Miller was hired without soliciting other engineers;
  - b. an explanation of why Broome County believes ARCADIS Geraghty and Miller's costs are reasonable;
  - c. an explanation of why ARCADIS Geraghty and Miller is performing construction work instead of competitively bidding the project;
  - d. an explanation as to why this approach to construction is the most cost effective solution; and
  - e. a copy of the agreement between the engineer and municipality complete with cost tables and legal language (the Department must review and approve this document before Broome County can receive Title 3 reimbursement for any consultant costs).
4. The ERD technology can also reduce dissolved metals to less soluble states until they precipitate out of the aquifer. Previously, discoloration of the adjacent streams due to metal rich leachate infiltration has been noticed. Are metals still a problem? How will ERD effect metals in the groundwater?
  5. Page 8, Section 4.4: The groundwater treatment system effluent cannot be discharged directly into the receiving body until the system has passed a demonstration period. This period includes capturing effluent into either a poly of frac tank until three successive influent and effluent samples from three successive days prove that the treatment system is working and that the effluent is below the discharge criteria. This must be described in detail in the design report.
  6. A Health and Safety Plan signed by a certified industrial hygienist must be written for this site. The plan must be absolutely clear who is subject to its requirements.

If you have any questions, please call me at 7-9280.

CML/mj

bcc: G. Harris

C. Lapinski

Dayfile

Lapinski #6 a:\davidsoncolesville.wpd

## 2.8 Reductive Dechlorination Using Molasses Injection (Eastern Pennsylvania)

Anaerobic biodegradation of CAHs is being explored as a viable way to cleanup contaminated aquifers at numerous sites around the country. ARCADIS Geraghty & Miller is influencing the biodegradation process by injecting a molasses and water mixture into the aquifer as the primary substrate for microorganisms. The basis for injecting molasses is its use as a carbon/energy source for indigenous microorganisms. The microbes readily degrade the primary substrate by utilizing available dissolved oxygen (DO) creating an anaerobic or reduced state in the system. In this reduced state hexavalent chromium can precipitate out of the aquifer and TCE can be degraded.

Evan Nyer and colleagues from ARCADIS Geraghty & Miller have recently published in the journal *Ground Water Monitoring and Remediation* an ongoing in-situ reductive dechlorination pilot demonstration at a manufacturing facility. The facility is located in eastern Pennsylvania on 16 paved acres. The facility was used for metal plating, textile operations and assembling of machinery. The aquifer beneath the industrial facility site was contaminated through the disposal of metal plating wastes and process water being dumped into deep bedrock injection wells for over 30 years until the early 1980s, when Pennsylvania Department of Environmental Protection (PADEP) put a stop to this practice. From 1982 until March 1997, when ARCADIS became involved, pump-and-treat was applied to reduce TCE and hexavalent chromium concentrations. The pump-and-treat system was operated for approximately 15 years, to a point where it was no longer efficient in removing significant contaminant mass.

In March 1997, the concentration of TCE in the aquifer was about 100 parts per billion (ppb). The aquifer geology consists of limestone and dolostones located 15 ft bgs. The majority of the groundwater is in the limestone aquifer.

Before initiating the pilot field application, testing was conducted to evaluate the natural biodegradation mechanisms at the site. Elevated concentrations of ethene, ethane and carbon dioxide were detected from the source area wells indicating that reductive dechlorination is taking place at the site, but at very slow rates. A pilot application was initiated in May 1997.

The pilot treatment facility established high reducing conditions in the aquifer to degrade TCE and precipitate out hexavalent chromium at a much faster rate. The means by which ARCADIS did this was by using the established boreholes from previous waste disposal practices. In order to deliver substrates to the source of the contamination, PVC drop pipes were installed. A 1:50 molasses and water solution was injected on a weekly basis beginning in May 1997. Monitoring was performed every three months thereafter.

The objective of the demonstration was to reduce contaminant concentrations in the aquifer. Monitoring indicated that a large reactive zone had been established within the groundwater aquifer favoring strong reducing conditions. By September 1997, the TCE concentration had decreased by 60 to 84 percent throughout the monitoring field. Hexavalent chromium concentrations had dropped to non-detectable levels at the source area within the first three weeks of operation.

