

ETE Sanitation and Landfill
5299 Broughton Road
Town of Gainesville, Wyoming County, New York
NYSDEC Site # 9-64-005

Project Work Plan

Patrick Concrete Constructors, Inc.
2 West Main Street – Suite 300
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1.0 Introduction

1.1 Program Purpose

This work plan has been developed by Patrick Constructors, Inc. with assistance from Lakeside Engineering, Rochester, NY. This plan attempts to describe and define items of work associated with the contract and Patrick Constructors, Inc. methods and means to address and accomplish the work. This plan will attempt to integrate a soil and erosion control plan overlaying the items of work.

This plan describes, in detail, the procedures that will be used to implement the work required under the scope of this contract. Specifically, this plan addressed how the project will be staffed, sequenced and constructed. This plan will perform in harmony with our previously submitted Health and Safety Plan and our storm water management-soil and erosion control plan. Copies of all plans submittals whether it be this work plan or the Health and Safety Plan etc. will be kept on file in the contractors Job office trailer on the site. It will be available for reference and use by all.

1.2 Site Description and History

1.2.1 Site Description

The ETE Sanitation and Landfill site is in a rural area on Broughton Road in the Town of Gainesville, Wyoming County, New York. The site is approximately twenty acres in size surrounded by woodlands and undeveloped agricultural land on three sides. Broughton Road runs east and west, just south of the property. A pond of 3 to 4 acres in size is located just north of Broughton road on the site this pond is the “south pond”. North of the south pond is the old Landfill mound. This mound is approximately fifteen feet deep at its deepest point. The mound is eight acres in size; the south toe of the mound extends into the south pond below the present water level. Just to the North of the old landfill mound is an approximately two acre pond referred to as the “north pond”. The

mean water level in the north pond is approximately 34 feet lower than the mean water level of the south pond even though they are separated by 750 lineal feet of the old landfill mound. The top of the old landfill mound is not graded to provide runoff. The small ponds with cattails that sit in low pockets on top of the old landfill mound retain water and then slowly percolate down into the mound or they evaporate. The east and west sides of the property are surrounded by sharp ridges of earth which were probably pushed into position or created when they moved dirt for the old landfill. These east and west sides are expected to provide drainage swales or channels in the final design contours on the project. The site is strewn with old scrap metal and some trash and debris, i.e.: tires, fiberglass, old appliances.

1.2.2 Operational and Disposal History

The ETE Sanitation and Landfill site was owned and operated by ETE Corporation from 1972 to 1979. The site may have been in use prior to 1972 as a landfill. The location was a non-permitted private landfill which accepted municipal and industrial waste from the surrounding Wyoming County Towns. When faced with a cease and desist order from NYSDEC in 1979, ETE Corporation declared bankruptcy. A number of the violations that NYSDEC cited in 1979 included refuse burned on site; refuse not spread, covered or compacted; refuse protruding through cover soils; insufficient grading; uncontrolled release of leachate and blowing papers around the site. Refuse is still protruding through the north face of the landfill mound today. The uneven, un-graded top of the mound still exists.

Almor Corporation of Warsaw, NY a paint manufacturer has acknowledged disposing of approximately 150 tons of leaded paint sludge on the property. Morton Salt Company of Silver Springs, NY acknowledged disposing of quantities of salt compounds on the site during its years of operation.

1.2.3 Investigative History

A series of preliminary site investigations were conducted by NYSDEC consultants and NYS Department of Health from 1987 to 1994. During that period approximately 25 drums leaded paint sludge and industrial solvents were removed from the site and properly disposed of. The PSA investigations revealed the presence of hazardous waste on the site and the fact that these wastes were starting to escape in the environment.

Due to the fact that ground water wells are used by the local residents as potable water source the site was designated as a class 2 hazardous waste site in 1995. Since NYSDEC was unable to identify responsible parties who could undertake additional investigations and remediation, work on the site was begun by using NYS Superfund in 1997. After further study and testing of the site a plan of remediation and capping was devised and implemented through this present contract.

1.3 Project Description

The scope of work (SOW) to be conducted at the ETE Sanitation and Landfill site under the current NYSDEC contract number D005972 generally includes:

- A. Site mobilization and setup
- B. Install required erosion, sediment and silt traps and pond suction tubes
- C. Have electric power drops installed back to the South and North pond pump locations.
- D. Begin dewatering of both ponds
- E. Hydroaxe bushes along the west, north and east sides of the project/cut down and chip all trees that can't be Hydoraxed
- F. Continue to construct/maintain diversion ditches
- G. Drill/Construct required nine each gas vent wells

- H. Construct containment dike on top of landfill mound to contain the sediments from the north and south ponds
- I. Remove contaminated sediments from the north and south ponds – place within the diked areas on top of the landfill mound
- J. Once sediments have been allowed to dewater, cover with uncontaminated soil from the new drainage swale or the expansion of the north pond
- K. Continue with earthwork to construct the drainage swale from the south pond to the north pond
- L. Construct the reinforced concrete V-notch weir structure and install cohesive soil cut-off trench at the northeast corner of the north pond
- M. Install gabion and rock dam at concrete weir out fall structure
- N. Continue maintenance of all silt fences, sediment traps, temporary dikes and diversion ditches.
- O. Place grade and compact excavated uncontaminated soils to the required contours
- P. Install required gas vent layer on subgrade
- Q. Install 40 mil LLDPE cap liner, anchor trench and toe drains
- R. Install tenax tenflow composite drainage net directly on liner
- S. Place and stone required 6” underdrain piping and non-woven geotextile cover
- T. Install protection layer of soil over the CDN
- U. Place 6” layer of topsoil, fertilizer, seed and mulch
- V. Place/pin down erosion control matting
- W. Construct crushed gravel roadway to the limits called for in the plans and specifications
- X. Dismantle site facilities; demobilize from the site

The above-listed scope of work will be performed as required by the project specifications, contract drawings and as directed by the NYSDEC site representative. Items of work and means/methods for accomplishment of items are described in greater detail later in this plan.

2.0 Project Organization

See the attached tables of Key Project Personnel and subcontractors for the project.

