

**MALCOLM  
PIRNIE**

**Town of Colonie  
Area 6 Lateral Landfill Expansion**

**OPERATIONS AND  
MAINTENANCE PLAN**

**for the**

**6 NYCRR PART 360  
PERMIT APPLICATION**

**Town of Colonie  
Colonie, New York**

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2042021

## **NOTE TO READER**

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*The Operations and Maintenance (O&M) Plan has been revised to reflect comments made by the New York State Department of Environmental Conservation (NYSDEC) during the Permit Application technical review and comment period.*

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A	Facility Map

## **1.0 INTRODUCTION/BACKGROUND**

### **1.1 GENERAL**

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The Town of Colonie will own and operate the Area 6 Lateral Landfill Expansion and be responsible for landfill operation and maintenance requirements. The Area 6 Lateral Landfill Expansion will begin operation as construction is completed, upon issuance of an operating permit and when the current Area 5 landfill expansion has reached sufficient capacity to allow for the logical progression of waste into the first phase of the Area 6 Lateral Landfill Expansion. The procedures described herein for operation and maintenance are based on New York State Department of Environmental Conservation (NYSDEC) regulations and standard operating procedures.

### **1.2 PURPOSE**

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The purpose of this Operations and Maintenance Plan (O&M Plan) is to provide a comprehensive description of all routine facility operations as related to the landfill cell operations. Additionally, this Plan will outline all routine maintenance required for the reliable and proper operation of the Area 6 Lateral Landfill Expansion.

This Plan will establish suggested inspection forms and reporting procedures to be completed by the Town of Colonie, Department of Environmental Services (DES) to document that operation practices and maintenance requirements are being completed in accordance with this Plan.

## 2.0 LANDFILL DISPOSAL METHODS

### 2.1 GENERAL

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The Town of Colonie Landfill Facility is a regional landfill facility that serves the needs of the Town of Colonie and surrounding communities for waste disposal either with municipality owned collection vehicles or, more common, the use of private collection services. The Town of Colonie Landfill Facility contains landfill areas that are currently closed in addition to the currently active Area 5 landfill expansion that is operated in accordance with current Part 360 regulations. In addition, the facility also contains the following facilities that operate in conjunction with the waste disposal facility:

- **Residential Convenience Center** – Accepts residential waste, C&D and recyclables from Town of Colonie residents.
- **Yard Waste Compost Facility** – Accepts yard waste from Town residents and the Town highway department that routinely collects yard waste from residents within the Town. The Yard Waste Compost facility processes the yard waste by grinding the material and composting it to create a compost product that is made available to the Town residents. Additionally, the Town Highway Department utilizes this compost material within the Town for maintenance activities on Town roads, property, etc.
- **Material Recycling Facility** – The material recycling facility accepts recyclables from both Town and private waste collection vehicles. The recyclable materials are segregated, sorted, and marketed to material recycling facilities.
- **Transfer Station** – A transfer station facility has recently been constructed to allow the transfer of waste materials received to the Town of Colonie landfill or to other facilities if the economics of transporting the waste to another facility is beneficial. Additionally, this facility will accept, sort and process residential and light commercial material. The intent of processing the residential and light commercial material is to separate beneficial use materials that can be marketed to vendors and thereby bypass the landfill and preserve landfill space.

- **Landfill Gas to Energy System** – A landfill gas to energy system is currently in the permitting and design stage that will take landfill gas collected by the existing active gas collection system, compress and clean it, and use it to power internal combustion engines that in turn will drive generators. The generators will be connected to the existing utility grid at the hydroelectric generation plant located southeast of the landfill facility. A central flare unit will be utilized until which time the gas to energy project is placed on-line and will be maintained and utilized in the event that the generator system is taken off-line for maintenance, etc. The flare and gas to energy system will burn the landfill gas created as part of the decomposition process of the waste. Destruction of this gas is beneficial to the control of greenhouse gases and other air contaminants present in landfill gas emissions.
  
- **Leachate Lagoons and Leachate Forcemain** – The facility contains two leachate storage lagoons and a leachate forcemain system that is used to store leachate and convey it to the sanitary sewer system for treatment at the Albany County Sewer District.
  
- **Support Facilities** – The landfill facility also contains a facility office, a scalehouse and two vehicle scales for the weighing of inbound and outbound waste disposal vehicles in order to assess disposal fees, and a equipment maintenance building utilized for the repair and preventative maintenance of the landfill equipment and support vehicles.

Refer to Plate 1 for location of the facilities and traffic patterns on-site.

## **2.2 DESCRIPTION OF WASTE DISPOSAL**

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Waste disposal vehicles entering the facility are weighed to determine the loaded weight of the vehicle and directed by the scalehouse operator to the transfer station or the landfill cell based on the waste material on the vehicle. Waste will be dumped either at the transfer station floor or at the working face of the landfill area as directed by the DES personnel. Once the vehicle is emptied the vehicle is directed back to the scalehouse to be weighted empty. The resulting tare weight and the type of waste is used to determine the disposal fee.

Waste entering the residential convenience center is deposited in roll-off containers and the containers are transported to the landfill cell with Town vehicles. This process avoids the introduction of passenger vehicles into the landfill cell that would otherwise impede operations in the landfill cell. Disposal fees for the residential convenience center are based on number of bags, approximate size of load, and type of waste material.

## 3.0 PERSONNEL REQUIREMENTS

### 3.1 GENERAL

The Area 6 Lateral Landfill Expansion will be operated with the following personnel as they relate specifically to the landfill cell operation. At the time of this report the following personnel serve critical positions as related to the operations of the landfill cell. The key landfill personnel have received the NYSDEC operator training course for landfill operations. The personnel currently serving these positions are as follows:

Name	Title	Completed NYSDEC Operator Training	MOLO Certified
F. Joseph Stockbridge	Director of Environmental Services	Yes	Yes
Matt McGarry	Environmental Engineer	Yes	No
Dennis Woodsinger	Environmental Technician	Yes	No
Mark Behuniak	Landfill Supervisor	Yes	No
	Working Foremen (3)	Yes	No
	Equipment Operators (7)	Yes	No
	Landfill Laborers (7)	No	No

The landfill personnel have received the following specific training:

- **Solid Waste Association of North America (SWANA), Manager of Landfill Operations (MOLO):**

Joseph Stockbridge

- **8-hour Drivers' Education:**

Keith Alund	Robert Napier
Mark Behuniak	Fred Roberts
John Boncaro	Arnold Shamus
Christopher Comproski	Robert Sleurs
David Gulliver	Joseph Stockbridge
William Haas	Lawrence Washburn
Robert Kennedy I	Dennis Woodsinger
Matthew McGarry	

■ **40-hour Hazardous Waste Operations:**

Keith Alund  
Matthew McGarry

Joseph Stockbridge  
Dennis Woodsinger

■ **NYSDEC Landfill Operators Course:**

Keith Alund  
Mark Behuniak  
Christopher Comproski  
Matthew McGarry  
Robert Napier

Fred Roberts  
Robert Sleurs  
Joseph Stockbridge  
Lawrence Washburn  
Dennis Woodsinger

■ **Confined Space Entry Training:**

Keith Alund  
Mark Behuniak  
John Busch  
Christopher Comproski  
Robert Comproski  
David Gulliver  
Paul Leonardo

Matthew McGarry  
Fred Roberts  
Arnold Shamus  
Robert Sleurs  
Lawrence Washburn  
Dennis Woodsinger

■ **Bloodborne Pathogens:**

Keith Alund  
Mark Behuniak  
John Boncaro  
Christopher Comproski  
David Gulliver  
William Haas  
Robert Kennedy I

Matthew McGarry  
Robert Napier  
Fred Roberts  
Arnold Shamus  
Robert Sleurs  
Joseph Stockbridge  
Lawrence Washburn

### 3.2 DESCRIPTION OF PERSONNEL RESPONSIBILITIES

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This Section will describe the responsibilities of the various personnel operating the landfill, specifically as it relates to the landfill disposal cell:

- **Director of Environmental Services** – The Director of Environmental Services is ultimately responsible for the facility maintaining compliance with the Part 360 operating permit and regulations. The Director of Environmental Services serves as the administrative head of the Division and is responsible for overseeing all personnel and ensuring site compliance with the operating permit.

- **Environmental Engineer** - The Environmental Engineer is responsible for overseeing the completion of all inspections and maintaining all reporting requirements as required by this plan and the operating permit. Additionally, the Environmental Engineer will oversee the activities of the Environmental Technician. The Environmental Engineer will coordinate the completion of scheduled maintenance activities as well as any other maintenance requirements that may occur during the course of facility operation.
  
- **Environmental Technician** – The Environmental Technician will perform or oversee all inspections related to the operation and maintenance plan. The Environmental Technician will report the results of all inspections to the Environmental Engineer. Additionally, the Environmental Technician will oversee and assist in any maintenance related activities and document the maintenance activities performed.
  
- **Landfill Supervisor** – The Landfill Supervisor will oversee the operations within the facility on a day-to-day basis. The Landfill Supervisor will coordinate with the Working Foreman to determine areas of waste placement, progression of waste placement, use of daily cover, operations during inclement weather and other issues as they relate to waste placement within the landfill cell.
  
- **Working Foreman** – The Working Foreman will direct the activities of the equipment operators working the landfill face. The Working Foreman will manage the working face and be responsible for the inspection and subsequent rejection of any unacceptable waste dumped at the working face. Additionally, the Working Foreman will direct the placement of daily cover materials at the conclusion of daily disposal activities.
  
- **Equipment Operators** – The Equipment Operators will operate the landfill equipment under the direction of the Working Foreman to manage the placement, compaction and covering of waste disposed of within the landfill cell.
  
- **Landfill Laborer** – The Landfill Laborers will assist the Equipment operators in directing vehicles to the working face and inspection of loads for unacceptable materials. Specifically during select waste lift placement, the landfill laborers will closely inspect the load of waste and remove any unacceptable materials from the waste lift that could potentially cause damage to the landfill cell liner system.

## **4.0 MACHINERY AND EQUIPMENT**

### **4.1 GENERAL**

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The Town of Colonie Landfill Facility has at their disposal a wide variety of heavy equipment that may be utilized for landfill operations. All on-site equipment is serviced by local equipment representatives and dealers for that particular manufacturer of equipment. The Town is currently contracting for maintenance to perform the Division equipment maintenance efforts.

### **4.2 EQUIPMENT**

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At the time of this report, the Town has the following equipment available to the landfill operations at the facility.

#### **4.2.1 Landfill Compactors**

Currently, the Town has two landfill compactors at the facility. The Town has two CMI 390 with a static weight of 106,000 pounds for use at the facility. Each compactor is equipped with a Roll Over Protection System (ROPS) cab, sound suppression cab and pressurized air system for operators safety and comfort.

#### **4.2.2 Trackloaders**

Currently, the Town has three Caterpillar 973 Trackloaders for use in the landfilling operations. The trackloaders are used primarily to spread waste in lifts for the compaction by the landfill compactors, spreading of soil type daily covers and pulling the alternative daily cover applicator. For operator safety and comfort, the trackloaders are equipped with the ROPS cab, sound suppression cab and pressurized air system.

#### **4.2.3 Dozer**

Currently, the Town has three dozers that can be utilized as back-up to the trackloaders for spreading refuse and/or cover material. The Town currently has a

Caterpillar Model D7R, Caterpillar model D5 and Caterpillar model D4 dozer at the facility. Each dozer is equipped with a ROPS cap, sound suppression cab and pressurized air system for operator safety and comfort.

#### **4.2.4 Excavator**

Currently, the Town has two hydraulic excavators that can be utilized in the landfill operations if necessary. The Town has a Kobelco and a Liebherr hydraulic excavator that are part of the landfill facility equipment inventory. These excavators can be utilized within the landfill cell if needed. Both excavators are equipped with a sound suppression cab and pressurized air system for operator safety and comfort.

#### **4.2.5 Alternative Daily Cover System**

The Town currently utilizes a “Posi-Shell” alternative daily cover system for use in daily and intermediate cover at the facility. The “Posi-Shell” system consists of an applicator unit and a silo unit. The applicator unit is used to mix the alternative daily cover and apply the cover to the refuse. The applicator unit is typically towed to the landfill cell by a dozer or trackloader. The silo unit stores the cement kiln dust (CKD) material; the primary ingredient of the cover mixture.

#### **4.2.6 Truck Scales**

Currently, the Town operates two 100-ton, 60-foot vehicle scales for recording the weight of waste received by the landfill facility.

#### **4.2.7 Miscellaneous Landfill Facility Equipment**

The Town has a multitude of other equipment available at the landfill facility that can be utilized in landfill operations if necessary. The following list summarizes other equipment and the potential application in landfill operations:

- **Water Truck** – For on-site dust control.
- **Two Roll-off Trucks and Roll-off Containers** – Management of incoming waste streams from residential convenience center and transfer station.

- **Dump Trucks** – Moving waste and/or cover materials on-site.
- **Street Sweeper** – Control of dirt and trash on facility access roads.
- **Light Tower** – For additional light during contingency operations.
- **Portable Generators** – Back-up power for leachate collection and conveyance systems.
- **Off-Road Utility Vehicles** – For gas system maintenance and transport of personnel around the site.

#### **4.2.8 2-Way Radios**

The Town equips all landfill supervisory and equipment operator personnel with 2-way radios. The radios allow for communications with the scalehouse, supervisor personnel and operator to operator. Communications from the landfill operators to the scalehouse and/or supervisor personnel can be used to contact outside agencies such as any emergency services (i.e., fire department, police, EMS, etc.).

#### **4.2.9 Combustible Gas Indicator**

The Town maintains a combustible gas indicator on-site to perform routine monitoring of gases from the landfill. Additionally, the combustible gas indicator will be used during confined space entry to monitor the air quality.

#### **4.2.10 Other Town Equipment**

In the event of breakdown of landfill equipment beyond the normal expectation and redundancy of the equipment on-site, the Town has access to additional equipment through the Town Department of Public Works that could be utilized if necessary.

## **5.0 LANDFILL OPERATIONAL CONTROLS**

### **5.1 ACCESS TO SITE**

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The Town of Colonie Landfill Facility is accessed from existing entrance ramps off of Route 9. Residential vehicles are directed to the residential convenience area by signs directing them to the attendant toll booth where residency is verified. Upon verification of residency, customers are directed to the residential convenience center where attendants assist with the unloading of vehicles and inspect for unauthorized waste materials.

Commercial haulers will be directed to the inbound scale to be weighed prior to entering the landfill facility. Upon completion of waste unloading, each driver will receive a duplicate copy of the load slip with the company name, weight of load, cost, date, time printed on the slip. The load slip shall be signed by the driver to serve as the record of transaction and to incorporate the affidavit by the driver that they are not knowingly disposing of any unacceptable waste at the facility. Upon notifying the scale operator of the contents of the load, the driver will be directed to the transfer station or to the landfill working face. Signage and personnel will further direct the driver from the scale to either location.

At the transfer station, an attendant will direct the vehicle to a location to unload. Upon unloading the driver will proceed to the out-bound scale to be weighed and receive the transaction receipt.

At the landfill cell working face, the Equipment Operators will direct each vehicle where to unload. Location of unloading will be dependent on the type of waste, type of vehicle, etc. Vehicles that require manual unloading are directed to the transfer station or, if directed to the landfill cell, will be further segregated to avoid delays within the working face. Upon unloading the waste hauling vehicles will exit the landfill cell and proceed to the outbound scale where they will be weighted and receive the transaction receipt.

## **5.2 HOURS OF OPERATION**

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The facility will continue to operate at the current hours of operation. The hours of operation of the landfill are from 7:00 A.M. to 3:00 P.M., Monday through Friday, and on Saturday from 7:00 A.M. to 2:00 P.M. The hours of operation of the transfer station are from 7:00 A.M. to 3:00 P.M., Monday through Friday, and on Saturday from 7:00 A.M. to 2:00 P.M. Alternative working hours may be required due to special circumstances or conditions. Sweeping and snow plow operations are conducted beyond normal working hours to minimize disturbance to traffic. Special projects may extend beyond normal working hours to take advantage of daylight.

## **5.3 SIGNAGE AND TRAFFIC CONTROLS**

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The Town will maintain signs on the site to direct vehicles to the various facilities located on the site. A significant number of landfill personnel are equipped with 2-way radios, so in the event a vehicle becomes "lost" on-site, it can be redirected after inquiry with the scale operator as to its intended destination on-site. There are 25 radios plus several spares for maintenance and special projects. Sufficient traffic signs and controls such as stop signs, highway barriers, etc. will be utilized on-site to route traffic and prevent the potential for vehicles to exit roadways at incorrect locations. Some of the critical signs have been included in Appendix A.

## **5.4 UNAUTHORIZED WASTE**

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In order to successfully operate the landfill and to maximize operating life it is imperative that the landfill supervisor control the quantity and type of inbound solid waste. The Town of Colonie will be continuing its "Waste Inspection Program" in an effort to keep control of the waste. If violators are found they will be subject to landfill use restrictions.

The Town currently has a list of materials (Table 5-1) that will not be accepted at either the landfill or at the transfer station. The initial enforcement of the list must be

**TABLE 5-1**  
**TOWN OF COLONIE LANDFILL**  
**UNACCEPTABLE WASTES**

- Explosives or ammunitions
- Combustible liquid or gas containers, bottles, cylinders or cans
- Caustic acids, corrosives, chemicals or other hazardous wastes containing radioactivity or other contamination or pollutants prohibited by mandatory and binding laws or regulations of the United States Government and New York State
- Liquid or slurry wastes (<20% solids)
- Unidentified containers containing product
- Thick-walled or solid metallic objects such as castings, forgings, cylinders or large motors
- Infectious medical or hazardous wastes
- Barrels
- Asbestos waste
- Recyclable materials

made by the commercial haulers when they pick up their loads. Any hauler who does not abide by this list would be subject to the following:

- **Verbal Warning** - Note to license file.
- **Warning Letter** - Used to alert licensee of a violation.
- **First Violation** - Mandatory minimum fine of \$500 and a discretionary suspension of license.
- **Second Violation** - Mandatory minimum 30 day suspension of license and a discretionary minimum \$1,000 fine.
- **Third Violation** - Mandatory minimum one year suspension of license and a discretionary maximum \$2,500 fine.

Landfill operations staff will periodically quarter incoming loads to check for *gross violations of the list*. In addition, a *minimum of two inspections* will be conducted weekly on randomly-chosen vehicles to check loads for the presence of any unacceptable wastes. The results of the waste load inspections will be recorded in the weekly monitoring report. Any rejected waste loads will be removed from the site by the close of business.

## **6.0 WASTE AMOUNTS AND CHARACTERIZATION**

### **6.1 WASTE AMOUNTS**

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The Town of Colonie Landfill Facility is currently permitted for 550 tons of waste per shift per day based on a month calculated with 24 working days and no two consecutive months exceeding the daily average by 20 percent (550 tons/day x 24 day/month x 1.2 = 15,840 tons/month). Under this permit application package, the Town is requesting the permit be modified to allow 820 tons/day of waste in the landfill cell. It is anticipated that some waste material will be directed to the transfer station where some portions of the waste may be separated, recovered and recycled and thereby diverted from disposal within the landfill area or transported off-site to other disposal facilities. For purposes of this permit application with the specific concern of waste inbound to the landfill cell a daily average of 820 tons/day of waste will be assumed.

### **6.2 WASTE CHARACTERISTICS**

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The waste stream at the Town of Colonie Landfill Facility generally consists of 25 percent residential waste, 34 percent industrial/institutional, and the remaining 41 percent consisting of wastewater treatment plant sludge, water treatment plant sludge, incinerator ash, construction and demolition (C&D) debris, and petroleum contaminated soils.

Construction and Demolition debris may be dumped at the transfer station to allow the processing of the waste stream to recycle some C&D debris for beneficial use.

### **6.3 SELECT WASTE**

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Select Waste is generally described as the waste material placed within the first 10 feet of the finished grade of the liner system. The Select Waste material consists of waste materials that do not contain large rigid debris or material that will potentially blind the leachate collection layer if placed over the top of the primary drainage layer. Select

Waste generally consists of residential waste that is transported to the site in packer trucks.

Select Waste will be placed in 5-foot lifts as measured perpendicular to the liner. Compaction equipment will not be allowed to operate over portions of the landfill cell that do not have the minimum 5 feet of Select Waste in-place. Placement of the Select Waste layer generally is completed simultaneously to normal landfiling. During placement, material which may be classified as Select Waste is first directed to an area separate from the existing working face. Once the waste is dumped, the piles are spread and visually inspected to ensure no large, rigid material is contained within the waste. If any unacceptable material is present, it is removed by the landfill laborer. The waste material is then placed in the 5-foot lift using a dozer.

The operator will continue with a similar inspection of the next 5-foot lift of waste until a minimum of 10 feet of waste exists over the liner system. Upon completion of the 10-foot layer, waste will be placed in normal 10-foot lifts and will not require the precautions taken with the Select Waste material.

As part of the modification to the stability analysis for the landfill liner system, a specific fill progression plan was developed to define the allowable fill progression for the landfill cell. Information defining the fill progression is included in Appendix B.

#### **6.4 WASTE PLACEMENT**

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The proposed landfill has been divided into two phases. Phase I consists of approximately 10 acres of double composite liner system sub-divided into two cells, designated as Cells A and B. Phase II consists of approximately 12 acres of double composite liner system sub-divided into two cells, designated as Cells C and D. Each cell has its own primary and secondary leachate collection systems. Therefore, each cell can be operated as an independent landfill, providing flexibility in landfill operation.

A gravel access road with a turn-around pad will be constructed out of stone and stabilization fabric into Cell A of Phase I. The gravel access road will originate at the edge of the existing paved access road, go over the western berm of Cell A, and terminate at the turn-around pad within Cell A.

As access is required for the remaining cell of Phase I and the two cells of Phase II, an access road will be constructed by benching the road base into the waste parallel to the Southern berm of Phase I. When Cell A of Phase I nears capacity, Select Waste shall be diverted from the normal fill progression to construct a ramp into Cell B. When Cell B is nearing capacity and Cell C (Phase II) has been constructed and is on-line, then Select Waste shall be diverted from the normal fill progression to construct a ramp into the western end of Cell C. Similarly, when Cell C is nearing capacity, Select Refuse shall be diverted to begin to fill Cell D.

The filling of Cell A will start by diverting Select Waste from Area 5 and having the trucks discharge their loads off the edge of the turnaround pad and exit the landfill via the same access road. Landfill equipment operators will then begin spreading and compacting the waste in a minimum compacted lift thickness of 5 feet. The operator will increase the size of the unloading pad as required. The placement shall continue from the unloading pad towards the Cell A and Cell B isolation berm (West to East). The first lift shall end at the toe of the isolation berm. By ending the waste placement at the toe of the isolation berm, runoff that has come into contact with waste is contained within the cell from which it was generated.

The second lift of waste will start from the Cell A and Cell B isolation berm and work towards the western berm.

For the second lift and each succeeding lift, the waste haulers shall discharge their loads at the toe of the working face and the landfill operators shall "knock down" the load into 2-foot thick lifts. Each lift shall be compacted with a minimum of four passes with the compactor. This will provide increased waste inspection and control capabilities while providing excellent compaction and volume reduction. After the waste has been compacted, the in-place waste density should be approximately 1,250 pounds per cubic yards. These sections outline the various sequences that the operator should follow and the limit of waste placement for each sequence.

Waste placed above the top of berm elevations will be placed at a maximum slope of three horizontal and one vertical. The equipment operator will terminate the outside toe of solid waste a minimum of 36 inches below the top elevation of the primary liner within the berm. The resulting swale between the berm and the solid waste shall be

maintained to contain any storm water run-off that may have come into contact with solid waste within the landfill cell. The 36-inch swale will partially be filled with 6 inches of intermediate cover and 6 inches of daily cover. This swale will be filled with either solid waste or general fill immediately prior to closure. Alternatively, at exterior cell berms, intermediate cover may be placed over the waste to the exterior edge to permit shedding of storm water to outside the cell limits.

Once the first lift of Phase I, Cell A is complete, whereby an entire 10-foot lift has been placed atop the landfill cell, the equipment operator will begin filling in a slightly different pattern for the remaining lifts. A modified access road must be constructed atop of the first lift. This access road will be aligned approximately in the middle of Cell A running West to East. The equipment operator will then construct the next lift adjacent to the existing Area 5 waste mass. The filling sequence will proceed East to West. This lift will be approximately 200-feet wide and 10 feet in height. The primary purpose for constructing this lift East to West is to serve as visual screening and litter control for the operations. Once the second 200-foot wide lift is placed, the operators will be required to reconstruct the access road closer to the Area 5 portion as the waste placement continues.

The remaining lifts are similar to lifts one and two. For these lifts, the equipment operator will only need to construct the access road and not a turn-around pad, as the area to be filled has become smaller and moves up the existing Area 5 waste mass. The operator will continue to construct the first lift in each cell from the Western side of the cell, and work towards the East.

It is important that terraces and drainage swales be maintained in the intermediate cover as the equipment operator fills the landfill. Though runoff is not as significant over the intermediate cover as it will be over the final cap, it must still be prevented from accumulating and washing out the intermediate cover. The use of the terraces and swales will direct what runoff occurs and prevent erosion of the cover. The operator may wish to construct the terraces and swales during Phase II operations along the alignment of the final closure grades. This will reduce additional grading during closure of the facility and reduce closure costs.

