



**CONSTRUCTION DOCUMENTATION
REPORT
NEW CAPPING SYSTEM
FOR CELL NO. 1
CIBA-GEIGY INDUSTRIAL WASTE
LANDFILL
VOLUME III**

Prepared for:

**CIBA-GEIGY CORPORATION
RT. 37 W
TOMS RIVER, NEW JERSEY**

Prepared by:

**ECKENFELDER INC.®
1200 MacArthur Boulevard
Mahwah, NJ 07430**

AUGUST 1994

9117.06

APPENDIX D
DAILY OBSERVATION REPORTS

CEA 005 0819

CIBA-GEIGY CORPORATION - CELL NO.
Toms River, New Jersey

Materials Removal and Transfer

Date:

Observer:

4/5/94

James R. Benn

[illegible]

PERSONNEL:

[illegible]

**NARRATIVE
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey**

Materials Removal and Transfer

Date:

4/5/94

Observer:

James R. Benn

Site Visitors:

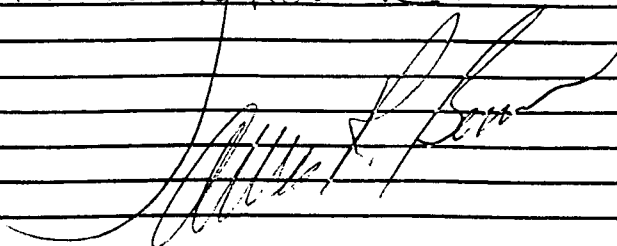
Remarks: (Daily Progress, Work Location, etc.)

0700 Pizzelli Asso. Arrived to start the preconstruction survey requirements. A new employee from Pizzelli Asso. was given a health and safety orientation by J. Benn (Fluor Daniel).

At ~1300 Conti mobilized a track dozer (D37P).

Notified Cont. (L. Nicaretta) they need to supply submittals on the surveyors qualifications.

Paul Mutch from Eckenfelder called and gave verbal approval on the material conformance testing. A hard copy will be followed.



EQUIPMENT & PERSONNEL CHECKLIST FOR

CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

Materials Removal and Transfer

Date: 4/6/94

Observer: James R. Ben

EQUIPMENT

HOURS WORKING

STAND BY/ DOWNTIME

REMARKS

950 E

—

—

Mobilized

PERSONNEL:

POSITION/NAME/COMPANY

HOURS WORKING

STAND BY/ DOWNTIME

REMARKS

Pizzelli - Dan Pizzelli
" " - Joe Jones

Conti - L. Niccarretta

**NARRATIVE
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey**

Materials Removal and Transfer

Date:

4/6/94

Observer:

James R. Benn

Site Visitors:

Remarks: (Daily Progress, Work Location, etc.)

0700 Conti mobilized a loader 950 E.

0710 Pizzetti Asso. arrived to continue preconstruction survey work. Reiterated the concern with deer ticks and gave them some tick spray.

CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

Date:
Observer:

4/7/94

HOURS
WORKING

**STAND BY/
DOWNTIME**

REMARKS

PERSONNEL:

POSITION/NAME/COMPANY

HOURS WORKING	STAND BY/ DOWNTIME
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24

REMARKS

Nicarretta

T. Wood

S. Thomas

P. Komorowski

L. Gonzalez

V. Casendino

NARRATIVE
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

Materials Removal and Transfer

Date:

4/7/94

Observer:

James R. Benn

Site Visitors:

Remarks: (Daily Progress, Work Location, etc.)

0700 Conti arrived and start working on placing plastic and hay for stockpiling sand which is on the asphalt pad of Cell #1

At ~ 0930 Conti started moving sand. Also started installing silt fence for soil erosion.

At 1300 Ciba, Eckenfelder, Fluor Daniel and Conti had a pre-construction meeting at Bldg 743.

Moh in Cat D6 LGR

Materials Removal and Transfer

4/8/94

Observer:

[illegible]

PERSONNEL:

[illegible]

Date: 4/8/94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

Conti continued moving sand from Cell #1 pad. Also started picking up asphalt from Cell 1 will ship out Monday 4/11/94. Installed silt fence for soil erosion control. Pizzelli continued surveying. Removed hay bales.
Mob in a pen for stripping top soil.