## ~~2.9 Reductive Dechlorination and Chromium Reduction at the Lycoming Superfund Site (Pennsylvania)~~

~~In the mid-1980s, moderate concentrations of CAHs were found in the alternate water supply near Williamsport, Pennsylvania. The alternate water supply is located approximately 3,000 feet downgradient from the Lycoming Superfund Site, an operating aircraft manufacturing facility. The contamination at the aircraft manufacturing facility extends over 28 acres, including surrounding residential neighborhoods. The contaminants of concern at the site were hexavalent chromium (Cr(VI)), cadmium (Cd) and CAHs (specifically TCE and daughter products 1,2-DCE and VC). The maximum concentrations of the contaminants at the site were Cr(VI), 3 mg/L, cadmium, 0.8 mg/L, and TCE, 0.7 mg/L. The geology of the contaminated aquifer consists of sandy silt overburden overlying weathered~~



# Ground Water Currents

Developments in Innovative Ground Water Treatment

## Ground Water Currents, December 1998, Issue No. 30

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### Contents

Microbial Precipitation of Dissolved Metals Using Molasses

Field Demonstration of a Surfactant/Foam Process for Aquifer Remediation

Waste Paper Mill Sludges as Reactive Semi-Permeable Barrier Slurry Walls

Resources Developed by the National Research Council

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### Microbial Precipitation of Dissolved Metals Using Molasses

*by Eugene Dennis, U.S. EPA Region 3, and Suthan Suthersan, ARCADIS Geraghty & Miller, Inc.*

Preliminary results of operations at the Avco Lycoming Superfund site in Williamsport, PA, indicate that a new technique for *in situ* remediation is enhancing and inducing microbial reduction of dissolved metals in ground water. The technology involves the use of a carbohydrate solution (dilute blackstrap molasses and water) that is injected into the aquifer to reduce dissolved metals, such as hexavalent chromium, to less soluble states, such as trivalent chromium. This reduction process yields significant remedial benefits because trivalent chromium is less toxic, less mobile, and precipitates more readily than hexavalent chromium.

The Avco Lycoming site is a 28-acre active manufacturing facility where hexavalent chromium contamination is located in a shallow, glacially-derived, silty sand aquifer. A 1991 record of decision (ROD) for the site called for a pump and treat system to be used, but the ROD was amended in 1996 to allow for *in situ* precipitation of ground water contaminated with hexavalent chromium. Clean-up goals specified in the ROD include a level of 0.032 mg/L for hexavalent chromium.

The target area for *in situ* treatment is a shallow overburden approximately 25 feet below land surface covering approximately two acres. Collection of samples from monitoring wells indicated initial ground water concentrations of hexavalent chromium and cadmium as high as 3.0 mg/L and 0.8 mg/L, respectively.

The technology used at this site is based on the rapid degradation of carbohydrates (primarily sucrose) present in molasses by indigenous

heterotrophic microorganisms residing in the aquifer. This metabolic degradation process utilizes available dissolved oxygen to create anaerobic conditions conducive to reduction processes. As a result, hexavalent chromium is reduced to trivalent chromium, which then reacts with naturally occurring hydroxides available in the aquifer to form chromium hydroxide. Under alkaline to moderately acidic conditions, chromium hydroxide readily precipitates out of solution because of its extremely low solubility, and is immobilized in the soil matrix of the aquifer. Conversion of trivalent chromium back to hexavalent chromium is expected to occur only under extremely acidic conditions (pH less than 3.5).

A small-scale field design test was conducted at the Avco Lycoming site over a six-month period prior to full-scale use of this technology. Within approximately 70 days of initiating molasses injections, analytical results indicated a decrease in hexavalent chromium from 2.4 mg/L to less than 0.01 mg/L in a monitoring well located approximately 5 feet from the injection wells. Analytical results of samples taken from a second monitoring well located 12 feet from the injection wells indicated a decrease in hexavalent chromium from approximately 3 mg/L to less than 0.01 mg/L within 155 days. Overall, hexavalent chromium concentrations in ground water decreased to below detection levels during the field test, and the concentration of total chromium also decreased.

