Environmental Consultants

3012 U.S. Highway 301 North
Suite 700
Tampa, FL 33619

813-621-0080
FAX 813-623-6757

SCS ENGINEERS

TO Florida Department of Environmental Protection
Southwest District, Solid Waste Section
3804 Coconut Palm Drive
Tampa, Florida 33619

DATE December 17, 1998
JOB NO. 0995029.14
ATTENTION Mr. Kim Ford, P.E.
Re: CQA Certification for the Construction of The Tire Chip Trenches at the Southeast County Landfill, Hillsborough County, Florida

WE ARE SENDING YOU

■ Attached ☐ Under separate cover via _____

☐ Shop drawings ☐ Prints

☐ Copy of letter ☐ Change Order

The following items: ☐ Plans ☐ Samples

☐ Specifications ☐ _____

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
JAN 15 1999
SOUTHWEST DISTRICT TAMPA

COPIES	DATE	DESCRIPTION
1	10/20/98	GLOBEX Engineering & Development, CQA Certification

THESE ARE TRANSMITTED as check below:

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REMARKS _____

COPY TO _____

SIGNED: Richard A. Siemering, Senior Project Engineer

If enclosures are not as noted, kindly notify us at once.

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Engineering & Development

20 October 1998

Mr. Jerry Pinder
ERC General Contracting Services, Inc.
13330 W. Colonial Drive #140
Winter Garden, Florida 34787

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

JAN 1 5 1999

SOUTHWEST DISTRICT
TAMPA

Subject: CQA Certification Letter for Construction of Tire Chip Trenches at Southeast Landfill

Dear Mr. Pinder,

Globex Engineering & Development, Inc. (Globex) is pleased to submit this construction quality assurance (CQA) certification document for the construction of tire chip trenches at the Southeast Landfill located in Hillsboro County, Florida.

Globex began the CQA monitoring of the construction of trenches on 27 August 1998. The work was completed on 18 September 1998. Mr. Gerald Earnest was the CQA Manager at the Southeast Landfill. As part of Globex CQA monitoring services, I had daily communications with the CQA Manager to become informed of the field activities. I also inspected construction activities on 10 and 11 September 1998. The CQA monitoring services were carried out in accordance with the CQA plan previously approved by the owner. The tire chip trenches were constructed in accordance with the project specifications and technical determinations by SCS Engineers (the designer) during the construction period.

Globex prepared daily reports documenting construction progress, construction procedures, and matters related to the construction of the tire chip trenches. Following completion of the project, the beginning and end points of each trench were surveyed by a registered land surveyor. The survey information has previously been provided to ERC General Contracting Services, Inc. (ERC) by the surveyor.

Attached to this certification letter, Globex has included the daily reports prepared by the CQA Manger, geotextile certified properties by the manufacturer, tire chip trench logs prepared by the CQA Manager, submittal transmittal forms and enclosures submitted by ERC, and meeting minutes and field orders by SCS Engineers. Globex also prepared photo documentation of the construction activities. This information is not included in the attachment; however, Globex will provide the photo documentation at your request.

1055/F980158

7499 West Atlantic Avenue, Suite 208 Delray Beach, Florida, USA 33446
TEL: (561) 638-8800 FAX: (561) 637-7663 Email: globex@gate.net

Please contact me at (561) 638-8800 if you have any questions.

Sincerely,

ali Khatami

Ali Khatami, Ph.D., P.E.
Principal

Attachment

1055/F980158

Florida Department of Environmental Protection
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

DEP Form # 62-701.900(2)
Form Title Certification of Construction Completion
Effective Date May 19, 1994
DEP Application No. _____ (Filled by DEP)

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No: 35435-001-SC County: HILLSBOROUGH

Name of Project: SOUTHEAST COUNTY LANDFILL

Name of Owner: HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS

Name of Engineer: DESIGN: SCS ENGINEERS: CERTIFICATION: GLOBEX ENGINEERING

Type of Project: LEACHATE COLLECTION SYSTEM CONSTRUCTION AND IMPROVEMENTS, TIRE CHIP TRENCHES

Cost: Estimate $ 123,000 Actual $ _____

Site Design: Quantity: _____ ton/day Site Acreage: 35 Acres

Deviations from Plans and Application Approved by DEP: MODIFICATION NUMBER 35435-002

Address and Telephone No. of Site: C.R. 672, 8 MILES EAST OF S.R. 301 BALM, FLORIDA

Name(s) of Site Supervisor: MATT MATHEWS, JOHN WONG

Date Site inspection is requested: _____

This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction

Permit No.: 35435-001-SC Dated: AUGUST 14, 1998

Date: OCTOBER 20, 1998 ali Khatam
Signature of Professional Engineer

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
JAN 15 1999
SOUTHWEST DISTRICT TAMPA

EXHIBIT I

DAILY LOGS

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Daily Report Log

Site: Southeast Landfill, Hillsbrough County
Project Number:
Date: 8-27-98 - THURSDAY
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at: 7:00 am
Weather conditions: CLEAR
Left site at: 9:00 pm

I RECIEVED SUBMITTALS (COPIES) T1 - T5 FROM J. PINDER. I did NOT RECIEVE THE MANUFACTURE QUALITY CONTROL TESTING AND DATA SHEET FOR THE GEOTEXTILE AS REQUIRED BY THE CQA PLAN - WHEN I ASK MAT FOR his RECOMMENDATION HE CALLED KARL WITH SCS - KARL told ME to GO AHEAD WITHOUT IT AND IF NECESSARY he would MODIFY OR DELETE PORTIONS of the SPEC'S PERTAINING to THE FABRIC. KARL SAID his ONLY CONCERN WAS WITH the OPENINGS IN THE FABRIC. JERRY PINDER SAID he would ASSUME RESPONSIBILITY if the MATERIAL FAILED to MEET the SPEC'S.

ERC STARTED REMOVING THE SAND COVER at the South END of TRENCH #19 - J. PINDER dug up AN ELECTRICAL SOURCE which PROVIDES POWER to the 2 lift STATIONS. J. PINDER CALLED AN ELECTRICIAN to REPAIR the CABLE. THE ELECTRICAL PANEL WAS TAGGED AND LOCKED to PREVENT AN ACCIDENTAL ELECTRICAL SHOCK to ANY ONE WORKING AROUND THE DAMAGED CABLES.

Cont.

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Daily Report Log

Site: Southeast Landfill, Hillsbrough County
Project Number:
Date: 8-27-98
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at:
Weather conditions:
Left site at:

GREG - (REPRESENTING WASTE MANAGEMENT) SAID IT WAS NOT NECESSARY TO DIG BACK THAT FAR AND TO STAY AWAY FROM THE POWER LINES - J. PINDER ASK IF THERE WERE ANY ADDITIONAL ELECTRICAL LINES, WATER LINES, ETC THAT WERE NOT INDICATED ON THE PLANS. - GREG SAID YES AND IDENTIFIED A FORCE MAIN AND AN ELECTRICAL LINE ROUGHLY ON THE PLANS. J. PINDER REMOVED THE SAND LAYER DOWN TO THE CLAY ON THE SOUTH END OF #17 - THEN REMOVED THE SAND COVER ON THE NORTH END OF #17 - THE CLAY ELEVATIONS WERE 1.50 FEET DIFFERENT - WITH THE SOUTH END BEING THE LOWER OF THE TO. WITH THIS INFORMATION WE CALLED SCS - (WE BEING MAT, GREG, AND MYSELF) WE SPOKE WITH KARL & LARRY AND DESCRIBED WHAT WE HAD - THEY INDICATED THE DIRECTION OF THE FALL WAS NOT IMPORTANT AND TO KEEP THE DITCH FALL UNIFORM. - (A PHONE CONSERSATION RECORD WAS REQUESTED FROM SCS ABOUT THE CONVERSATION BY MAT) GREG PREPARED A RECORD (SEE ATTACHED) ALSO. WE WENT BACK TO J. PINDER AND DISCUSSED WHAT WAS SAID AND HE WENT BACK TO WORK

cont ..

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Daily Report Log

Site: Southeast Landfill, Hillsbrough County
Project Number:
Date: 8-27-98
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at:
Weather conditions:
Left site at:

As J. Pinder excavated at the North end of #17 and getting close to the Leachate collection pipe - water began running into the hole - J. Pinder stopped and prepared a sump and placed a 3" pump to remove the water - Moving a few feet ahead he began diggin again - removing the sand within about 3' of the Designed elevations. → 11:30 to 3:45) At 4:00 J. Pinder began diggins the bottom portion of the trench → A total of 115' was dug, Filled with tire chips and wrapped with fabric between 4:00 - and - 8:30 pm. The remainins portion of the open ditch was backfilled now with the completed portion to met the excavation plan requirements.