2.1 Key Project Personnel

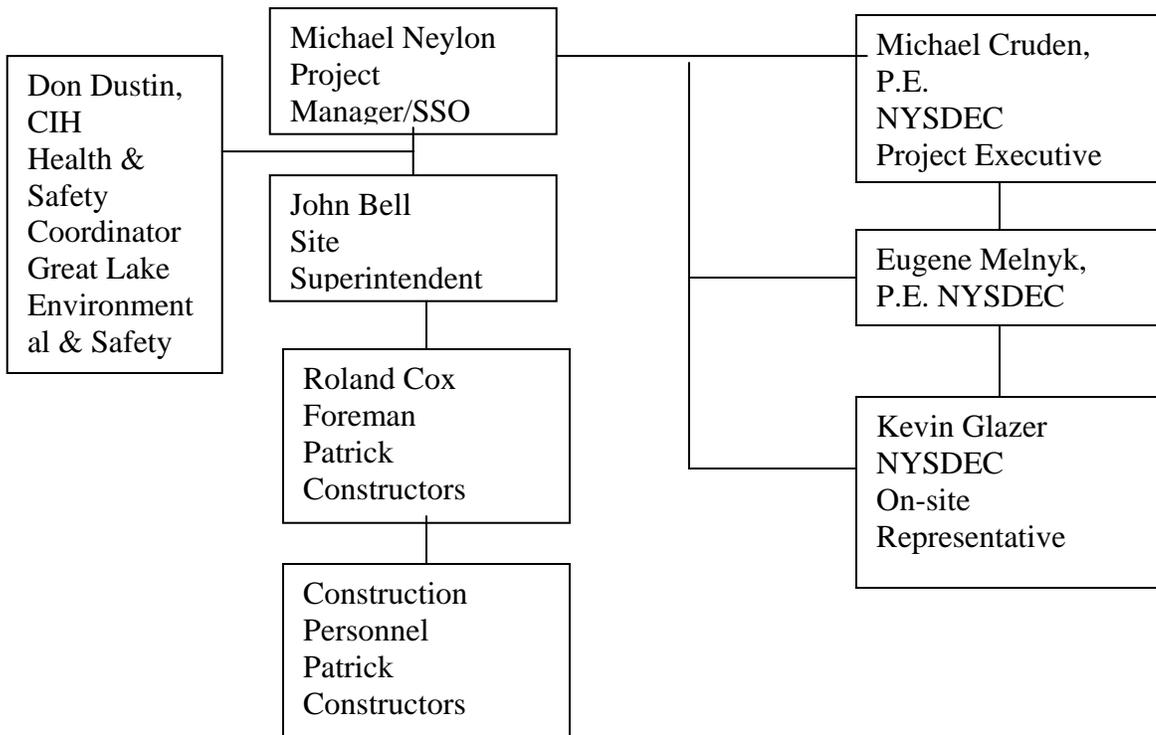
<u>Title</u>	<u>Name</u>	<u>Firm</u>
Project Manager	Michael Neylon	Patrick Constructors, Inc.
Site Superintendent	John Bell	Patrick Constructors, Inc.
Health & Safety Manager QA/QC officer	Michael Neylon	Patrick Constructors, Inc.
Site Forman	Roland Cox	Patrick Constructors, Inc

2.2 Proposed Subcontractors

<u>Company/Firm</u>	<u>Contact Name/Phone No.</u>	<u>Area of Responsibility</u>
Great Lakes Environmental and Safety Consultants, Inc., Buffalo, NY	Donald Dustin, CIH 716-327-0700	Health and Safety
Great Lakes Environmental and Safety Consultants, Inc., Buffalo, NY	Garrett Schmidbauer 716-827-0700	On-site Health & Safety Rep.
Paradigm Environmental Services, Rochester, NY	Bruce Hoogesteger 585-647-2530	Analytical Laboratory – Soil, Water & Air Analysis
Lakeside Engineering Services, Rochester, NY	Rod Prosser 585-279-9300	NYS Licensed Professional Engineer
Chenango Contracting, Johnson City, NY	Carl Burdick, PE 607-729-8500	Supply and install liners geotextiles & drainage net
CME Associates, Buffalo, NY	Ernie Kihl 716-877-9577	Soil & Material Testing Services
Grover & Bates Associates, Perry, NY	Dana Grover 585-237-3550	Survey & stakeout by licensed LS
Eastwood Industries, Inc. North Boston, NY	Jane Rozborski 716-941-7420	Clearing, clipping, Hydroaxing
Ashtead Technology, Henrietta, NY	Michael Aralaukas 585-424-2140	Supply/Calibrate testing and sampling equipment

C.Y. Concepts, Inc., Rochester, NY	Francis Youney 585-349-1820	40 Hour Hazwoper training & refreshment
TRI/Environmental Inc., Austin, Texas	Sam Allen 1-800-880-8378	Perform/ report all Geosynthetic conformance testing
Precision Geosynthetic Laboratories Anaheim. California	Ron Belanger 714-520-9631	Linear conformance testing for tear and peel of field welds

2.3 Project Organization



3.0 Sequence of Work

3.1 Work Schedule

The planned sequence and anticipated duration for each item of work will be graphically illustrated using Microsoft project software. This bar chart work schedule will be updated or revised on a monthly basis until the end of the project or as required by NYSDEC.

3.2 Narrative of the Work Sequence

Generally the project will be sequenced as follows:

1. Prepare pre-work submittals and attend pre-construction meetings.
2. Mobilize to the site
3. Construct site support facilities
4. Clear the site
5. Install all required erosion, sediment and silt traps and pond suction tubes.
6. Pick up and dispose to scrap metal strewn on the site
7. Dewatering of the ponds
8. Strip/Stock pile any topsoil or organics in preparation for excavation of the drain swale and the area on top of the landfill mound to take the sediments from the north and south ponds
9. Prior to excavation of the contaminated sediments – install the gas vent wells and abandoned existing monitoring wells
10. Implement our Air monitoring plan along with establishment of our exclusion zone during the excavation, placement and dewatering of the contaminated sediments from ponds to the top of the landfill mound
11. Continuous particulate monitoring both real time and documentation monitoring will be implemented on site as soon as earthwork is commenced on-site (See air monitoring plan in this plan for operations)
12. Drill/construct required 9 each gas vent wells
13. Excavate and place compact uncontaminated soils to cover the contaminated sediments on the landfill mound

14. Install CDN Gas Vent layer between wells
15. Install LLDPE 40 mil cap with requisite toe drains and underdrains
16. Install CDN Drainage Layer
17. Place and compact required soil protection layer and topsoil above the newly installed liner cap
18. Construct required berms and outfall structures
19. Complete work on drain swales, line with rip-rap
20. Place and pin down erosion control matting
21. Construct final access road and ramp down to the north pond
22. Dismantle site facilities; demobilize from the site

4.0 General Requirements and Excavation

Work plan items required by specification section 01150 “Minimum Requirements for the work plan”, are provided in the subsections that follow.

4.1 Site Layout

A work site layout diagram is provided in the attachments to this work plan. The layout shows the existing conditions and the proposed locations of:

- A) Equipment of Staging Area
- B) Placement of the Office Trailer
- C) Vehicle Parking Area
- D) Location of Decontamination Facilities

Air monitoring stations, loading areas and any additional drawing controls will be determined during pre-construction meetings.