CONSTRUCTION OBSERVATION:

PROBLEMS / RESOLUTIONS:

COPY TO: _____

OBSERVER: _____

PAGE 1 of 2

Date: 4-11-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

- J. Topsoil Placement
K. Survey Work
L. Access Roads
M. Mechanical Installation
N. Seed & Fertilization
O. Erosion & Sediment Control
P. Other CELL #3 GRADING
Q. Other _____
R. Other _____

**HOURS
WORKING**

**STAND BY/
DOWNTIME**

REMARKS

$$\frac{1}{2}$$

$$2 \frac{1}{2}$$
$$\frac{1}{2}$$

REMOVAL of Hwy BAIL
LOADING of ASPHALT
REMOVAL of ASPHALT
GRADING CELL #3
--
GRADING CELL #3

WEATHER:

AM - CLEAR, SUNNY & COOL Lt to MED WINDS
PM - CLEAR SUNNY & WARM Lt WINDS

OBSEVER: HEATHERA CURRIE

PAGE 1 of 3

Date: 4-11-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- ASPHALT WEST of CELL #1 REMOVED
- SILT FENCE INSTALLED SOUTH & EAST END of CELL #1
- SOUTH & EAST END CELL #3 SURVEYED
- GRADING CELL #3

CONSTRUCTION OBSERVATION:

- 2 HAUL TRUCKS REMOVED ASPHALT FROM SITE EACH TRIP APPROX 1 HOUR - ~~REMOVED~~
- 2 LABORERS INSTALLED SILT FENCE ALONG SOUTH & EAST PERIMETER OF CELL #1 APPROX 5 ft FROM TOE OF SWALE
- D6H USED TO REMOVE 37B FROM SLUDGE IN CELL #3 - GRADING STOPPED WHEN 37B GOT STUCK
- LUNCH 1/2 HOUR
- INSTALLATION of SILT FENCE CONTINUED
- GRADING CELL #3 CONTINUED USING THE D6H
- ASPHALT CONTINUED TO BE REMOVED - TOTAL 10 TRIPS MADE

PROBLEMS / RESOLUTIONS:

- SOIL EROSION & SEDIMENT CONTROL PERMIT HAS NOT BEEN APPROVED
NO WORK IN CELL #1 MAY BEGIN UNTIL PERMIT HAS BEEN APPROVED
AWAIT OUTCOME
- PERMIT APPROVED

COPY TO: P. Mutch, FLOUR DANIELS OBSERVER: HEATHER ALLEN PAGE 2 of 3

Date: 4-11-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

- SPOKE W/ J. BENN (FLOUR DANIELS) EIS CONTROL PERMIT DID NOT COME IN AS OF TODAY. NO WORK MAY BEGIN ON CELL #1 UNTIL PERMIT IS APPROVED EXCEPT FOR SILT FENCE/STABILIZATION
- 3:45PM PERMIT APPROVED CONTI WILL BEGIN STRIPPING TOPSOIL 4-12-94

OTHER:

0700 ARRIVED ON SITE
12-12:30 LUNCH
1600 DEPARTED SITE
8.5 HOURS WORKED

COPY TO: P. Mutch, FLOUR DANIELS OBSERVER: HEATHER A. CURRIE

PAGE 3 of 3

Date: 4-12-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u>X</u>	A. Stripping of Existing Soil
_____	B. Grading Subbase
_____	C. Bento-Fix Installation
_____	D. PVC Installation (Secondary)
_____	E. Geocomposite Installation
_____	F. PVC Installation (Primary)
_____	G. Sand Placement
_____	H. Geotextile Installation
_____	I. Subsoil Placement

☐ J. Topsoil Placement
☐ K. Survey Work
☒ L. Access Roads
☒ M. Mechanical Installation
☐ N. Seed & Fertilization
☐ O. Erosion & Sediment Control
☒ P. Other GRADING CELL #3
☒ Q. Other SAND BAGS
☐ R. Other _____

[illegible]**WEATHER:**

AM - RAINY CLOUDY 52° NO WIND
PM - RAINY CLOUD COOL Lt to med WINDS

COPY TO: P. Mutch, Floor Daniels

OBSEVER:

HEATHER A. CURRIE PAGE 1 of 3

Date: _____

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- STRIPPING OF EXISTING TOPSOIL BEGAN
- REMOVAL OF ASPHALT CONTINUED
- ~~GREEN~~ GRADING OF SLUDGE ON CELL #3 CONTINUED

CONSTRUCTION OBSERVATION:

- CAT RAN 3 PASSES OVER TOPSOIL. PAW WAS TURNED OFF AND WOULD NOT START AGAIN. MECHANIC NEEDED
- 2 LABORERS FILLED SANDBAGS FOR GEOTEXTILE INSTALLATION
- D6H CONTINUED TO GRADE SLUDGE ON TOP CELL #3
- CAT G13C PAW FIXED
- 2 VENT PIPES RAISED TO 7ft ABOVE GROUND ON CELL #1
- LAUNCH 1/2 HOUR
- D37B & G13C USED TO REMOVE EXISTING TOPSOIL FROM CELL #1
- 8 LOADS OF ASPHALT WERE REMOVED

PROBLEMS / RESOLUTIONS:

COPY TO: P. Mutch, FLOUR DANIELS

OBSERVER: Heather A. Currie

PAGE 2 of 3

Date: _____

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

J. BENN (FLOUR DANIELS) REQUESTED CONTI NOT TO WORK UNTIL
EITHER ECKENFELDER OR THEMSELVES (FLOUR DANIELS) IS PRESENT
7:00 START NOT BEFORE DUE TO NOISE ORDINANCE.

VERBAL APPROVAL WAS GIVEN TO CONTI FOR THE STRUCTURAL FILL
MATERIAL SUBMITTED. WRITTEN APPROVAL WITH COMMENTS FOLLOWING

OTHER:

0700 ARRIVED ON SITE
30 LUNCH
1530 OFF SITE
8 HOURS

COPY TO: P. Mutch, FLOUR DANIELS

OBSERVER: Heather A. Lurie

PAGE 3 of 3

Date: 4-13-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u>X</u>	A. Stripping of Existing Soil
<u>X</u>	B. Grading Subbase (200G)
_____	C. Bento-Fix Installation
_____	D. PVC Installation (Secondary)
_____	E. Geocomposite Installation
_____	F. PVC Installation (Primary)
_____	G. Sand Placement
_____	H. Geotextile Installation
_____	I. Subsoil Placement

J. Topsoil Placement
K. Survey Work
L. Access Roads
M. Mechanical Installation
N. Seed & Fertilization
O. Erosion & Sediment Control
P. Other _____
Q. Other _____
R. Other _____

[illegible]**WEATHER:**

AM - COLD - RAIN - FOG - CLOUDY - LT WINDS

COPY TO: P. Mutch, FOUR DANIELS

OBSEVER:

HEATHER A. CURRIE

PAGE 1 of 3

Date: 4-13-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- STRIPPING OF TOPSOIL CONTINUED
- ROUGH GRADING OF SUBBASE BEGAN
- Portion of North BERM REMOVED

CONSTRUCTION OBSERVATION:

- D37P & G13C USED TO STRIP APPROX 6" of topsoil
- Foreman, T. WOOD, (CONTI) dug DOWN in the SUBBASE to determine thickness of soil ABOVE the PRELIMINARY CAP ALREADY IN PLACE - RANGE 1 1/2 to 2 foot of soil is on top of the CAP
- LUNCH
- G13C BROKE DOWN AGAIN
- 850E USED TO ROUGH GRADE SUBBASE
- D37P USED TO GRADE STOCKPILE of topsoil
- 850E REMOVED PART of North BERM AND PLACED SOIL AT toe of CELL #3 (WEST), At the discretion of CONTI BECAUSE the FOREMAN FELT the material WAS INADEQUATE

PROBLEMS/RESOLUTIONS:

— NONE —

COPY TO: P. MOTOI, FLOUR DANIELS

OBSERVER: Heather A. Currie

PAGE 2 of 3

Date: 4-13-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

• SPOKE W/ D. CROUSE AND J. BENN (FLOUR DANIELS) ON TEMPORARY ACCESS RAMPS IN PERIMETER SWALE. A CULVERT PIPE MUST BE IN PLACE TO ASSURE DRAINAGE. L. NICAROTTA (CONEL) WOULD LIKE TO REMOVE THEM DAILY ALSO ACCEPTABLE

• VERBAL APPROVAL ON MATERIAL SUBMITTED FOR SAND & SUBSOIL WAS GIVEN, LETTER TO FOLLOW

OTHER:

- 0700 ARRIVED ON SITE
- 1/2 LUNCH
- 1500 OFF SITE
- 7.5 HOURS

COPY TO: P. MUTCH, FLOUR DANIELS

OBSERVER: Heather A. Currie

PAGE 3 of 3

Date: 4-14-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u> X </u>	A. Stripping of Existing Soil
<u> </u>	B. Grading Subbase
<u> </u>	C. Bento-Fix Installation
<u> </u>	D. PVC Installation (Secondary)
<u> </u>	E. Geocomposite Installation
<u> </u>	F. PVC Installation (Primary)
<u> </u>	G. Sand Placement
<u> </u>	H. Geotextile Installation
<u> </u>	I. Subsoil Placement

_____ J. Topsoil Placement
_____ K. Survey Work
_____ X L. Access Roads
_____ M. Mechanical Installation
_____ N. Seed & Fertilization
_____ O. Erosion & Sediment Control
_____ P. Other _____
_____ Q. Other _____
_____ R. Other _____

[illegible]

WEATHER:

AM Partly Cloudy - Sunny - Cool - Lt Winds -

PM - Sunny WARM - lt to med winds - in the 70's

COPY TO: P. MITCH, FLOOR DANIELS

OBSEVER: HEATHER A. CURRIE PAGE 1 of 3

Date: 4-14-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

• STRIPPING OF TOPSOIL CONTINUED IN CELL #1

CONSTRUCTION OBSERVATION:

• D37P ASSISTED 613C IN STRIPPING TOP 6" OF TOPSOIL TO EXPOSE SUBBASE

• D37P GRADED STOCKPILE OF TOP SOIL

• D6H ASSISTED 613C IN STRIPPING OF TOPSOIL

• PROGRESS MEETING

• WALKED CELL #2 TO DETERMINE INTEGRITY OF HYPALON LINER IN PLACE

• LUNCH

• PAN (613C) & D6H STRIPPED EXISTING TOPSOIL

• 950E COMPLETED ASPHALT REMOVAL W/ 3 LOADS

• MATERIAL (TOPSOIL) WAS TOO SATURATED TO BE REMOVED WITH PAN MATERIAL
WAS SCRAPPED W/ D6H & REMOVED TO STOCKPILE WITH 950E

SEE OTHER:

PROBLEMS / RESOLUTIONS:

COPY TO: P. Mutch, FLORE DANIELS

OBSERVER: 

HEATHER A. CURRIE

PAGE 2 of 3

Date: 4-14-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

- CIBA, FLOUR DANIELS & ECKENFELDER WALK CELL # 2 & DISCUSSED A PROPOSAL FOR THE LINER TO DECREASE WASHOUTS. P. MUTCH (ECKENFELDER) TO WRITE PROPOSAL FOR CONSTRUCTION. CONCI WILL CORRECT SITUATION UNDER A CHANGE ORDER, FOLLOWING.

OTHER: ~~200~~ SLAT REND ~~WERE~~ ^{WERE} BROUGHT IN FOR MOVING MATERIAL
D37P USED TO CLEAN UP TOP SOIL STOCKPILE

0700 ARRIVED ON SITE

1/2 LUNCH

1530 OFF SITE

8 HOURS

COPY TO: P. MUTCH, FLOUR DANIELS

OBSERVER: Heather A. Currie

PAGE 3 of 3

Date: 4-15-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

X	A. Stripping of Existing Soil
	B. Grading Subbase
	C. Bento-Fix Installation
	D. PVC Installation (Secondary)
	E. Geocomposite Installation
	F. PVC Installation (Primary)
	G. Sand Placement
	H. Geotextile Installation
	I. Subsoil Placement

<u> X </u>	J. Topsoil Placement
<u> X </u>	K. Survey Work
<u> X </u>	L. Access Roads
<u> X </u>	M. Mechanical Installation
<u> X </u>	N. Seed & Fertilization
<u> X </u>	O. Erosion & Sediment Control
<u> X </u>	P. Other <u>REPAIR PERIMETER FENCE</u>
<u> X </u>	Q. Other <u>REMOVAL OF BUMPERS</u>
<u> X </u>	R. Other

[illegible]**WEATHER:**

Am - Cool sunny Lt winds

COPY TO: P. Mutch, Floor Daniels

OBSEVER: Heather A. Purrie PAGE 1 of 3
HEATHER A. PURRIE

Date: 7-15-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- STRIPPING OF EXISTING TOPSOIL CONTINUED
- SILT FENCING INSTALLED AROUND TOPSOIL STOCKPILE
- SURVEYORS STAKED OUT SUBBASE
- LEACHATE PIPE CUT AT NORTH & WEST END CELL #1
- PLATFORM OVER CELL #2 REMOVED
- BUMPERS REMOVED FROM SOUTH CREST CELL #2