J. Pinder will have a Bigger Backhoe comming in on Monday to assists with the trenchins.

MAT, and Gees stayed on site until the end @ 9:00

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Daily Report Log

Page / of /

Site: Southeast Landfill, Hillsbrough County
Project Number:
Date: 8/31/98 - MONDAY
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at: 9:30 am
Weather conditions: CLEAR
Left site at: 7:00 pm

JERRY P, RON N., CLIFF H, 2 LABORS - MAT, FIRES AND MYSELF-
2 BACKHOES 690 SD & 490 JD, L70C VOLVO LOADER
550 JD DOZER - (D250 ART. TRUCK - WASTE MANAGEMENTS)
-> TRENCH #2 STARTING @ WEST END & THE EAST 515' FEET COMPLETING TRENCH AND BOTH ENDS.
STARTED STRIPPING TRENCH #5
STOCKPILED SOME TIRES NEAR TRENCH
USED ROLL # 2108528 2-09 (ROLL WAS SHORT 40') & 2108528 2-02 (USED 200' OF THIS ROLL)
IN TRENCH #2

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Daily Report Log

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9/1/98 TUESDAY
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at: 7:30 am
Weather conditions: CLEAR AND HOT
Left site at: 6:30 pm

J. PINDER, RON NEALY, MARK, J. EARNEST, GREG, MAT, 2 LABORS

STARTED AND COMPLETED TRENCHES 5, 3, & 4

* I DISCUSSED THE BACKFILLING OF THE TRENCHES WITH J. PINDER AND USING UNSUITABLE MATERIALS, SUCH AS CLAY BALLS AND BALLS OF GRASS - CONTINUED USE OF THIS MATERIAL WILL RESULT IN NON-COMPLIANCE.

TRENCH #5 - ROLL # 21085282-02 - 160' AND ROLL # 21085288-01 TOTAL TRENCH APP 332 FEET

TRENCH #3 - SEAM @ 156' FROM EAST END
TOTAL LENGTH 391'

TRENCH #4 - SEAM @ 125' FROM SOUTH END
TOTAL LENGTH 293'

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Daily Report Log

Page 1 of 1

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9/2/98 ~~TUESDAY~~ WED.
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at: 8:00 am
Weather conditions: CLEAR
Left site at: 3:00 pm

ERC STARTED EXCAVATING TRENCH # 1
USED ROLL # 21085282-08
INSTALLED 360' OF TRENCH

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Daily Report Log

Page 1 of 1

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9/3/98 THURSDAY
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at: 8:00 am
Weather conditions: RAINING
Left site at: 9:00 am

THE WEATHER WAS BAD.
ERC DID NOT WANT TO OPEN ANY NEW TRENCHES
WITH THE THREAT OF RAIN IN THE AREA.

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Daily Report Log

Page / of /

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9/4/98 FRIDAY
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at: 8:00 am
Weather conditions: OVERCAST
Left site at: 5:30 pm

ELC EXCAVATING TRENCH # 11 - SOUTH to NORTH
STARTING @ EXISTING LEACHATE COLLECTION LINE.
THE TRENCH BOTTOM FOLLOWED THE CLAY FOR THE 1ST 150'
AND THEN THE depth of the CLAY WAS 2-3 1/2' BELOW
THE TRENCH BOTTOM -
THERE IS SOME CONCERN ABOUT THE TRENCH ELEVATION
IN RELATIONSHIP WITH THE CLAY ELEVATION. -
MAT SAID HE'LL ARRANGE A MEETING FOR TUESDAY.

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Daily Report Log

Page / of /

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9/8/98 - TUESDAY
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at: 8:00 am
Weather conditions: CLEAR, AND PARTLY CLOUDY
Left site at: 5:30 pm

SPOKE WITH J. PINDER ON THE PHONE THIS MORNING - HE WANTS TO START REMOVING THE OVERBURDEN ON TRENCH #12 - AND LEAVE #11 AS IS UNTIL SCS DECIDES WHAT THEY WANT TO DO ABOUT IT.

THE AREA RECEIVED RAIN OVER THE WEEKEND - SOME STANDING WATER.

MAT SAID WE HAVE A MEETING THIS MORNING @ 9:00 IN HIS OFFICE - WITH SCS - TO DISCUSS THE TRENCHES.

AT THE MEETING - LARRY WITH SCS SAID TO FOLLOW THE C/M'S & 4" OF SAND - SPOT CHECK BOTH ENDS OF #11 - THE SPOT CHECKS REVEALED THAT THE TRENCH WAS OK - LARRY GAVE APPROVAL TO BACKFILL #11 -

J. PINDER CREATED A SUMP AT THE END OF THE TIRE CHIPS ON #17 - WILL LEAVE PUMP THERE TO REMOVE WATER WHICH IS IN THE TRENCH

SOME RAIN @ 5:30 PM AS I WAS LEAVING.

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Daily Report Log

Page / of /

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9/9/98 - WEDNESDAY
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at: 8:00 am
Weather conditions: CLEAR
Left site at: 8:00 pm

ERC - LEVELING AND GRADING BACKFILLED #11.
REMOVING OVERBURDEN FROM #12 - BEGIN TRENCHING
#12 @ 10:00 am -> HAD to put a pump @ L.C.R. Pipe.
- ERC STOCKPILING TIRE CHIPS NEAR #12 NE END
Stopped scan from Trenches 18, 19
#12 - 410' found force main HDPE Pipe -

MEMORANDUM

TO: John Wong, Waste Management
COPY: Matt Matthews, HCSWMD
Jerry Pinder, ERC
FROM: Ali Khatami, Globex
DATE: 11 September 1998
SUBJECT: Incident Report

At approximately 7:00 p.m. on 10 September 1998, a 6-in. diameter leachate force main crossing Trench 18 was damaged during excavation of Trench 18. The location of the damage is approximately 15 ft west of the excavated area for Trench 18.

The pump was immediately shut off by Mr. Matthews. The area around the pipe was immediately bermed off to control water reaching the surface. Approximately 150 gallons of water exited the pipe and contained within the bermed area.

ERC has scheduled for a repair crew arriving on site this morning to repair the pipe. The repair is expected to be completed within a few hours since the extent of the damage is limited to two small holes on the upper surface of the pipe.

Following completion of the repair, the soil in the vicinity of the damaged pipe will be excavated and transported to the landfill active face. The completion of the above described work will be reported in my daily report.

* * *

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Daily Report Log

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9/10/98
CQA Personnel: Gerald K. Earnest (Jerry), Ali Khatami

Arrived on site at: 9:10 a.m.
Weather conditions: cloudy
Left site at: 8:00 p.m.

- ERC is benching trench 19. Grass is cleared from the surface of Trench 18 area.
- ERC excavated sand at the gravel trench to expose the gravel wrap. A pump was set up to pump water from the gravel trench. The existing geotextile on the tire chips trench was opened to connect the tire chips to the gravel.

ERC began placement of the tire chips at 10:10 am. The sand is removed to the top of the clay and sand was placed back in the trench to provide the 4" requirement.

As of 12:30 pm, 240 ft of trench was completed. Approximately, another 30 ft more to complete Trench 19.

ERC off for lunch at 12:30 pm.

ERC began work at 1:00 pm by continuing the trench excavation

ERC's large back hoe began benching Trench 18 from the west (north) end of Trench 18.

ERC reached the gravel trench at the east end of Trench 19 at 3:45 pm. The gravel trench was exposed for connections. Sand around the gravel trench was cleared. The geotextile around the gravel was opened and tire chips were placed against

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Daily Report Log

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9/10/98
CQA Personnel: Gerald K. Earnest (Jerry), Ali Khatami

Arrived on site at:
Weather conditions:
Left site at:

gravel. A minimum of 12 in. of overlap was observed between the existing geotextile and the new geotextile.

At approximately 4:00 PM a discussion took place between ERC, the County and SCS regarding the second option for constructing tire chips trenches as noted in the 9 Sept. 1998 meeting minutes. The outcome of the conversation is as follows:

- ERC will locate the two ends of the trench first, if the trench is located between two gravel trenches; and
- ERC will locate only the interior end of the trench if the tire chip trench ends at the toe of the perimeter slope.

According to the agreement in the 9 Sept. 1998 meeting minutes, the top of clay, bottom of trench, and top of tire chips will be noted on the wood posts installed at each end of the trench.

The length of the trench was measured at 389 ft. The width and depth of the trench meet the minimum 2 ft dimensions.

ERC began back filling the trench at 4:45 PM.