It is anticipated that, as the landfill is filled, the access road must increase in grade. Consideration will be given to the grade of the access roads to maintain access given the season of operation.

The actual location and construction of the access road is left to the discretion of the operator. The locations described appear to provide the most flexibility, though actual operating conditions may dictate that the access roads be constructed elsewhere. The initial access road and unloading pad is of special construction so as to prevent any damage to the liner system below. Future access roads or pads may be constructed similarly but the operator may also elect to reduce the thickness of one of the components of the pad (e.g., the No. 4 stone). Exactly how durable the pad must be could be based on the time of year in which the landfill is operating and length of time for which it is to be operated. During the winter and spring, equipment operators may choose the type of construction shown, while in the summer the road could be constructed out of a stable, well draining select fill or daily cover.

## **7.0 SOLID WASTE RECEIVING PROCESS**

### **7.1 WASTE MONITORING AND RECORDKEEPING**

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Waste deposited in the landfill cell is accounted for at the scalehouse during the disposal transaction. As waste hauling vehicles enter the facility they are required to be weighed in to get a loaded vehicle weight. At the time the vehicle is weighed, the scalehouse operator asks for a description of the waste material and it is recorded as part of the transaction.

The scalehouse operator uses the waste description to enter in a waste code that is used to track monthly and annual tonnages of various waste that is accepted at the facility.

### **7.2 SPECIAL WASTE HANDLING**

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Sludges and incinerator ash are generally the only wastes that are received by the facility that require special handling considerations. The sludges and ash that are received by the facility are generally scheduled into the facility in advance of delivery to the site. Sludges and incinerator ash are usually placed in a larger area of the landfill to prevent a large volume of material from being placed in an isolated lift of waste that could otherwise cause a soft subgrade for subsequent lifts of waste.

## 8.0 COVER MATERIAL MANAGEMENT

### 8.1 DAILY COVER MATERIALS

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Typical daily cover will consist of a "Posi-Shell" alternate daily cover and off-site soil cover placed on exposed solid waste. The application of daily cover will start at approximately 2:00 P.M. and continue until the entire active area which has received wastes since the last application of daily cover has been covered. To the greatest extent possible the Town utilizes the "Posi-Shell" material for daily cover and uses the soil material primarily for waste materials that the "Posi-Shell" does not cover well and areas that comprise roads within the landfill cell. The "Posi-Shell" material is placed using the proprietary application equipment towed by a Low Ground Pressure (LGP) Dozer. The soil daily cover will be placed using the Town's trackloader to spread the material. As the daily cover is being spread, the equipment operator will also "track" the material to achieve compaction. The expected in-place density of the daily cover material will be approximately 2,500 pounds per cubic yard for either on-site or off-site material. The resulting permeability of the daily cover is expected to be at or greater than  $1 \times 10^{-5}$  cm/sec, therefore, leachate is not expected to perch within the landfill on the daily cover layer.

The area available to stockpile cover material within the landfill will be kept to a minimum. The Town will contract with private firms to supply material to the site on an as needed basis. The daily cover material, which has typically been a silty sand, will be delivered and stockpiled within the landfill cell.

A minimum of 200 cubic yards of cover material will be stockpiled and maintained within the landfill cell for daily use. As the landfill is being filled, the landfill operator will relocate the stockpile to an area atop the solid waste that will be the most convenient for proper operation over the following two weeks. This location will most likely be adjacent to the unloading pad.

## **8.2 INTERMEDIATE COVER MATERIALS**

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Intermediate cover consists of a 12-inch layer of on-site soil placed on all surfaces of the landfill where no additional solid waste will be deposited for 30 days. Additionally, any location where the solid waste has reached its final grade will receive intermediate cover. These locations will typically be the exterior slopes of three horizontal to one vertical with terraces and swales. "Posi-Shell" has also been utilized as intermediate cover with the approval of NYSDEC and is currently pending approval to be re-instituted as an approved intermediate cover. The expected in-place permeability of the soil intermediate cover is expected to be approximately  $1 \times 10^{-5}$  cm/sec. Prior to resuming waste disposal activities over areas that have had intermediate cover, the soil intermediate cover shall be reclaimed to prevent leachate from becoming perched within the landfill. The intermediate cover will be graded so as to direct runoff over the top of berms into the perimeter drainage surfaces, runoff that has come into contact with the waste will be collected and treated as leachate.

## **8.3 ALTERNATIVE COVER MATERIALS**

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There are presently several materials that the Town is using as a substitute or in addition to soil as a daily cover material. The materials consist of the "Posi-Shell", incinerator ash, and petroleum contaminated soils.

### **8.3.1 "Posi-Shell"**

"Posi-Shell" is a trade name of a product consisting of a mixture of cement kiln dust, polymers, and cellulose fiber. Additionally, latex paints and cement have been added to the mixture to increase the durability of the material after application. The "Posi-Shell" acts in a similar manner as soil in terms of fire, vector, and litter control. The "Posi-Shell" is applied at the end of waste placement activities each day. The application of the "Posi-Shell" prohibits bags and papers from blowing from the working

face and causing nuisance litter problems and reduces vectors such as flies, birds and rodents from entering the waste mass.

The application of the "Posi-Shell" requires specialized equipment, resulting in additional costs for the equipment as well as the purchase of the "Posi-Shell" materials. However, the cost of "Posi-Shell" offset by the reduction in airspace consumption, makes it an economically feasible alternative.

### **8.3.2 Ash**

The types of ash to potentially be used as daily or intermediate cover will be either bottom ash from a MSW incinerator or waste water treatment plant (WWTP) sludge incinerator ash. Ash, used as a replacement for soil, will behave in a manner similar to soil. Therefore, the use of ash as a replacement for soil as a daily cover will not have an impact on landfill operations. Ash will be placed in a 6-inch lift the same as soil. However, ash will not be used to construct temporary access roads within the landfill due to the possibility of excessive dust being generated.

The use of ash as daily cover will have two benefits for the Town. One benefit is that the Town will reduce operational costs due to purchasing off-site material such as daily cover. The second benefit for the Town would be extended landfill life. Since the ash is currently part of the waste stream, additional air space would not be lost to daily cover. This could represent as much as 50 percent or more of the air space normally consumed by daily cover.

### **8.3.3 Petroleum Contaminated Soils**

The Town utilizes petroleum contaminated soils that are disposed of within the landfill for daily cover to the greatest extent possible. Contaminated soils that are accepted as waste into the facility are stockpiled within the landfill cell area to be used as needed for daily cover and/or access roads within the cell area.

#### **8.3.4 Other Wastes**

The Town has previously used and would consider using other waste materials for daily or intermediate cover. Other wastes previously used include paper mill sludge, processed C&D, foundry sands, etc.

## 9.0 LEACHATE MANAGEMENT

### 9.1 GENERAL

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Leachate management includes leachate collection, sampling, testing, storage, recirculation, and disposal. The leachate system consists of the leachate collection pipes, monitoring structures, gravity sewer and storage lagoons. Rainfall which falls on the landfill, comes into contact with waste, and reaches the primary liner will flow by gravity down the liner to one of four leachate collection pipes of the Primary Leachate Collection System (PLCS). The leachate will be pumped via sideslope riser pumps to the existing leachate gravity sewer which in turn flows to the leachate storage lagoons. The lagoons will be used to receive and store leachate in preparation for discharge via the leachate forcemain. Both the primary and secondary leachate pumps operate automatically based on liquid level controls to maintain the leachate collection systems in a free flowing condition and minimize head on the liner system.

### 9.2 LANDFILL OPERATIONAL CONTROLS

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This facility may be operated as either a conventional landfill or as a bioreactor type facility with active leachate or liquids recirculation. The primary leachate collection system and liner system have been designed to effectively operate with leachate recirculation. Additionally, consideration has been made for the increased density of waste that will occur as a result of the decomposition process associated with operating the facility as a bioreactor landfill. Waste density achieved during waste placement will have a direct bearing on the performance of the leachate collection system. The landfill operator must be aware that an increase in waste density in an area that will receive leachate by recirculation, may cause poor distribution of leachate into the waste mass resulting in reduced decomposition of the waste mass. As a result, the landfill operator should follow the guidelines below for the compaction of waste.

To minimize the potential for perched leachate and leakage seeps during the operation of the landfill, the operator must minimize the deposition of impermeable

layers within the waste mass. The impermeable layers typically are the result of layers of cover material, sludge, and haul road materials that are placed in a lift and not adequately removed prior to placing additional waste. The landfill operator must take care to remove apparent lifts of these materials to minimize the potential for perched leachate.

Given the intent to operate this facility with leachate recirculation to promote waste decomposition it will be important to prevent the formation of impermeable layers as the addition of leachate will have the potential to generate perched leachate zones.

Similarly, the landfill operator will have to pay close attention to potential for leachate seeps as a result of leachate recirculation. If leachate is added to an area of waste that is too close to the edge of the waste mass, the potential for leachate seeps forming as a result of the leachate flowing to the exposed surface increases. The ability to regulate the flow of leachate that is being recirculated to the waste will minimize the potential for seeps.

### **9.3 SUBCELL CONFIGURATION AND LEACHATE CONVEYANCE**

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In order to minimize the quantity of leachate generated, the landfill is divided into a series of subcells. Each subcell has a separate leachate collection system and secondary leachate collection system to provide discrete monitoring of the leachate generated and the efficiency of the primary liner system. To reduce the quantity of leachate generated, only subcells that have received waste will collect leachate. Subcells that have not yet received waste will have stormwater bypass controls installed that will allow any precipitation that collects within those subcell areas to be discharged to the surface stormwater collection system.

Leachate collected by the primary leachate collection system will be removed from the landfill cell by means of submersible pumps installed in sideslope riser pipes. The primary leachate will discharge through a flowmeter to allow continuous quantification of the primary leachate collected from the landfill cell. The sideslope riser pump will pump leachate via a forcemain to the existing leachate gravity sewer. Upon discharging to the leachate gravity sewer the leachate will flow by gravity to the north leachate storage lagoon. The north leachate storage lagoon will be used as equalization

storage prior to pumping via the forcemain to discharge in the City of Cohoes sanitary sewer system which flows to the Albany County Sewer District North Plant. In the event that the leachate forcemain is down (i.e., pump station not operating) the leachate lagoon will be used as temporary storage until the pump station can be returned to service.

It is currently anticipated that the south leachate storage lagoon will be drained, cleaned and routinely drained of any precipitation entering the lagoon. In the event the leachate forcemain is unable to discharge for a long period of time, leachate will be transported to the Albany County Sewer District North Plant via tanker truck. As further contingency, the southern leachate lagoon could be re-activated for leachate storage. Additionally, the leachate forcemain will contain provisions to allow the future connection and discharge of leachate to a sanitary sewer on Fonda Road which ultimately flows to the Town of Colonie Wastewater Treatment Plant.

#### **9.4 SECONDARY LEACHATE COLLECTION SYSTEM**

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As previously stated, each subcell of the landfill will have a separate secondary leachate collection layer that will allow for the quantification of primary liner system performance. Daily readings of the flows from the secondary leachate collection system will be taken to ensure that flows do not exceed the regulatory threshold of 20 gallons per acre per day (based on 30-day average). Secondary flow monitoring will be conducted on a five days per week basis by the environmental technician. Readings from the secondary leachate collection system will be recorded on the daily site inspection forms as further described in Section 15 of this report. In the event that secondary flows exceed the 20 gallon per acre per day threshold, the appropriate action will be taken as defined in the Contingency Plan.

#### **9.5 ROUTINE MAINTENANCE**

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An annual maintenance schedule has been developed for the primary leachate collection system. The maintenance of the primary leachate collection system includes

the routine flushing of the primary collection laterals and the gravity sewer line by the Town of Colonie (or a sub-contractor) at least once a year.

To aid in flushing the primary leachate collection laterals, a dedicated cable system shall be installed within each lateral. The dedicated cable will aid in the flushing of the approximately 1,000-foot long lateral, by allowing the flushing equipment to be pulled through the pipe.

## **9.6 LEACHATE RECIRCULATION**

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Currently the Town plans to recirculate leachate in the Area 6 lateral expansion. Leachate recirculation will be implemented after the Phase I landfill has been constructed and has established six months of background monitoring of the primary and secondary leachate collection system. The secondary leachate collection system will be monitored for the integrity of the primary system. Also, the primary leachate collection system will be monitored to assure the leachate flow rates in the system are as expected and that the collection and conveyance system is functioning correctly and adequately. Upon demonstration that the primary liner is functioning as designed, and the 30-day average flow from the secondary leachate collection system does not exceed 20 gpad, then leachate recirculation may begin.

Leachate recirculation will be accomplished by using horizontal piping installed in trenches to minimize the potential for contact with the leachate. The first horizontal trench will be installed after a minimum of 50 feet of waste has been placed in the cell. Additional horizontal trenches will be placed as the fill progresses with a maximum spacing of 50 feet vertically and 200 feet horizontal spacing between trenches. After leachate has been recirculated to the waste mass it is expected that the rate of decomposition of the waste will increase and the rate of landfill gas generation will increase. The horizontal leachate recirculation trenches will be utilized for removal of landfill gas with the existing active gas collection system and routed to the landfill gas to energy project (stationary generators) or the flare unit for combustion.

## 10.0 LANDFILL GAS MONITORING

### 10.1 EXISTING GAS SYSTEM

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The Town of Colonie Landfill Facility contains both a passive and active gas system. Currently, more recent landfill areas including portions of Area 3, Area 4 and the active Area 5 landfill cells are connected to an active gas system. The remaining portions of the site contain passive gas vents. The active gas system consists of both horizontal and vertical gas collection wells piped to a central blower unit that draws the gas under vacuum from the collection systems to a central flare unit. The central flare unit burns the gas in order to control air emissions and landfill gas odors. At the time of this report, it is anticipated that the gas collection system will be connected to a gas to energy system that is currently being permitted and designed.

The Town intends to collect landfill gas from the proposed Area 6 Lateral Landfill Expansion through the use of horizontal and vertical wells that will be connected to the existing gas collection system. Collected landfill gas will be utilized by the gas to energy project. Initially, gas will be flared until gas quality improves for use in the gas to energy system.

### 10.2 LANDFILL GAS MONITORING

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On a daily basis, as more fully described in Section 15, gas flow and quality will be measured at the active gas collection system. The perimeter of all landfill containment areas will be monitored semi-annually for the presence of landfill gas migration. In addition, the presence of landfill gas will be monitored at the property line and at all on-site underground structures. If landfill gases are present in concentrations exceeding 25 percent of the lower explosive limit (LEL) procedures outlined in the Contingency Plan will be implemented.

Given the performance of the active gas collection system and historical monitoring of the facility it is not anticipated that landfill gas migration is likely to occur.

### **10.3 LEACHATE COLLECTION AND CONVEYANCE SYSTEMS**

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Leachate collection and conveyance structures such as the existing leachate collection structures and leachate gravity sewer manholes have the potential for accumulations of landfill gas. The Town has classified all of these structures as “permitted confined space” that requires the completion of air monitoring and potentially ventilation of the structures prior to personnel entering the structure. Only personnel with confined space entry training will be allowed to enter these structures after they have been properly prepared for entry.

## 11.0 WINTER AND INCLEMENT WEATHER OPERATIONS

### 11.1 WINTER OPERATIONS

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During winter operations, equipment operators must contend with intermittent snow removal from the working face and other areas of the landfill that have not received intermediate cover. At the beginning of each day or as necessary when snow accumulates during the day, the equipment operators will push snow to a location that has received intermediate cover or a final cover system. The preferred location would be along an exterior side slope so that as the snow melts, the resulting run-off could be shed off the landfill and to the perimeter drainage swales. This will minimize the amount of water coming into contact with the waste, and thus reduce leachate production.

Any snow that has come into contact with either waste or run-off from the waste will be contained within the landfill cell. All water resulting from the melting of this snow will be considered leachate and handled accordingly.

### 11.2 INCLEMENT WEATHER

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During the late winter or early spring, excessive rain, snowmelt or frost melt can cause difficult operating conditions within the landfill. The difficulty is usually contained to the landfill cell area where the temporary access roads may be compromised by the poor weather conditions. The landfill operator must be prepared to make the necessary changes to the operation to compensate for inclement weather conditions. Response to the inclement weather conditions will vary depending on the period in which they occur, however, generally the following potential actions could be implemented to assist in the inclement weather operations:

- Temporarily move the active face to a more accessible location within the landfill cell.
- Add additional material to the temporary haul roads within the cell to provide a better surface for vehicle traffic. This may be accomplished by adding more cover and/or granular fill to the roadways.

- Maintain additional material at the site for the maintenance of the roads.
- Potentially route some waste hauling vehicle to the transfer station and dump waste at the transfer station to eliminate the need for these vehicles from entering the landfill cell. This action would require the Town to then transfer the waste to the cell with the Town equipment but could minimize the number of vehicles in the landfill cell and/or eliminate the potential for vehicles getting struck within the landfill cell that are otherwise well suited for operation on the temporary roads.

### **11.3 LINER FROST PROTECTION**

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Areas of the landfill cell that have not received the initial lift of Select Waste may be subject to frost action of the liner system. Frost action has no effect on the geosynthetic layers of the liner system such as the geomembrane, and GCL materials; however, the secondary low permeability clay layer can be affected by frost action. Studies have shown that the frost can increase the permeability of the low permeability soil layer. Integrity of the secondary low permeability soil layer, specifically the permeability properties of the layer, must be maintained. Permeability of the secondary low permeability layer can be maintained in the event that the layer is subject to freezing through the reconsolidation of the layer as a result of the loading of the layer from the placement of waste within the landfill cell.

## **12.0 RESIDENTIAL CONVENIENCE CENTER OPERATION**

### **12.1 RESIDENTIAL CONVENIENCE CENTER**

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The Town currently operates a residential convenience center for the disposal of waste by residents. The residential convenience center consists of a series of containers that allow residents to unload the waste and recyclable products into the containers without the need to enter the landfill cell. This procedure contains the residents to an isolated area of the site to avoid interaction with large commercial waste hauling vehicles, heavy equipment and the potential for vehicle damage if the vehicles were to enter the landfill cell area. The residential convenience center is maintained by landfill personnel that assist and supervise the unloading of the resident's vehicles.

### **12.2 TRANSFER STATION**

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The transfer station also has the ability to assist the landfill operator in segregating certain vehicles from entering the landfill cell. It is likely the transfer station will be utilized extensively during landfill operations for the manually unloaded vehicles that can otherwise present an obstacle to operation or require extended periods of unload at the active waste face. By eliminating manually unloaded vehicles, the active face can be kept to a size that will minimize the area needed to be covered daily, reduce the potential for odors, reduce the potential for blowing litter and minimize the efforts of the landfill operators in placing and compacting the waste.

The transfer station Operations and Maintenance Plan has been included in Appendix C.

## **13.0 FIRST LIFT PLACEMENT PLAN**

### **13.1 SELECT WASTE PLACEMENT**

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Section 6 of this Plan addresses the placement of Select Waste. As previously stated, the Select Waste will be placed in an initial lift of 5 feet and a second lift of 5 feet for a total of 10 feet of Select Waste material over the liner system prior to the introduction of general waste materials to the cell.

### **13.2 LEACHATE COLLECTION PERFORMANCE**

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The initial placement of waste within the landfill is the critical period when leachate generation can be at its greatest for the subcell. With waste in the subcell the landfill operator is required to collect any precipitation that enters that subcell and treat the liquid as leachate. As a result of waste in the subcell, any precipitation that enters the subcell is quickly conveyed to the primary leachate collection system as the small amount of waste does not provide sufficient field capacity to absorb the precipitation. The result is the leachate collection system quickly conveys the leachate to the collection system and into the leachate storage lagoon. The leachate conveyance system has been designed to handle the peak generation rate of leachate that may be produced during the initial start-up of the subcell.

The landfill operator will need be aware of the potential for increased leachate generation during a subcell start-up and maintain sufficient capacity within the north leachate storage lagoon.

Additional operational considerations should be made with respect to the placement of Select Waste with the subcell. Generally, Select Waste placement should occur from the high side of the subcell to the low point of the subcell to allow any precipitation that enters the subcell an unobstructed route to the primary leachate collection system. Filling over the top of the primary collection piping prior to other areas of the subcell may result in the temporary ponding of leachate within the subcell in the event that the precipitation event exceeds the ability of the drainage soils from

conveying leachate to the primary collection piping. The resulting condition will induce a head on the liner that is allowed by regulation for a period of seven days after the storm event. The landfill operator, however, should not consider this to be an acceptable condition as subsequent storm events could increase the potential for ponded leachate. Additionally, the landfill operator needs to be concerned that the subcell can physically contain the ponded leachate. An overtopping of leachate into an adjacent subcell will result in the adjacent subcell being considered to be active. The resulting activation of the adjacent subcell will result in even greater leachate generation rates. The potential for this condition must be avoided. In the event that the primary drainage sand layer will not provide adequate conveyance of leachate to the primary leachate collection piping, a submersible pump should be installed at the low point of the subcell to pump leachate directly into the primary leachate collection piping.

## **14.0 FIRE PREVENTION PLAN**

### **14.1 LANDFILL PERSONNEL**

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Landfill operators are instructed to inspect for “hot” loads of waste that may come into the facility. Each piece of landfill equipment is equipped with a fire extinguisher. Fire extinguishers are also available at the residential convenience area and the transfer station to extinguish small fires.

The landfill operator will maintain a sand area or pad for the dumping of “hot” loads as well as a stockpile of cover material for extinguishing the fire.

### **14.2 FIRE DEPARTMENT RESPONSE**

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In the event of a fire that cannot be extinguished by landfill personnel, the landfill will contact the Boght Fire Department. The fire department will be dispatched by the Town’s 911 dispatcher following a call to the dispatcher by landfill personnel. Landfill supervisory personnel as well as the scalehouse and landfill office have 2-way radios that can communicate directly with the Town’s 911 dispatcher. In the unlikely event that the 2-way radio communications are unavailable, a telephone call to the 911 number will be made.

## **15.0 LANDFILL INSPECTION AND RECORDKEEPING**

### **15.1 GENERAL**

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Daily monitoring of leachate collection system components, incoming waste characteristics, and periodic inspections of landfill structures are to be performed at the landfill. Monitoring is important for developing a baseline of normal operations so that unusual conditions can be detected and corrective actions taken. Scheduled inspections of the landfill are required as a part of routine maintenance to assure that hazards or the potential for hazards can be identified and the appropriate action taken. The appropriate actions may require minor repairs or require the activation of the Contingency Plan. The items to be addressed in each inspection are shown on the attached forms for daily and weekly monitoring, and monthly inspections. Additional forms are given for Waste Load Inspections and Contingency Plan Implementation. A copy of the various inspection forms are included in Appendix D.

### **15.2 INSPECTIONS**

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Daily monitoring will include checking the quantity of leachate in the leachate storage lagoon, quantity pumped by the leachate forcemain system, the secondary leachate collection structures, and general site reconnaissance for damage. Precipitation and temperature is also to be monitored daily by taking readings from the weather station near the scale office. This is very important for determining how leachate production corresponds to rainfall.

As outlined in Section 5, a minimum of two loads of waste per week will be inspected for the presence of unacceptable wastes. This will be performed in a segregated area large enough for the waste to spread out to a thickness of 1 foot or less. Results of the inspection will be documented in the weekly Monitoring Report. Additional loads will be inspected if there is suspicion that unacceptable wastes are present from a particular hauler or hauler's route. In addition, operators at the working face of the landfill will observe the waste as it is being unloaded for the presence of unacceptable

waste, segregating any that is found in a separate area for subsequent removal. The source (or hauler) of the waste should be recorded, the location indicated on the fill progression drawing and the Director notified so that appropriate action can be taken against the responsible parties.

Monthly reports are primarily to ensure the structural integrity of the landfill berms and other control structures, to assure that landfill gases are not migrating from the site, and to summarize results of secondary leakage rates to determine that the rates are under 20-gallons per acre per day.

The need to implement the Contingency Plan will be based on deficiencies detected during daily monitoring and other inspections. However, some deficiencies can be corrected without Contingency Plan implementation. For example, liner cover material can be replaced and drainage ditches can be cleaned. Unwanted vegetative growth can be removed, and erosion can be repaired. Cleaning or repair of leachate collection lines can be made by Town of Colonie personnel or private contractors, as these individuals are trained in the safety procedures required for confined space entry. In addition to these items, the operators must inspect the intermediate cover for erosion and exposed solid waste, both of which can be rectified with the application of additional cover material.

The presence of excessive liquid in the landfill secondary leachate collection system will require a more detailed response as described in the Contingency Plan.

### **15.3 REPORTING**

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Periodically, reports summarizing the operation of the landfill must be prepared. Included in Appendix D are daily, weekly, monthly, quarterly and a semi-annual report forms. The semi-annual report will be submitted to the NYSDEC for review every March 1 and September 1, and will cover the status of the facilities operations as shown on the report form.

During waste placement, the landfill supervisor or a designated representative will prepare a daily report which includes the location, type, and quantity of waste. The type of waste and quantity may be determined from the scale house records. The location of

the waste placement will be recorded on a daily basis on the weekly fill progression drawing.

For the semi-annual reports, leachate and groundwater monitoring data may be summarized in table or chart form. All groundwater monitoring data will be reported in accordance with the procedures outlined in the Environmental Monitoring and Site Analytical Plan.