4.2 Required Permits

To our knowledge no permits are required for execution of this project. We have discussed and showed our soil erosion/sediment control plan to the Wyoming County Soil and Water Conservation Agency. Patrick will be working on the site under NYSDEC SPDES general permit GP-O2-01 for storm water discharges from construction activities.

4.3 Site Security

Patrick intends to install construction fence from the east side of the south pond parallel to Broughton Road approximately 200 LF, then the fencing will turn to the north and run an additional 200 LF back to the area of the existing abandoned motor home and trailer. This fence will define the access to the jobsite. We will also install fencing to block the access road coming to the property from the old Town of Gainesville storage and work yard. The office trailers and the vehicle parking areas will be located just inside the fence line out by Broughton Road. Access to the jobsite will be through the single 15' drive entrance which will be adjacent to Patrick's office trailer out by Broughton Road. All employees, staff and/or visitors will not be allowed on the jobsite until first checking in at the Patrick trailer which will be manned by Patrick Administrative Assistant during all work hours. All visitors and employees will be required to sign-in and sign out before entering or leaving the property. Vehicular traffic will be permitted in designated parking areas within the support zone. Vehicles making deliveries –(i.e. fuel, etc.) will also be allowed in the staging areas but only authorized vehicles will be allowed access to the exclusion zone. The exclusion zone will be delineated by construction fencing or yellow barrier tape. Establishment of an exclusion zone line of demarcation can be seen on the attached drawing showing the trailers, parking areas and proposed fencing. In addition to perimeter fencing, Patrick will install signage stating "No Trespassing" and that all personnel wishing to enter the site must sign in at Patrick job trailer prior to any entry on the site. Patrick will have the main access road to the jobsite locked and secured when we are not on the jobsite. In addition to these measures Patrick will have a closed circuit TV camera and DVD recorder setup, to record any unauthorized entry to the site during non-work hours and weekends.

4.4 Staging Area/Equipment Storage Area

No contaminated material will be placed or brought out beyond the exclusion zone line of demarcation. On the clean side of the exclusion zone line we will have a material and equipment staging area for parking clean equipment/temporary storage of materials not necessary within the exclusion zone until later. (i.e. liner material, CDN, geotextile, rip-rap)

4.5 Decontamination Pad/Decontamination Trailer

The decontamination trailer and pad will be setup immediately adjacent to the entrance and exit into the exclusion zone. No equipment or individuals will pass from the exclusion zone area to the outside without utilizing the decontamination trailer or pad. A Porta-John will be placed beyond the exclusion line for use by workers within the exclusion zone. The trailer will be a pre-manufactured unit constructed exclusively to be used as a decontamination station. The decontamination pad for equipment and trucks will be a bermed perimeter approximately 20' wide by 40' long with a 40mil HDPE Liner sandwiched within the perimeter berm and beneath the pad. The pad will be constructed in such a manner that it slopes to one corner of the pad where a sump pit will collect any wash water and a sump pump will pump this water to a holding vessel. A potable water source will be provided in a holding tank with a pump to supply the pressure washer on the decontamination pad or supplied to the decontamination trailer for personnel washing. The used water from the decontamination trailer will also be collected and stored for future disposal. The storage vessel for the contaminated wash down waters will be located and stored behind the exclusion zone line.

4.5.1 Site Maintenance

The contractor will collect and properly contain all accumulated rubbish, refuse, debris, or waste materials on the site. All materials will be classified as to their proper disposal (ie: contaminated versus non-contaminated) and will be

treated accordingly. Besides keeping the site in a clean and orderly manner the contractor will make sure that the public roadways are kept clean and passable. The Contractor will not dispose of any debris resulting from the contract work and any wastes, effluents, trash, garbage, oil, grease, chemicals, etc in an unauthorized area. If any waste material is dumped in unauthorized area, the contractor will remove the material and restore the area to its original condition. Contractor generated hazardous waste will be confined to the decontamination or exclusion zones until transported off-site for proper disposal.

4.6 Equipment

Listed below are pieces or equipment that Patrick presently owns and intends to utilize on this project:

1. Case 9050 Excavator (78,000lb)
2. Volvo 30ton off road haul truck
3. John Deere 750C Dozer
4. John Deer 850 Dozer
5. Ingersoll Rand single drum sheepsfoot/smooth drum roller
6. 2003 Chevy 3000 gallon water truck
7. Case 580 Backhoe/loader
8. John Deere 566 Loader
9. John Deere 200C or 270 Excavator 48,000-60,000lb
10. 24' wide disk/conditioner
11. Case 4 Wheel drive 200HP Tractor
12. Bell 17Cy pull pan
13. Finn 900 Gallon Hydroseeder

This is only a partial list of equipment Patrick owns, but more than likely this will be our working spread for this project.

**5.0 General Sequence of Construction listed below is
the sequence of work as Patrick anticipates it**

- 1.) Notify Dig Safe NY prior to mobilization.
- 2.) Get the power company (NYSEG) to be ready to install a power drop at each pond location and at the proposed trailer locations.
- 3.) Install a stabilized construction entrance to Broughton road and access road to the exclusion zone.
- 4.) Install and place all silt fence, hay bales, sediment basins as shown on the attached drawing for the soil erosion/sediment/storm water management plan.
- 5.) Prior to some silt fence or sediment traps being installed it will be necessary to perform some clearing. It is our intention to have our subcontractor mow all bushes with a hydro axe and cut/chip all trees within the limits of disturbance. No stripping of topsoil or stump removals will be performed until that given area is ready to begin excavation or accept fill.
- 6.) During the clearing work, Patrick will be working on picking up and consolidating all the scrap steel and general debris that is strewn about the site. Place this material in dumpsters for disposal.
- 7.) Simultaneously complete the temporary installations for the job trailers vehicle parking lot, establish the decontamination pad and the decontamination trailer.
- 8.) Fence the site as described. Establish the exclusion zone line, signs and temporary utilities/ surveillance camera.
- 9.) Construct any temporary haul road from the top of the landfill down to the north pond. Do the same, if necessary, at the south pond.