ERC began excavating tire chips Trench 18, which is at a gravel

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Daily Report Log

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9/10/98
CQA Personnel: Gerald K. Earnest (Jerry), Ali Khatami

Arrived on site at:
Weather conditions:
Left site at:

trench.
ERC began placing tire chips in Trench 18 at 5:30 pm. Dewatering
at the interior end of Trench 18 is in progress to remove
the water coming out of the gravel trench.
ERC excavated soil around a 6 in. force main crossing Trench 18
near the south end of the trench. During an attempt to pull
the back hoe out of the trench, the bach hoe backet
damaged the 6-in fore main at a location west of Trench
18. Matt immediately shut the system off and soil
berm was constructed around the damaged area to contain
any water coming out of the ~~trenching~~ damaged area.
ERC completed placement of tire chips in Trench 18 up to the
crossing force main location. The remainder of the
trench will be completed tomorrow.
ERC began covering the tire chips at 7:10 pm. By
8:00 pm the entire Trench 19 was covered. Trench 18
was covered up to the crossing force main with the
exception of 20 ft at the northern end of Trench 18. ERC
indicated that if was too dark and they will cover the

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Daily Report Log

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9/10/98
CQA Personnel: Gerald K. Earnest (Jerry), Ali Khatami

Arrived on site at:
Weather conditions:
Left site at:

tire chips trench in the area first thing in the morning. Another reason indicated by ERC was that ERC wanted to ensure that all clay residuals are removed from the trench during the day light before the trench is backfilled. The clay at the southern end of Trench 18 did not remain exposed during the night. The trench in the area was partially backfilled to cover the clay.

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Daily Report Log

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9/11/98
CQA Personnel: Gerald K. Earnest (Jerry), Ali Khatami

Arrived on site at: 7:00 am
Weather conditions: cloudy
Left site at: 6:00 pm

ERC began work with placing soil over the tire chips at the northern
end of Trench 18. ERC was informed of several large masses
of clay in the trench that were to be removed prior to the
backfilling of the trench.
Matt indicated that the tire chips at the northern end of Trench 18
were left open overnight and that would be unacceptable. ERC
indicated that according to agreements between the parties
involved in the project, the open trench is considered clay surface
being exposed in the trench in areas that would be covered
with tire chips at a later date. This matter to be clarified.
ERC removed the clay masses from the area at the northern end of
Trench 18 before backfilling the area.
Globex inspected the remaining tire chips pile near the construction
area. The small pipe was contaminated with soil. Globex
requested that the tire chips coming to the construction area
be piled adjacent to the contaminated pile and not over it.
ERC is currently hauling tire chips to the construction area.
ERC began dewatering the area at the south end of Trench 18.
According to observations during excavation of the area on

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9/11/98
CQA Personnel: Gerald K. Earnest (Jerry), Ali Khatami

Arrived on site at:
Weather conditions:
Left site at:

10 Sept. 1998, the clay surface drops in elevation toward the
south end of Trench 18. The excavation had been backfilled
with several feet of sand before close of the day on 10 sept.
1998.
ERC completed placement of tire chips in Trench 18 at 10:45 am.
ERC began backfilling the trench shortly after completion of the
tire chips placement. The length of Trench 18 was measured
at 193 ft. A 2x4 stake was installed at the south end
of Trench 18.
The repair crew of US. Filter arrived on site at approximately
11:00 am.
ERC is preparing to begin Trench 10.
ERC begins excavating the west end of Trench 10 at 11:35 am. to
locate clay surface. Trench 10 will be located between two
gravel trenches.
The repair crew completed the pipe repair work at approximately
2:00 pm. The pump was started to check the repair work for
any leaks. No leaks was observed. ERC is currently
excavating soil from around the pipe and transporting the

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Daily Report Log

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9/11/98
CQA Personnel: Gerald K. Earnest (Jerry), Ali Khatami

Arrived on site at:
Weather conditions:
Left site at:

soil to the active area.

The representatives of the county and Waste Management observed soil excavation and removal from the pipe repair area. Three truck loads of soil was removed from the area adjacent to the repair location. The excavated soil was transported to the landfill active area.

Placement of tire chips was accomplished to the midpoint of Trench 10 by 5:00 pm. The west end of Trench 10 was connected to the gravel trench. The length of the trench completed today was measured at 234 ft.

ERC covered Trench 10. The end of tire chips was covered with excess geotextile to continue work the following work day.

ERC personnel will be on site tomorrow to continue the backfilling of trenches

Globex and ERC departed from the site about 6:00 pm.

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Daily Report Log

Page / of /

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9-15-98 ~~Monday~~ TUESDAY
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at: 7:30 am
Weather conditions: – Began raining @ 4:00pm
Left site at: 5:00

ERC - Began @ TRENCH # 9 - 130' FROM START
POINT - FINISHED # 9 - TOTAL FEET = 380'
EXCAVATED AND PLACED CHIPS IN TRENCH
8 = TOTALING 390' FEET.
MADE THE TRENCH CONNECTION @ # 17 NORTH END.
ERC - HAULING CHIPS + STOCKPILING

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Daily Report Log

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9-14-98
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at: 7:30 am
Weather conditions: CLEAR
Left site at: 5:30

ERC went back to working on trench #10
J. Pardia left site @ 10:00 - attend meeting.
+ Thursday 389' of #19 to complete + 120' of #18
+ Friday 75' of #18 = total 195' for #18 + 230' of #10.

- Trenches excavating and placing tire chips in trench #10 @ 11:30 - Trench has 3 splices - clay elevation is deepen in the middle of trench and rise at each end - 1-1½'

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Daily Report Log

Page 1 of 1

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9-16-98 TUESDAY
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at: 7:30 am
Weather conditions: OVERCAST
Left site at: 6:15

ECC Pumping water out of trench # 7 - approx 100' Lar overburden removed - The trench was installed by 11:30 with the exception of the liner @ the South end. Trench totaled 327'. " (Completed liner @ 5:45) Installed trench #14 - the southern end may need to be extended - upon locating the power line buried in that area. #14 Total = 345'

Delivered 9-16-98 - 2 Rolls of geo-textile - "tri chem"
Roll # 21085274 FW401 } Both rolls have the
Roll # 21085274 FW401 } same ID #

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Daily Report Log

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9-17-98 Thursday
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at: 7:30 am
Weather conditions: Cloudy - good chance of RAIN
Left site at: 6:30 pm

ERC BEGAN EXCAVATING TRENCH #15 -> Completed Trench #15 totaling 334'.

ERC then excavated trench #16 -> 1:00 - 5:30 Trench totaled 295'

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Daily Report Log

Site: Southeast Landfill, Hillsbrough County
Project Number: 1055
Date: 9-18-98 Friday
CQA Personnel: Gerald K. Earnest (Jerry)

Arrived on site at: 7:00 am
Weather conditions: Partly Cloudy
Left site at: 6:30 pm

ELC began excavating trench # 6 — trench #6 totaled 365'

ELC excavated trench # 13 which totaled 445' — All trenches are installed as indicated on plans.

There are some tie ins on cell 6 which will be excavated - fabric opened and clays placed directly on graded. Probably next week.

The approx. total length of trenches = 6,819 Feet

GEOTEXTILE CERTIFIED

PROPERTIES

Spec Sheet

Filterweave 401 Technical Data 61709

Product Description

Filterweave 401 is a woven geotextile composed of polypropylene filaments which are formed into a stable network such that the filaments retain their relative position. The fabric is inert to biological degradation and naturally encountered chemicals, alkalies, and acids. Filterweave 401 conforms to the property values listed in the following table.

Property	Test Method	Unit	Minimum Average Roll Value	
			MD	CD
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.45 (325)	0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	26	15
Mullen Burst Strength	ASTM D 3786	kPa (psi)	2756 (400)	
Puncture Strength	ASTM D 4833	kN (lbs)	0.51 (115)	
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.40 (90)	0.22 (50)
Apparent Opening Size	ASTM D 4751	U.S. Std. Sieve	40 (0.42 mm)	
Percent Open Area	COE-02215-86	%	20	
Permittivity	ASTM D 4491	sec^{-1}	2.14	
Permeability	ASTM D 4491	cm/sec	0.142	
Flow Rate	ASTM D 4491	lpm/m2 (gpm/ft²)	5907 (145)	
UV Resistance after 500 hours	ASTM D 4355	% strength retained	90	

Filterweave 401 Packaging

STYLE NUMBER	FW401/12/300
ROLL DIMENSIONS - METERS (FEET)	3.7 x 91.5 (12 x 300)
SQUARE METERS (SQUARE YARDS) PER ROLL	334 (400)
ESTIMATED ROLL WEIGHT - KG (LBS)	72 (158)

MD - Machine Direction
CD - Cross-machine Direction

roll diameter 12½ inches

TC Baycor

August 27, 1998

Re: TC Baycor 61709/FW401
Quantity: 11,480 yds
Order #: 56442

T & M Converting
192 Lee st.
Cornelia, Ga. 30531
Att: Brandy

Dear Sir:

This is to certify that TC Baycor 61709/FW401 is a woven fabric of polypropylene filaments. These filaments consist of at least 85% propylene and contain stabilizers and inhibitors to make the material resistant to ultraviolet and heat deterioration. Below are the minimum values TC Baycor 61709/FW401 will meet or exceed.