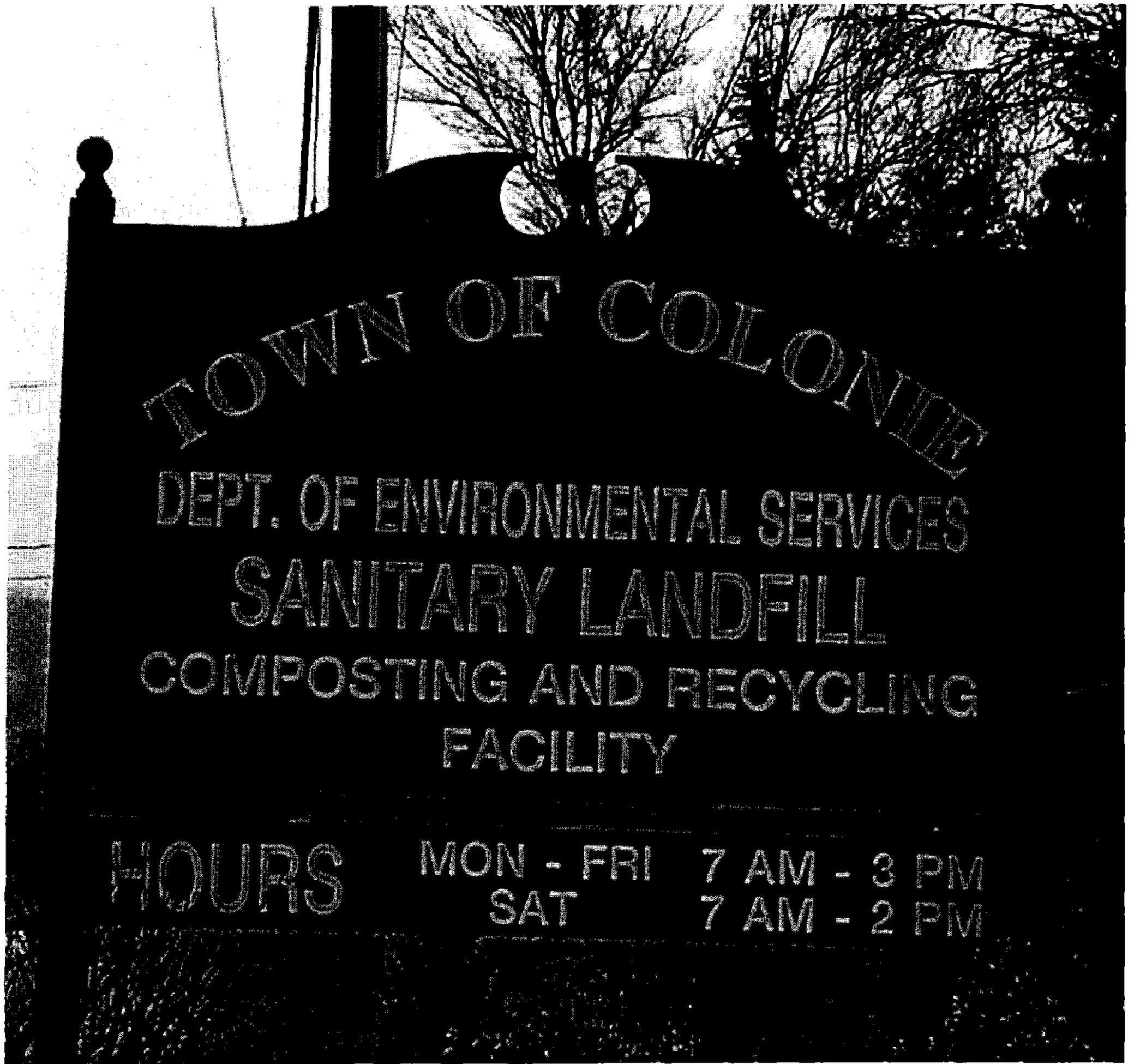
#### **15.4 MONITORING FORMS AND REPORTS**

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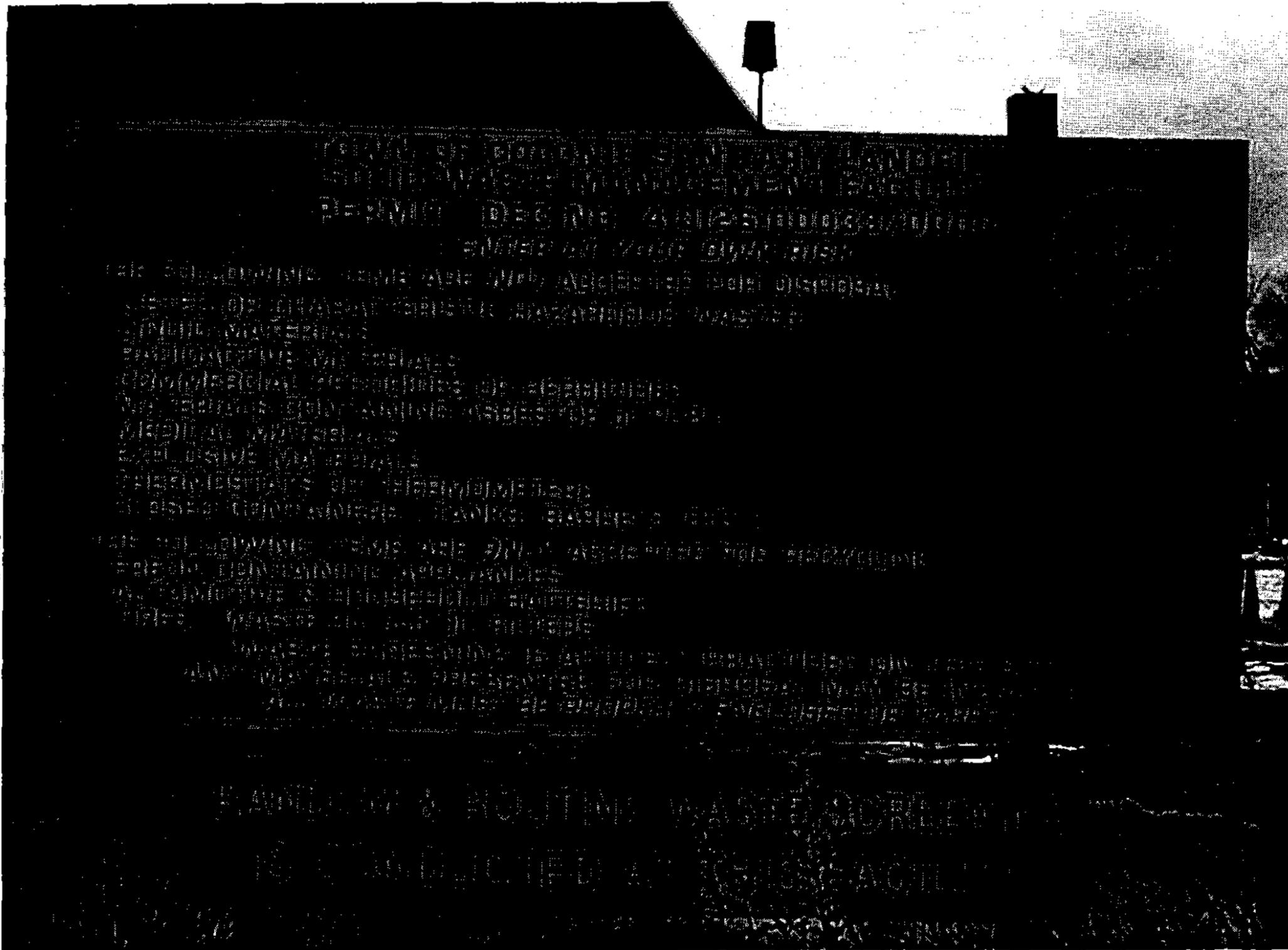
Included in this operating plan are suggested formats for all of the monitoring forms and reports necessary for operating the landfill. It is suggested that each report be kept in a separate file with the daily reports serving as the index to all of the other reports. The forms included herein are only suggested and the actual forms may vary depending on the specific wants and needs of the landfill operations.

**APPENDIX A**

**Site Signage**



Former Site Entrance Sign - New sign has been installed and a new sign with hours of operation is to be installed in the near future.



Prohibited Wastes - Notification Sign

# RESIDENTS RATES

KITCHEN GARBAGE

0-200 LBS \$3.00

OVER 200 LBS \$60.00 PER TON

TIRES \$1.00 EACH LIMIT 8

APPLIANCES / METAL \$3.00 EA.

DEMO MATERIALS 0 200 LBS \$5.00



Typical Site Directional Signs

**APPENDIX B**

**Fill Progression Plan**

June 18, 2003

Mr. Thomas Reynolds, P.E.  
New York State Department of  
Environmental Conservation  
Region IV  
1150 North Westcott Road  
Schenectady, NY 12306

Re: Town of Colonie – Area 6, Phase I Landfill Expansion  
Stability and GCL Modification

Dear Tom:

Pursuant to our discussion on May 27, 2003 after the progress meeting, we have prepared this letter to request formal modification of the Area 6 permit to incorporate the following changes:

■ **Stability Modification**

As you are aware, Malcolm Pirnie conducted a stability analysis for both static and seismic stability of the landfill system as required by 6NYCRR Part 360 that was submitted and approved as part of the Area 6 Permit Application. The analysis developed required interface criteria for all of the liner system interfaces. The analysis resulted in a required interface of 31 degrees between all of the liner materials.

As defined in the QA/QC plan, Malcolm Pirnie has conducted interface testing of all of the interfaces utilizing the proposed materials. Three interfaces failed to meet the required 31 degrees, those interfaces were:

- Textured HDPE Geomembrane to Double-sided Geocomposite.
- Textured HDPE Geomembrane to Geosynthetic Clay Liner (GCL).
- Textured HDPE Geomembrane to Geocushion Geotextile.

Malcolm Pirnie has investigated alternate materials and found that other standard products would unlikely meet the interface requirements. Custom run materials could potentially meet the requirements but would require production of test

samples, testing and, assuming materials meet the interface requirements, production of the material. Given the lead time involved, this would likely delay the project.

This has resulted in Malcolm Pirnie investigating the stability analysis in *further detail to determine if the currently proposed material could be utilized if other landfill conditions could be modified, namely the fill progression of the waste mass.*

As you are aware, the Area 6 permit application proposed the Phase I and Phase II cells would be subdivided into two subcells. The primary purpose of the subcell division was to minimize leachate generation through the active diversion of storm water while waste was being placed in the first subcell and prior to waste placement in the second subcell for each Phase. This subcell division and subsequent fill progression lead to a critical stability condition when waste was *filled in one subcell and no buttressing effect was present in the unfilled cell.* It should be noted that this condition only occurs when the cell is empty and during a seismic event. This condition became the primary condition that resulted the interface requirements as specified in the permit application.

The attached technical memo summarizes the analysis completed in support of modifying the interface requirements and fill progression to satisfy the regulatory requirements for static and seismic stability. In addition, we have prepared a fill progression plan that reflects the fill progression required based on the revisited stability analysis. A copy of the fill progression plan has been included for your review.

■ **GCL Modification**

In addition to the changes identified above, Malcolm Pirnie would propose that the Geosynthetic Clay Liner (GCL) be eliminated at the primary composite liner at areas of landfill sideslope. Under this modification, the GCL would be carried up the berm slopes approximately five foot vertical and then stopped. The sideslopes would then utilize the structural soil (same material as used for the low permeability soil) as the soil component of the composite liner. Based on the stability analysis, this modification would provide an acceptable interface condition at the primary geomembrane to the structural soil material (this interface would be the same as the low permeability soil vs. 60 mil Textured HDPE).

**MALCOLM  
PIRNIE**

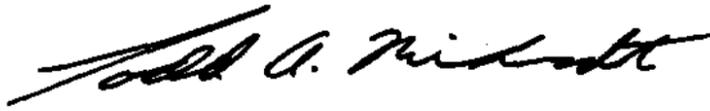
Mr. Thomas Reynolds, P.E.  
NYSDEC

June 18, 2003  
Page 3

I hope you find this consistent with our discussion and find this request acceptable. Should you have any questions or comments, please feel free to call me at (518) 786-7349.

Very truly yours,

MALCOLM PIRNIE, INC.



Todd A. Minehardt, P.E.  
Project Engineer

caw

*Attachment*

F:\PROJECT2042028\DOC\Reyno7.doc

c: F.J. Stockbridge, Town of Colonie

---

**To:** Todd Minehardt, (Albany) **Date:** 05/30/03

**Copy:** Michael Taylor, WHI

**From:** Sal Triano, Kapila Pathirage, WHI

**Re:** Revised Liner Stability Analyses  
Area 6 Expansion, Colonie Landfill - Project No. 2042121

---

**SUMMARY:**

In accordance with your request, we have performed a revised liner stability analyses with the data provided by you on May 13, 2003. The data included interfacial friction test results for materials comprising the liner system as presented in Table 1.

**Table 1: Interfacial Friction Test Results**

<b>INTERFACE</b>	<b>PEAK SHEAR (Deg)</b>
Specification	> 31
Geocomposite vs Filter Sand	37.3
Geocomposite vs Low Perm. Soil	34.7
Low Perm. Soil vs 60 mil Text. HDPE	31.8
Geocomposite vs. Struc. Soil	34.0
60 mil Text HDPE vs. Geocomposite	24.1
60 mil Text HDPE vs. Geocushion	23.8
GCL vs 60 mil Text HDPE	21.3

In addition, based on a sketch of the proposed liner system, Figures 1 and 2 were developed. Figure 1 shows the proposed liner system for the bottom area of the landfill and Figure 2 shows the proposed liner system for the side slopes of the landfill. Basically, the difference between these two systems is the GCL layer, which is included in the system that goes on the bottom area of the landfill.

Figure 1: Proposed Liner System for the Bottom of the Landfill

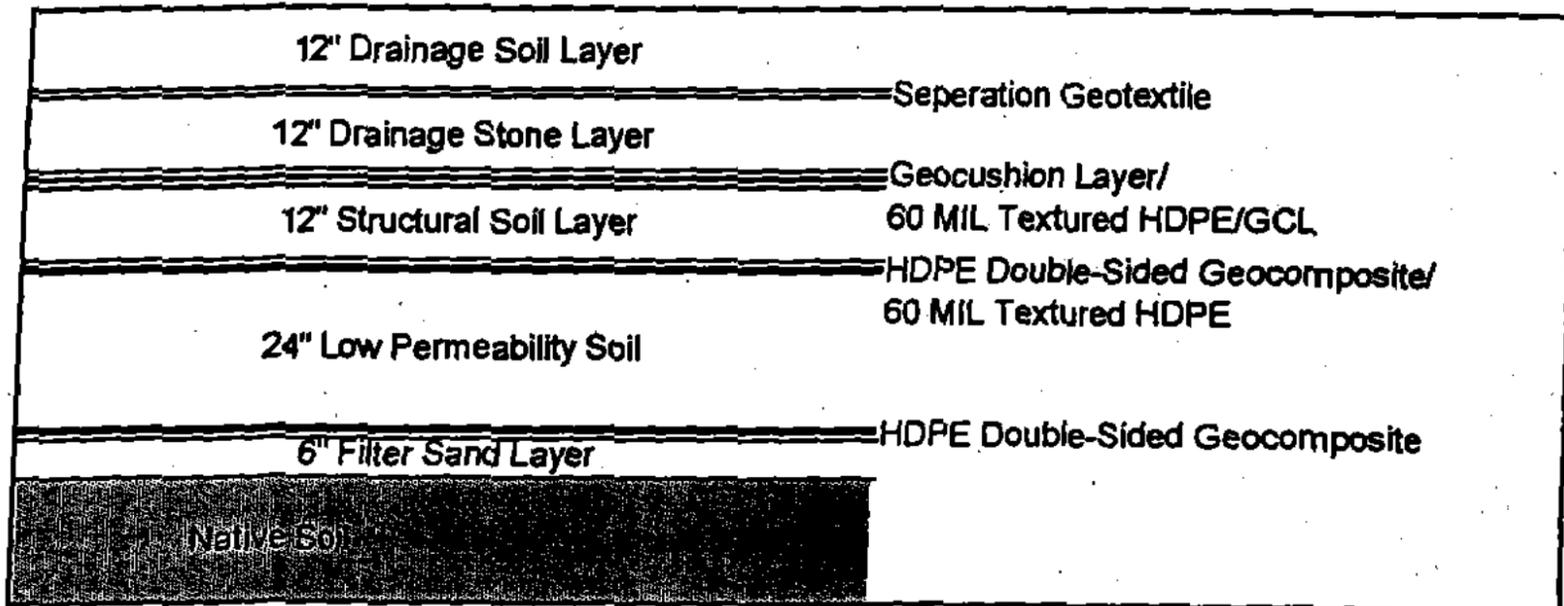
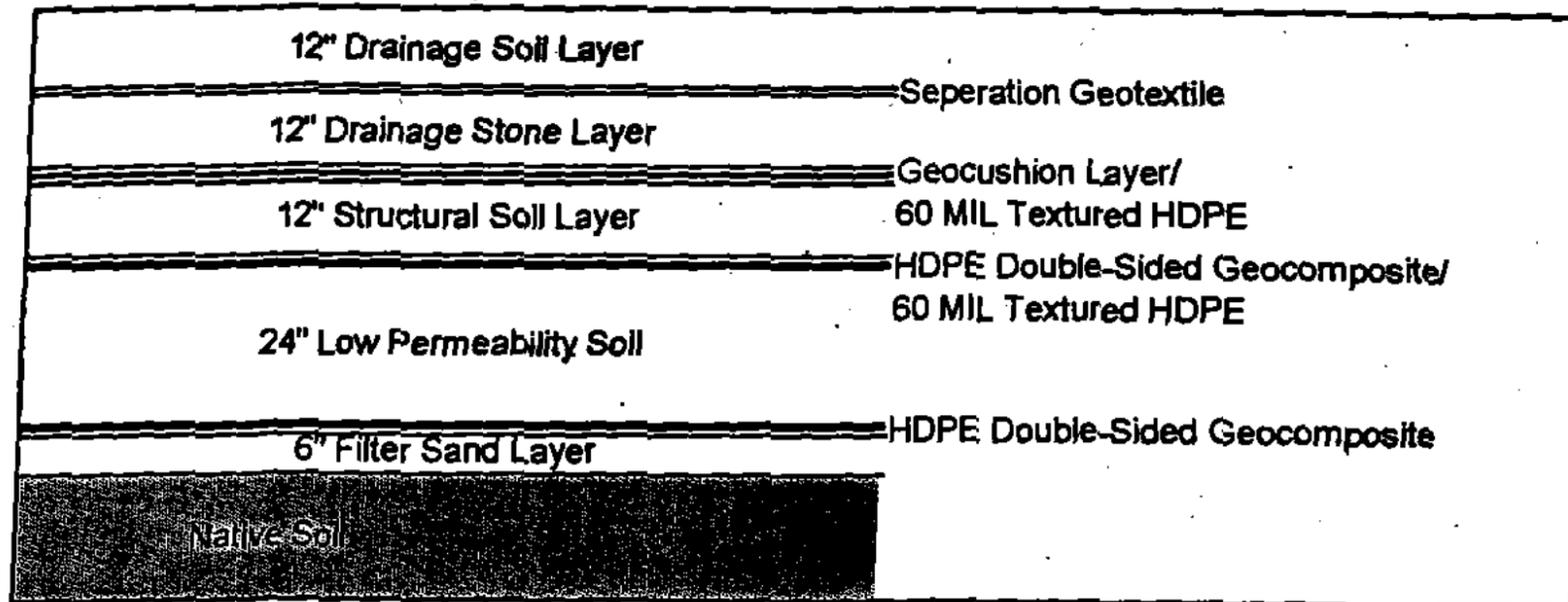


Figure 2: Proposed Liner System for the Side Slopes of the Landfill



Based on the proposed filling sequence, our original design analyses allowed the Town of Colonie to follow an ideal sequential fill plan. The results of the original analyses were incorporated into the Contract Documents, which required interfacial friction angle between layers of the liner system be 31 degrees. During construction however, the Contractor delivered materials to the project site that, after laboratory testing, indicated that some of the material will not meet this specified criteria. The purpose of this supplemental series of analyses was to determine if these materials, with the properties shown in Table 1, could be incorporated into a stable system and therefore used for construction of the proposed liner system.

The slope stability computer program SLOPE/W, Version 4.23, developed by Geo-Slope International, Ltd., Calgary, Canada was used to model the proposed liner system with material properties shown in Table 1. Both static and dynamic stability were evaluated

---

using Morgenstern-Price and Bishop methods of analyses, to determine if the minimum factors of safety of 1.5 and 1.0 can be achieved under static and dynamic conditions, respectively. We analyzed the systems for veneer stability by using block type failure surfaces.

For these analyses, the water level in the liner system was maintained at the bottom of the HDPE Double-Sided Geocomposite layer and a series of fill progression patterns were analyzed to define the sensitivity of the factor of safety against sliding during both static and seismic loading conditions. The east berm of the facility was analyzed under both static and seismic loading conditions, with no fill being placed in the landfill cell area. Figures 1 and 1s show the factors of safety with resulting failure surfaces. Based on these analyses the minimum interfacial friction angle requirements for the system must be as follows:

- 60 mil Text HDPE vs. Geocomposite 24 degrees
- 60 mil Text HDPE vs. Geocushion 24 degrees
- Geocomposite vs Structural Soil 30 degrees
- GCL vs 60 mil Text HDPE (applicable only for the bottom area of the landfill) 22 degrees

The remainder of the liner system must conform with the contract requirements.

Additional analyses included the east berm, basin area, and the west berm of the facility and were analyzed for seismic and static loading conditions with varies thickness of fill on the berm slope (see Figures 2 through 4). However, analyses indicated that the factors of safety do not meet the required minimum values with the interfacial friction angles discussed above. Therefore, these conditions required a different approach including revising the fill progression plans, in order to maintain stability with the low strength materials. As the analyses revealed, the fill pattern will have to be more uniformly loaded with maximum 10-foot high lifts across the entire bottom of the landfill. Under these conditions, the analyses indicated that the factors of safety of 1.5 and 1.0 against sliding can be achieved for static and seismic loading conditions, respectively. (see Figures 5 through 7). Basically, the results of these analyses revealed that the factor of safety of the proposed liner system is a function of water level in the liner system and the fill progression patterns of the within the landfill cell.

In order to achieve the required factors of safety of 1.5 and 1.0 against sliding during static and seismic loadings, respectively, the following conditions must be maintained during construction and operation of the landfill.

1. Geosynthetic materials (i.e., 60 mil Text HDPE vs. Geocomposite and 60 mil Text HDPE vs. Geocushion) to be used in the liner system must maintain a minimum interface friction of 24 degrees and Geocomposite vs Structural Soil must have a minimum interface friction of 30 degrees. The remainder of the liner system must maintain a minimum interface friction angle of 31 degrees.

- 
2. Geosynthetic materials should be checked for defects such as damages to the textured surface, torn sections, and cracks. Any defective materials must be replaced with proper materials.
  3. The water level in the liner system during landfill operations must be maintained at the bottom of the HDPE Double-Sided Geocomposite drainage layer.
  4. Fill progression of the landfill should be maintained in a control manner; i.e., the entire basin of the landfill should be filled in 10-foot (maximum) lifts up to Elev. 270 and above this elevation (i.e., Elev. 270) until Elev. 425, the height difference between two neighboring lifts must be maintained at no more than 10 feet. This sequential fill plan requires that the owner revise the original filling sequence and be prepared to treat the collected stormwater as leachate for the life of the facility.

\*\*\*\*

Please give us a call, if you have any questions.