- 10.) Install all berms, basins, silt fences and hay bales necessary and as illustrated on the erosion control plan in preparation for pumping water from both the north pond and the south pond.
- 11.) Install suction tubes in each of the ponds with crushed stone –wait for the silt to settle out then install electric submersible pumps and discharge hoses to the sediment basins-begin pumping of the ponds while monitoring for turbidity in the pump discharge.
- 12.) Expand or enhance any sediment basins silt traps or fencing as necessary during pumping.
- 13.) Install temporary earth dike across the west outlet channel from the south pond.
- 14.) Relocation suction tubes in the north pond and the south pond as the water levels decrease from pumping, again being careful not to have turbidity in the pump discharge.
- 15.) Check and clean-out any silt or sediment buildup at all the temporary soil and erosion/ sediment basins on a daily basis. One individual will be assigned responsibility for this and he will keep a daily log as to his actions.
- 16.) Have our licensed land surveyor perform a topographic survey on all areas requiring movement of earthwork under the contract. This might include working pond bottom elevations.
- 17.) Perform top soil stripping/ stock piling, removal of any organics or roots from areas such as the west landfill mound. Keep this stripping to a minimum, only uncovering areas needed for earthwork movement in the coming two to three day period. Should more than 5 acres become exposed at any one time make the valid attempt to temporarily mulch some acreage and minimize the are open for erosion. At some point this 5 acre rule have to be null and void because the nature of the project requires that more than 5 acres of ground will be necessary to be exposed. (i.e. the liner area to be covered almost 8 acres alone).

- 18.) Keep this open ground exposure to a minimum, establish any secondary erosion controls on site so as to protect the erosion controls at the perimeters of the project.
- 19.) Construct containment dike on top of the landfill to accept the wet sediments which will be excavated from the north pond and the south pond.
- 20.) Construct perimeter diversion dikes at the perimeters of the job site such that runoff from the property does not necessarily drain back onto the jobsite.
- 21.) Remove contaminated soils from the areas of the north pond and place on top of the landfill behind the containment dikes allowing it to drain the free water from the material. Turn this material to a compactable state.
- 22.) Once the limits of containment removals are achieved to the satisfaction of NYSDEC and being verified by laboratory analysis begin the excavation of the north pond.
- 23.) Excavate the garbage exposed in pumping down of the south pond to the limits requested by NYSDEC .
- 24.) Excavate any sediment per NYSDEC. Place on top of the existing mound.
- 25.) Cover this material with Earth excavated from the west channel excavation or from the expansion of the north road.
- 26.) Drill and install the nine gas venting wells for the project.
- 27.) Excavate the required cutoff trench at the new outfall at the north pond. Place and compact a cohesive soil, generated on site, into the trench.
- 28.) Construct the reinforced concrete weir outfall and continue backfilling with cohesive soils.
- 29.) Shape and grade the berm either side of the concrete outfall and around the newly expanded north pond.

- 30.) Install PVC coated gabion mat in front of the new outfall structure.
- 31.) Topsoil. Grade seed fertilize and mulch the areas around the expanded north pond and the new outfall structure.
- 32.) Continue to maintain silt trap ST-1-A at the north pond. Install diversion berm between the new concrete/ gabion outfall structure and ST-1-A.
- 33.) Install the 2 foot high rock filter dam on top of the new concrete V-notch spillway.
- 34.) Subcontractor to install CDN as a gas venting layer between vent wells
- 35.) Subcontractor to place liner cap material and CDN layers of geosynthetic on the previously prepared subgrade. These subgrades are derived by deducting the topsoil thickness ("6") and the cover soil thickness (1.5) from the final contours as shown on the project drawings. Elevations of this subgrade will be recorded by our LS prior to covering.
- 36.) Construct the required underdrain as shown by the sketch from addenda #2
- 37.) Complete required conformance and performance testing on the liner material prior to covering with protection layer of soil.
- 38.) Construct the new toe drain around the perimeter of newly capped mound-simultaneous to the placement of the soil protection layer over the liner and the CDN.
- 39.) Remove the sump tubes, and pumps from the north pond and the south pond.
- 40.) Complete all fine grading of the west channel and the newly exposed west channel.
- 41.) Seed and fertilize the disturbed areas of the project. Mulch any areas not designated to receive the erosion control blankets.
- 42.) Install and pin down all erosion control blankets after seeding.

- 43.) Leave sediment basin/rock filter dam and silt fence in the stream way beyond the newly constructed concrete outfall structures by the north pond.
- 44.) Complete the installation of the rip-rap for the west channel and the east drain swale. Leave erosion control measures in front of these drains until growth is established.
- 45.) Complete the construction of the crushed stone access road and the ramp at the north end of the landfill mound.
- 46.) Remove all temporary facilities once we are positive growth has been established. Dispose of all trash, debris or collected liquids in an authorized facility.

5.1 Excavations

All excavation work anticipated on this project is having to do with mass earthwork. With mass earthwork all excavation to a 3 on 1 slope which in most soils meets OSHA requirements. If sloping back is not an option then stepping the side of the excavation is another method that might be employed. The only trenching I can think of is the trenching for the placement of the cohesive soils in the cutoff soil wall at the new outfall structure. We will employ a hoe-pak mounted on the boom of an excavator to compact the cohesive soils. No men should have to enter the trench.

During excavations on site, real time particulate monitoring and real time VOC's will occur. Should the particulate level reach a differential of 150 mg/cubic meter between upwind monitor and the downwind monitor then methods of dust suppression will be employed. These suppression methods consist of watering with our 3000 gallon water truck, placement of calcium chloride crystals to suppress the dust. Should these methods not be satisfactory then work will cease until such time as dust is abated. This would also be true of visible dust blowing not just the particulate level.

Should a hazard be occurring and these dust suppression methods cannot remedy the problem, then the placement of a polyethylene sheet and sand bags may be necessary.

5.2 Imported Earthwork Materials

All imported aggregate materials that are intended to be incorporated into the final construction will be analyzed by a soils lab and submitted for approval and use (i.e. rip-rap, crusher run for the roadway, crushed stone for the methane vent lines, etc.). A mix design and history will be submitted for approval for ready mix concrete prior to use. The lower 12” of the 18” protection layer to be placed over the CDN will be free of all deleterious materials, sharp objects and be 1” in size or less. This material will be placed in one 12” layer and compacted to 90% of maximum density. Patrick is considering on-site screening of excavated uncontaminated soils to use for this 12” protection layer.

5.3 Gas Vent Wells

Prior to construction of the gas vent wells all materials, schedule 80 pipe, crushed stone and non-woven geo-textile will be submitted for approval prior to use. A preconstruction meeting will be held prior to any installation to review the requirements of the specifications for these wells. A drilling log and the final depth of each well will be recorded for as built records.

6.0 Material Handling Plan

A number of materials are scheduled for excavation on this project.

- 1.) Debris/ Garbage laying on the surface now.
- 2.) Debris/ Garbage exposed in toe of slope – South Pond
- 3.) Debris/ Garbage on the slope in north pond

- 4.) Silt/ Sediment from the south pond
- 5.) Silt/ sediment from the north pond
- 6.) Native soil excavated from the west channel
- 7.) Native soil excavated from the north pond expansion and installation of the new out fall structure.