TC Baycor 61709/FW401				
Property	Unit	Test Method	Minimum Average	
Grab Tensile Strength	lbs	ASTM D4632	Warp	325
			Fill	200
Grab Elongation @ Ultimate Strength	%	ASTM D4632	Warp	26
			Fill	15
Mullen Burst Strength	psi	ASTM D3786	400	
Puncture Strength	lbs	ASTM D4833	115	
Trapezoid Tear Strength	lbs	ASTM D4533	Warp	90
			Fill	50
AOS	US Sieve No.	ASTM D4751	40	
Water Flow Rate	gpm/ft²	ASTM D4491	145	
Permittivity	sec^{-1}	ASTM D4491	2.140	
Permeability	cm/sec	ASTM D4491	0.142	
UV Resistance	% Strength Retained	ASTM D4355	90% @ 500 HRS	
Wide Width Tensile @ 2% Strain	lbs/in	ASTM D4595	Warp	18
			Fill	25
Wide Width Tensile @ 5% Strain	lbs/in	ASTM D4595	Warp	30
			Fill	50
Wide Width Tensile @ 10% Strain	lbs/in	ASTM D4595	Warp	60
			Fill	90
Wide Width Tensile @ Ultimate Strain	lbs/in	ASTM D4595	Warp	175
			Fill	120

Sincerely,

Jerry Barnett
Quality Control Manager

Sworn and subscribed to before me this Thursday, August 27, 1998.

Jennifer Taylor MY COMMISSION EXPIRES FEB 16, 2001

TIRE CHIP TRENCH LOGS

GLOBEX
Engineering & Development

Southeast Landfill, Tire Chip Trench Log

DATE	TRENCH #	ROLL #	SPLICE @ FT	APPROX. LENGTH OF TRENCH
8-27-98	17	210P5288-03		70'
8-31-98	2	210852 82-09		360'
8-31-98	2	210P52 82-02		155'
9-1-98	5	210852 82-02		160'
9-1-98	5	210852 88-01		172'
9-1-98	3	210852 88-01		156'
9-1-98	3	210 P52 P		235'
9-1-98	4	210 852		78'
9-1-98	4	210 852		215'
9-2-98	1	210 852		360'
9-4-98	11	210 852		410'
9-8-98	17	210 852		190'
9-9-98	12	210 852		410'
9-10-98	19	210 852		389'
9-10-98	18	210 852		120'
9-11-98	18	210 852		75'
9-11-98	10	210 852		120'
9-14-98	10	210 852		378'
9-14-98	8	210 852		130'
9-14-98	9	210 852		250'
9-15-98	8	210 852		390'

GLOBEX
Engineering & Development

Southeast Landfill, Tire Chip Trench Log

DATE	TRENCH #	ROLL #	SPLICE @ FT	Approx. LENGTH OF TRENCH
9-16-98	# 7			328'
9-16-98	# 14			345'
9-17-98	# 15			334'
9-17-98	#16			295'
9-18-98	# 6			265'
9-18-98	#13			445'

SUBMITTAL TRANSMITTAL

FORMS

HILLSBOROUGH COUNTY DEPARTMENT OF SOLID WASTE
SUBMITTAL TRANSMITTAL FORM

Submittal No. 1B
Submittal Desc. H&S Plan Clarification

Contract No.: C-206-89
Contractor Name: Waste Management, Inc. of Florida
Description of Activity: Health & Safety Plan (02220, 1.04A)

Designated H&S officer on-site for ERC is Mr. Terry Pinder

Subcontractor or Supplier Name: ERC
Description of Material or Product: NA
Specification Reference H&S Plan

CONTRACTOR SUBMITTAL CERTFICATION

The attached submittal conforms to all requirements of the Contract Documents.

W. W. — 6/25/98
Authorized Contractor Representative — Date

The attached submittal does not conform to the requirements of the Contract Documents, and as such represents a substitution. The attached submittal includes the supporting documentation and the additional information required for acceptance of substitutions

Authorized Contractor Representative — Date

COUNTY and/or ENGINEER ACCEPTANCE OF SUBMITTAL

X — No Exceptions Taken
___ Make Corrections Noted
___ Amend – Resubmit
___ Rejected – Resubmit
(Initial One)

Remarks:

K. Selmo — SCS — 6-29-98
County or Engineer Representative — Organization — Date

CONTRACTORS REQUEST FOR INFORMATION

NO. T-1

OWNER:	Hillsborough County	No. Copies	1
ENGINEER:	SCS Engineers	No. Copies	1
CONTRACTOR:	Waste Managment Inc. of Florida	No. Copies	1
FIELD:		No. Copies	
OTHER:		No. Copies	

PROJECT DATA		CONTRACT DATA	
NAME:	TIRE CHIPS & LCRS Permanent Pump Station B	NUMBER:	
LOCATION:	Southeast County Landfill	DATE:	8-24-98
OWNER:	Hillsborough County	DRAWING NO.:	
OTHER:		SPEC. SECTION:	02220-1.04

CONTRACTOR'S QUESTION:

ERC IS PROVIDING THE 24 HR. NOTICE PRIOR TO EXCAVATION OF THE TIRE CHIPS TRENCHES.

BY: [signature] DATE: 8-24-98

ENGINEER'S REPLY:

NOTED — WORK NOT TO BEGIN UNTIL EXCAVATION PLAN APPROVED ON SUBMITTAL T-5 APPROVED

BY: K. Schmidt DATE: 8-25-98

HILLSBOROUGH COUNTY DEPARTMENT OF SOLID WASTE
SUBMITTAL TRANSMITTAL FORM

Submittal No. T-2
Submittal Desc. CQA

Contract No.: C-206-89
Contractor Name: Waste Management. Inc. of Florida
Description of Activity: TIRE CHIP TRENCHES -

Subcontractor or Supplier Name: ERC / GLOBEX
Description of Material or Product: CQA PLAN
Specification Reference

CONTRACTOR SUBMITTAL CERTFICATION

The attached submittal conforms to all requirements of the Contract Documents.

Authorized Contractor Representative — Date: 8-25-98

The attached submittal does not conform to the requirements of the Contract Documents, and as such represents a substitution. The attached submittal includes the supporting documentation and the additional information required for acceptance of substitutions

Authorized Contractor Representative — Date

COUNTY and/or ENGINEER ACCEPTANCE OF SUBMITTAL

	No Exceptions Taken
X	Make Corrections Noted
	Amend – Resubmit
	Rejected – Resubmit

(Initial One)

Remarks:

K. Selina — SCS — 8/26/98
County or Engineer Representative — Organization — Date

Prepared for

ERC General Contracting Services, Inc.
13330 W. Colonial Dr., Suite 140
Winter Garden, Florida 33071

CONSTRUCTION QUALITY ASSURANCE PLAN FOR CONSTRUCTION OF TIRE CHIPS TRENCHES SOUTHEAST LANDFILL TAMPA, FLORIDA

Prepared by

GLOBEX
Engineering & Development
7499 W. Atlantic Ave., Suite 208
Delray Beach, Florida 33446

Globex Project Number 1055

August 1998

TABLE OF CONTENTS

1. TRENCHING

1.1 Overview
1.2 Trenching and Backfilling Monitoring Procedures
1.3 Surveying

2 GEOTEXTILE

2.1 Design
2.2 Manufacturing
2.3 Labeling
2.4 Shipment and Storage
2.5 Installation Monitoring
2.6 Repairs

1. TRENCHING

1.1 Overview

This section describes the monitoring procedures that the CQA Consultant will follow during the excavation and backfilling of the trenches. The trench will be excavated in the sand layer overlying the phosphatic clay.

1.2 Excavation and Backfilling Monitoring Procedures

The CQA Consultant will monitor and document the construction of trenches. In general, monitoring the construction of the trenches includes the following activities:

- The CQA Consultant will ensure that the area in the vicinity of trench is dewatered prior to the excavation of the trench.
- The CQA Consultant will monitor the stability of slopes in the trench. The CQA Consultant will discuss any indications of instability in the trench slope with the Project Manager. In the event the proposed trench cross section should be revised to ensure stability of the trench slopes, the CQA Consultant will coordinate with the Project Manager to obtain the revised plans.
- The CQA Consultant will ensure that the bottom of the trench remains above the phosphatic clay surface within the specified distance of 4" presented in the project specifications.
- The CQA Consultant will monitor placement of geotextile in the trench. The two ends of the geotextile that wrap over the tire chips must remain accessible during placement of tire chips.
- The CQA Consultant will monitor overlapping of the geotextile. Any openings in the geotextile overlap will be corrected prior to backfilling the trench.
- If the Contractor selects to sew the overlap, the CQA Consultant will monitor the

sewing operation to ensure no openings are remained in the overlap.