<b>RECEIVED</b>
JUN 5 2003
MALCOLM PIRNIE ALBANY
ROUTE 7Am XL
JOB# 204201 204214

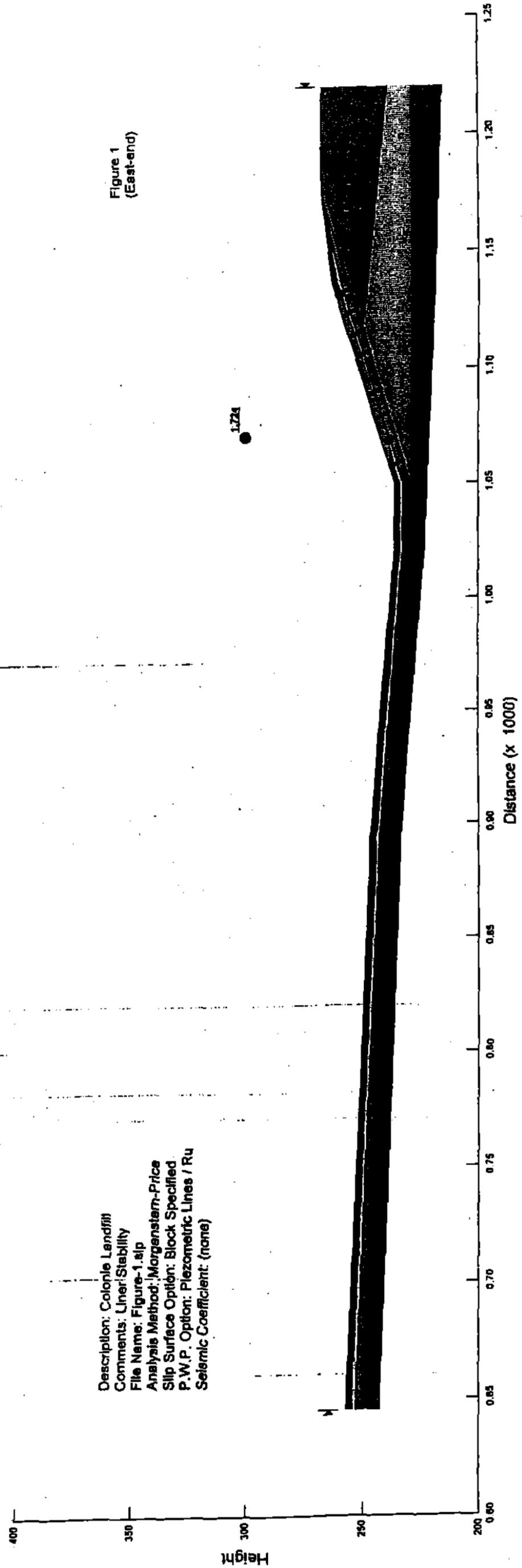
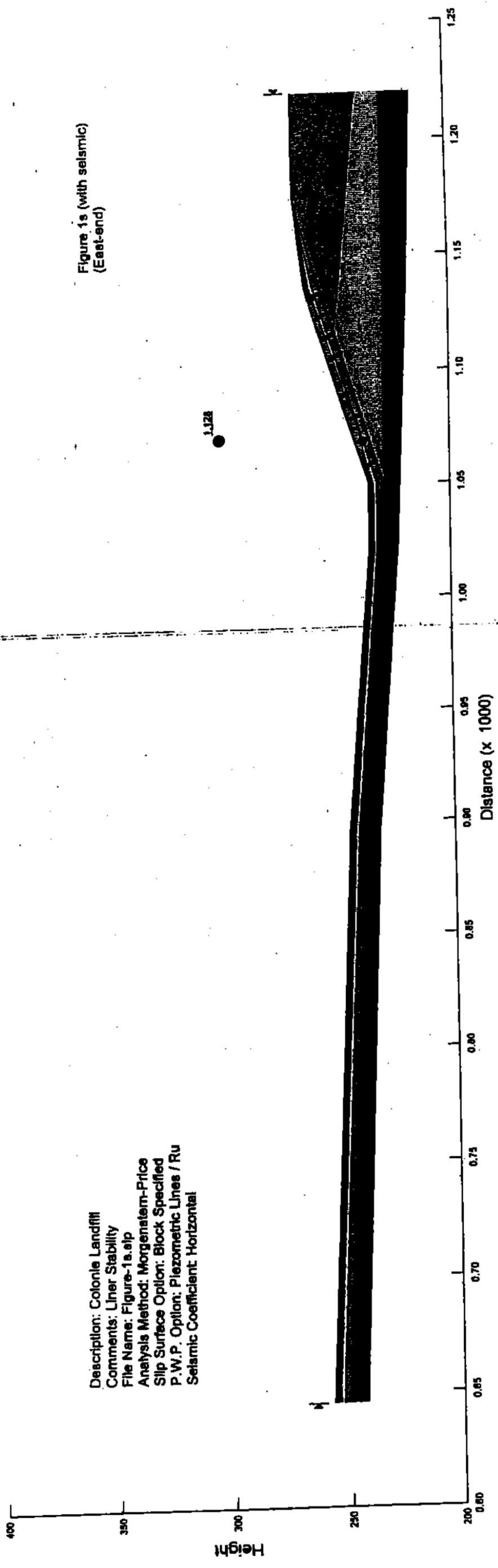


Figure 1  
(East-end)

Description: Colonel Landfill  
 Comments: Limer Stability  
 File Name: Figure-1.slp  
 Analysis Method: Morgenstern-Price  
 Slip Surface Option: Block Specified  
 P.W.P. Option: Piezometric Lines / Ru  
 Seismic Coefficient: (none)

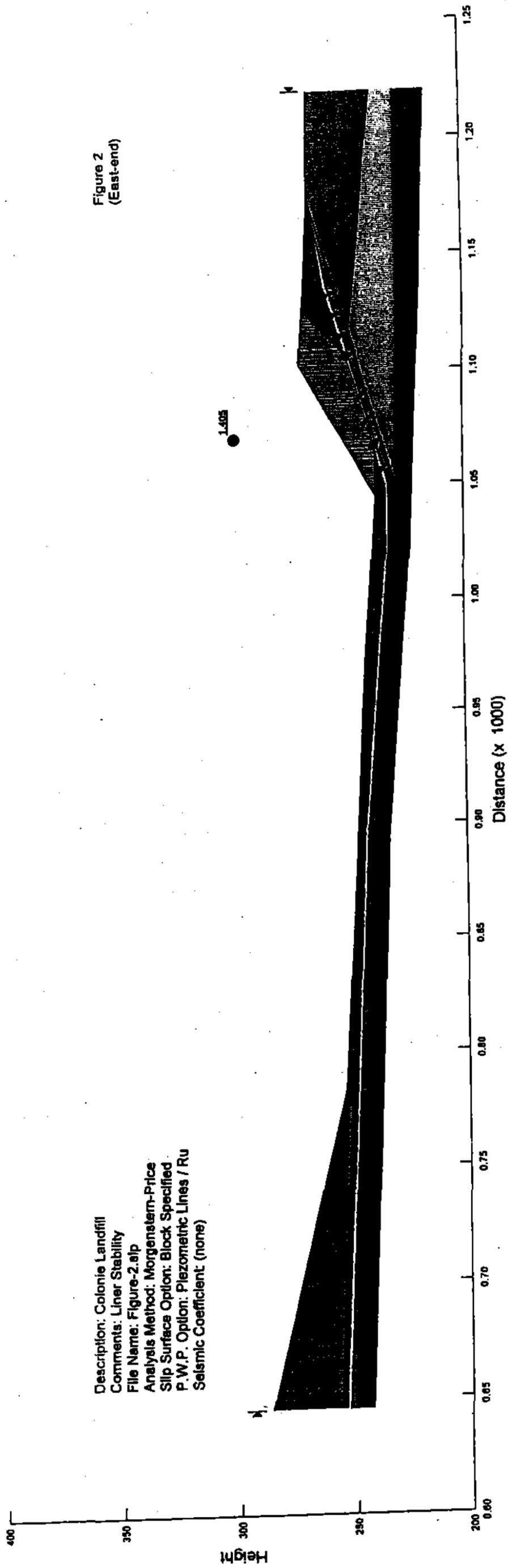
Figure 1s (with seismic)  
(East-end)

Description: Coltonle Landfill  
Comments: Liner Stability  
File Name: Figure-1s.slp  
Analysis Method: Morgenstern-Price  
Slip Surface Option: Block Specified  
P.W.P. Option: Piezometric Lines / Ru  
Seismic Coefficient: Horizontal



Description: Colonia Landfill  
Comments: Liner Stability  
File Name: Figure-2.slp  
Analysis Method: Morgenstern-Price  
Slip Surface Option: Block Specified  
P.W.P. Option: Piezometric Lines / Ru  
Seismic Coefficient: (none)

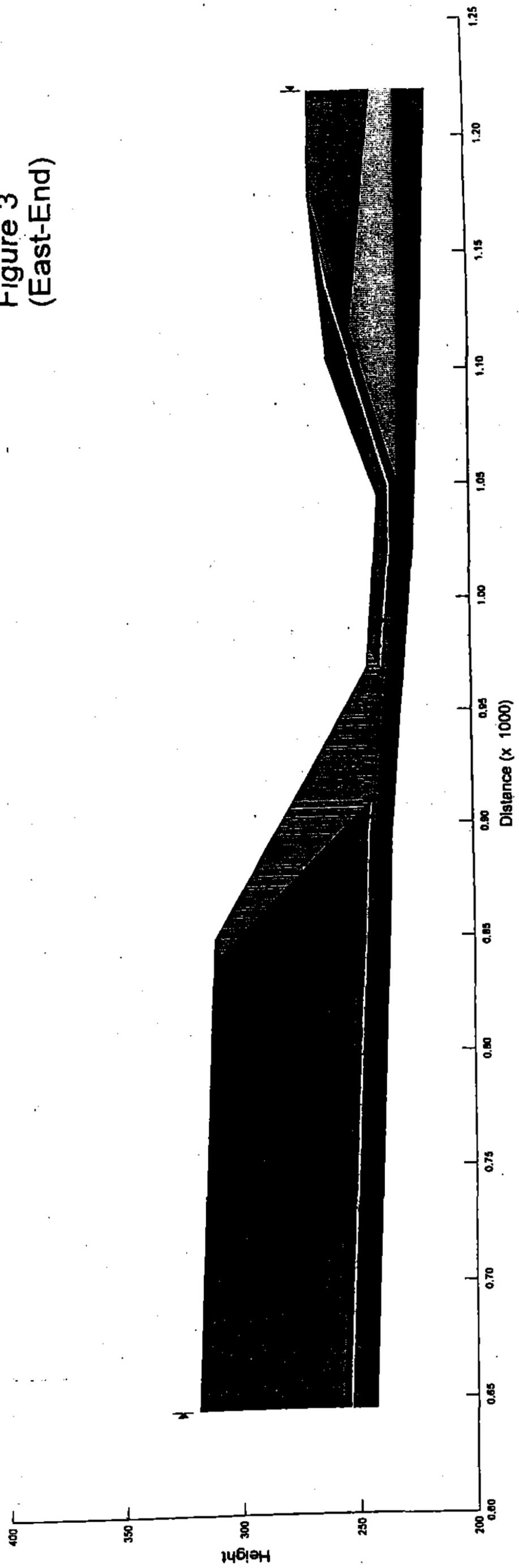
Figure 2  
(East-end)



Description: Colonia Landfill  
Comments: Linear Stability  
File Name: Figure-3.slp  
Analysis Method: Morgenstern-Price  
Slip Surface Option: Block Specified  
P.W.P. Option: Piezometric Lines / Ru  
Seismic Coefficient: (none)

1.400

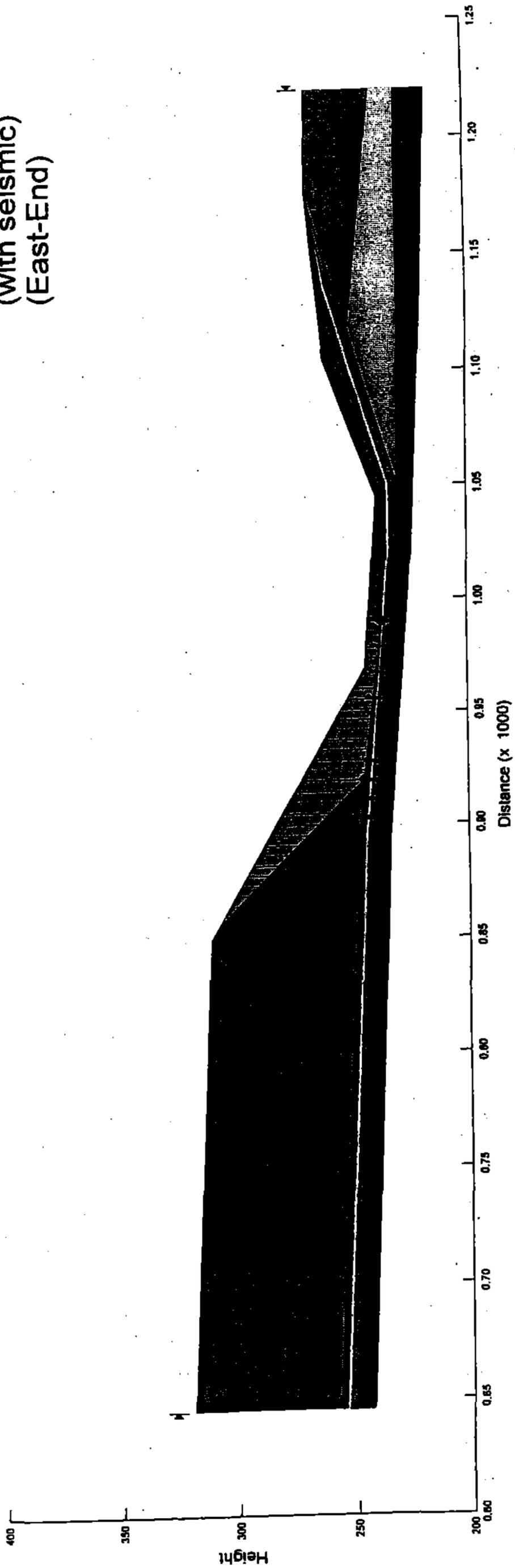
Figure 3  
(East-End)



Description: Colonel Landfill  
Comments: Linear Stability  
File Name: Figure-3s.slp  
Analysis Method: Morgenstern-Price  
Slip Surface Option: Block Specified  
P.W.P. Option: Piezometric Lines / Ru  
Seismic Coefficient: Horizontal

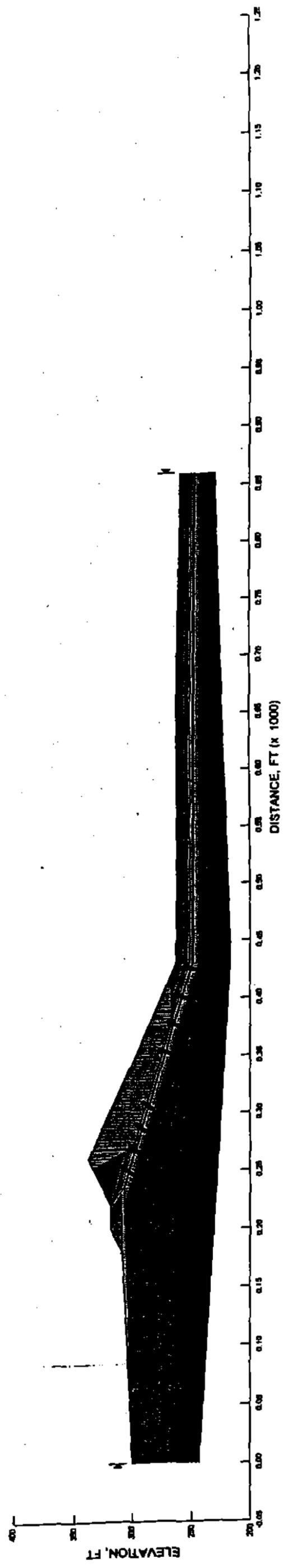
0.537

Figure 3s  
(with seismic)  
(East-End)



Description: COLONIE LANDFILL  
Comments: LINER STABILITY  
File Name: Figure-4.slp  
Analysis Method: Morgenstern-Price  
Slip Surface Option: Block Specified

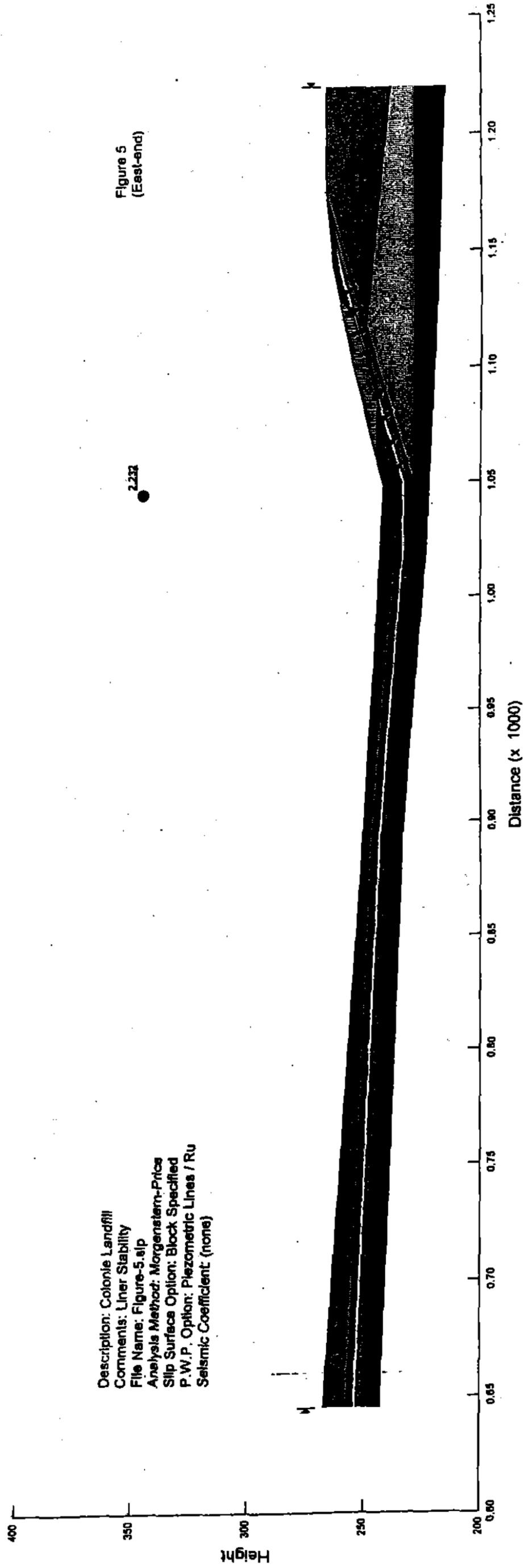
Figure 4  
(West-end)



Description: Colonie Landfill  
Comments: Lner Stability  
File Name: Figure-5.slp  
Analysis Method: Morgenstern-Price  
Slip Surface Option: Block Specified  
P.W.P. Option: Piezometric Lines / Ru  
Seismic Coefficient: (none)

Figure 5  
(East-end)

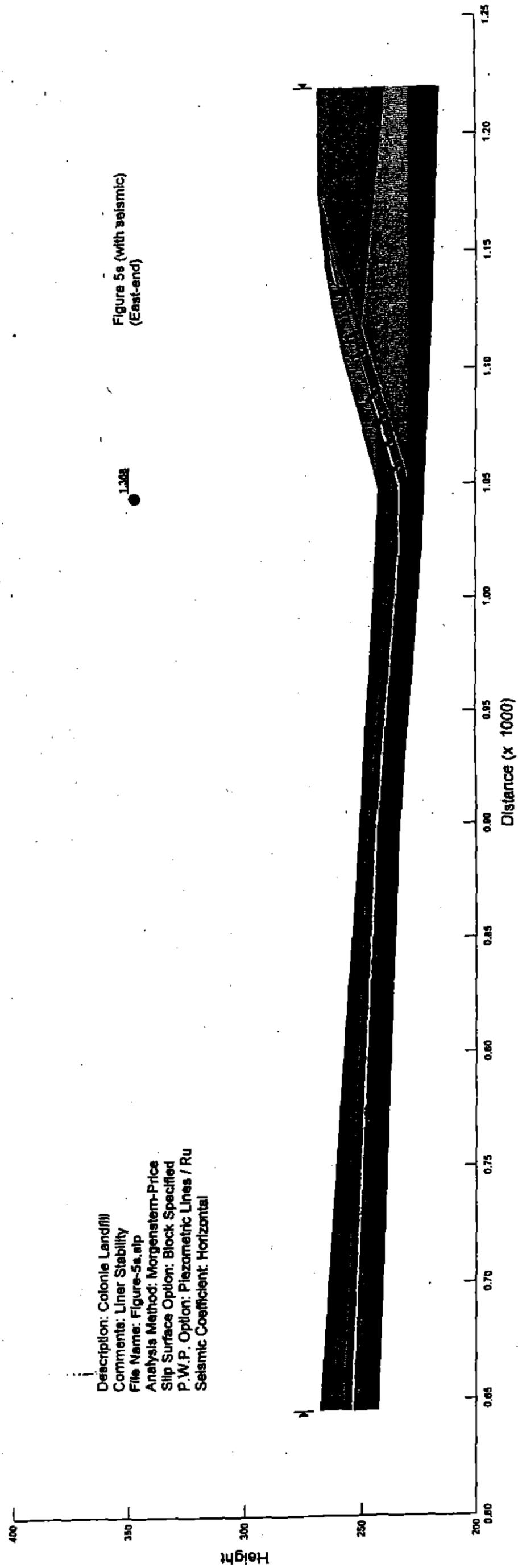
2.232



Description: Colonia Landfill  
Comments: Linear Stability  
File Name: Figure-5a.plp  
Analysis Method: Morgenstern-Price  
Slip Surface Option: Block Specified  
P.W.P. Option: Piezometric Lines / Ru  
Seismic Coefficient: Horizontal

Figure 5a (with seismic)  
(East-end)

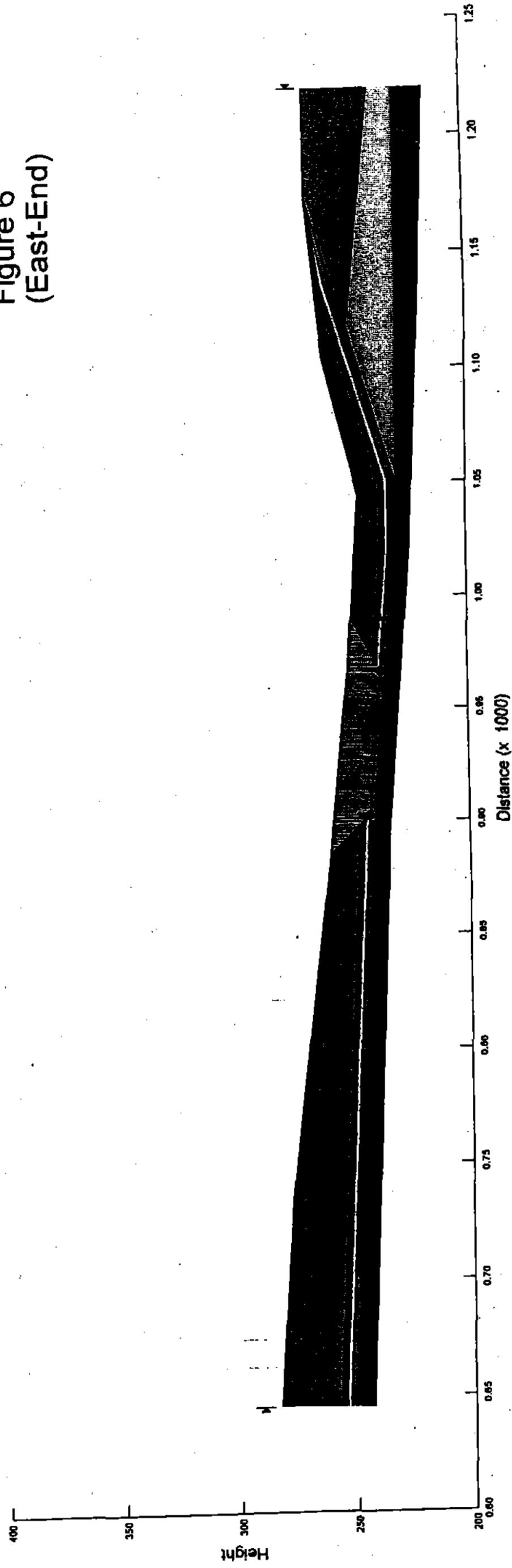
1.303



Description: Colonie Landfill  
Comments: Liner Stability  
File Name: Figure-6.sip  
Analysis Method: Morgenstern-Price  
Slip Surface Option: Block Specified  
P.W.P. Option: Piezometric Lines / Ru  
Seismic Coefficient: (none)

7.008

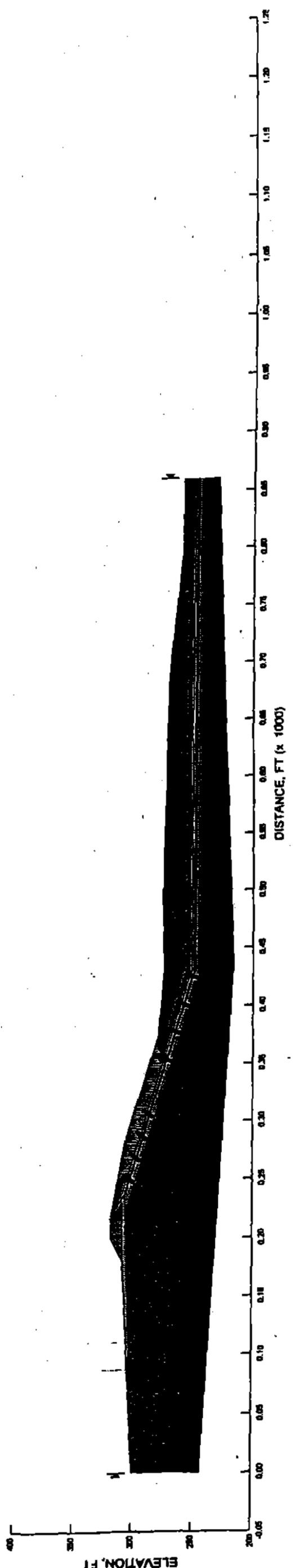
Figure 6  
(East-End)



Description: COLONIE LANDFILL  
Comments: LINER STABILITY  
File Name: Figure-7.slp  
Analysis Method: Morgenstern-Price  
Slip Surface Option: Block Specified

1.018

Figure 7  
(West-end)



**Note: Plan Sheet not scannable  
but is available for preview  
at the Landfill Site.**

Landfill Area #6

New York State Department of Environmental Conservation  
Office of Environmental Quality, Region 4  
1150 North Westcott Road, Schenectady, New York 12306-2014  
Phone: (518) 357-2045 • FAX: (518) 357-2398  
Website: www.dec.state.ny.us



July 23, 2003

Made ✓  
Matt ✓  
Dennis ✓  
Erin M. Crotty  
Commissioner

Note: Fill Progression  
Comments

F. Joseph Stockbridge, P.E., Director  
Department of Environmental Services  
Town of Colonic  
1319 New Loudon Road  
Cohoes, New York 12047

Dear Mr. Stockbridge,

We have completed our review of the June 18, 2003 package submitted by Mr. Todd A. Minehardt, P.E. of Malcom Pirnie, Inc., on behalf of the Town, regarding the Town of Colonic Area 6, Phase I Landfill Expansion, Stability and GCL Modifications. Based upon the information provided in this package, we agree with the recommended change to the liner components on the side slopes of the Area 6 Expansion cell. Specifically, we agree with the omission of the Geosynthetic Clay Liner (GCL) in the primary composite on side slope areas of the new cell. This change in the new cell's liner design remains in compliance with 6 NYCRR Part 360, specifically 360-2.13(f)(2).