CONSTRUCTION OBSERVATION:

- 2 LABORERS INSTALLED SILT FENCING AROUND TOPSOIL STOCKPILE
- 950 E & DGH CONTINUED TO REMOVE TOPSOIL FROM SILT FENCE
- PIPE CUT (LEACHATE) AFTER PUMP WAS SHUT OFF
- PERIMETER FENCE/GATE REPAIRED BY CIBA (NORTH - WEST GATE)
- LABORER FILLED SANDBAGS FOR GEOSYNTHETIC DEPLOYMENT
- DGH REMOVED NORTH BERM BETWEEN CELL #1 & CELL #2

PROBLEMS / RESOLUTIONS:

- NONE -

COPY TO: P. MULLEN, FLOUR DANIELS

OBSERVER: HEATHER A. LUCIER

PAGE 2 of 3

Date: 7-15-74

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

The monitoring well #122 was found to be made of Carbon Steel (CS)
Pipe instead of PVC. To keep the metals the same a CS pipe will be used
to extend the well. A change order will be made per Fluor Daniels

OTHER:

7:00 ON SITE
1/2 LUNCH
1:00 OFF SITE
8 1/2 HOURS

COPY TO: P. Mutch, Fluor Daniels

OBSERVER: Heather A. Currie

PAGE 3 of 3

Date: 7-18-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

ITEMS WORKED ON

- | | | | |
|-------------------------------------|---------------------------------|-------------------------------------|---------------------------------|
| ☐ | A. Stripping of Existing Soil | ☐ | J. Topsoil Placement |
| ☒ | B. Grading Subbase | ☒ | K. Survey Work |
| ☐ | C. Bento-Fix Installation | ☐ | L. Access Roads |
| ☐ | D. PVC Installation (Secondary) | ☐ | M. Mechanical Installation |
| ☐ | E. Geocomposite Installation | ☐ | N. Seed & Fertilization |
| ☐ | F. PVC Installation (Primary) | ☐ | O. Erosion & Sediment Control |
| ☐ | G. Sand Placement | ☒ | P. Other <u>GRADING CELL #3</u> |
| ☐ | H. Geotextile Installation | ☐ | Q. Other _____ |
| ☐ | I. Subsoil Placement | ☐ | R. Other _____ |

[illegible]**WEATHER:**

AM - COOL - SUNNY - HVY WINDS
PM - WARM SUNNY - MED to HVY WINDS

COPY TO: P. Mutch, Floor Daniels

OBSERVER: HEATHER A. CURRIE PAGE 1 of 3

Date: 4-18-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- SUBBASE GRADED APPROX $\frac{1}{2}$ to $\frac{3}{4}$
- SURVEYORS STAKED CELL #1 TO ASSURE PROPER THICKNESS
- CELL #3 CONTINUED TO BE GRADED

CONSTRUCTION OBSERVATION:

- D37P & DLH USED TO GRADE CELL #1 (SUBBASE)
- LABORER ASSISTED OPERATORS ON GRADE CHECKS
- ON EAST WEST FMS (NORTH) PVC LINER 6" BELOW SUBBASE WHERE A 1' CUT NEEDED (SEE KEY...)

PROBLEMS / RESOLUTIONS:

- DISCREPANCY ON THE CROSS SECTION VS PLAN VIEW WITH THE NORTHING ON THE CENTER LINE OF THE NORTH SLOPE PER P. MUTCH FOLLOW PLAN VIEW

COPY TO: P. MUTCH, FLOOR DANIELS

OBSERVER: HEATHER A. CURRIE

PAGE 2 of 3

Date: 7-18-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

After talking w/ P. Mutch, it was learned that there was a liner installed to be used as a future tie-in from CELL #1 to CELL #2. This liner is considered sacrificial. After tracking this liner CONTI broke through this liner to determine if it was the sacrificial piece of the CAP. CONTI dug down approx 2 to 3' and found another PVC liner, the CAP. The first PVC liner found was removed to meet proper grade.