Full-scale use of this technology was initiated in January 1997, at which time daily injection of the molasses solution began. Analysis of quarterly ground water samples collected over an 18-month period indicates that microbial reduction has occurred in an area encompassing approximately 12,000 ft<sup>2</sup>. Substantial reductions in metal concentrations in ground water have been observed, including a 90% reduction in hexavalent chromium.

*In situ* remediation of hexavalent chromium using molasses is continuing at the Avco Lycoming site. For more information, contact Eugene Dennis (U.S. EPA, Region 3) at 215-814-3202 or E-mail [dennis.eugene@epa.gov](mailto:dennis.eugene@epa.gov), or Suthan Suthersan (ARCADIS Geraghty & Miller, Inc.) at 215-752-6840 or E-mail [ssuthersan@gmgw.com](mailto:ssuthersan@gmgw.com).

---

## Field Demonstration of a Surfactant/Foam Process for Aquifer Remediation

by George Hirasaki, Ph.D., Rice University

The first field demonstration of a surfactant/foam process for removal of dense non-aqueous phase liquid (DNAPL) from a heterogeneous alluvial aquifer was conducted during the Spring of 1997 at Hill Air Force Base, UT. Air was injected to form an *in situ* "foam" in the zones of highest permeability that is capable of diverting surfactant solution to zones of lower permeability, thus improving removal process efficiency. This demonstration, which differed from others utilizing continuous surfactant injection without foam generation, proved the process effective in reducing the average DNAPL saturation of the swept pore volume to 0.03%.

The surfactant solution was designed to mobilize and solubilize contaminants located in the lowest part of the saturated zone of the aquifer contained in a buried paleo-channel eroded into thick clay deposits. The demonstration was conducted in a 6.1-meter line drive well pattern with three injection and three extraction

New York State Department of Environmental Conservation  
Division of Environmental Remediation Room 260B  
50 Wolf Road, Albany, New York 12233-7010  
Phone: (518) 457-5861 FAX: (518) 485-8404  
Website: www.dec.state.ny.us



## MEMORANDUM

TO: Richard K. Randles, Director, Division of Management and Budget Services

FROM: Michael J. O'Toole, Jr., Director, Division of Environmental Remediation *DLJ:MT*

SUBJECT: Extension of Time for the Colesville Landfill Site, Contract No. C093001, Broome County, Site No. 7-04-010 (Title 3 Assistance Contract)

DATE: JUN - 2 2000

Please amend the referenced contract completion date to December 31, 2002. This extension is necessary for the County to complete the installation of the groundwater treatment system and assure proper operation of the remediation.

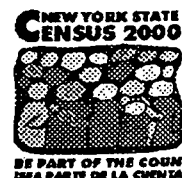
Division of Budget exemption approval is not necessary because this contract is funded by the Bond Act; also, the time extension will not increase the contract amount.

Broome County's request for a time extension is attached. The Federal Identification Number for the County is 15-6000449.

If there are any questions, please contact Brian Davidson at 7-5677.

Attachment

bcc: M. O'Toole (2)  
W. Daigle  
D. Smith  
B. Davidson  
J. Yavonditte  
R. Knizek  
C. Linder-Cantwell  
T. Wolosen  
J. Agresta





# Office of the Broome County Executive

JEFFREY P. KRAHAM  
Broome County Executive

April 13, 2000

Mr. James G. VanHoesen, P.E., Chief  
Central Field Services Section  
Bureau of Construction Services  
Division of Hazardous Waste Remediation  
NYSDEC  
50 Wolf Road  
Albany, NY 12233-7010

Mr. Brian Davidson  
Project Manager  
Bureau of Central Remedial Action  
NYSDEC  
50 Wolf Road  
Albany, NY 12233-7010

RE: COLESVILLE LANDFILL REMEDIAL PROJECT  
AMENDMENT TO CONTRACT C-093001

Dear Mr. VanHoesen and Mr. Davidson:

Broome County wishes to amend the existing NYSDEC agreement for state assistance of Stage II – Remedial Design Phase and Stage III – Remedial Action Construction and Construction Oversight as it pertains to the Colesville Landfill Groundwater Treatment Facility.