Of the materials listed above it is only anticipated that the silt and sediments from both ponds might be classified as hazardous material. The debris and garbage from the toe of the slopes in both ponds may also have potentially hazardous nature. It is the intent of this contract that the debris and garbage as well as the site and sediments all be placed, compacted and covered with soil prior to placing the new 40 mil LLDPE synthetic liner. During all excavation and earthwork on the site realtime VOC monitoring and extrapolated heavy metals from particulate counts will be used to control the levels of PPE and potential exposures to the public. Should any of these action limits for these items be reached or exceeded then work will cease until the contaminates drop to a safe level or the level of PPE will be increased beyond the anticipated level "D" so work could proceed. Communications on the jobsite will be established with walkie talkies for each crew or operation. In addition, an air horn of loud enough decibels will also be utilized to stop the work due to high action levels. All safety and protection procedures as outlined in our HASP and per plans and specifications will be adhered to.

All decontamination fluids and construction wastes will be disposed and transported by legally authorized entities. No hazardous waste solids will be disposed of off site, all onsite contaminates will be collected and placed beneath the new cap liner. All scraps metals or other recyclables that are generated from the project will be transported and disposed of at legally authorized facilities.

6.1 Proposed Disposal Facilities

<u>Waste Type</u>	<u>Disposal Method</u>	<u>Disposal Facility</u>
Non-hazardous construction or debris or wastes	Non-hazardous waste landfill	Steuben County Landfill Bath, N.Y. Scott Martinez 607-776-7802
Decontamination Fluids	Tertiary Waste Treatment Plant	VanLare WWTP Monroe County, N.Y. Lake Rd. Rochester, NY
Hazardous waste soils/solids-no garbage (None anticipated)	Hazardous waste landfill	CWM-Model City 1550 Balmer Rd. Model City, N.Y. Eileen Carbon 716-754-0457

7.0 Storm water Management/Erosion Sediment Controls

All required and necessary dikes, diversion ditches drainage swales, silt fencing, staked hay bales, sump suction pipes and rock filter dams will be installed prior to start of any excavation for an item of work. These measures will be monitored, adjusted and repaired on a daily basis if necessary. All work will be prepared in accordance with the appropriate requirements for safe pollutant discharge elimination system (SPDES) general permit for storm water discharge from construction activities.

Attached you will find layout mapping/diagram for installation and implementation of what our consultant deemed adequate to meet or exceed the requirements for a storm water and erosion/ sediment control plan. Included with these drawings are miscellaneous details for erosion/ sediment methods that would be implemented as well as the detail with the plan drawings.

To review, this site was originally a private (non-permitted) landfill operation on this 20 acre site from 1972 to 1979. In 1979 a cease and desist order was issued to the owner ETE sanitation who promptly declared bankruptcy. The site is in a rural area surrounded by undeveloped agricultural or woodlands. The nearest resident to the landfill is approximately 1000 LF to the southwest (Up gradient) of the landfill. The nearest residence down gradient of the location is approximately 4000 LF to the east/north east of the location. Several large dairy farms exist in the area. The closest I would estimate to be 2 miles approximately to the south/southeast. Broughton Road is on the south border of the site. On the site are two ponds (north pond and south pond) separated by a 7 to 8 acre landfill mound between the two ponds. The mean water level in the north pond is thirty feet lower than the mean water level of the south pond. It is known that a paint manufacturer and possibly a plating operation disposed of lead laden waste in the landfill during its operation.

A series of preliminary site investigations were conducted by NYSDEC or their consultants on the site. During that period approximately 25 drums of leaded paint sludge and industrial solvents were found at the site and removed from the site and properly disposed of. The PSA investigation revealed the presence of hazardous waste on the site and the fact that these wastes had the potential to escape into the environment. Due to the fact that ground water wells are used by local residents as a potable water source, the site was designated as an inactive class 2 hazardous waste site in 1995. Since NYSDEC was

unable to identify responsible parties who could undertake additional investigations and remediation, work on the site was begun using the NYS superfund in 1997. After further study and capping, a plan of action was devised and implemented through this present contract.

Storm water management/ erosion/ sediment control for this project falls under NYSDEC SPDES general permit GP-02-01 for storm water discharges from construction activities.

The site presently allows the north pond to drain from the northeast corner of the property by overflow into an intermittent streambed.

After review of the plans and a visit to the site by our consultant Rod Prosser of Lakeside Engineering, he felt that at a minimum, the soil and erosion control methods illustrated on the attached plan covers a 50 year magnitude storm occurrence.

Perimeter silt fence as shown on the plan drawings must occur prior to any substantial work on the site. No earthwork should occur until the silt fence is installed and sediment trap ST-1-A is constructed. It may be necessary to hydro axe a path through the dense perimeter underbrush before these controls can be installed.

Diversion ditches will be constructed to channel any surface water away from the construction site. This effect will minimize the amount of water in the ponds to be dealt with.

As previously stated in this work plan one individual from Patrick forces will be assigned to inspect all erosion/ sediment control measures and make any repairs or corrections as needed. This individual will be responsible to monitor controls on a daily basis and to create a log of occurrences.

Patrick will clean out, adjust or expand any control measure that does not perform as intended.

Patrick will maintain a weather station at the jobsite measuring temperature, humidity, wind speed and amounts of rainfall occurrences. Also a NOAA dedicated weather forecasting radio will be kept on site.

Weather will also be monitored real time from the internet forecasting services. All weather forecasts will be evaluated as to how they may affect the jobsite and work will proceed accordingly.

Existing vegetation will be maintained on site for as long a period as feasible in relation to accomplishing the work. Temporary seeding and mulching will be performed in an effort to minimize the exposed soil as much as practical in performing the work. Temporary jute mesh may need to be placed in order to protect against washouts in certain locations.

No sediment or turbidity will be allowed to escape into the surrounding environment. If turbidity is discovered then greater measures must be implemented to remedy the problem (i.e. replace silt fence and staked bales with a rock filter dam or install the filter dam just behind the fence and bales).

These storm water management and erosion controls will be installed and maintained from prior to the beginning of operations on site up to the winter shutdown period. If growth has not been established by then additional heavy mulching would be one way to attempt to protect against erosion during the winter period. All control elements would be cleaned and rebuilt prior to winter shutdown. In closing, we wish to state that Patrick Constructors Inc. realizes the seriousness of maintaining storm water management on this project. The whole objective of this project is to minimize storm water from flowing through or across the landfill mound so as not to carry contaminants away from the site.