Our agreement with this recommended liner design change is contingent upon the new Area 6 Expansion Phase I being operated in accordance with the fill progression plan included in Mr. Minehardt's June 18, 2003 letter. It is understood that while the Area 6 Expansion Phase I cell is two hydraulically distinct sub-cells, the entire Phase I area will be filled as one single unit. This waste placement regime will continue until waste has been placed to the top of elevation of the East berm, as depicted on Sheet 1 of 1, dated June 2003, labeled "Modified Fill Progression."

If there are any questions regarding this matter, please do not hesitate to contact me at 357-2245.

Sincerely,

*Thomas R. Reynolds, P.E.*  
Thomas R. Reynolds, P.E.  
Environmental Engineer  
NYSDEC Region 4

cc: R. Forgea, P.E., Region 4 Solid Waste Engineer  
T. Halcy, Region 4 Division of Environmental Permitting

TAM

**MALCOLM  
PIRNIE**

**MALCOLM PIRNIE, INC.**  
INDEPENDENT ENVIRONMENTAL ENGINEERS, SCIENTISTS & CONSULTANTS

July 29, 2003

Mr. Thomas Reynolds, P.E.  
New York State Department of  
Environmental Conservation  
Region IV  
1150 North Westcott Road  
Schenectady, NY 12306

Re: Town of Colonie – Area 6, Phase I Landfill Expansion  
Stability and GCL Modification

Dear Tom:

We are in receipt of your letter dated July 23, 2003 to the Town of Colonie giving approval of the stability and GCL modification. We wish to clarify several points with regard to this letter.

1. As discussed, the primary cell subdivision has been eliminated since there is no benefit to leachate management at this time given the necessary revision to the waste fill progression. As a result, the primary pump controls have been revised to allow the two primary pumps to operate in a lead/lag mode. Additionally, the primary collection piping was modified to provide dual collection pipes in the primary layer.
2. The revised stability analysis has identified acceptable interface values that vary from the QA/QC plan and technical specifications. The revised interface requirements are the result of the revised stability analysis and subsequent modified waste fill progression plan and will be achieved as described in the stability analysis memo included in our letter dated June 18, 2003.

I hope you find this consistent with our discussion. Should you have any questions or comments, please feel free to call me at (518) 786-7349.

Very truly yours,

MALCOLM PIRNIE, INC.

  
Todd A. Minehardt, P.E.  
Project Engineer

Attachment

F:\PROJECT\2042028\FILE\Reyno8.doc

c: F.J. Stockbridge, Town of Colonie

15 CORNELL ROAD

LATHAM, NY 12110

518-786-7349

fax 518-786-8645

<http://www.pirnie.com>

RECYCLED PAPER

August 22, 2003

Mr. Thomas Reynolds, P.E.  
New York State Department of  
Environmental Conservation  
Region IV  
1150 North Westcott Road  
Schenectady, NY 12306

Re: **Town of Colonie – Area 6, Phase I Landfill Expansion  
Stability and GCL Modifications, Leachate Collection Piping Modifications**

Dear Tom:

Pursuant to our discussion on May 21, 2003, we wish to clarify several issues with regard to the above-referenced project.

The first issue is in response to your approval letter dated July 23, 2003. In that letter it is stated "that while the Area 6 Expansion Phase I cell is two hydraulically distinct subcells, the entire Phase I area will be filled as one single unit". To clarify, we have eliminated the primary subcell division berm and retained the secondary subcell division berm, thereby allowing the secondary system to operate as two distinct and monitorable subcells while the primary system will have a combined system. In addition, two sets of primary leachate pipes will remain and be perforated for the full extent of the collection trench to provide system redundancy. Likewise, the second primary sump will be perforated to again provide for system redundancy and the primary pump control system has been reconfigured to allow the pumps to operate in a lead/lag and alternating start sequences to equalize pump run time and minimize pump damage from potential inoperation.

The second issue is the clarification of the stability analysis with respect to required interface values of the 60 mil textured HDPE geomembrane vs. the Geocushion material and the GCl vs. the 60 mil textured HDPE geomembrane installed at the base cell area. The stability analysis was performed using actual interface values obtained from samples of the materials. In particular, the geomembrane sample obtained represented the roll delivered to the site that exhibited the poorest texturing in order to provide the most conservative result. Using these actual interface values, the necessary factors of safety were achieved as summarized in the attached memo.

**MALCOLM  
PIRNIE**

Mr. Thomas Reynolds, P.E.  
NYSDEC

August 22, 2003  
Page 2

The third issue is the revision of the primary and secondary cleanout risers at the western berm. As discussed, we will revise the installation of the cleanouts to place the cleanouts in the 12-inch drainage stone layer and 12-inch structural soil layer for the primary and secondary cleanouts, respectively. Please refer to the attached contract drawing revision detailing this change.

I hope you find this consistent with our discussion. Should you have any questions or comments, please feel free to call me at (518) 786-7349.

Very truly yours,

MALCOLM PIRNIE, INC.



Todd A. Minehardt, P.E.  
Project Engineer

jcf

Attachments

F:\PROJECT\2042028\DOC\Reynolds8.doc

c: F.J. Stockbridge, Town of Colonie  
J. Cichy, Delaney Construction Corp.

---

**To:** Todd Minehardt, (Albany) **Date:** 08/20/03

**Copy:** Michael Taylor, WHI

**From:** Sal Triano, Kapila Pathirage, WHI

**Re:** **Clarification of the Strength Parameters used in the Revised Liner Stability Analyses**  
**Area 6 Expansion, Colonie Landfill - Project No. 2042121**

---

With reference to the telephone conversation, we had on August 20, 2003, regarding the strength parameters presented in the interoffice memorandum dated May 30, 2003, we would like to clarify the values used in the stability model for interface frictions for the 60 mil Text HDPE/Geocushion and GCL/60 mil Text HDPE.

The values used in the stability model were in accordance with the laboratory test results and those values should be as follows:

- 60 mil Text HDPE vs. Geocushion 23.8 degrees
- GCL vs. 60 mil Text HDPE (applicable only for the bottom area of the landfill) 21.3 degrees

Please note that these interface friction angles represent the minimum values required to achieve the necessary factors of safety. During construction, it is imperative that the geomembrane be inspected and tested to confirm that the material properties remain consistent with the samples tested and used in our analyses.

\*\*\*\*

Please give us a call, if you have any questions.

**Note: Plan Sheet not scanable  
but is available for preview  
at the Landfill Site.**

**APPENDIX C**

**Transfer Station O&M Plan**

**Town of Colonie**

**Waste Transfer Station  
and  
Residential Convenience Station**

**OPERATIONS AND MAINTENANCE  
PLAN**

for the

**6 NYCRR PART 360  
SOLID WASTE MANAGEMENT FACILITY PERMIT**

**Town of Colonie  
Colonie, New York**

PREPARED BY

Town of Colonie  
Department of Public Works  
Division of Environmental Services  
1319 New Loudon Road  
Cohoes, New York 12047

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G	Typical Inspection Forms

## 1.0 INTRODUCTION/BACKGROUND

### 1.1 GENERAL

---

The Town of Colonie will own and operate the Waste Transfer Station (WTS) and Residential Recyclables Convenience Station (RRCS) and be responsible for WTS and RRCS operation and maintenance requirements. The WTS began operation on July 11, 2001 and the RRCS began operation in 1986. The Town was issued a modification of the New York State Department of Environmental Conservation (NYSDEC) Solid Waste Management Facility operating permit for the WTS on 5/2000. The procedures described herein for operation and maintenance are based on New York State Department of Environmental Conservation (NYSDEC) regulations and standard operating procedures. A location map of the Town Solid Waste Management Facility is presented in Appendix A.

### 1.2 PURPOSE

---

The purpose of this Operations and Maintenance Plan (O&M Plan) is to comply with the Special Condition #9 contained within the recently issued (6/3/2002) NYSDEC Solid Waste Management Facility Permit Modification, and to provide a comprehensive description of all routine facility operations as related to the WTS and RRCS operations. Additionally, this Plan will outline all routine maintenance/monitoring required for the reliable and proper operation of the WTS and RRCS.

This plan will establish suggested inspection forms and reporting procedures to be completed by the Town of Colonie, Department of Public Works (DPW), Division of Environmental Services (DES) to document that operation practices and maintenance

requirements are being completed in accordance with this Plan.

## 2.0 Solid Waste Management Facility Operating Unit Description

### WASTE AND RECYCLABLES HANDLING METHODS

#### 2.1 GENERAL

---

The Town of Colonie Landfill Facility is a regional landfill facility that serves the needs of the Town of Colonie and surrounding communities for waste disposal either with municipality owned collection vehicles, directly from residential or commercial customers, directly from institutional customers or, more commonly from the private waste and recyclable materials collection services. The Town of Colonie WTS and RRCS are individual operating units within the Town's solid waste management facilities which have been developed to better service our customers, reduce the consumption of landfill capacity, reduce the cost of operation of the overall facility and provide additional materials for recycling or composting.

- # **Residential Recyclables Convenience Station (RRCS)** – Accepts residential recyclables from residents and small commercial customers.
  
- # **Yard Waste Compost Facility (YWCF)** – Accepts yard waste from Town residents, commercial sources, municipal sources and the Town private collection contractor and Highway Division that routinely collects yard waste from residents within the Town. The Yard Waste Compost facility processes the yard waste by grinding the material and composting it to create a compost product that is made available to the Town residents. Additionally, the Town Highway, Latham Water, Pure Waters Divisions and the Recreation Department utilize this compost material within the Town for lawn maintenance activities on Town roads, property, etc.
  
- # **Material Recycling Facility (MRF)**– The material recycling facility accepts recyclables from Town, residential and private waste collection vehicles. The recyclable materials are source segregated, sorted, and marketed to material recycling or manufacturing facilities.

- # **Waste Transfer Station (WTS)** – A waste transfer station facility has recently been constructed to allow the inspection, sorting and separation of potentially recyclable materials. The WTS will transfer the recyclable and waste materials received in the WTS to the Town of Colonie landfill, MRF, YWCF or to other solid waste management, recycling or composting facilities if the economics of transporting the waste to another facility is beneficial. This will help to reduce the Town's reliance upon the Town landfill for disposal. This facility will accept, sort and process residential and light commercial solid waste materials. The intent of processing the residential and light commercial material is to separate reusable, recyclable or compostable materials that can be marketed to vendors or materials that can be better (safer or more environmentally soundly) managed at other solid waste management facilities and thereby bypass the Town landfill and preserve landfill space. This facility would also be used as a merchant transfer station to transfer the solid wastes to an outside solid waste management facility for disposal if the Town landfill was unavailable to accept waste materials in an emergency or extraordinary situation.
  
- # **Landfill Gas to Energy System (LFGTE)** – A landfill gas to energy system is currently in the permitting and design stage. The system will take landfill gas collected by the existing active gas collection system, compress and clean it, and use it to power internal combustion engines that in turn will drive generators. The generators will be connected to the existing utility grid at the hydroelectric generation plant located southeast of the landfill facility. A central flare unit will be utilized until the gas to energy project is placed on-line, and will be maintained and utilized in the event that the generator system is taken off-line for maintenance, etc. The flare and gas to energy system will burn the landfill gas created as part of the decomposition process of the waste. Destruction of this gas is beneficial to the control of greenhouse gases and other air contaminants present in landfill gas emissions.
  
- # **Leachate Lagoons and Leachate Forcemain (LLLFM)** – The facility contains two leachate storage lagoons and a leachate forcemain system that is used to store leachate and convey it to the sanitary sewer system for treatment at the Albany County Sewer District.
  
- # **Support Facilities** – The landfill facility also contains a facility office, a scale house and two vehicle scales for the weighing of inbound and outbound waste disposal vehicles in order to assess disposal fees, and a equipment maintenance building utilized for the repair and preventative maintenance of the landfill equipment and support vehicles.

## 2.2 DESCRIPTION OF WASTE FLOW THROUGH WTS AND RRCS

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Waste disposal vehicles enter the Town Solid Waste facility through two adjacent entrances. Commercial vehicles enter the facility through the Weigh Scales entrance and Residential vehicles having construction demolition debris or a large quantity of wastes also enter the facility through the Weigh Scales entrance. These vehicles are weighed to determine the nature of the material, the loaded weight of the vehicle and are then directed by the scalehouse operator to the waste transfer station, materials recycling facility, yard waste composting facility or the active landfill cell based on the waste material in the vehicle. Waste directed to the WTS will be dumped at the transfer station tipping floor as directed by the DES personnel. Once the vehicle is emptied of wastes the vehicle is directed back to the scalehouse to be weighted empty. The resulting tare weight and the type of waste dumped is used to determine the disposal fee.

Residential type vehicles having household recyclables, refuse or light demolition debris wastes (less than 500 lbs.) enter the facility through the TollBooth entrance. After determining the nature of the wastes and estimating the approximate quantity of wastes, these vehicles are directed to the Residential Recyclables Convenience Station (RRCS). Disposal fees for the WTS are based on number of bags, approximate size of load, and type of waste material.

At the RRCS customers place their recyclable materials in designated containers. After completing the unloading of the recyclable materials, customers proceed to the WTS to unload their solid waste materials.

Wastes entering the WTS is inspected for unacceptable or recyclable material and the remaining solid waste is loaded by Division staff/equipment in to roll-off containers and the containers are transported to the landfill cell with Town vehicles. This process avoids the introduction of passenger vehicles into the landfill cell that would otherwise impede

operations in the landfill cell, minimizes the size of the active working waste area, and allows the Division the ability to recover potentially recyclable materials.

The compostable materials separated from the Solid Wastes in the WTS are/will be transported to a composting facility. Some recyclable and/or compostable materials are collected year round and some are collected seasonally. The recyclable and compostable materials are generated/separated from the solid wastes received from the various residential, commercial, institutional, municipal, industrial customers using the WTS.

The recyclable materials collected in the RRCS are either transported to the Materials Recycling Facility or to an off site recycling facility or to an end product manufacturer. Some recyclable and/or compostable materials are collected year round and some are collected seasonally. The recyclable materials generated/separated/collected at the RRCS are received from primarily the residential customers but small amounts from small commercial, institutional, municipal, industrial customers also use the RRCS.

*In 2001 the WTS serviced an estimated average of 477 vehicles per operating day and 834 vehicles per Saturday of operation. An annual average of 283 vehicles are received through the Residential TollBooth and an annual average of 194 vehicles are received through the Weigh Scale. The vehicles accessing the WTS are split into two categories. Cars and light trucks with refuse/garbage access the WTS from the three overhead doors on the south side of the WTS. Vehicles with trailers, light trucks and all other vehicles with larger amounts of solid waste or vehicles that cannot automatically dump their wastes access the WTS from the two open bays on the North side of the WTS. A table of the number of vehicles entering the facility through the Toll Booth and Scale per day of the week is presented in Appendix B.*

The RRCS is primarily used only by vehicles that access the facility through the Residential TollBooth.

Based upon the total amount of waste and recyclable materials managed in 2001, the quantity of wastes, and therefore, the number of vehicles accessing the Town Solid Waste Management Facilities (SWMF) was approximately 78.7% of the peak quantity of wastes accessing the Town's SWMF that occurred in 1994.

### 3.0 PERSONNEL REQUIREMENTS

#### 3.1 GENERAL

The WTS and RRCS will be operated with the following personnel as they relate specifically to the transfer station and convenience drop off station operation. At the time of this report the following personnel serve critical positions as related to the operations of the WTS and RRCS. The key landfill personnel have received the NYSDEC operator-training course for landfill operations. The personnel currently serving these positions are as follows:

Name	Title	Completed NYSDEC Operator Training	MOLO Certified
F. Joseph Stockbridge	Director of Environmental Services	Yes	Yes
Matt McGarry	Environmental Engineer	Yes	No
Dennis Woodsinger	Environmental Technician	Yes	Yes
Mark Behuniak	Landfill Supervisor	Yes	No
	Working Foremen (3)	Yes	No
	Equipment Operators (7)	Yes	No
	Landfill Laborers (7)	No	No

#### 3.2 DESCRIPTION OF PERSONNEL RESPONSIBILITIES

This section will describe the responsibilities of the various personnel operating the WTS and RRCS and generally the Solid Waste Management Facility Operation:

- # **Director of Environmental Services** – The Director of Environmental Services is ultimately responsible for the facility maintaining compliance with the Part 360 operating permit and regulations. The Director of Environmental Services serves as the administrative head of the Division and is responsible for overseeing all personnel and ensuring site compliance with the operating permit.
- # **Environmental Engineer** - The Environmental Engineer is responsible for overseeing the completion of all inspections and maintaining all reporting requirements as required by this plan and the operating permit. Additionally, the Environmental Engineer will oversee the activities of the Environmental Technician. The Environmental Engineer will coordinate the completion of scheduled compliance activities as well as any other monitoring requirements that may be required during the course of facility operation.
- # **Environmental Technician** – The Environmental Technician will perform or oversee all inspections related to the operation and maintenance plan. The Environmental Technician will report the results of all inspections to the Environmental Engineer. Additionally, the Environmental Technician will oversee and assist in any compliance related activities and document the activities performed.
- # **Environmental Services Operations Supervisor** – The Operations Supervisor will oversee all the operations within the facility on a day-to-day basis. The Operations Supervisor will coordinate with the Working Foreman to determine method of waste and recyclable materials handling and coordinate resources with the other operating units especially during inclement weather and extraordinary operating condition in regard to the flow, management and handling of waste and recyclable materials within the facility.
- # **Working Foreman** – The Working Foreman will direct the activities of the equipment operators and laborers working the WTS and RRCS. The Working Foreman will manage the daily operating activities and be responsible for the inspection and subsequent rejection of any unacceptable waste dumped at the WTS or RRCS. Additionally, the Working Foreman will direct the WTS and RRCS daily closure and clean up of waste materials at the conclusion of daily operating activities.
- # **Equipment Operators** – The Equipment Operators will operate the equipment under the direction of the Working Foreman to manage the placement, movement and separation of waste or recyclable materials within the WTS and RRCS.

- # **Laborers** – The Laborers will assist the Equipment operators in directing vehicles to the waste acceptance area of the WTS and inspection of loads for unacceptable materials. Laborers will undertake with the Equipment Operators the clean up of solid waste at the end of the day, the laborers will closely inspect the loading of waste to assure the safe loading and unloading of wastes and to remove any unacceptable materials from the waste lift that could potentially cause damage or can be managed through the recycling or composting.

The number of labor staff used and the term of staff assignment at the WTS and RRCS vary with the day of the week, the time of year and the volume of customers present. For example, the WTS is typically staffed by an equipment operator and one to two labor staff on Monday through Friday and two equipment operators and two to three labor staff on Saturday. The RRCS is typically intermittently staffed on Monday through Friday and is continuously staffed by a labor staff on Saturday. The number of staff assigned to these operating units is typically higher in the Spring, Summer and Fall than in the Winter due to the lower customer activity in the Winter months. We also typically increase the foreman's supervisory coverage on Saturdays in April, May, September and October due to increased customer activity at these times.

## 4.0 MACHINERY AND EQUIPMENT

### 4.1 GENERAL

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The Town of Colonie Solid Waste Management Facility has at their disposal a wide variety of heavy equipment that may be utilized for solid waste management operations. All on-site equipment is serviced by local equipment representatives and dealers for that particular manufacturer of equipment. The Town is currently contracting for maintenance to perform the Division equipment maintenance efforts.

### 4.2 EQUIPMENT

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At the time of this report, the Town has the following equipment available to the operations at the WTS and RRCS.

#### **4.2.1 Loaders - Track**

Currently, the Town has two Caterpillar 973 Trackloaders. The primary use of the trackloaders is spreading waste in lifts for the compaction by the landfill compactors, spreading of soil type daily covers, and pulling the alternative daily cover applicator. If necessary, these units can be available for volume reduction and loading of wastes at the WTS. For operator safety and comfort, the trackloaders are equipped with the ROPS cab, sound suppression cab and pressurized air system.

#### **4.2.2 Loaders - Rubber Tire**

Currently the Town has three rubber tire payloaders assigned at the Division. These units are used in the WTS, RRCS, MRF, Yard Waste Composting and in various other activities and special projects at the Town Solid Waste Management Facility. The units are John Deere 544 G, a John Deere 544 E and a Hyundai 750. These are 2-3.0 cubic yard bucket machines. These units are used to push solid wastes to the rubber tire excavator in the WTS, to pick up and load recyclables in to roll off containers at the WTS and RRCS. The rubber tire loaders are also used to clear the floor of all solid wastes at the end of the working day within the WTS.

#### **4.2.3 Dozer**

Currently, the Town has three dozers that can be utilized as back-up to the trackloaders. The Town currently has a Caterpillar Model D7R, Caterpillar model D5 and Caterpillar model D4 dozer at the facility. Each dozer is equipped with a ROPS cap, sound suppression cab and pressurized air system for operator safety and comfort.

#### **4.2.4 Excavator**

Currently, the Town has two hydraulic excavators that can be utilized in the WTS and RRCS operations as needed. The Town has a Kobelco track excavator and a Liebherr rubber tire excavator that are part of the facility equipment inventory. These excavators are utilized almost everywhere within the solid waste management as needed. The Liebherr

rubber tire excavator is equipped with a rotating grapple attachment which allows the unit to crush, break apart and load wastes or bulk metals into roll off containers at the WTS or RRCS and to separate recyclable materials from solid wastes in the WTS. The Liebherr has foam filled rubber tires. Both excavators are equipped with a sound suppression cab and pressurized air system for operator safety and comfort.

#### **4.2.6 Truck Scales**

Currently, the Town operates two 100-ton, 60-foot vehicle scales and computerized data collection and management system for recording the weight of waste received by the landfill facility and for all wastes or recyclables shipped from the facility. The computer software that operates the weigh scales captures the following information:

- location where the solid waste material was generated*
- type of solid waste material*
- type of customer presenting waste at scale*
- location where the solid waste material was sent (both in or out-side of facility)*
- weight/quantity of solid waste presented at scale*
- type of vehicle transporting solid wastes*
- date and time of transaction*

A copy of a typical weigh ticket is presented in Appendix B.

#### **4.2.7 Miscellaneous Landfill Facility Equipment**

The Town has a multitude of other equipment available at the landfill facility that can be utilized in landfill operations if necessary. The following list summarizes other equipment and the potential application in landfill operations:

- # **Water Truck** – For on-site dust control.
  
- # **Two Roll-off Trucks and Roll-off Containers** – Transportation of wastes and recyclable streams from Residential Recyclables Convenience Station and Waste Transfer Station to the Landfill, Composting or Recycling Facilities.

- # **Dump Trucks** – Moving waste, recyclable materials on-site or off-site.
- # **Street Sweeper** – Control of dust, dirt and trash on facility access roads and within tipping area of WTS.
- # **Light Tower** – For additional light during contingency operations.
- # **Portable Generators** – Back-up power for leachate collection and conveyance systems.
- # **Off-Road Utility Vehicles** – For gas system maintenance and transport of personnel around the site.
- # **MADVAC Vacuum Litter Collector** – For collection of litter from blowing debris fencing and confined areas around the WTS and RRCS.

#### **4.2.8 2-Way Radios**

The Town equips all supervisory, equipment operator and most laborers with 2-way radios. The radios allow for communications with the scalehouse, supervisor personnel and operator to operator. Communications from the equipment operators to the scalehouse and/or supervisor personnel can be used to contact outside agencies such as any emergency services (i.e., fire department, police, EMS, etc.).

#### **4.2.9 Combustible Gas Indicator**

The Town maintains a combustible gas indicator on-site to perform routine monitoring of gases generated from the landfill. Additionally, the combustible gas indicator will be used during confined space entry to monitor the air quality.

#### **4.2.10 Other Town Equipment**

In the event of breakdown of Division equipment beyond the normal expectation and redundancy of the equipment on-site, the Town has access to additional equipment through the Town Department of Public Works that could be utilized if necessary.

## 5.0 WTS AND RRCS OPERATIONAL ACCESS

### 5.1 ACCESS TO SITE

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The Town of Colonie Solid Waste Management Facility is accessed from existing entrance ramps off of Route 9. Residential vehicles are directed to the Residential Recyclable Convenience Station by signs directing them to the attendant tollbooth where residency is checked. Customers are directed to the residential recyclables convenience center where attendants assist with the unloading of recyclable materials from customer's vehicles and inspect for unauthorized waste materials.

These vehicles then access the WTS on the south side of the building. The customers discharge their wastes through one of three large overhead doors on to the WTS tipping floor area.