- The CQA Consultant will ensure that tire chips are not placed in trenches with standing water.
- The CQA Consultant will monitor transfer of tire chips from the stockpile to the trench to ensure that tire chips are not mixed with soil.
- The CQA Consultant will monitor the thickness of tire chips in the trench. The tire chips must be placed in a continuous row with no void in the row.
- The CQA Consultant will ensure that phosphatic clay excavated from the trench bottom is not mixed with the trench backfill material.
- The CQA Consultant will monitor backfilling of the trench. The backfill material will be placed such that the geotextile overlap will remain intact.
- The CQA Consultant will monitor the connecting of the tire chips/geotextile to the leachate collection and recovery system (LCRS). Any openings in geotextile near the connection area may result in the migration of the backfill material into the tire chips and the LCRS.
- The CQA Consultant will coordinate with the health and safety officer responsible for the project to ensure safety of the personnel laying geotextile in the trench.

1.3 Surveying

The CQA Consultant will coordinate with the Project Manager and the surveyor to determine the bottom elevation of the trench. This information will be reported in the record drawings of the trenches.

2. GEOTEXTILE

2.1 Design

A copy of the geotextile drawings and specifications prepared by the Engineer will be given to the CQA Consultant. The CQA Consultant will review the information prior to commencement of the CQA services and verify that they are conceptually consistent with the state of practice, and are clear and complete.

2.2 Manufacturing

The Manufacturer will provide the CQA Consultant with a list of guaranteed "minimum average roll value" properties (defined as the mean less two standard deviations), for the type of geotextile to be delivered. The Manufacturer will also provide the CQA Consultant with a written quality control certification signed by a responsible party employed by the Manufacturer that the materials actually delivered have property "minimum average roll values" which meet or exceed all property values guaranteed for that type of geotextile.

The quality control certificates will include:

- roll identification numbers;
- sampling procedures; and
- results of quality control testing.

The Manufacturer will provide, as a minimum, test results for the following:

- mass per unit area;
- grab strength;
- tear strength;
- burst strength;
- puncture strength;
- thickness; and
- ~~apparent opening size~~ PERCENT OPEN AREA

PER SPEC SECTION 02940

Quality control tests must be performed in accordance with the test methods

specified in the project specifications for every 100,000 ft^2 (9278 m^2) of geotextile produced for the project. The Manufacturer will also provide a written certification that the nonwoven, needle-punched geotextiles are continuously inspected and found to be needle-free.

The CQA Consultant will examine all Manufacturer certifications to ensure that the property values listed on the certifications meet or exceed those specified in the project specifications and the measurements of properties by the Manufacturer are properly documented, test methods acceptable and the certificates have been provided at the specified frequency properly identifying the rolls related to testing. Any deviations will be reported to the Project Manager.

2.3 Labeling

The Manufacturer will identify all rolls of geotextile with the following:

- manufacturer's name;
- product identification;
- lot number;
- roll number; and
- roll dimensions.

Additionally, if any special handling of the geotextile is required, it will be so marked on the top surface of the geotextile, e.g., "This Side Up".

The CQA Consultant will examine rolls upon delivery and any deviation from the above requirements will be reported to the Project Manager.

2.4 Shipping and Storage

During shipment and storage, the geotextile will be protected from ultraviolet light exposure, precipitation or other inundation, mud, dirt, dust, puncture, cutting or any other damaging or deleterious conditions. To that effect, geotextile rolls will be shipped and

stored in relatively opaque and watertight wrappings.

Geotextiles will not be exposed to precipitation prior to being installed. Protective wrappings will be removed less than one hour prior to unrolling the geotextile. After the wrapping has been removed, a geotextile will not be exposed to sunlight for more than 30 days, unless otherwise specified and guaranteed by the Manufacturer.

The CQA Consultant will observe rolls upon delivery at the site and any deviation from the above requirements will be reported to the Project Manager. Any damaged rolls will be rejected and replaced at no cost to the Owner.

2.5 Handling and Placement

The CQA Consultant monitoring of the geotextile installed in trenches include:

- the geotextile will not be placed in trench that is excessively wet or has standing water;
- the geotextile wrap will be overlapped over the tire chip pile with the minimum overlap specified in project specifications;
- the overlap will be monitored for continuous sewn line if the contractor selects to sew the overlap;
- the overlap will be monitored for any openings in the overlap if the contractor selects to overlap without sewing;
- the seams joining geotextile panels will be monitored in accordance with the manufacturer's recommendations; and
- the placement of sand over the geotextile to ensure that the overlap remains intact.

2.6 Seams and Overlaps

The CQA Consultant will inform the Contractor of any damage to the geotextile panels. Any repair will be discussed with the CQA Consultant prior to repair. Repairs will be completed before the geotextile is placed in the trench.

The CQA Consultant will document repairs on the field log. Any repair of the geotextile in the trench following installation of the geotextile will be monitored by the CQA Consultant.

HILLSBOROUGH COUNTY DEPARTMENT OF SOLID WASTE
SUBMITTAL TRANSMITTAL FORM

LCRS PROJECT

Submittal No. T-3
Submittal Desc. HEALTH & SAFETY PLAN

Contract No.: C-206-89
Contractor Name: Waste Management, Inc. of Florida
Description of Activity: HEALTH & SAFETY PLAN, ~~...~~ ERG IS SUBMITTING THE SAME PLAN AS BEFORE, JERRY PENDUM IS THE HSO, RON NEALY IS THE SUBSTITUTE.

Subcontractor or Supplier Name: N/A
Description of Material or Product: H&S PLAN
Specification Reference 02220 1.04 A. 1, 2, 3

CONTRACTOR SUBMITTAL CERTFICATION

The attached submittal conforms to all requirements of the Contract Documents.

[signature] 8-25-98
Authorized Contractor Representative — Date

The attached submittal does not conform to the requirements of the Contract Documents, and as such represents a substitution. The attached submittal includes the supporting documentation and the additional information required for acceptance of substitutions

Authorized Contractor Representative — Date

COUNTY and/or ENGINEER ACCEPTANCE OF SUBMITTAL

X No Exceptions Taken
Make Corrections Noted
Amend – Resubmit
Rejected – Resubmit
(Initial One)

Remarks: NOTE: PAGE 2 STATES "THE SS WILL BE ON SITE 100% OF THE TIME"

K. Scia — SCS — 8-25-98
County or Engineer Representative — Organization — Date

HILLSBOROUGH COUNTY DEPARTMENT OF SOLID WASTE
SUBMITTAL TRANSMITTAL FORM

Submittal No. T-4
Submittal Desc. ~~PEV~~ EXCAVATION PLAN

Contract No.: C-206-89
Contractor Name: Waste Management, Inc. of Florida
Description of Activity: EXCAVATION PLAN - TIRE TRENCHES

Subcontractor or Supplier Name: ERC
Description of Material or Product: N/A
Specification Reference 02220 - 1.04 B.

CONTRACTOR SUBMITTAL CERTFICATION

The attached submittal conforms to all requirements of the Contract Documents.

[signature] 8-24-98
Authorized Contractor Representative Date

The attached submittal does not conform to the requirements of the Contract Documents, and as such represents a substitution. The attached submittal includes the supporting documentation and the additional information required for acceptance of substitutions

Authorized Contractor Representative Date

COUNTY and/or ENGINEER ACCEPTANCE OF SUBMITTAL

	No Exceptions Taken
X	Make Corrections Noted
	Amend – Resubmit
	Rejected – Resubmit

(Initial One)

Remarks:

K. Sabino SS 8/26/98
County or Engineer Representative Organization Date

TIRE CHIP TRENCHING

EXCAVATION PLAN

SECTION 02220-1.04 B.

AUGUST. 1998

OVERVIEW

The purpose of this plan is to define the scope of work to be performed and analyze each component for strategy, contingency, and forethought. The nature of this plan is subject to changes depending on the nature of the excavated sands. Going though this mental exercise of this excavation plan is an attempt to produce scenarios which could help formulate answers and potential solutions during problem solving.

SAND EXCAVATION

1. EQUIPMENT PROPOSED:

A 490 JD track hoe with a 24" wide trench bucket will be utilized to remove the sands located in the area of the tire trenches. The operating weight is 27,000 lbs or 3.9 psi and the bucket reach is 27 feet. An L-70 2.5 cubic yard loader will be used for back-filling and also for tire chip placement.

2. OSHA SLOPE STABILIZATION, STOCKPILING

ESTABLISH LOCATION OF CLAY AT BOTH ENDS OF TRENCH TO PROVIDE CONSTANT SLOPE OF TRENCH

The drainage sands will be removed to the organic layer at the surface of the clay. ~~No clay will be excavated during the trench activities.~~ The slopes in this area will extend 2:1 to existing ground. The material removed will be temporarily stockpiled near the trench excavation following OSHA mandates for excavated materials which state that a 1.5:1 slope must be maintained at all times and that stockpiles must be placed away from the edge of the trench excavation to insure that this slope is maintained. Benching will be performed to stabilize these slopes. Shoring will not be used nor a trench box.

BACKFILLED W/ 4" OF SAND.