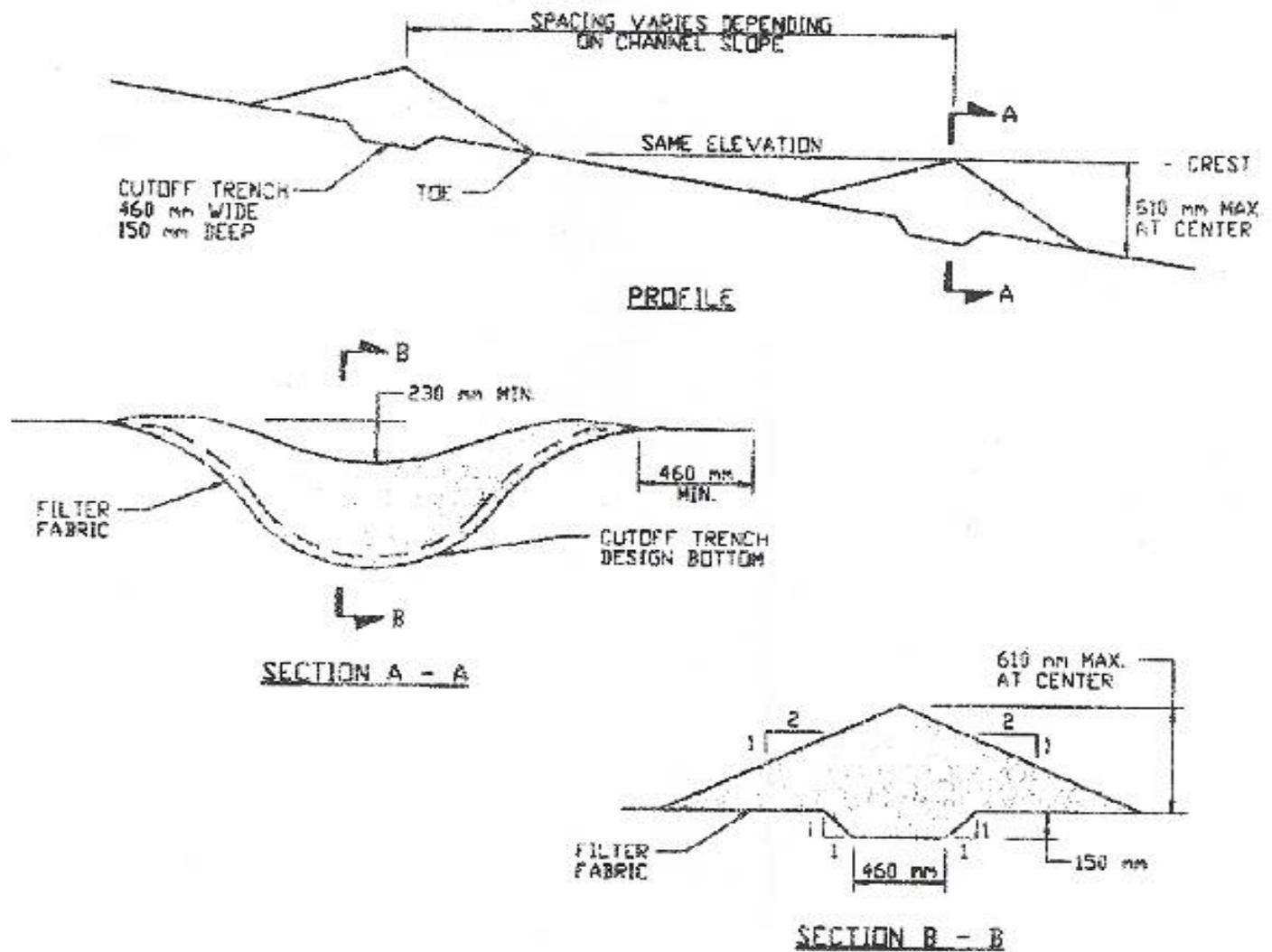
8.0 Installation of the 40 mil LLDPE Liner and Composite Drainage Net

This work will be preformed by a subcontractor “Chenango Contracting”, a certified NYS MBE business with the required credentials and experience. Liners

are their business. A full resume and list of key personnel will be included with the submittal package for these materials. All personnel employed on the site by Chenango Contracting will be required to have had 40 hour Hazwoper training. The same level of PPE will be required of Chenango's men as what Patrick employees will be required for the time the liner installation takes place, should it be necessary. Chenango forces will be responsible to weld and vacuum test the field seams of the liner and composite drainage net. Perform all field destructive testing coupon sampling, performance testing of the samples by a third party accredited testing laboratory. All conformance testing of all Geosynthetic materials will be done for Patrick by a third party accredited Geosynthetic laboratory. More details for installation of the geosynthetics will be supplied and addressed in a full submittal package at a later date.

9.0 Soil Usage and Balancing Plan

During the bidding stages for this project, Patrick had performed a computerized takeoff of the project cuts and fills as displayed on the project plans contours. Our estimate yielded between 5,00 and 10,000 cubic yards of fill will be generated beyond what the plans indicate is required to establish contours. It was stated at the pre-bid meeting for the project that no fill was required to be imported or exported. Without guidance from NYSDEC the only plan we would have would be to place this fill on top of the landfill mound prior to top soiling to achieve greater contours than what is indicated in the plans. Afterward, a shop drawing submittal detailing calculated cuts and fills, soil processing, backfill, barrier protection and overall soil handling to determine actual excess materials and how Patrick proposed to handle it, will be submitted.



CONSTRUCTION SPECIFICATIONS:

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLANS.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOP OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 460 mm BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.
6. STONE USED SHALL BE 50 mm TO 380 mm IN SIZE (NYSDD? LIGHT STONE FILL), SECTION 620-2 OF THE NYSDD? SPECIFICATIONS.
7. MAXIMUM DRAINAGE AREA IS 0.8 ha. LARGER DRAINAGE AREAS WILL REQUIRE LARGER CHECK DAMS DESIGNED TO ACTUAL RUNOFF.