Large Residential and Commercial customers are directed to the inbound scale to be weighed prior to entering the facility. Upon completion of waste unloading, each customer will receive a duplicate copy of the load slip with the company name, weight of load, cost, date, time printed on the slip. The load slip shall be signed by the driver to serve as the record of transaction and to incorporate the affidavit by the driver that they are not knowingly disposing of any unacceptable waste at the facility. Upon notifying the scale operator of the contents of the load, the driver will be directed to the Waste Transfer Station or to the landfill working face. Signage and personnel will further direct the driver from the scale to either location.

At the north access location to the Waste Transfer Station, an attendant will direct the vehicle to a location on the tipping floor to unload. Upon unloading the driver will proceed to the out-bound scale to be weighed and receive the transaction receipt. All vehicles containing wastes that require manual unloading are directed to the transfer station. Upon unloading, the vehicles transporting the wastes will exit the WTS and proceed to the outbound scale where they will be weighed and receive the transaction receipt. If these

customers have customer accounts with the Town, the customers vehicles may be issued vehicle identification numbers, which will allow the use of historic vehicle tare weights to complete their transactions at the time of first entry at the weigh scale facility. The historic vehicle tare weights are recorded in the computerized weigh scale system and are updated on a quarterly to annual basis depending on the frequency of use of the Town's Solid Waste Management Facility.

## 5.2 HOURS OF OPERATION

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The facility will continue to operate at the current hours of operation. The hours of operation of the Division Office are from 8:00 A.M. to 4:00 P.M., Monday through Friday. The hours of operation of the Waste Transfer Station and Residential Recyclables Convenience Station are from 7:00 A.M. to 3:00 P.M., Monday through Friday, and on Saturday from 7:00 A.M. to 2:00 P.M. Alternative working hours may be required due to special circumstances or conditions. Sweeping and snowplow operations are conducted beyond normal working hours to minimize disturbance to traffic. Special projects may extend beyond normal working hours to take advantage of daylight.

## 5.3 SIGNAGE AND TRAFFIC CONTROLS

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The Town will maintain signs on the site to direct vehicles to the various facilities/operations located on the site. Division personnel are equipped with 2-way radios, if a vehicle becomes "lost" on-site, it can be redirected after inquiry with the scale operator as to its intended destination on-site. There are 25 radios plus several spares for maintenance and special projects. Sufficient traffic signs and controls such as stop signs, highway barriers, etc. will be utilized on-site to route traffic, and prevent the potential for vehicles to exit roadways at incorrect locations.

## 5.4 UNAUTHORIZED WASTE

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In order to successfully operate the WTS and RRCS and to maximize operating life of the Town landfill, the Operations Supervisor will control the quantity and type of inbound solid waste. The Town of Colonie will be continuing its "Waste Inspection Program" in an effort to keep control of the waste. If violators are found they will be subject to Facility use restrictions.

The Town currently has a list of materials (Table 5-1) that will not be accepted for management at either the Town Landfill or at the Waste Transfer Station. Primary enforcement of the list must be made by the customers (residential, institutional and commercial) when they load or pick up their loads. Any customer who does not abide by this list would be subject to the following:

- # **Verbal Warning** - Note to Permit/License file.
- # **Warning Letter** - Used to alert Permittee/Licensee of a violation.
- # **First Violation** - Mandatory minimum fine of \$500 and a discretionary suspension of Permit/License to use facility.
- # **Second Violation** - Mandatory minimum 30 day suspension of Permit/License to use facility and a discretionary minimum \$1,000 fine.
- # **Third Violation** - Mandatory minimum one year suspension of Permit/License to use facility and a discretionary maximum \$2,500 fine.

Operations staff will periodically quarter incoming loads to check for gross violations of the list. In addition, a minimum of two inspections will be conducted weekly on randomly chosen vehicles to check loads for the presence of any unacceptable wastes. The results of the waste load inspections will be recorded in the weekly monitoring report. Any rejected wastes or waste loads will be removed from the site by the close of business.

## 6.0 WASTE AMOUNTS AND CHARACTERIZATION

### 6.1 WASTE AMOUNTS

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The Town of Colonie Landfill Facility is currently permitted to accept an average of 550 tons of waste per operating day; no two consecutive months can exceed the average by 20 percent (660 tons/operating day) without a review of the Landfill Operation and Maintenance Plan.

The Town's 2000 Waste Transfer Station application for solid waste management permit identified an average design capacity of 225 tons per day with a peak operating capacity of 500 tons per day under the extraordinary or emergency conditions when the Town Landfill was not able or available to accept wastes.

The Residential Recycling Convenience Station does not have a permit limitation on the quantity of recyclable materials accepted.

The amount of waste material brought or vehicle trips in to or out of the Town's Solid Waste Management Facility has not increased or decreased with the operation of the WTS and RRCS but it allows the more effective management of these wastes within the facility prior to transport to recycling, composting or disposal.

Some of the solid waste materials directed to the waste transfer station is separated, recovered for recycling and thereby diverted to the Materials Recycling Facility or Yard Waste Composting Facility and thereby do not require disposal within the Town landfill area. Other solid waste materials directed to the waste transfer station are separated, recovered for recycling, then taken to the materials recycling facility and then transported off-site to other recycling or composting facilities.

A copy of a table which identifies the flow of wastes to and the flow of wastes and recyclable from the Waste Transfer Station from July 10, 2001 to December 31, 2001 is presented in Appendix D.

All waste materials that are transported from the WTS to the Town Landfill are recorded by the weigh scale and are included in the landfill's tonnage limit as identified in the Town's Solid Waste Management Facility Permit. All recyclable or compostable materials that are directed to the Materials Recycling Facility or a composting facility are not included in the landfill's tonnage limit.

## 6.2 WASTE CHARACTERISTICS

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The solid waste stream accepted at the Town of Colonie Solid Waste Management Facility generally consists of residential waste, commercial wastes, industrial/institutional wastes, municipal wastes, not-for-profit wastes, and other source wastes consisting of wastewater treatment plant sludge, water treatment plant sludge, incinerator ash, construction and demolition (C&D) debris, and petroleum contaminated soils.

Household Wastes, Commercial Wastes, Industrial Wastes and Construction and Demolition debris will be dumped at the waste transfer station tipping floor to allow the separation and processing of the waste stream to enable the recover of materials to compost or recycle for beneficial use.

The Town will periodically evaluate the characteristics of the solid waste and recyclable materials received within the Town's Solid Waste Management Facilities to determine if additional reduction, reuse or recycling opportunities are feasible to be implemented. If the Town determines that substantive changes in the Solid Waste Management Facility Operations are required to facilitate the implementation of these waste reduction, reuse or recycling effort, we will notify the Department of the changes.

Currently, the Town's evaluation has identified that the implementing the separation of the following materials may be feasible within the near future:

Residential Organic Wastes

Asphalt Roofing Materials

Carpeting

Clean Wood

Concrete/Brick/Block

The implementation of the separation of these materials is pending the development of stable, long term markets for the resulting materials.

### **6.3 WASTE AND RECYCLABLES PLACEMENT**

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A copy of the site plan showing the location for the acceptance of wastes collected and recyclable materials separated within the WTS is presented in Appendix E.

A copy of the site plan showing the location for the collection of the various recycling materials at the Residential Recyclables Convenience Station is presented in Appendix F.

## **7.0 SOLID WASTE RECEIVING PROCESS**

### **7.1 WASTE AND RECYCLBLE MATERIALS RECORDKEEPING**

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Waste deposited in the WTS is accounted for at the scalehouse during transport from the WTS to the recycling, composting or disposal site. At the time the vehicle is weighed, the scalehouse or tollbooth operator asks for a description of the waste material and it is recorded as part of the transaction.

The scalehouse operator or toll booth operator uses the waste description to enter in a waste code that is used to track the various waste that is accepted at the facility.

## 7.2 **EMERGENCY OR EXTRAORDINARY WASTE HANDLING**

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The Division Operations Staff have been trained in the detection of unacceptable wastes or the indicators of unacceptable wastes in the Solid Wastes presented for disposal/management. This waste screening procedure is applicable in all of the various Town's Solid Waste Management Facility operating units.

If the unacceptable solid waste is a material that can be managed through another one of the Division's solid waste management units, the staff will segregate the unacceptable waste for transport to the appropriate solid waste management unit. An example would be a propane tank in a waste load discharged at the WTS. The staff would separate the propane tank from the wastes and would transfer the propane tank to the propane tank storage area adjacent to the Materials Recycling Facility.

If the staff observes other unacceptable wastes, such as bulk liquids, medical wastes, radioactive wastes, etc., the staff has been instructed that they are not to handle these materials. The staff's primary responsibility if they believe that they may have unacceptable wastes of this nature present is to exit the area, proceed to an up wind position, secure and restrict the access to the area and immediately contact a site supervisor. If they are in equipment, they are to remain in the equipment and exit the area in the equipment. The equipment will provide a level of shielding and therefore protection for the employee from containing the unacceptable wastes. The Site Supervisor will then make the determination as to the appropriate method of handling the unacceptable wastes.

The required equipment for the WTS and RRCS operations is as follows:

- Rubber Tire Excavator with Grapple
- Rubber Tire Payloader
- Roll Off Truck
- Roll Off Containers – Enclosed and Open Top
- Forklift

The Town maintains a significant amount of additional equipment units as backup to the primary operating equipment required for the WTS and RRCS. If the primary units were to breakdown, the Town maintains additional, rubber tire payloaders, roll off truck, roll off containers and forklift. If the Rubber Tire Excavator with Grapple was to become unavailable, the WTS facility can be operated using a payloader but would not be able to obtain as high a waste density in the roll off containers. If the WTS operation was required to be closed for any reason, the RRCS can be re-opened to accept solid waste from the residential customers and the Town Landfill can accept solid waste directly from our residential and light commercial customers.

The Operations employees of the Division have been instructed to immediately advise the Site Supervisor or Division Scale Office or Division Administration Office of any fire that occurs in any of the Solid Waste Management Facility Operating Units. The Supervisory Staff will then report the fire to the Town Communication Center by Town Radio System or telephone (911). The Communication Center will then dispatch the local Fire Company. The Local Fire Company, located 2 miles south of the Division Solid Waste Management site at Boght Corners responds to all significant fires at the Town's Solid Waste Management Facility. The Town maintains a coordinated response of three other Local Fire Companies for all fires reported at the Solid Waste Management Facility.

Operations Staff of the Division have been instructed to exit the area of any significant fire, proceed to an up wind position, secure and restrict the access to the area and immediately contact a site supervisor. Any significant fire will/may require the Site Supervisor to notify the Weigh Scale Staff to cease receipt of wastes in the solid waste management facility or unit until the fire is extinguished. The staff will/may assist the local fire companies in containing or extinguishing the fire as directed by the Fire Captain in charge at the scene.

The Operations employees of the Division have been instructed to immediately advise the Site Supervisor or Division Scale Office or Division Administration Office of any employee or customer injury that occurs in any of the Solid Waste Management Facility Operating Units. The Supervisory Staff will then assess the significance of the injury and determine if a report of the injury to the Town Communication Center by Town Radio System or telephone (911) is required. Basic first aid may be provided by Division Operations or Supervisory staff in accordance with their level of first aid training. If a supervisor determines that there has been a significant injury, the Supervisor will contact the Town Communication Center which will immediately dispatch a local Emergency Medical Services (EMS) Unit. The nearest EMS Facility is located 3 miles south of the Division Solid Waste Management site at on NYS Route 9 and responds to all significant personal injury incidents at the Town's Solid Waste Management Facility.

The Division Supervisors monitor the status of the local weather to assess the potential for adverse weather impact upon Division Solid Waste Management Facility Operating Units. The types of weather that are most problematic are: high winds, rain, snow, high or low temperature, fog or lightning. The WTS and RRCS operations may be restricted or curtailed during these periods. The Site Supervisor will determine if the weather conditions are adverse enough to require that the waste or recyclable materials typically directed to the WTS or RRCS operations, cannot be accepted in the facility. In these

instances, the Site Supervisor will direct the Weigh Scale Staff or TollBooth Attendant to cease or restrict acceptance of wastes or recyclable materials in these operating units.

If the Site Supervisor determines that there is not sufficient staff to effectively operate the WTS or RRCS, they will direct the Weigh Scale Staff or Toll Booth Attendant to cease or restrict acceptance of wastes or recyclable materials in these operating units until the available number of staff can be supplemented. The Division may use overtime or other Town/Department/Division staff, contractors or community service to supplement the regularly scheduled staff to meet the facility staffing needs as the Town determines necessary.

## **8.0 LEACHATE MANAGEMENT**

### **8.1 GENERAL**

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Leachate management within the WTS includes liquid collection, transport, pumping and disposal. The original design of the facility provided separate handling of the liquids in and around the WTS. All liquids that did not contact solid wastes (primarily site stormwater drainage) are treated separately from the liquid that did contact solid waste (primarily rainfall or snowfall that enters/lands on the concrete floor of the WTS or fluid generated from the wastes itself). The liquids that did not contact solid wastes are managed through the site stormwater drainage system and the liquids that did contact solid wastes are treated as leachate. The leachate collection system consists of the liquid collection pipes and drains within the WTS Building. Rainfall/Snow which falls in the WTS flows to the drains by gravity and is conveyed by gravity to a leachate pump station. The pump station discharges to a double contained leachate forcemain that flows to the leachate cleanout manhole for Landfill Area #5. The leachate then is conveyed by gravity down the Area 4 leachate collection pipes to the existing leachate gravity sewer which in turn flows to the leachate storage lagoons. The lagoons will be used to receive and store leachate in preparation for discharge via the leachate forcemain that discharges to the City of Cohoes Wastewater

Collection System and ultimately to the North Albany County Waste Water Treatment Facility.

Since all recyclable materials collected at the RRCS are placed within roll off containers, 55 gallon barrels or gaylord boxes, there is little potential for contaminating run off or drainage water. If a spill is noted, the Division will implement the control plan outlined in the Facility's Stormwater Management/Pollution Prevention Plan and notify the New York State Spill Hotline. All other run off from the RRCS is treated as a stormwater discharge and is managed through the site stormwater collection and discharge system.

## **9.0 WTS AND RRCS FACILITY MAINTENANCE**

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### **9.1 ROUTINE MAINTENANCE**

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An annual maintenance schedule has been developed for the primary leachate collection system. The maintenance of the primary leachate collection system includes the routine flushing of the primary collection laterals and the gravity sewer line by the Town of Colonie (or a sub-contractor) at least once a year.

### **9.2 LANDFILL GAS MONITORING**

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On an annual basis, landfill gas detection monitoring will be measured at the on site below grade structures. In addition, the presence of landfill gas will be monitored at the property line. If landfill gases are present in concentrations exceeding 25 percent of the lower explosive limit (LEL) procedures outlined in the Contingency Plan will be implemented.

Given the performance of the active gas collection system and historical monitoring of the facility it is not anticipated that landfill gas migration is likely to occur.

### 9.3 LEACHATE COLLECTION AND CONVEYANCE SYSTEMS

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WTS leachate collection and ump station structures have the potential for accumulations of landfill gas. The Town has classified all of these structures as "permitted confined space" that requires the completion of air monitoring and potentially ventilation of the structures prior to personnel entering the structure. Only personnel with confined space entry training will be allowed to enter these structures after they have completed an application for a Confined Space Entry and have been properly trained, prepared and equipped for entry.

## 10.0 WINTER AND INCLEMENT WEATHER OPERATIONS

### 10.1 WINTER OPERATIONS

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During winter operations, equipment operators must contend with intermittent snow removal from the WTS and RRCS and other areas within the facility. At the beginning of each day or as necessary when snow accumulates during the day, the equipment operators will push snow to a location to the east of the WTS and to the North or West of the RRCS that can receive the snow. These preferred locations are along an exterior side slope so that as the snow melts, the resulting run-off could be shed off the facility and to the perimeter drainage swales. This will minimize the potential for any water coming into contact with the waste, and thus reduce leachate production.

Any snow that has come into contact with either waste or run-off from the waste will be contained within the leachate collection system.

### 10.2 INCLEMENT WEATHER

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During the late winter or early spring, excessive rain, snowmelt or frost melt can cause difficult operating conditions within the facility. The difficulty is usually contained to the landfill cell area where the temporary access roads may be compromised by the poor weather conditions. At these times, all vehicles that are not able to enter the landfill will be

directed to the WTS. Response to the inclement weather conditions will vary depending on the period in which they occur. The routing of some waste hauling vehicle to the transfer station and dumping of solid wastes at the transfer station will eliminate the need for these vehicles from entering the landfill cell. This action would be undertaken at the discretion of the Site Supervisor and will require the later transfer the waste into the landfill cell with the Town equipment. The access to the WTS and RRCS are asphalt-paved roadways capable of year round all weather access.

## **11.0 RESIDENTIAL RECYCLABLES CONVENIENCE STATION**

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The Town currently operates a residential convenience center for the collection of recyclable materials from primarily residential and small commercial customers. The residential Recyclable Convenience Station consists of a series of containers that allow customers to unload the recyclable products into the containers. This procedure separates the disposal of wastes from the collection of recyclables and minimizes the negative interaction of customers with small vehicles from the large commercial waste hauling vehicles and reduces the potential for vehicle damage if the vehicles were to enter the landfill cell area. Division personnel to assist and supervise the unloading of the resident's vehicles staff the residential recyclables convenience station.

## **12.0 WASTE TRANSFER STATION**

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The waste transfer station also has the ability to assist the landfill operation by eliminated the need for certain small vehicles from having to enter the landfill cell. The waste transfer station is utilized extensively for the manually unloaded vehicles that can otherwise present an obstacle to operation or require extended periods of unload. By eliminating manually unloaded vehicles, the active face can be kept to a size that will minimize the area needed to be covered daily, reduce the potential for odors, reduce the potential for blowing litter and minimize the efforts of the landfill operators in placing and

compacting the waste. Further, the operation of the waste transfer station allows Division staff to view the waste materials prior to being placed in the roll off containers for disposal. This step allows more effective screening and separation of recyclable and unacceptable materials from the wastes for disposal.

## **13.0 FIRE PREVENTION PLAN**

### **13.1 DIVISION PERSONNEL**

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Division operators and laborers are instructed to inspect for "hot" loads of waste that may come into the facility. Each piece of landfill equipment is equipped with a fire extinguisher. Fire extinguishers are also available at the residential convenience area and the transfer station to extinguish small fires.

The landfill operator will maintain a sand area or pad for the dumping of "hot" loads as well as a stockpile of cover material for extinguishing the fire. If a hot load is observed in a roll off container at the WTS or RRCS, it will be taken to the "Hot" load area within the landfill for discharge if possible. The load will be left in the container until the Fire Company is on-site. Afterwards the staff will follow the instructions of the senior fire personnel and provide assistance as requested.

### **13.2 FIRE DEPARTMENT RESPONSE**

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In the event of a fire that cannot be extinguished by division personnel, the staff will contact the Boght Fire Department. The Town's 911 dispatcher following a call to the dispatcher will dispatch the fire department by Division personnel. Division supervisory personnel as well as the scalehouse and landfill office have 2-way radios that can communicate directly with the Town's 911 dispatcher. In the unlikely event that the 2-way radio communications are unavailable, a telephone call to the 911 number will be made.

## 14.0 WASTE TRANSFER STATION AND RESIDENTIAL RECYCLING CONVENIENCE STATION RECORDKEEPING

### 14.1 GENERAL

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Daily observation of incoming wastes characteristics and periodic observation of leachate collection system components and periodic observation of WTS and RRCS structures are to be performed by the Division Staff. Monitoring is important for developing a baseline of normal operations so that unusual conditions can be detected and corrective actions taken. Scheduled observation of the WTS equipment and structures are required as a part of routine maintenance to assure that hazards or the potential for hazards can be identified and the appropriate action taken. The appropriate actions may require minor repairs or require the activation of the Contingency Plan. The items to be observed are shown on the attached forms for monthly monitoring. Additional forms are used for Waste Load Inspections. A copy of the various inspection forms are included in Appendix G.

### 14.2 INSPECTIONS

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As outlined in Section 5 of the Landfill Operations and Maintenance Plan, a minimum of two loads of waste per week will be inspected at the facility for the presence of unacceptable wastes. This will be performed in a segregated area large enough for the waste to spread out to a thickness of 1 foot or less. Results of the inspection will be documented in the Monitoring Reports. Additional loads will be inspected if there is suspicion that unacceptable wastes are present from a particular hauler or hauler's route. In addition, operators at the tipping area of the WTS will observe the waste as it is being unloaded for the presence of unacceptable waste, segregating any that is found in a separate area for subsequent removal. The source (or hauler) of the waste should be recorded and the Director notified so that appropriate action can be taken against the responsible parties.

The need to implement the Contingency Plan will be based on deficiencies detected during daily monitoring and other inspections. However, some deficiencies can be corrected without Contingency Plan implementation. For example the following items are unacceptable for disposal in the WTS but can be separated and delivered to the appropriate recyclables materials collection or storage areas within facility or recyclables markets outside of facility: propane tanks, bulk metals, computers, televisions, batteries, corrugated cardboard, clean wood. Cleaning or repair of leachate collection lines can be made by Town of Colonie personnel or private contractors, as these individuals are trained in the safety procedures required for confined space entry.

#### 14.3 REPORTING

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Periodically, reports summarizing the operation of the WTS and RRCS must be prepared. An annual report will be submitted to the NYSDEC for review every March 1, and will cover the status of the WTS and RRCS operations as shown on the report form.

#### 14.4 MONITORING FORMS

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Included in this operating plan are suggested formats for all of the monitoring forms and reports necessary for operating the WTS and RRCS. It is suggested that each report be kept in a single annual file. The forms included herein are only suggested and the actual forms may vary depending on the specific wants and needs of the WTS operations. If after the review of the NYSDEC Region 4 Solid Waste Staff, it is determined that additional information is required under 6NYCRR Part 360, the Staff are requested to identify the specific additional information requested and amendment of the forms will be undertaken by the Town.