Review of the existing agreement indicates that monies have been allocated for the design, construction, and construction review of the groundwater treatment facility, however, the timelines need to be amended. It is anticipated that all work and first year of operation should be complete by December 31, 2002.

The basis for this request is that the County and GAF hired Geraghty & Miller, Inc. to perform additional study and testing for the purpose of developing a Focused Feasibility Study. The outcome of this approach has led to a modification of the ROD remedy. The design for this new action is 90% complete. Time delays associated with this work have led to this request for amending the timeline for completion.

Should you require further information or action by the County, please contact Ray L. Standish, P.E. at (607)778-2286.

Very truly yours,

Signed on 5/5/00.

*Sandra S. Fox*  
My commission expires Nov. 28, 2000  
Residing in Broome Co.  
Notary Public, State of New York  
SANDRA S. FOX

Jeffrey P. Kraham  
Broome County Executive

*Sandra S. Fox*  
SANDRA S. FOX  
Notary Public, State of New York  
No. 01F05036504  
Residing in Broome Co.

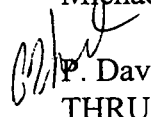
JPK/yp

My commission expires Nov. 28, 2000

Edwin L. Crawford County Office Building / P.O. Box 1766 / Binghamton, New York 13902

## MEMORANDUM

**TO:** Michael J. O'Toole, Director, Division of Environmental Remediation

**FROM:**  P. David Smith, Chief, Remedial Section C,  
THRU: William Daigle, Director, Bureau of Central Remedial Action

**SUBJECT:** Extension of Time for the Colesville Landfill Site, Contract No. C093001,  
Broome County, Site No. 7-04-010 (EQBA Title 3 Assistance Contract)

**DATE:** April 18, 2000

Attached is a request from Broome County to extend the Title 3 State Assistance Contract for the Colesville Landfill Site until December 31, 2002. This contract actually expired on December 31, 1998.

Although capping of the landfill was completed in October 1995, the groundwater pump and treat component of the ROD remedy was never implemented. The PRPs, USEPA, and the Department have now come to agreement that the ROD remedy should be modified to provide for in-situ groundwater treatment by enhanced reductive dechlorination (ERD). The USEPA is currently preparing an Explanation of Significant Differences (ESD) to document the modification to the ROD remedy. The construction contract will include an initial start up operation period for the treatment system.

We recommend that you sign the attached request.

Attachment

cc: B. Davidson  
☐ J. Yavonditte

JUN - 8 2000



# Office of the Broome County Executive

JEFFREY P. KRAHAM  
Broome County Executive

April 4, 2000

-18

Mr. James G. VanHoesen, P.E., Chief  
Central Field Services Section  
Bureau of Construction Services  
Division of Hazardous Waste Remediation  
NYSDEC  
50 Wolf Road  
Albany, NY 12233-7010

Mr. Brian Davidson  
Project Manager  
Bureau of Central Remedial Action  
NYSDEC  
50 Wolf Road  
Albany, NY 12233-7010

RE: COLESVILLE LANDFILL REMEDIAL PROJECT  
AMENDMENT TO CONTRACT C-093001

Dear Mr. VanHoesen and Mr. Davidson:

Broome County wishes to amend the existing NYSDEC agreement for state assistance of Stage II – Remedial Design Phase and Stage III – Remedial Action Construction and Construction Oversight as it pertains to the Colesville Landfill Groundwater Treatment Facility.

Review of the existing agreement indicates that monies have been allocated for the design, construction, and construction review of the groundwater treatment facility, however, the timelines may need to be amended.

Should you require further information or action by the County, please contact Ray L. Standish, P.E. at (607) 778-2286.

PETER J. ROSEBOOM  
Notary Public, State of New York  
No. 01R05058867  
Qualified in Broome Co.  
My commission expires April 15, 2002

Very truly yours,

Jeffrey P. Kraham  
Broome County Executive

JPK/yp

Peter Roseboom

File on eDOCs   X   Yes            No             
Site Name   Colesville    
Site No.   704010    
County   Broome    
Town   Colesville    
Foitable   X   Yes            No             
File Name   2000-04-17. Contract documents    
Scanned & eDOC