STONE CHECK DAM (DITCH) NOT TO SCALE

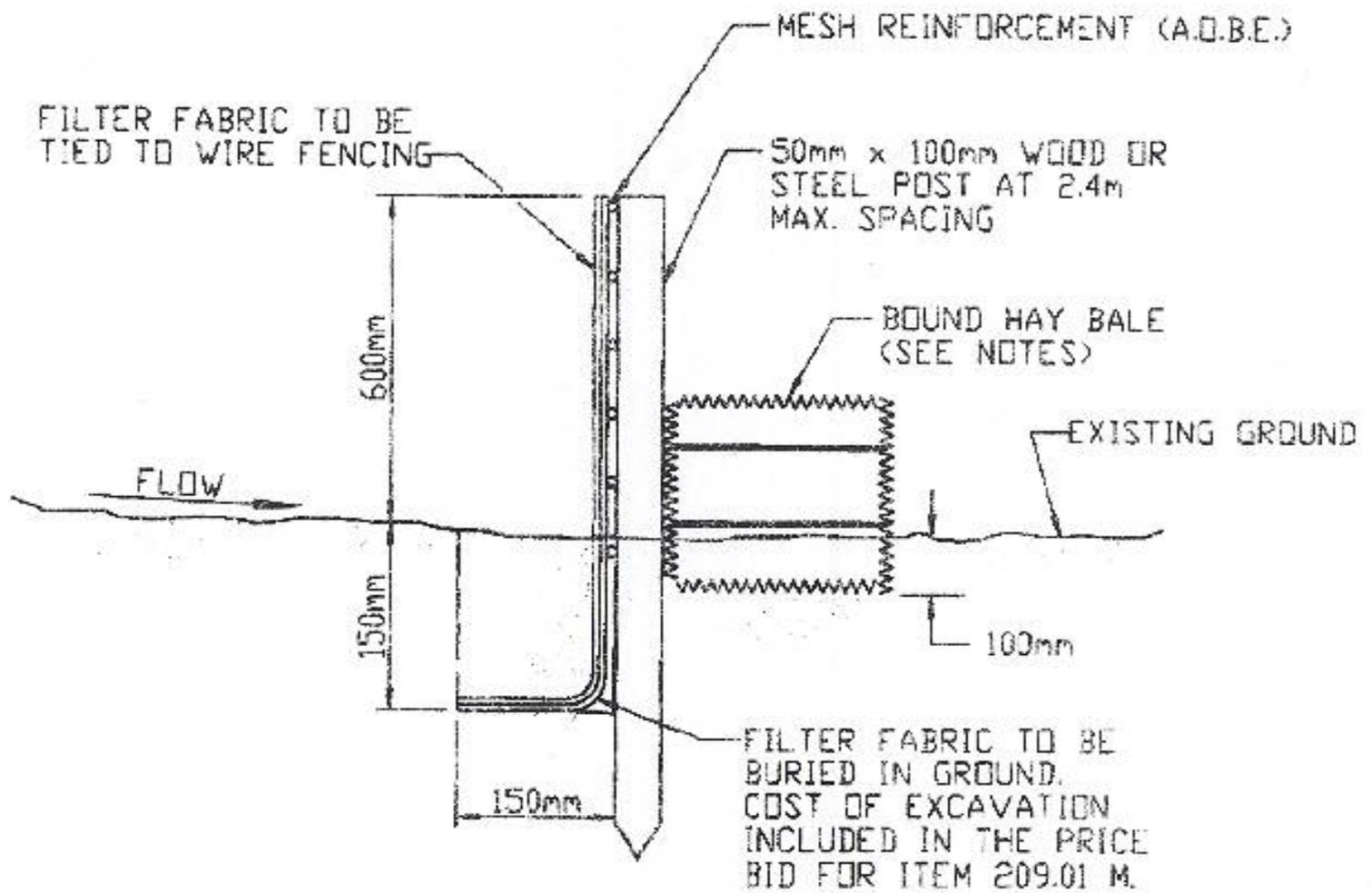


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FIGURE NO.
0011

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SILT FENCE
NOT TO SCALE



LAKESIDE ENGINEERING, PC

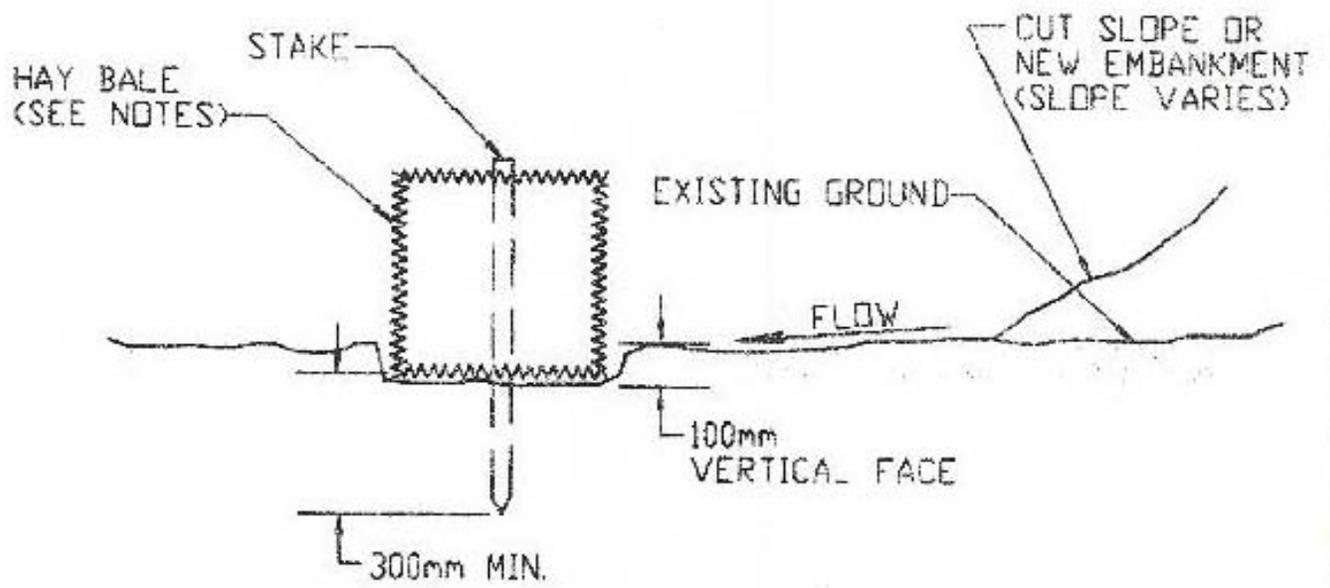
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FIGURE NO.