<b>TABLE 5-1</b> <b>TOWN OF COLONIE LANDFILL</b>
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WTS UNACCEPTABLE WASTES

- # Explosives or ammunitions
- # Combustible liquid or gas containers, bottles, cylinders or cans
- # Caustic acids, corrosives, chemicals or other hazardous wastes containing radioactivity or other contamination or pollutants prohibited by mandatory and binding laws or regulations of the United States Government and New York State
- # Non-Residential Radioactive wastes
- # Liquid or slurry wastes
- # Unidentified containers containing product
- # Thick-walled or solid metallic objects such as castings, forgings, cylinders or large motors
- # Infectious medical or hazardous wastes
- # Barrels
- # Asbestos waste
- # Recyclable materials
- # Batteries
- # Electronic Components, Televisions, Computers, Appliances

Appendix A

# Current Map



## Appendix B

Day	Date	Toll Transactions	Scale Transactions	toll ave/mo	scale ave/mo	total ave/mo
Monday	1/8/01	183	207	1		
Monday	1/15/01	54	132	1		
Monday	1/22/01	150	179	1		
Monday	1/29/01	157	198	1		
Monday	2/5/01	131	158	1		
Monday	2/12/01	143	187	1		
Monday	2/19/01	115	134	1		
Monday	2/26/01	99	167	1		
Monday	3/5/01	42	79	1		
Monday	3/12/01	198	176	1		
Monday	3/19/01	150	204	1		
Monday	3/26/01	146	186	1		
Monday	4/2/01	193	180	1		
Monday	4/9/01	340	225	1		
Monday	4/16/01	579	257	1		
Monday	4/23/01	376	258	1		
Monday	4/30/01	355	261	1		
Monday	5/7/01	274	267	1		
Monday	5/14/01	271	252	1		
Monday	5/21/01	289	265	1		
Monday	6/4/01	318	264	1		
Monday	6/11/01	223	229	1		
Monday	6/18/01	258	242	1		
Monday	6/25/01	205	205	1		
Monday	7/2/01	275	230	1		
Monday	7/9/01	286	218	1		
Monday	7/16/01	269	233	1		
Monday	7/23/01	304	230	1		
Monday	7/30/01	230	189	1		
Monday	8/6/01	260	195	1		
Monday	8/13/01	220	236	1		
Monday	8/20/01	236	240	1		
Monday	8/27/01	218	203	1		
Monday	9/10/01	252	206	1		
Monday	9/17/01	279	198	1		
Monday	9/24/01	241	231	1		
Monday	10/1/01	289	213	1		
Monday	10/8/01	183	183	1		
Monday	10/15/01	361	245	1		
Monday	10/22/01	460	214	1		
Monday	10/29/01	320	252	1		
Monday	11/5/01	325	216	1		
Monday	11/12/01	280	197	1		
Monday	11/19/01	326	235	1		
Monday	11/26/01	291	225	1		
Monday	12/3/01	155	268	1		
Monday	12/10/01	101	194	1		

Monday	12/17/01	103	180	1			
Monday	12/24/01	189	121	1			
Monday	12/31/01	293	187	1	244.795918	213.2857143	458.081633
Tuesday	1/2/01	183	169	2			
Tuesday	1/9/01	86	156	2			
Tuesday	1/16/01	154	32	2			
Tuesday	1/23/01	120	181	2			
Tuesday	1/30/01	69	142	2			
Tuesday	2/6/01	51	125	2			
Tuesday	2/13/01	140	179	2			
Tuesday	2/20/01	208	212	2			
Tuesday	2/27/01	105	176	2			
Tuesday	3/6/01	8	10	2			
Tuesday	3/13/01	52	132	2			
Tuesday	3/20/01	115	182	2			
Tuesday	3/27/01	77	157	2			
Tuesday	4/3/01	157	166	2			
Tuesday	4/10/01	316	201	2			
Tuesday	4/17/01	326	240	2			
Tuesday	4/24/01	232	250	2			
Tuesday	5/1/01	291	241	2			
Tuesday	5/8/01	174	212	2			
Tuesday	5/15/01	221	257	2			
Tuesday	5/22/01	124	202	2			
Tuesday	5/29/01	333	262	2			
Tuesday	6/5/01	211	221	2			
Tuesday	6/12/01	180	194	2			
Tuesday	6/19/01	205	205	2			
Tuesday	6/26/01	215	173	2			
Tuesday	7/3/01	306	249	2			
Tuesday	7/10/01	180	221	2			
Tuesday	7/17/01	194	191	2			
Tuesday	7/24/01	181	196	2			
Tuesday	7/31/01	190	199	2			
Tuesday	8/7/01	180	237	2			
Tuesday	8/14/01	161	192	2			
Tuesday	8/21/01	161	191	2			
Tuesday	8/28/01	183	192	2			
Tuesday	9/4/01	305	247	2			
Tuesday	9/11/01	136	190	2			
Tuesday	9/18/01	172	189	2			
Tuesday	9/25/01	118	192	2			
Tuesday	10/2/01	147	249	2			
Tuesday	10/9/01	315	262	2			
Tuesday	10/16/01	234	212	2			
Tuesday	10/23/01	285	207	2			
Tuesday	10/30/01	376	193	2			
Tuesday	11/6/01	220	188	2			
Tuesday	11/13/01	268	237	2			

Tuesday	11/20/01	281	202	2			
Tuesday	11/27/01	163	226	2			
Tuesday	12/4/01	107	239	2			
Tuesday	12/11/01	106	231	2			
Tuesday	12/18/01	137	190	2	189.18	199.98	389.16
Wednesday	1/3/01	138	207	3			
Wednesday	1/10/01	80	171	3			
Wednesday	1/17/01	129	192	3			
Wednesday	1/24/01	117	171	3			
Wednesday	1/31/01	85	155	3			
Wednesday	2/7/01	111	174	3			
Wednesday	2/14/01	75	140	3			
Wednesday	2/21/01	114	171	3			
Wednesday	2/28/01	107	174	3			
Wednesday	3/7/01	111	88	3			
Wednesday	3/14/01	91	142	3			
Wednesday	3/21/01	98	191	3			
Wednesday	3/28/01	94	175	3			
Wednesday	4/4/01	141	195	3			
Wednesday	4/11/01	248	213	3			
Wednesday	4/18/01	240	208	3			
Wednesday	4/25/01	233	236	3			
Wednesday	5/2/01	228	232	3			
Wednesday	5/9/01	206	220	3			
Wednesday	5/16/01	204	252	3			
Wednesday	5/23/01	134	188	3			
Wednesday	5/30/01	282	223	3			
Wednesday	6/6/01	204	202	3			
Wednesday	6/13/01	184	242	3			
Wednesday	6/20/01	190	195	3			
Wednesday	6/27/01	204	175	3			
Wednesday	7/11/01	178	185	3			
Wednesday	7/18/01	246	221	3			
Wednesday	7/25/01	134	205	3			
Wednesday	8/1/01	188	197	3			
Wednesday	8/8/01	179	214	3			
Wednesday	8/15/01	163	200	3			
Wednesday	8/22/01	172	211	3			
Wednesday	8/29/01	191	190	3			
Wednesday	9/5/01	220	235	3			
Wednesday	9/12/01	146	209	3			
Wednesday	9/19/01	159	198	3			
Wednesday	9/26/01	190	188	3			
Wednesday	10/3/01	160	208	3			
Wednesday	10/10/01	190	219	3			
Wednesday	10/17/01	184	202	3			
Wednesday	10/24/01	202	220	3			
Wednesday	10/31/01	219	213	3			
Wednesday	11/7/01	208	194	3			

Wednesday	11/14/01	203	197	3			
Wednesday	11/21/01	260	211	3			
Wednesday	11/28/01	164	237	3			
Wednesday	12/5/01	133	210	3			
Wednesday	12/12/01	71	213	3			
Wednesday	12/19/01	151	171	3			
Wednesday	12/26/01	510	188	3	176.588235	201.1372549	377.72549
Thursday	1/4/01	105	201	4			
Thursday	1/11/01	104	162	4			
Thursday	1/18/01	147	211	4			
Thursday	1/25/01	99	203	4			
Thursday	2/1/01	94	190	4			
Thursday	2/8/01	85	163	4			
Thursday	2/15/01	125	140	4			
Thursday	2/22/01	112	163	4			
Thursday	3/1/01	99	105	4			
Thursday	3/8/01	150	162	4			
Thursday	3/15/01	141	176	4			
Thursday	3/22/01	58	132	4			
Thursday	3/29/01	114	189	4			
Thursday	4/5/01	222	198	4			
Thursday	4/12/01	162	182	4			
Thursday	4/19/01	773	233	4			
Thursday	4/26/01	226	234	4			
Thursday	5/3/01	176	232	4			
Thursday	5/10/01	192	228	4			
Thursday	5/17/01	160	251	4			
Thursday	5/24/01	220	187	4			
Thursday	5/31/01	213	239	4			
Thursday	6/7/01	251	206	4			
Thursday	6/14/01	204	197	4			
Thursday	6/21/01	219	189	4			
Thursday	6/28/01	183	190	4			
Thursday	7/5/01	292	219	4			
Thursday	7/12/01	197	189	4			
Thursday	7/19/01	208	174	4			
Thursday	7/26/01	142	166	4			
Thursday	8/2/01	154	181	4			
Thursday	8/9/01	144	190	4			
Thursday	8/16/01	146	184	4			
Thursday	8/23/01	188	219	4			
Thursday	8/30/01	194	209	4			
Thursday	9/6/01	300	255	4			
Thursday	9/13/01	138	182	4			
Thursday	9/20/01	97	205	4			
Thursday	9/27/01	197	190	4			
Thursday	10/4/01	158	201	4			
Thursday	10/11/01	223	211	4			
Thursday	10/18/01	184	200	4			

Thursday	10/25/01	195	236	4			
Thursday	11/1/01	196	190	4			
Thursday	11/8/01	213	211	4			
Thursday	11/15/01	168	215	4			
Thursday	11/29/01	103	205	4			
Thursday	12/6/01	130	233	4			
Thursday	12/13/01	97	220	4			
Thursday	12/20/01	134	205	4			
Thursday	12/27/01	291	205	4	182.46	201.16	383.62
Friday	1/5/01	152	217	5			
Friday	1/12/01	152	198	5			
Friday	1/19/01	123	146	5			
Friday	1/26/01	148	176	5			
Friday	2/2/01	142	163	5			
Friday	2/9/01	108	113	5			
Friday	2/16/01	166	191	5			
Friday	2/23/01	118	136	5			
Friday	3/2/01	136	154	5			
Friday	3/9/01	116	128	5			
Friday	3/16/01	157	197	5			
Friday	3/23/01	130	143	5			
Friday	3/30/01	63	139	5			
Friday	4/6/01	230	207	5			
Friday	4/13/01	333	248	5			
Friday	4/20/01	421	275	5			
Friday	4/27/01	331	250	5			
Friday	5/4/01	250	231	5			
Friday	5/11/01	318	244	5			
Friday	5/18/01	251	248	5			
Friday	5/25/01	299	211	5			
Friday	6/1/01	313	246	5			
Friday	6/8/01	339	232	5			
Friday	6/15/01	330	218	5			
Friday	6/22/01	301	223	5			
Friday	6/29/01	330	190	5			
Friday	7/6/01	398	226	5			
Friday	7/13/01	311	449	5			
Friday	7/20/01	319	218	5			
Friday	7/27/01	186	224	5			
Friday	8/3/01	284	228	5			
Friday	8/10/01	230	201	5			
Friday	8/17/01	209	199	5			
Friday	8/24/01	243	234	5			
Friday	8/31/01	316	260	5			
Friday	9/7/01	277	211	5			
Friday	9/14/01	191	176	5			
Friday	9/21/01	175	178	5			
Friday	9/28/01	250	241	5			
Friday	10/5/01	311	247	5			

Friday	10/12/01	264	228	5			
Friday	10/19/01	264	218	5			
Friday	10/26/01	397	192	5			
Friday	11/2/01	365	238	5			
Friday	11/9/01	272	233	5			
Friday	11/16/01	306	226	5			
Friday	11/23/01	456	201	5			
Friday	11/30/01	172	223	5			
Friday	12/7/01	196	256	5			
Friday	12/14/01	183	219	5			
Friday	12/21/01	201	209	5			
Friday	12/28/01	241	203	5	250.470588	216.9019608	467.372549
Saturday	1/6/01	424	68	6			
Saturday	1/13/01	529	84	6			
Saturday	1/20/01	441	63	6			
Saturday	1/27/01	467	89	6			
Saturday	2/3/01	391	68	6			
Saturday	2/10/01	487	75	6			
Saturday	2/17/01	444	90	6			
Saturday	2/24/01	426	104	6			
Saturday	3/3/01	449	93	6			
Saturday	3/10/01	436	58	6			
Saturday	3/17/01	500	106	6			
Saturday	3/24/01	504	115	6			
Saturday	3/31/01	509	100	6			
Saturday	4/7/01	683	152	6			
Saturday	4/14/01	900	188	6			
Saturday	4/21/01	971	194	6			
Saturday	4/28/01	998	217	6			
Saturday	5/5/01	933	178	6			
Saturday	5/12/01	818	189	6			
Saturday	5/19/01	646	190	6			
Saturday	5/26/01	718	159	6			
Saturday	6/2/01	664	166	6			
Saturday	6/9/01	858	182	6			
Saturday	6/16/01	826	175	6			
Saturday	6/23/01	689	151	6			
Saturday	6/30/01	667	155	6			
Saturday	7/7/01	698	143	6			
Saturday	7/14/01	653	167	6			
Saturday	7/21/01	630	139	6			
Saturday	7/28/01	697	152	6			
Saturday	8/4/01	551	136	6			
Saturday	8/11/01	544	138	6			
Saturday	8/18/01	562	349	6			
Saturday	8/25/01	568	153	6			
Saturday	9/1/01	582	160	6			
Saturday	9/8/01	694	179	6			
Saturday	9/15/01	593	140	6			

Saturday	9/22/01	711	169	6			
Saturday	9/29/01	699	171	6			
Saturday	10/6/01	597	134	6			
Saturday	10/13/01	1131	177	6			
Saturday	10/20/01	877	172	6			
Saturday	10/27/01	967	162	6			
Saturday	11/3/01	1154	211	6			
Saturday	11/10/01	935	199	6			
Saturday	11/17/01	980	187	6			
Saturday	11/24/01	790	131	6			
Saturday	12/1/01	633	134	6			
Saturday	12/8/01	568	177	6			
Saturday	12/15/01	468	101	6			
Saturday	12/22/01	514	284	6			
Saturday	12/29/01	567	101	6	681.196078	152.4509804	833.647059

			year ave	year ave	total ave
	86961	59413	283.260586	193.5276873	476.788274

## Appendix C

Town of Colonie Envir. Service  
 1319 New Loudon Road  
 Cohoes, New York 12047

John G. Boncaro

WTS

025003

02

06/13/02 06/13/02 13:50 14:00

000000 Cash Customer  
 Cash Customer

RES RESIDENT IN TOWN

Scale 1 Gross Wt. 5900 LB  
 Scale 2 Tare Wt. 5520 LB  
 Net Weight 380 LB

Inbound - Cash ticket

0.19 TON Demolition Res In To

60.00 11.40 0.00 11.40

Operating hours 7AM to 3PM Monday thru Friday  
 and Saturday 7AM thru 2PM. This is to certify that this load  
 contains no hazardous materials, medical waste or liquids of  
 any type. All loads must be properly contained (tied & Tarp)

11.40  
 11.40  
 0.00

SIGNATURE

## Appendix D

New Transfer Station  
Vehicle Count Tonnage

Date	# of Vehicles WTS	Input Tons WTS	Metals		Demo		Cardboard		Wood		Recyclables Diverted Tons	Recyclables Diverted Percent Per Week
			Tons MRF	Pounds MRF	Tons Landfilled	Pounds Landfilled	Tons MRF	Pounds MRF	Tons Compost	Pounds Compost		
7/10/01	35.00	20.79	0.00	0.00	25.24	50480.00	0.00	0.00	0.00	0.00	0.00	
7/11/01	51.00	28.84	0.00	0.00	32.39	64780.00	0.00	0.00	0.00	0.00	0.00	
7/12/01	47.00	31.81	15.93	31860.00	38.37	76740.00	0.00	0.00	0.00	0.00	15.93	19.56
7/17/01	46.00	27.63	0.00	0.00	28.17	56340.00	0.00	0.00	0.00	0.00	0.00	
7/18/01	71.00	38.63	0.00	0.00	37.81	75620.00	0.52	1040.00	0.00	0.00	0.52	
7/19/01	62.00	40.64	2.93	5860.00	49.60	99200.00	0.00	0.00	0.00	0.00	2.93	3.23
7/24/01	55.00	40.74	0.00	0.00	19.60	39200.00	0.00	0.00	6400.00	3.20	3.20	
7/25/01	51.00	41.12	0.00	0.00	55.93	111860.00	0.00	0.00	0.00	0.00	0.00	
7/26/01	51.00	32.62	0.00	0.00	33.69	67380.00	0.19	380.00	0.00	0.00	0.19	2.96
7/31/01	79.00	68.17	3.49	6980.00	31.00	62000.00	0.00	0.00	0.00	0.00	3.49	
8/1/01	61.00	38.85	0.00	0.00	46.17	92340.00	0.00	0.00	0.00	0.00	0.00	
8/2/01	72.00	64.04	0.00	0.00	45.12	90240.00	1.68	3360.00	0.00	0.00	1.68	3.02
8/7/01	72.00	35.20	0.00	0.00	24.40	48800.00	0.00	0.00	0.00	0.00	0.00	
8/8/01	55.00	48.65	0.00	0.00	33.95	67900.00	0.00	0.00	0.00	0.00	0.00	
8/9/01	57.00	42.53	1.66	3320.00	51.26	102520	0.87	1740.00	0.00	0.00	0.87	2.00
8/14/01	48.00	23.26	0.00	0.00	30.40	60800.00	0.00	0.00	0.00	0.00	0.00	
8/15/01	61.00	49.80	0.00	0.00	35.80	71600.00	0.00	0.00	0.00	0.00	0.00	
8/16/01	42.00	25.41	1.22	2440.00	33.81	67620.00	0.00	0.00	0.00	0.00	1.22	1.24
8/21/01	46.00	29.55	2.66	5320.00	16.29	32580.00	0.00	0.00	0.00	0.00	2.66	
8/22/01	69.00	44.92	0.00	0.00	29.76	59520.00	1.34	2680.00	1.34	1.34	1.34	
8/23/01	51.00	31.89	3.32	6640.00	40.34	80680.00	0.84	1680.00	0.00	0.00	0.84	4.16
8/28/01	50.00	35.85	0.00	0.00	24.43	48860.00	0.00	0.00	0.00	0.00	0.00	
8/29/01	67.00	40.07	0.00	0.00	39.61	79220.00	0.00	0.00	0.00	0.00	0.00	
8/30/01	57.00	40.51	1.36	2720.00	57.57	115140.00	0.00	0.00	0.00	0.00	1.36	
9/4/01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9/5/01	81.00	38.75	0.00	0.00	26.14	52280.00	0.00	0.00	0.00	0.00	0.00	
9/6/01	88.00	55.24	3.82	7640.00	0.00	88000.00	0.00	0.00	0.00	0.00	3.82	
9/7/01	77.00	44.97	2.52	5040.00	56.73	113460.00	0.00	0.00	0.00	0.00	2.52	
9/11/01	49.00	30.23	0.00	0.00	30.85	61700.00	0.00	0.00	0.00	0.00	0.00	
9/12/01	87.00	65.90	0.00	0.00	32.46	64920.00	0.00	0.00	0.00	0.00	0.00	
9/13/01	63.00	38.15	0.00	0.00	25.59	51176.00	0.00	0.00	0.00	0.00	0.00	
9/14/01	38.00	26.13	0.00	0.00	11.79	23580.00	0.00	0.00	0.00	0.00	0.00	
9/17/01	85.00	63.60	2.15	4300.00	42.45	84900.00	0.00	0.00	0.00	0.00	2.15	
9/18/01	72.00	50.16	0.00	0.00	25.59	51176.00	0.00	0.00	0.00	0.00	0.00	
9/19/01	90.00	47.79	0.00	0.00	26.79	53584.00	0.48	960.00	0.00	0.00	0.48	
9/20/01	68.00	48.06	0.29	580.00	40.97	81940.00	0.00	0.00	0.00	0.00	0.29	
9/21/01	63.00	33.98	3.90	7800.00	46.96	93920.00	0.00	0.00	0.00	0.00	3.90	
9/24/01	96.00	77.59	0.00	0.00	53.46	106920.00	0.00	0.00	0.00	0.00	0.00	
9/25/01	70.00	43.41	0.00	0.00	40.87	81740.00	0.00	0.00	0.00	0.00	0.00	
9/26/01	82.00	42.71	0.00	0.00	46.36	92720.00	0.00	0.00	0.00	0.00	0.00	
9/27/01	76.00	43.63	4.81	9620.00	63.13	126260.00	0.60	1200.00	0.00	0.00	0.60	
10/2/01	76.00	47.62	0.00	0.00	45.65	91300.00	0.00	0.00	0.00	0.00	0.00	
10/3/01	87.00	55.02	0.00	0.00	32.81	65620.00	0.00	0.00	0.00	0.00	0.00	
10/4/01	65.00	52.07	2.74	5480.00	56.67	113340.00	0.63	1260.00	0.00	0.00	0.63	
10/15/01	97.00	79.92	0.00	0.00	59.14	118270.00	0.00	0.00	0.00	0.00	0.00	
10/16/01	78.00	65.72	0.00	0.00	59.89	119780.00	0.00	0.00	0.00	0.00	0.00	

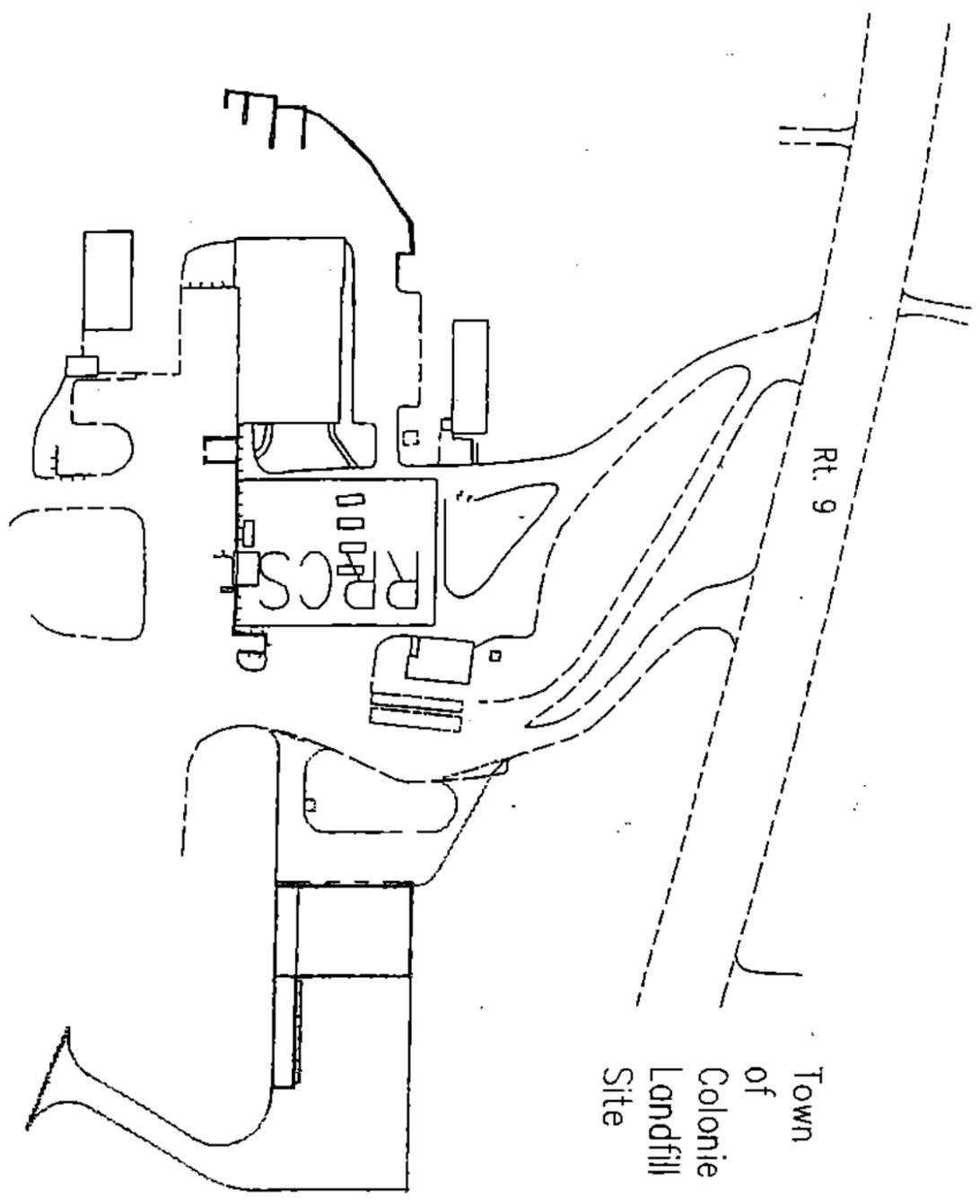
New Transfer Station  
Vehicle Count Tonnage

Date	# of Vehicles WTS	Input Tons WTS	Metals		Demo Pounds Landfilled	Cardboard		Wood		Recyclables Diverted Tons	Recyclables Diverted Percent Per Week
			Tons MRF	Pounds MRF		Pounds MRF	Tons MRF	Pounds Compost	Tons Compost		
10/17/01	91.00	58.47	0.00	0.00	101520.00	0.00	0.00	0.00	0.00	0.00	0.00
10/18/01	54.00	40.11	0.00	0.00	67260.00	0.00	0.00	0.00	0.00	0.00	0.00
10/19/01	49.00	33.37	0.00	0.00	81740.00	0.00	1620.00	0.81	0.00	0.81	0.00
10/22/01	88.00	76.48	0.00	0.00	104440.00	0.00	0.00	0.00	0.00	0.00	0.00
10/23/01	50.00	33.66	0.00	0.00	47760.00	0.00	0.00	0.00	0.00	0.00	0.00
10/24/01	91.00	95.84	5.54	11080.00	145400.00	0.00	0.00	0.00	0.00	5.54	0.00
10/25/01	104.00	78.08	4.87	9740.00	146260.00	0.00	0.00	0.00	0.00	4.87	0.00
10/29/01	95.00	66.21	0.00	0.00	84180.00	0.00	0.00	0.00	0.00	0.00	0.00
10/30/01	57.00	27.51	0.00	0.00	78520.00	0.00	1120.00	0.56	0.00	0.00	0.00
10/31/01	85.00	49.63	0.00	0.00	43290.00	0.00	0.00	0.00	0.00	0.00	0.00
11/1/01	65.00	45.43	9.93	19860.00	155320.00	0.00	0.00	0.00	0.00	9.93	0.00
11/2/01	0.00	0.00	4.73	9460.00	27320.00	0.00	0.00	0.00	0.00	4.73	0.00
11/6/01	0.00	0.00	0.00	0.00	59980.00	0.00	0.00	0.00	0.00	0.00	0.00
11/7/01	73.00	54.82	0.00	0.00	37020.00	0.00	0.00	0.00	0.00	0.00	0.00
11/8/01	63.00	39.62	0.00	0.00	52500.00	0.00	0.00	0.00	0.00	0.00	0.00
11/9/01	72.00	42.18	0.00	0.00	102880.00	0.00	0.00	0.00	0.00	0.00	0.00
11/12/01	74.00	65.74	0.00	0.00	99800.00	0.00	0.00	0.00	0.00	0.00	0.00
11/13/01	78.00	44.68	0.00	0.00	127500.00	0.00	0.00	0.00	0.00	0.00	0.00
11/14/01	66.00	37.75	0.00	0.00	115140.00	0.00	0.00	0.00	0.00	0.00	0.00
11/15/01	72.00	40.61	0.00	0.00	90440.00	0.00	0.00	0.00	0.00	0.00	0.00
11/16/01	76.00	51.51	0.00	0.00	141320.00	0.00	0.00	0.00	0.00	0.00	0.00
11/19/01	92.00	41.38	0.00	0.00	81860.00	0.00	0.00	0.00	0.00	0.00	0.00
11/20/01	70.00	46.74	6.28	12560.00	121500.00	0.00	0.00	0.00	0.00	6.28	0.00
11/21/01	71.00	36.98	50.58	0.00	101160.00	0.00	2060.00	1.03	0.00	0.00	0.00
11/23/01	104.00	46.64	0.00	0.00	126900.00	0.00	0.00	0.00	0.00	0.00	0.00
11/27/01	75.00	44.80	0.00	0.00	77740.00	0.00	0.00	0.00	0.00	0.00	0.00
11/28/01	22.00	11.80	6.17	12340.00	87620.00	0.00	0.00	0.00	0.00	6.17	0.00
11/29/01	32.00	16.28	6.06	12110.00	77740.00	0.00	0.00	0.00	0.00	6.06	0.00
11/30/01	65.00	34.35	0.00	0.00	98880.00	0.00	0.00	0.00	0.00	0.00	0.00
12/3/01	71.00	41.43	0.00	0.00	121140.00	0.00	0.00	0.00	0.00	0.00	0.00
12/4/01	80.00	47.04	0.00	0.00	125770.00	0.00	0.00	0.00	0.00	0.00	0.00
12/5/01	57.00	44.53	0.00	0.00	95530.00	0.00	0.00	0.00	0.00	0.00	0.00
12/6/01	76.00	71.15	0.00	0.00	105460.00	0.00	0.00	0.00	0.00	0.00	0.00
12/7/01	81.00	52.25	0.00	0.00	86640.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/01	49.00	37.19	0.00	0.00	79820.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/01	28.00	12.53	0.00	0.00	76460.00	0.00	0.00	0.00	0.00	0.00	0.00
12/13/01	63.00	33.29	4.84	9680.00	91880.00	0.00	0.00	0.00	0.00	4.84	0.00
12/17/01	49.00	23.19	0.00	0.00	51580.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/01	48.00	25.61	0.00	0.00	66560.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/01	54.00	25.47	0.00	0.00	67600.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/01	64.00	30.28	7.40	14800.00	94500.00	0.00	0.00	0.00	0.00	7.40	0.00
12/21/01	73.00	50.16	0.00	0.00	50980.00	0.00	0.00	0.00	0.00	0.00	0.00
12/22/01	0.00	0.00	0.00	0.00	33720.00	0.00	0.00	0.00	0.00	0.00	0.00
12/24/01	35.00	18.68	0.00	0.00	59620.00	0.00	0.00	0.00	0.00	0.00	0.00
12/26/01	35.00	23.35	0.00	0.00	75560.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/01	33.00	17.26	0.00	0.00	99650.00	0.00	0.00	0.00	0.00	0.00	0.00

## Appendix E



## Appendix F



## Appendix G

TOWN OF COLONIE  
DEPARTMENT OF PUBLIC WORKS  
DIVISION OF ENVIRONMENTAL SERVICES

WASTE TRANSFER STATION CHECKLIST AND DUTY SHEET:

Safety Equipment Required: HardHat, Steel Toed Work Boots, Leather Gloves, and Orange Safety Vest

Optional: Safety Glasses, Hearing Protection, Dust Mask or Respirator

Staff on Duty:

Date: \_\_\_\_\_

- |          |          |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |
| 5. _____ | 6. _____ |

THE FOLLOWING DUTIES ARE TO BE PERFORMED CONTINUALLY THROUGHOUT THE DAY (Put a check mark in the space provided when complete):

\_\_\_\_\_ Floor cleaning – including sweeping and collection of wastes on upper and lower levels, entrance and exit area and property adjacent to WTS.