3. DEWATERING

Dewatering will continue throughout the project from the area of the vault using a 40,000 GPH pump discharging into the stormwater system in wet well #4 or directly into the storm water piping. In the event that local dewatering becomes necessary, a small pump will remove the water and discharge 100 feet away from the excavation. Tire chips will not be place in standing water.

4. STORMWATER

Stormwater runoff will be controlled away from the excavation with small sand berms throughout the project. Trenches will not be left open overnight.

5. BACKFILLING

Backfilling will be accomplished using the loader placing the sand in loose lifts. Backfilling will be continuous after the tire chips are place and the geotextile is overlapped.

6. SCHEDULE:

The tire chip trenching will commence during the week of August 24, 1998 and continue for 35 work days.

Post-it® Fax Note 7671	Date	# of pages ▶ 4
To MAT	From Kris	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax #	

WMIF TO MAKE ● COPIES & DISTRIBUTE

HILLSBOROUGH COUNTY DEPAI
SUBMITTAL TRANS

Submittal No. T-5
Submittal Desc. GEOTEXTILE MANUFACTURER'S MANUAL

Contract No.: C-206-89
Contractor Name: Waste Management, Inc. of Florida
Description of Activity: GEOTEXTILE MANUFACTURERS RECOMMENDATION

Subcontractor or Supplier Name: TNS/MIRAFI
Description of Material or Product: GEOTEXTILE FILTERWEAVE 401
Specification Reference 02940 1.02 (A)

CONTRACTOR SUBMITTAL CERTFICATION

The attached submittal conforms to all requirements of the Contract Documents.

X [signature] 8/26/98
Authorized Contractor Representative — Date

The attached submittal does not conform to the requirements of the Contract Documents, and as such represents a substitution. The attached submittal includes the supporting documentation and the additional information required for acceptance of substitutions

Authorized Contractor Representative — Date

COUNTY and/or ENGINEER ACCEPTANCE OF SUBMITTAL

X No Exceptions Taken
Make Corrections Noted
Amend – Resubmit
Rejected – Resubmit
(Initial One)

Remarks:

K. Schiva — SCS — 8/26/98
County or Engineer Representative — Organization — Date

ENGINEERED SYNTHETIC PRODUCTS, INC.

Representing
TNS Advanced Technologies & SKAPS Industries
405 Hood Road
Lilburn, GA 30047
770/564-1857 Phone
770/564-1818 Fax

August 26, 1998

Mr. Jerry Pender
ERC General Contractors, Inc.

Fax: 813/634-9203

Dear Jerry:

This letter is in regard to the Southeast Landfill project located in Lithia, FL.

Installation of the FW401 with a 3' foot overlap is acceptable. Also, the minimu acceptable overlap on all end seams should be 3'.

If you have any further questions, please feel free to call.

Sincerely,

Kathy Licata

Kathy Licata
Engineered Synthetic Products, Inc.

KAL/me

TOTAL P.01

TNS MILLS, INC.
Geotextile Division

INSTALLATION PROCEDURE
GEOTEXTILE FABRICS

I. GEOTEXTILE UNLOADING & STORAGE:

A. The geotextile shall be labeled, stored and handled in Accordance with ASTM D-4873 "Guide for Identification, Storage, and Handling of Geotextiles.

B. Geotextile rolls are to be unloaded under supervision of the geotextile installer using straps or other devices that will prevent damage to the geotextile material.

C. The geotextile shall be kept dry and wrapped in a waterproof wrapping so that it is protected from UV light and the elements during shipping and storage. Torn wrapping shall be repaired within 48 hours, using an approved protective covering.

D. Rolls should be stored on supports that will not damage the material. The material must be elevated at least 2" above the subgrade.

E. If any material damage is noted during unloading, a notation made as to the roll number, location of damage, and type of damage.

II. MATERIAL DEPLOYMENT:

A. No geotextile is to be deployed until the project inspector has inspected and approved installation of the geonet.

B. Material will not be deployed when moisture, high winds, or other adverse weather conditions are expected. This determination will be made by the FIS.

C. Geotextile materials are to be deployed using methods that will not damage the material. The material will be visually inspected during deployment, and any faulty or unsatisfactory areas will be marked for corrective action.

D. Temporary sand bags are to be used to prevent material uplift and movement from winds during geotextile installation. The number and location of sand bags will be determined by the FIS.

E. All folds and excessive wrinkles are to be removed prior to sewing adjacent panels together.

F. On slopes, the geotextile shall be anchored at the top and unrolled down the slopes

Page Two:
Installation Instructions.

III. MATERIAL SEAMING:

A. Field seams are to be made sewn together using sewing machines and thread specially adapted for this purpose.

B. Adjacent panels are to be overlapped a minimum of six inches, and sewn together. A sewing crew is to consist of a sewing machine operator and at lease one assistant to help align the materials. The machine operator and assistant are to inspect opposite sides of the seam for dropped or incorrect stitches.

C. Seams shall be sewn utilizing one or two rows of stitching. Each row shall consist of 4 to 7 stitches per inch.

D. And damaged areas of the geotextile are to be patched wit h an additional layer of geotextile material. The patch is to overlap the damaged area by a minimum of six inches on each side, and is to be heat bonded to the main layer of geotextile.

E. Thread should be of contrasting color to the fabric to facilitate seam inspection.

F. The installer shall ensure that no soil materials are present within seams or overlaps.

IV. PROJECT DOCUMENTATION:

A. The field installation superintendent (FIS) will maintain the following Documentation on a daily basis:

1. Log of job activities, including number of personnel, weather conditions, and quantity of geotextile deployed.
2. Listing of material placed, including panel size and location, and a cross reference of panel numbers to roll numbers.
3. Listing of patches and repairs, including location, and reason for the repair.

B. At the completion of the project, the following documentation is to be provided to the owner or inspector:

1. Copies of items 1,2, and 3 above.
2. If required by the project specifications, copies of material certifications from the geotextile manufacturer.

HILLSBOROUGH COUNTY DEPARTMENT OF SOLID WASTE
SUBMITTAL TRANSMITTAL FORM

Submittal No. T-5A
Submittal Desc. _____

Contract No.: C-206-89
Contractor Name: Waste Management, Inc. of Florida
Description of Activity: ROLL I.D. NUMBERS

Subcontractor or Supplier Name: TNS / MDRAFI
Description of Material or Product: GEOSYNTHETICS
Specification Reference 02940 – 1.02 A

CONTRACTOR SUBMITTAL CERTFICATION

The attached submittal conforms to all requirements of the Contract Documents.

[signature] 8-31-98
Authorized Contractor Representative — Date

The attached submittal does not conform to the requirements of the Contract Documents, and as such represents a substitution. The attached submittal includes the supporting documentation and the additional information required for acceptance of substitutions

_____ _____
Authorized Contractor Representative — Date

COUNTY and/or ENGINEER ACCEPTANCE OF SUBMITTAL

X No Exceptions Taken
_____ Make Corrections Noted
_____ Amend – Resubmit
_____ Rejected – Resubmit
(Initial One)

Remarks: _____

K. Schiro SCS 9-1-98
County or Engineer Representative — Organization — Date

GLOBEX ENGINEERING AND DEVELOPMENT INC.
Material inventory sheet

Southeast Landfill, Tire Chip / Trench Project.

August 25, 1998

	FAB ID. NUMBER	ROLL NUMBER
1	61709/1440	21085282-04
2	61709/1440	21085282-09
3	61709/1440	21085282-10
4	61709/1440	21085282-02
5	61709/1440	21085282-01
6	61709/1440	21085282-03
7	61709/1440	21085282-08
8	61709/1440	21085282-06
9	61709/1440	21085282-07
10	61709/1440	21085282-05
11	61709/1440	21085288-02
12	61709/1440	21085288-05
13	61709/1440	21085288-07
14	61709/1440	21085288-03
15	61709/1440	21085288-04
16	61709/1440	21085288-06
17	61709/1440	21085288-01
18	61709/1440	21085274-01
19	61709/1440	21085274-03
20	61709/1440	21085274-02

Twenty rolls of Geo-textile delivered to the Southeast landfill for ERC General Contracting Services Inc. for use in the construction of the tire chip trenches. The roll numbers indicated are from the labeling on the actual rolls themselves and have not been compared to the shipping ticket.