0010

REVISED

ISSUE DATE 5/06



BEDDING DETAIL

NOT TO SCALE



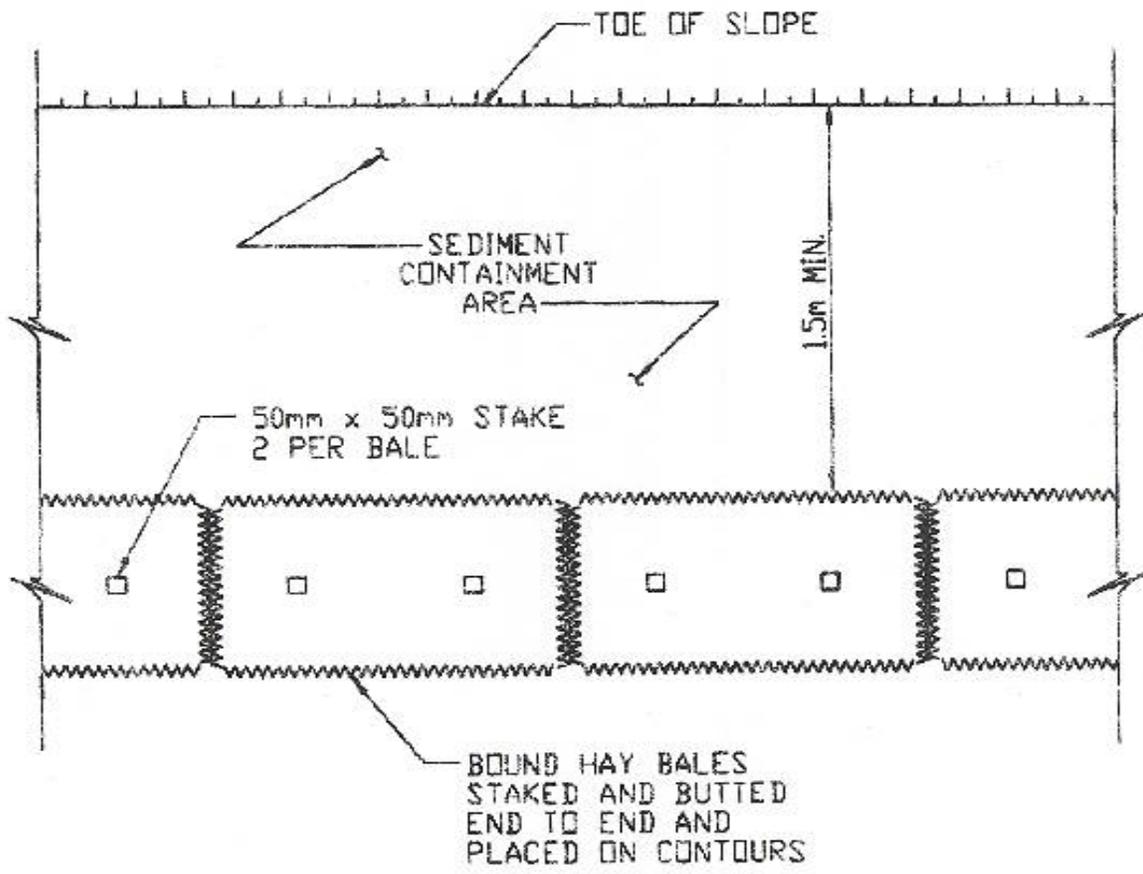
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FIGURE NO.

005

REVISED

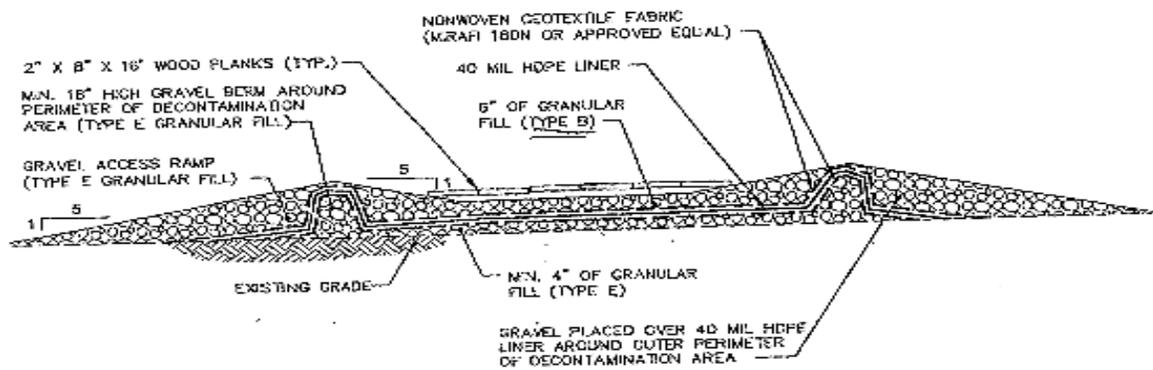
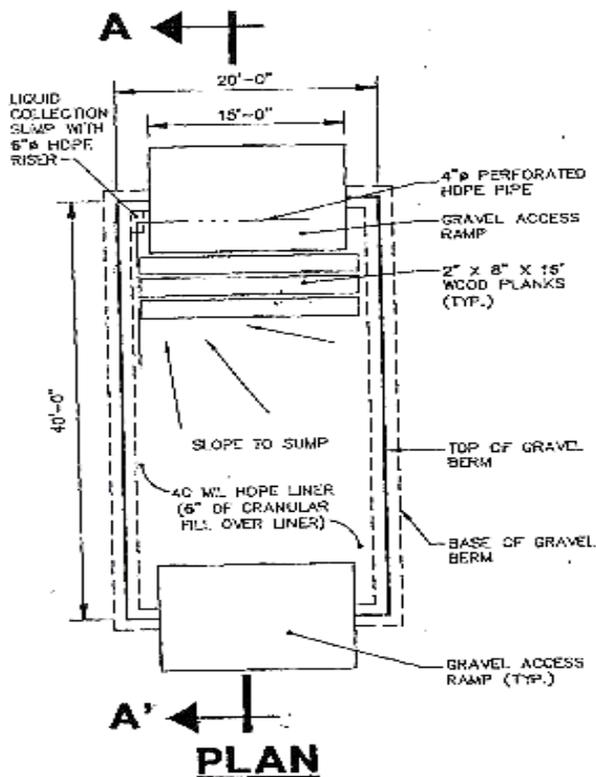
ISSUE DATE:



PLAN

HAY BALE
NOT TO SCALE

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		ISSUE DATE 5/06



NOTES:

- DECONTAMINATION AREA SHALL HAVE A GENERAL SLOPE TOWARD A COLLECTION SUMP TO FACILITATE THE COLLECTION OF WASH FLUIDS. FLUIDS SHALL BE PUMPED FROM COLLECTION SUMP INTO 55 GALLON DRUMS OR A TEMPORARY STORAGE TANK (IF NECESSARY).
- UPON COMPLETION OF CONSTRUCTION ACTIVITIES, THE DECONTAMINATION AREA, INCLUDING HDPE LINER, IS TO BE REMOVED BY THE CONTRACTOR FOR DISPOSAL.
- WOOD PLANKS SHALL BE PLACED ABOVE THE GRAVEL DRAINAGE LAYER THROUGHOUT THE WORKING SURFACE OF THE DECONTAMINATION AREA TO PROVIDE A STABLE SURFACE FOR VEHICLES AND EQUIPMENT TO BE DECONTAMINATED.
- PERSONNEL DECONTAMINATION AREA SHALL BE OF SIMILAR DETAIL AS SHOWN ABOVE.

Patrick Concrete
Constructors Inc.

Project:
ETE Sanitation and Landfill Remediation
Broughton Road
Gainsville Wyoming County, New York

Date:
May 10, 2006