\_\_\_\_\_ Check wastes for unacceptable materials

Separate out all solid wastes which can be managed in other Division Solid Waste Units.

Implement Waste Screening – Response procedure for unacceptable hazardous materials

\_\_\_\_\_ Check wastes for recyclable materials  
Metals to metals containers  
Corrugated cardboard to cardboard containers  
Propane Tanks  
Electronic Components, Televisions, Computers,  
Automotive Batteries  
Specials \_\_\_\_\_

\_\_\_\_\_ Assist customers in unloading their wastes in appropriate areas

END OF DAY WTS CHECK LIST

\_\_\_\_\_ Close all overhead doors

\_\_\_\_\_ Clean tipping floor of all solid wastes

- \_\_\_\_\_ Load all solid wastes, metals and cardboard into appropriate containers
- \_\_\_\_\_ Lights and Fans turned off
- \_\_\_\_\_ Tools, brooms and shovels put away
- \_\_\_\_\_

\* Always Assist Customers

\* No Smoking on Duty

Return this form to the reception desk at the end of the day.

TOWN OF COLONIE  
 DEPARTMENT OF PUBLIC WORKS  
 DIVISION OF ENVIRONMENTAL SERVICES

RESIDENTIAL RECYCLABLES CONVENIENCE STATION CHECKLIST AND DUTY SHEET:

Safety Equipment Required: HardHat, Eye Protection, Steel Toed Work Boots, Leather Gloves, and Orange Safety Vest

Optional: Hearing Protection, Dust Mask or Respirator

Staff on Duty:

Date: \_\_\_\_\_

1. \_\_\_\_\_ 2. \_\_\_\_\_  
 3. \_\_\_\_\_ 4. \_\_\_\_\_

THE FOLLOWING DUTIES ARE TO BE PERFORMED CONTINUALLY THROUGHOUT THE DAY (Put a check mark in the space provided when complete):

\_\_\_\_\_ Site cleaning – including sweeping and collection of wastes on upper and lower levels, entrance and exit area and property adjacent to RRCS and Scale.

\_\_\_\_\_ Check Recyclables for unacceptable materials

Separate out all solid wastes which can be managed in other Division Solid Waste Units.

Implement Waste Screening – Response procedure for unacceptable hazardous materials

\_\_\_\_\_ Check recyclable materials

\_\_\_\_\_ Assist customers in unloading their recyclables in appropriate areas

INSPECT THE FOLLOWING AT THE END OF EACH DAY (CIRCLE ONE)

*	Corrugated Cardboard	Empty	¼	½	¾	Full
*	Tin Cans	Empty	¼	½	¾	Full
*	Plastic Containers	Empty	¼	½	¾	Full
*	Glass Containers	Empty	¼	½	¾	Full
*	Newspapers	Empty	¼	½	¾	Full
*	Bulk Metals	Empty	¼	½	¾	Full

*	Styrofoam Packaging Materials	Empty	¼	½	¾	Full
*	Waste Automotive Oil	Empty	¼	½	¾	Full
*	Antifreeze	Empty	¼	½	¾	Full
*	Automotive Batteries	Empty	¼	½	¾	Full
*	Household Batteries	Empty	¼	½	¾	Full
*	Hard Covered Books	Empty	¼	½	¾	Full
*	Junk Mail	Empty	¼	½	¾	Full
*	Latex Paint	Empty	¼	½	¾	Full
*	Propane Tanks	Empty	¼	½	¾	Full
*	Salvation Army Box	Empty	¼	½	¾	Full
*	Waste Tires	Empty	¼	½	¾	Full

END OF DAY WTS CHECK LIST

- \_\_\_\_\_ Close and lock all entrance gates ( truck gate at 2:55 p.m./car gate at 3:00 p.m.)
- \_\_\_\_\_ Storage Trailer door closed and locked
- \_\_\_\_\_ Clean area of all solid wastes
- \_\_\_\_\_ Garbage carts emptied
- \_\_\_\_\_ Compactor ram left in full forward position and key removed and hung on key board in crew room
- \_\_\_\_\_ Attendants house cleaned, closed and locked
- \_\_\_\_\_ Tools, brooms and shovels put away

Maintenance

- \_\_\_\_\_ Clean Beneath the compactor each time the roll off box is pulled

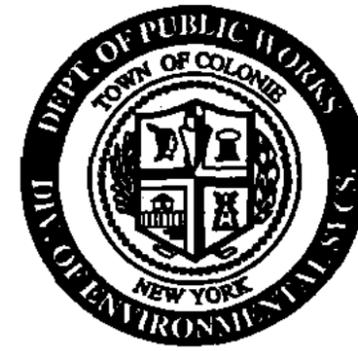
\* Always Assist Customers \* No Smoking on Duty

Return this form to the reception desk at the end of the day

**APPENDIX D**

**Inspection Forms**

**OWN OF COLONIE D.P.W.  
Division of Environmental Services  
DAILY SITE INSPECTION FORM**



NAME OF PERSONNEL OBSERVING \_\_\_\_\_ TIME \_\_\_\_\_ DATE \_\_\_\_\_ 2001  
 General Weather Conditions \_\_\_\_\_ Temp. \_\_\_\_\_ °F General Wind Direction N S E W

**LEACHATE**

- \_\_\_ 1) Leachate was observed seeping from landfill \_\_\_ 2) Leachate was observed entering surface water  
 \_\_\_ 3) Waste is being placed into water \_\_\_ 4) Leachate levels observed in lagoons (10ft+2ft freeboard)  
 #1-Elevation-\_\_\_\_\_ Feet from berm  
 #2-Elevation-\_\_\_\_\_ Feet from berm  
 Time of Readings: \_\_\_\_\_

\_\_\_ 5) Secondary Leak Detection Readings Taken:

**AREA 5 PHASE I & II**

Reading in Inches or Gallons

CELL	Prior Reading	Daily Reading
A		
B		
C		
D		
E		

**AREA 6 PHASE I & II**

Reading in Inches or Gallons

CELL	Prior Reading	Daily Reading
A		
B		
C		
D		

\_\_\_ 6) Pore Pressure relief pipe flow observed if Yes/ Describe flow- \_\_\_\_\_

**COVER**

- \_\_\_ 7) Quantity of Daily Cover Present-\_\_\_\_\_ Loads \_\_\_\_\_ 8) Waste in the active Landfill are not covered  
 \_\_\_ 9) Refuse is protruding through cover \_\_\_\_\_ 10) Erosion of cover observed

If YES Location and description \_\_\_\_\_

**NUISANCE**

- \_\_\_ 11) Noise is a nuisance off site  
 \_\_\_ 12) Odors are detectable off site  
 \_\_\_ 13) Papers or plastics are observed to be Blowing out of landfill  
 \_\_\_ 14) Blowing dust or dirt is a nuisance  
 \_\_\_ 15) Blowing Debris Fence needs repairs

If YES Location and description \_\_\_\_\_

**OBSERVATION**

- \_\_\_ 16) Sanitary Sewer Sand Filter Observed Flow from end pipe- Y or N  
 \_\_\_ 17) Water meter reading 7 am \_\_\_\_\_  
 \_\_\_ 18) Water meter reading 3 pm \_\_\_\_\_  
 \_\_\_ 19) Sanitary Sewer Sand Filter Observed Seepage from sides- Y or N/ Location of seepage: \_\_\_\_\_  
 \_\_\_ 20) High Level Alarm observed in an alarm activated state- Y or N/ Chamber(s): \_\_\_\_\_  
 \_\_\_ 21) Gas Vents & Flares observed / Problem Identified- Y or N/ location: \_\_\_\_\_  
 \_\_\_ 22) Tire Chip Trench Temperatures observed? Problem Identified- Y or N/ location: \_\_\_\_\_

Signature of personnel conducting site observation \_\_\_\_\_ Date \_\_\_\_\_

Signature of Site Operations Supervisor \_\_\_\_\_ Date \_\_\_\_\_

**TOWN OF COLONIE D.P.W.  
Division of Environmental Services  
OPERATOR'S LOG**



**Weekly Monitoring**

**Litter Control Fencing** – Inspect and clean on a weekly basis

Police Permanent Litter Fencing

Quantity of Litter: \_\_\_\_\_ Low/Average/High

Police Portable Fencing

Quantity of Litter: \_\_\_\_\_ Low/Average/High

Move Portable Fencing: \_\_\_\_\_ Yes/No

Location: \_\_\_\_\_

**Waste Load Inspection** – In addition complete waste load inspection report

Time: \_\_\_\_\_

Hauler and Vehicle ID: \_\_\_\_\_

Unacceptable Items Detected: \_\_\_\_\_

Waste Load Rejected: \_\_\_\_\_

Time: \_\_\_\_\_

Hauler and Vehicle ID: \_\_\_\_\_

Unacceptable Items Detected: \_\_\_\_\_

Waste Load Rejected: \_\_\_\_\_

Time: \_\_\_\_\_

Hauler and Vehicle ID: \_\_\_\_\_

Unacceptable Items Detected: \_\_\_\_\_

Waste Load Rejected: \_\_\_\_\_

**Waste Load Placement** – Record the location of the waste placement on the on the attached drawing for the weeks operation.

Approximate elevation of the finished waste lift: \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

SIGNED: \_\_\_\_\_

# TOWN OF COLONIE D.P.W.

## Division of Environmental Services

### WASTE LOAD INSPECTION REPORT



Inspector: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Landfill Cell Deposited In: \_\_\_\_\_

**VEHICLE INFORMATION:**

Owner: \_\_\_\_\_ Driver: \_\_\_\_\_

Identification Code: \_\_\_\_\_

Type of Vehicle: \_\_\_\_\_

Capacity of Vehicle: \_\_\_\_\_

Source of Waste: \_\_\_\_\_

(Determine from waste examination)

Check for the following items:

Item Present (Y,N) If yes, note quantity)

- |  |       |
|--|-------|
| 1. Explosives or ammunitions.  | _____ |
| 2. Combustible liquid or gas containers, bottles, cylinders or cans.   | _____ |
| 3. Caustic acids, corrosives, chemicals or other hazardous wastes containing radioactivity or other contaminated or pollutants prohibited by mandatory and binding laws or regulations of the United States Government and New York State. | _____ |
| 4. Liquid or slurry wastes.  | _____ |
| 5. Unopened containers the contents of which cannot be readily identified by visual observation.   | _____ |
| 6. Tree trunks, stumps, branches, limbs or lumber over four inches in diameter or over five feet in length.  | _____ |
| 7. Slag, rock, sand, brick, or concrete.   | _____ |
| 8. Thick-walled or solid metallic objects such as castings, forgings, gas cylinders or large motors.   | _____ |
| 9. Steel or nylon rope, cables or slings more than four feet long.   | _____ |
| 10. Case hardened or alloy steel chains over 3/3 inches in diameter or 4' in length.   | _____ |
| 11. Rolls of carpet or fencing over twelve inches in diameter, or 4' in length.  | _____ |

- 12. Animal wastes or parts of animals (excluding normal household garbage). \_\_\_\_\_
- 13. Automotive or larger sized tires. \_\_\_\_\_
- 14. Solid blocks of rubber or plastic in excess of two cubic feet. \_\_\_\_\_
- 15. Tied or unbroken bales of paper, cardboard, or textiles.(Ties must be broken for acceptance). \_\_\_\_\_
- 16. Any material classified as Infectious Hazardous Wastes,(Contaminated hypodermic needles, syringes, broken glass, and scapel blades, isolation wastes, cultures and stocks from hospitals and laboratories, human blood and blood products). \_\_\_\_\_
- 17. Demolition or construction debris including roofing materials. \_\_\_\_\_
- 18. Barrels of any kind. \_\_\_\_\_
- 19. White goods(washer, dryer refrigerators, etc.). \_\_\_\_\_
- 20. Lawn or leaf debris including grass, branches leaves, etc. \_\_\_\_\_
- 21. Tires, newspapers or any other recyclables as determined by the Director of Environmental Services for the Town of Colonie. \_\_\_\_\_
- 22. Asbestos Waste. \_\_\_\_\_  
 If "Y" (yes) was answered for any of the above items, a decision must be made by the supervisor to accept or reject the load. If the load is rejected, the waste must be segregated and enforcement actions initiated. The waste is to be removed from the site by the vehicle owner at no cost to the Town of Colonie.

Additional Comments on Waste Load: \_\_\_\_\_  
 \_\_\_\_\_

**DISPOSITION OF WASTE LOAD**

Accepted: \_\_\_\_\_  
 Rejected: \_\_\_\_\_

Reason for Rejection: \_\_\_\_\_  
 \_\_\_\_\_

Enforcement Action Initiated: \_\_\_\_\_  
 \_\_\_\_\_

SIGNED: \_\_\_\_\_

**TOWN OF COLONIE D.P.W.**  
**Division of Environmental Services**  
**CONTINGENCY PLAN IMPLEMENTATION**



Supervisor: \_\_\_\_\_ Date: \_\_\_\_\_

Event Requiring Plan Implementation: Date: \_\_\_\_\_ Time: \_\_\_\_\_

Personnel Involved: \_\_\_\_\_

Event Location and Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Actions Taken (Emergency Responses Initiated, Authorities contacted, Follow-up actions taken.) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Additional Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SIGNED: \_\_\_\_\_

**TOWN OF COLONIE D.P.W.**  
**Division of Environmental Services**  
**LEACHATE DISCHARGE REPORT**



Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

Date approval for leachate discharge received from Albany County Sewer District: \_\_\_\_\_  
(attach approval notice)

TOTAL PRECIPITATION  
(over period lagoon was receiving leachate) \_\_\_\_\_ inches

LEACHATE QUALITY - Attach Laboratory Results

DISCHARGE DIRECTLY TO ALBANY COUNTY SEWER DISTRICT

Via Leachate Forcemain: \_\_\_\_\_ gallons (from totalizer)

Date of Last Reading: \_\_\_\_\_

Last Totalizer Reading: \_\_\_\_\_ gallons

Net Volume Pumped Since Last Reading: \_\_\_\_\_ gallons

ALTERNATE DISCHARGE METHOD/LOCATION

Method: \_\_\_\_\_

Location: \_\_\_\_\_

Quantity Discharged: \_\_\_\_\_ gallons

Ultimate Destination of Leachate: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SIGNED: \_\_\_\_\_  
(Supervisor)

**TOWN OF COLONIE D.P.W.**  
**Division of Environmental Services**  
**MONTHLY INSPECTION REPORT**



**INSPECTOR:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

The landfill, leachate collection and secondary leachate collection systems will be inspected monthly and immediately following a storm event. The inspection shall consist of a visual assessment of the condition of all berms and structures, and the opening and observation of all secondary leachate collection structures and leachate collection structures. Structures shall be inspected from above with a strong flashlight. If it is determined that a manhole requires further examination, a crew from the Town of Colonie Sewer Department will be obtained to enter the manhole.

Each of the items in the "Items to Check" lists should be noted as either okay or deficient with a description of the deficiency. The corrective action required should be noted and once completed, the date of completion should be entered.

Landfill Berms, Fill Area, and Leachate Storage Area Berms

Items to Check:

1. Exposed Liner System, Leachate Collection Laterals.
2. Erosion of daily and intermediate cover.
3. Erosion of berms, external and internal.
4. Damp areas at or near toe of slope.
5. Animal burrowing.
6. Unwanted vegetative growth.

Observations: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Corrective Action Required: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Leachate Collection and Secondary Leachate Collection Structures**

**Items to Check:**

1. Flow restrictions causing surcharge in collection structures.
2. Sediment build-up in secondary sumps.
3. Amount of liquid in structure.
4. Proper operation of the flow meters.

**Observations:**

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**Corrective Action Required:**

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**Leachate Conveyance and Storage System**

**Items to Check:**

1. Sump Pump and magnetic flow meter operations.
2. Sediment build-up in sumps.
3. Valve operation and settings.
4. Water in structures and drip pans.
5. Proper operation of level sensors in the sumps.
6. Leachate lagoon conditions.
7. Leachate forcemain and pump station condition.

**Observations:**

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**Corrective Action Required:**

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**Site Drainage**

**Items to Check:**

1. Obstruction in ditches.
2. Erosion of drainage ditches.
3. Build-up of sediments in ditches or culverts.
4. Overtopping of drainage ditches.
5. Erosion and sedimentation control operable.

**Observations:**

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**Corrective Action Required:**

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**Groundwater Monitoring Wells**

**Items to Check:**

1. Casing integrity.
2. Cap secure and locked.

**Observations:**

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**Corrective Action Required:**

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General Site Structures

Items of Check:

1. Access Roads - erosion, surface conditions, potholes.
2. Fencing.
3. Gates and Locks.

Observations: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Corrective Action Required: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Explosive Gas (Methane) Monitoring

No methane detected: \_\_\_\_\_

Methane Detected:

Reading	Location
_____	_____
_____	_____
_____	_____

Water Quality Monitoring in Secondary Leachate Collection Sumps

	Time	Temp.	pH	Conductivity
Area 5 - Cell A				
Area 5 - Cell B				
Area 5 - Cell C				
Area 5 - Cell D				
Area 5 - Cell E				
Leachate Storage				
Lagoon Leak				
Detection Manual				
Area 6- Cell A				
Area 6- Cell B				
Area 6- Cell C				
Area 6- Cell D				



# TOWN OF COLONIE D.P.W.

## Division of Environmental Services

### MONTHLY OPERATIONS SUMMARY



Month \_\_\_\_\_ Operating Days \_\_\_\_\_

#### Inbound Tonnage

Solid Waste \_\_\_\_\_ Tons  
 Sludge \_\_\_\_\_  
 WWTP Ash \_\_\_\_\_  
 C&D Ash \_\_\_\_\_  
 Other ( \_\_\_\_\_ ) \_\_\_\_\_  
 TOTAL \_\_\_\_\_ Tons

#### Cover Material

Quantity Delivered \_\_\_\_\_ (Identify Tons or Cubic Yards)  
 Quantity Used \_\_\_\_\_  
 Source \_\_\_\_\_

#### Leachate Collection

Total precipitation for month \_\_\_\_\_ inches  
 Quantity in Lagoons \_\_\_\_\_ gallons  
 Quantity Discharged to ACSD \_\_\_\_\_ gallons  
 Samples Taken \_\_\_\_\_ (attach results)  
 Comments \_\_\_\_\_

#### Leachate Recirculated

Quantity \_\_\_\_\_ gallons  
 Location \_\_\_\_\_

#### Secondary Leachate Collection

Area 5, Phase I & II		Area 6, Phase I&II	
Cell A	_____ gallons	Cell A	_____ gallons
Cell B	_____ gallons	Cell B	_____ gallons
Cell C	_____ gallons	Cell C	_____ gallons
Cell D	_____ gallons	Cell D	_____ gallons
Cell E	_____ gallons		

Leachate Storage Lagoon L.D. Manhole \_\_\_\_\_ gallons

#### Quarterly Ground Water Sampling Program

Samples Taken: \_\_\_\_\_ Date: \_\_\_\_\_ (results attached)

Contingency Plan Activation

Not Required: \_\_\_\_\_  
Date: \_\_\_\_\_ Reason: \_\_\_\_\_ (report attached)  
Date: \_\_\_\_\_ Reason: \_\_\_\_\_ (report attached)

Unacceptable Waste

Number of Violations: \_\_\_\_\_ (see attached reports)

Equipment

	<b>Operating Hours</b>	<b>Hours Down for Maintenance or Repair</b>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

ADDITIONAL COMMENTS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SIGNED: \_\_\_\_\_

# TOWN OF COLONIE D.P.W.

## Division of Environmental Services

### SEMI-ANNUAL OPERATIONS REPORT



\_\_\_\_\_ To \_\_\_\_\_

Report Prepared By \_\_\_\_\_  
(Name and Title)

Total Operating Days \_\_\_\_\_

Hours Open \_\_\_\_\_

Inbound Tonnage

Solid Waste \_\_\_\_\_  
 SLUDGE \_\_\_\_\_  
 Ferrous \_\_\_\_\_  
 Other (\_\_\_\_\_) \_\_\_\_\_  
 Total \_\_\_\_\_ tons

Cover Material

Total Quantity Used \_\_\_\_\_ (Identify tons or cubic yards)  
 Capacity of Site Remaining (Cubic Yards) \_\_\_\_\_  
 Time Estimated to Reach Capacity (Months) \_\_\_\_\_

Leachate Collection

(See also attached data summary)

Quantity Discharge to \_\_\_\_\_ gallons  
 Albany County Sewer District

Quantity Transported Off-Site \_\_\_\_\_ gallons  
 Receiving Facility

Number of Samples Taken \_\_\_\_\_  
 (test results attached)

Secondary Leachate Collection

Total Quantity of Leachate Removed from  
 the Area 5 Secondary Leachate Collection System: \_\_\_\_\_

Total Quantity of Leachate Removed from  
 the Area 6 Secondary Leachate Collection System: \_\_\_\_\_

Groundwater Sampling

(See also attached data summary)

<b>Dates When Samples Obtained</b>	<b>Date When Repairs Sent to NYSDEC</b>
_____	_____
_____	_____
_____	_____
_____	_____

Contingency Plan Implementation (circle if applicable)

Not Required

Date: _____	Reason: _____	(report attached)
Date: _____	Reason: _____	(report attached)
Date: _____	Reason: _____	(report attached)
Date: _____	Reason: _____	(report attached)
Date: _____	Reason: _____	(report attached)

Unacceptable Waste

Number of Violations:

	<b>Hauler</b>	<b>Violation Summary Unacceptable Waste</b>	<b>Action Taken/ Fine Levied</b>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____

(attach additional sheet for further violations)

**Equipment**

Describe current available equipment maintained at the site:

	<b>Equipment (Function/Identification) (Ex: Bulldozer/Cat DZ)</b>	<b>Hours Operating</b>	<b>Hours Down*</b>	<b>Remaining Life (Years)</b>
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____

\*Down = Maintenance, repair, out of service.

**Personnel**

List in Order of Responsible Charge:

	<b>Title</b>	<b>Name</b>	<b>NYSDEC Approved Training</b>
1.	Director of Env. Affairs	_____	_____
2.	On-Site Supervisor	_____	_____
3.	Foreman	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____
11.	_____	_____	_____
12.	_____	_____	_____

**Recycling**

List Materials Recycles and Approximate Quantities of Each:

<b>Material</b>	<b>Tonnage</b>
Ferrous	_____
Newspaper	_____
Glass	_____
Aluminum	_____
Other _____	_____
_____	_____
_____	_____



**Note: Plan Sheet not scanable  
but is available for preview  
at the Landfill Site.**