CONTRACTORS REQUEST FOR INFORMATION

RECEIVED
SEP - 2 1998
SCS-TAMPA

NO T-6

OWNER:	Hillsborough County	No. Copies	1
ENGINEER:	SCS Engineers	No. Copies	1
CONTRACTOR:	Waste Managment Inc. of Florida	No. Copies	1
FIELD:		No. Copies	
OTHER:		No. Copies	

PROJECT DATA		CONTRACT DATA	
NAME:	TIRE CHIPS & LCRS Permanent Pump Station B	NUMBER:	
LOCATION:	Southeast County Landfill	DATE:	9-1-98
OWNER:	Hillsborough County	DRAWING NO.:	
OTHER:		SPEC. SECTION:	02220 3.01 A

CONTRACTOR'S QUESTION:

REQUEST VARIANCE OF LICENSED SURVEYOR FOR TRENCH LAYOUT. CONTRACTOR WILL LAYOUT AS DISCUSSED IN PRE CONSTRUCTION MEETINGS

BY: [signature] for DATE: 9-1-98

ENGINEER'S REPLY:

Layout may be accomplished by the contractor. However, the contractor is still responsible to provide as-built certified by a registered land surveyor as required in section 02220-1.04(C).

BY: Larry E. Fi DATE: 9/2/98

MEETING MINUTES

AND

FIELD ORDER FORMS

FIELD ORDER NO: 1

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 1

To MATT	From KARL
Co. PLEASE REVIEW	Co. & CALL ME.
Dept.	Phone #
Fax #	Fax #

OWNER: HILLS. COUNTY
ENGINEER: SCS Engineers
CONTRACTOR: WMI
FIELD:
OTHER:

No. Copies

PROJECT DATA
NAME: LCRS IMPROVEMENTS
LOCATION: SCLF
OWNER: HILLS. COUNTY
OTHER: TIRE TRENCHES

CONTRACT DATA
NUMBER: C-2016-89
DATE:
DRAWING NO.: 3 OF 4
SPECIFICATION SECTION: 02220

You are hereby directed to execute ,promptly, this Field Order which interprets the Contract Documents or authorizes minor changes in the Work without change in the Contract Sum or Contract Time.

If you (Contractor) consider that a change in the Contract Sum or Contract Time is required, please submit an itemized proposal to the Engineer, immediately. If the proposal is found to be satisfactory and in proper order, this Field Order shall be superceeded by a Change Order.

DESCRIPTION of WORK

THIS NOTICE IS TO PROVIDE CLARIFICATION TO SECTION 02220 PART 3.02 (F) REGARDING OPEN TRENCHES.

HENCEFORTH, TRENCHES WHICH HAVE RECEIVED CHIPPED TIRES ARE NOT ALLOWED OPEN OVERNIGHT. TRENCHES THAT HAVE NOT RECEIVED CHIPPED TIRES ARE ALLOWED TO OPEN OVERNIGHT, HOWEVER UNDER NO CIRCUMSTANCES WILL THEY BE ALLOWED OPEN OVER A WEEKEND.

BY: Karl Schmitz DATE: 9-11-98

REPLY:

BY: _____ DATE: _____

References or Attachments

8-27-98 CONVERSATION RECORD

MOTT, JERRY/ ERNEST, GREG, CARL, LARRY/
N.C. GLOBEX WMI SCS SCS

TRENCH SLOPE PERCENTAGE

ELEVATIONS AND PERCENTAGE OF SLOPES ARE CONTROLLED BY ELEVATIONS OF CLAY AT START POINT AND END POINT OF TRENCHES. MAINTAIN CONSTANT GRADE BETWEEN THE TWO.

TOP SPOIL

FAXED TO MATT M.

LCR ____
FILE ____

TELEPHONE CONVERSATION RECORD

Job No.: 0995029.23 **Date:** August 27, 1998 **By:** Karl Schmit

Person (called, calling): Matt Mathews **Time:** 10:00 am

Representing: _____ **City:** _____

Subject: Tire Trenches **Tel. No.:** _____

Items Discussed:

Matt called with Greg Walk (WMIF) to discuss the initial trenching excavation activities. WMIF started with trench No. 17, and excavated to the clays on both ends of the trench. The clay elevation is approximately as depicted in the design drawing.

We discussed how the trench does not flow towards the PPS-B at this time, but the way in which The trenches are shown in the drawing is correct.

The top of clay controls the trench invert elevations at the ends, and then the trench bottom slopes continuously between the two end points.

If the clay elevation is discovered to be in excess of 12 inches from the design drawing, SCS should be contacted to evaluate the trench configuration.

cc: MATT M. **Signature:** K. Schmit

SCS ENGINEERS FIELD CONVERSATION LOG

PROJECT: Southeast County Landfill **Project number:** 09B5029.23

Owner: Hillsborough County **Contractor:** Waste Management Inc.

Present: Matt Matthews, HCSWMD; Greg Walk, WMI; Jerry Pinder, ERC; Jerry Everest, Globex; Larry Ruiz, SCS.

Subject: Phases V and VI Tire Trench Construction and CQA

Date : September 8, 1998

Description of Activity / Items discussed:

- Confirmed that Globex will provide a construction report to include daily notes, photographs, as-builts, and certification.
- Confirmed that Globex is getting copies of approved submittals from the Contractor.
- Discussed the design intent for the tire trenches elevations. We agreed that both of the construction methods discussed would meet the design intent.
  - Locate both ends and provide constant slope as noted by SCS on the excavation plan submittal or
  - Locate both ends and construct the trench 4 inches above the existing elevation of the phosphatic clays as shown on the drawings. In addition, when this method is used, the Contractor agreed to provide elevation at middle points when there is a significant change in slope at no additional cost to the County.
- Discussed the design intent for the connection to the existing gravel trenches. The Contractor agreed to remove the filter fabric where the trenches connect and provide a minimum 12 inches overlap with the new trench fabric at no additional cost to the County (including Phase V). The intent is to provide unimpeded flow between the trenches (i.e., tire chips to gravel).
- Globex received a copy of the construction Drawing 4 of 4 as modified by FDEP request during the permit process.

FOLLOW UP REQUIRED : None

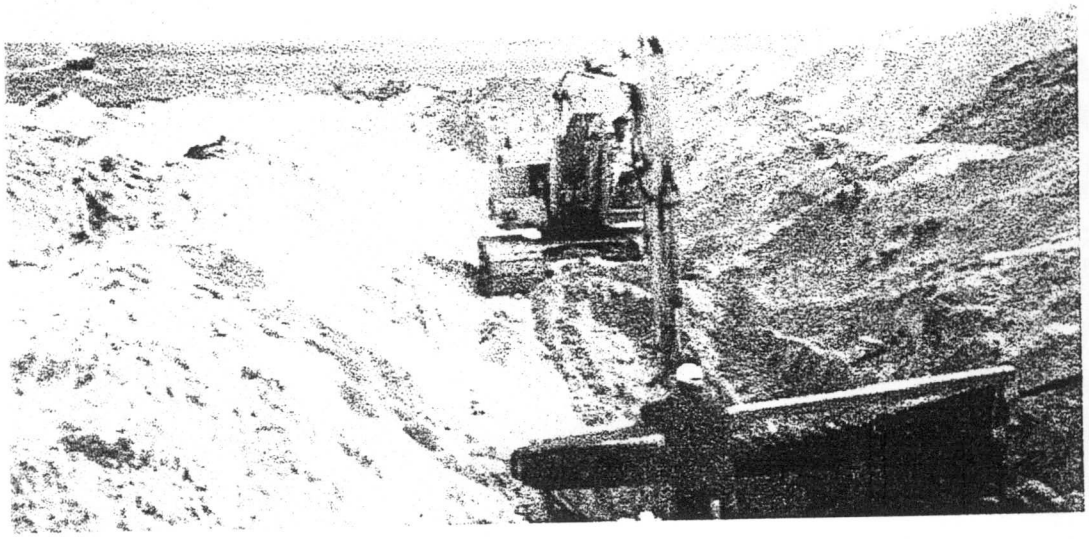
Field Representative: [signature] **Date:** 9/8/98

cc: Matt Matthews, HCSWMD
John Wong, WMI

QUANTITY CALCULATIONS FROM REGISTERED AS-BUILT AUTOCADD FILE

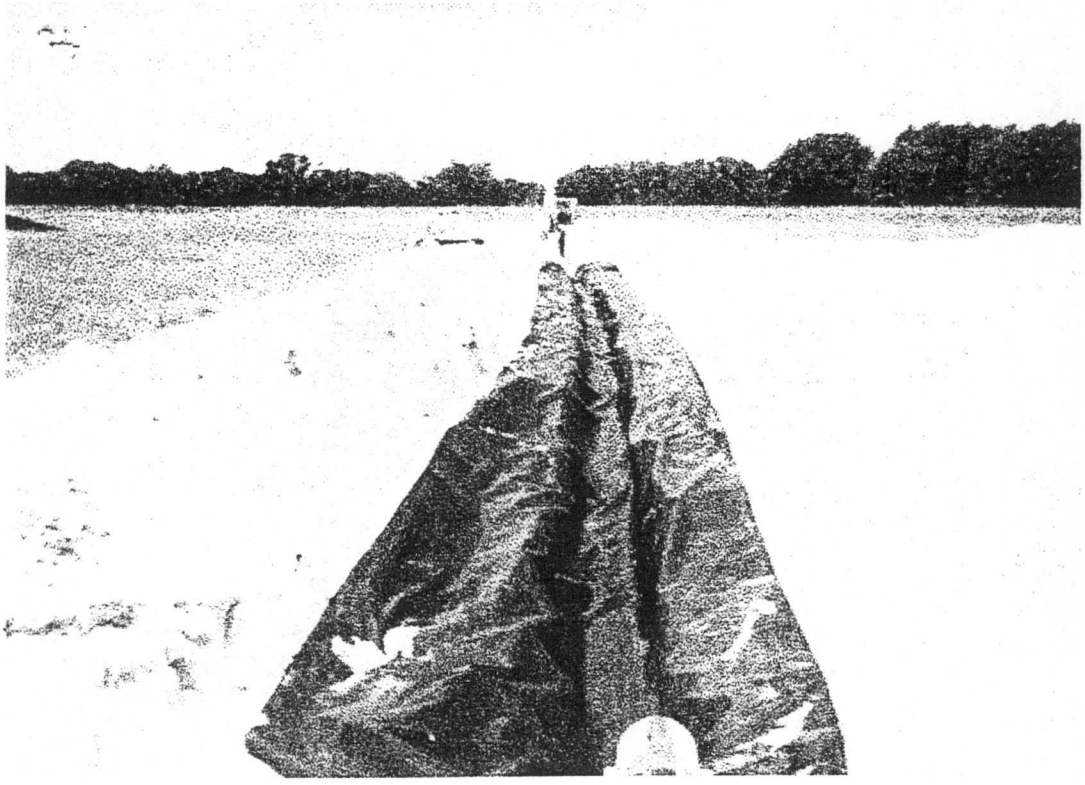
TRENCH #	LENGTH	DEPTH	WIDTH	CF	CY
1	342.7	2	2	1,370.8	50.8
2	509	2	2	2,036.0	75.4
3	393.5	2	2	1,574.0	58.3
4	291.8	2	2	1,167.2	43.2
5	330.8	2	2	1,323.2	49.0
6	269.4	2	2	1,077.6	39.9
7	316.8	2	2	1,267.2	46.9
8	389.5	2	2	1,558.0	57.7
9	379.8	2	2	1,519.2	56.3
10	492.9	2	2	1,971.6	73.0
11	413.7	2	2	1,654.8	61.3
12	412.1	2	2	1,648.4	61.1
13	448.7	2	2	1,794.8	66.5
14	341.3	2	2	1,365.2	50.6
15	329.1	2	2	1,316.4	48.8
16	300.6	2	2	1,202.4	44.5
17	247.5	2	2	990.0	36.7
18	188	2	2	752.0	27.9
19	386.7	2	2	1,542.8	57.1
TOTALS	6,782.9			27,131.6	1,004.9

The trench is excavated using a track hoe to the top of clay. Sand is pushed back in the trench over the top of clay to meet the 4 in. requirement.



While the trench is excavated, the geotextile roll is prepared to be unrolled over the trench opening.

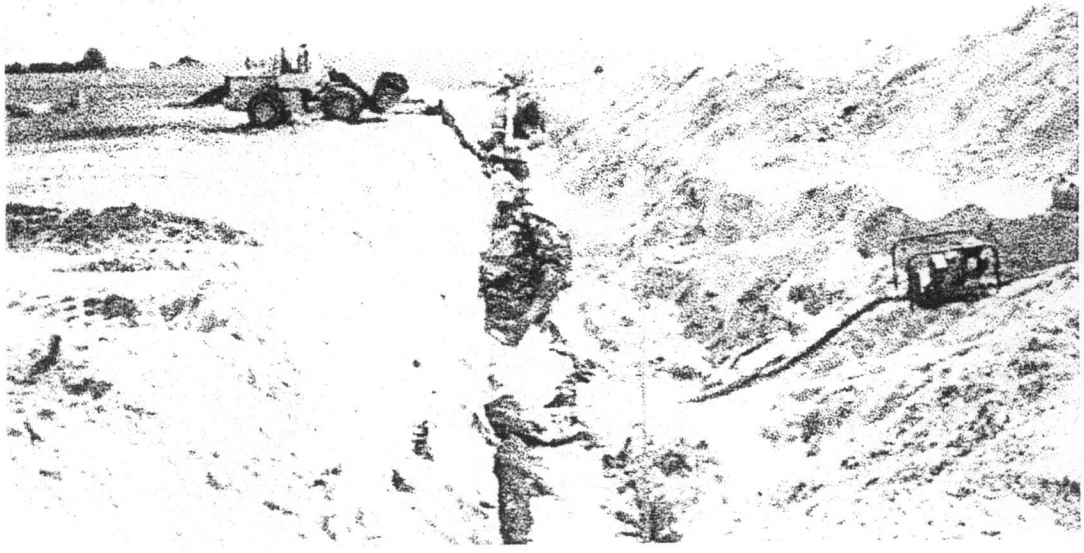
Geotextile roll is unrolled over the open trench and geotextile formed in the trench.



Geotextile is positioned in the trench such that adequate material on both sides of the trench is available for overlap.

Tire chips are placed in the trench using a loader. The loader is positioned such that tire chips directly fall over the geotextile in the trench.

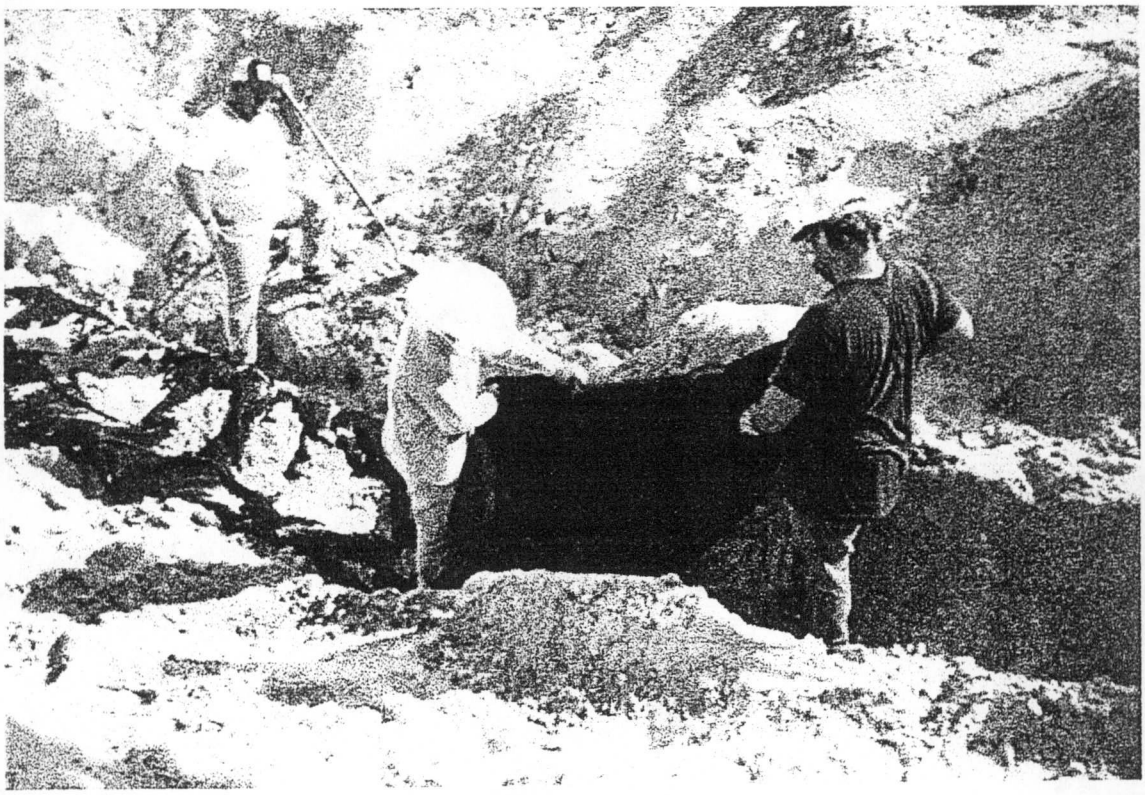
The excess tire chips are shoveled off from the geotextile
on the two sides to the trench center.



Portable pump is used to dewater the trench before geotextile and tire chips placed in the trench.

The overlaps are pulled together to close the exposed surface of tire chips and to meet the minimum 24 in. overlap requirement.

Geotextile overlap is held in place by placing piles of sand along the overlap.



Geotextile is carefully wrapped at the two ends of the trench to prevent sand migration into the tire chips.

The closing of overlap takes place in segments.

Sand is carefully placed over the overlap to maintain overlap in position.

Geotextile at gravel trenches is opened to connect tire chips to gravel for hydraulic connection between the trenches.

Wood posts are installed at the two ends of the trench with elevation of the top of clay and top of tire chips marked on them.

Sand is pushed by dozer over the completed trench.