OTHER:

0700 on site
1/2 lunch
1730 off site

10 HOURS

COPY TO: P. Mutch, Floor Daniels

OBSERVER: HEATHER A. CURRIE

PAGE 5 of 3

Date: 4-19-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

- | | | | |
|-------------|---------------------------------|-------------|---------------------------------------|
| <u>X</u> | A. Stripping of Existing Soil | <u>X</u> | J. Topsoil Placement |
| <u> </u> | B. Grading Subbase | <u>X</u> | K. Survey Work |
| <u> </u> | C. Bento-Fix Installation | <u> </u> | L. Access Roads |
| <u> </u> | D. PVC Installation (Secondary) | <u>X</u> | M. Mechanical Installation |
| <u> </u> | E. Geocomposite Installation | <u> </u> | N. Seed & Fertilization |
| <u> </u> | F. PVC Installation (Primary) | <u> </u> | O. Erosion & Sediment Control |
| <u> </u> | G. Sand Placement | <u>X</u> | P. Other <u>DIGGING ANCHOR TRENCH</u> |
| <u> </u> | H. Geotextile Installation | <u>X</u> | Q. Other <u>LINE TRANSFER</u> |
| <u> </u> | I. Subsoil Placement | <u> </u> | R. Other <u> </u> |

[illegible]

WEATHER:

AM - COOL - CLEAR - SUNNY - MOD to HVY WINDS
PM - WARM - BECOMING CLOUDY bt to MOD WINDS

COPY TO: P. Mutch, FLVOR DANIELS

OBSEVER:

PAGE 1 of 3

Q:/9117FIELDRPT.XLS/HAC/4/6/94

CBA 005 0846

Date: 4-19-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- CONTINUED GRADING SUBBASE
- LINER BROUGHT UP TO CELLS
- ANCHOR TRENCH CUT
- SURVEYORS SHOT TAPES ON SUBBASE GRADE

CONSTRUCTION OBSERVATION:

- D37P & 950E USED TO GRADE SUBBASE
- 2 LAGBOERS CHECKED ~~ROUGH~~ GRADE
- 2 SURVEYORS SHOT FINAL GRADE
- 1030 LOAD ALL ON SITE BEGAN BRINGING LINER TO DESIGNATED STOCK PILE AREA ~~WEST~~ ^{EAST} OF CELL #1
- ANCHOR TRENCH CUT BY BACK HOE / TRACK HOE C220LC

PROBLEMS / RESOLUTIONS:

-NONE-

COPY TO: R. Mutch, FLUOR DANIELS

OBSERVER: HEATHER A. CURKIE

PAGE 2 of 3

Date: 4-19-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

T. BENN WAS INFORMED BY CIBA THAT PEOPLE ON SITE WERE NOT WEARING THEIR HARD HATS & ~~GLASSES~~ GLASSES. T. BENN INFORMED ME THAT I WAS TO MONITOR THAT EVERYBODY COMPLIES WITH CIBA'S RULES

OTHER:

COPY TO: P. MITCH, ELVOR DANIELS

OBSERVER:


HEATHER A. CURRIE

PAGE 3 of 5

Date: 1-20-93

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

- | | |
|-------------------------------------|---------------------------------|
| ☐ | A. Stripping of Existing Soil |
| ☒ | B. Grading Subbase |
| ☒ | C. Bento-Fix Installation |
| ☒ | D. PVC Installation (Secondary) |
| ☐ | E. Geocomposite Installation |
| ☐ | F. PVC Installation (Primary) |
| ☐ | G. Sand Placement |
| ☐ | H. Geotextile Installation |
| ☐ | I. Subsoil Placement |

- _____ J. Topsoil Placement
 _____ K. Survey Work
 _____ L. Access Roads
 _____ M. Mechanical Installation
 _____ N. Seed & Fertilization
 _____ O. Erosion & Sediment Control
 _____ K P. Other CUTTING, ANCHOR TRENCH
 _____ Q. Other _____
 _____ R. Other _____

[illegible]**WEATHER:**

AM COOL WINDY - SUNNY
PM WARM WINDY - SUNNY

COPY TO: P. Mutch, FLOR DAWIELS

OBSEVER:

~~PAGE~~ _____ of _____

Date: 4-20-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- CONTINUED GRADING SUBBASE
- BEGAN DEPLOYMENT OF BENTOFIX - GCL
- BEGAN DEPLOYMENT OF PVC LINER
- CONTINUED TO CUT ANCHOR TRENCH (SOUTH END)

CONSTRUCTION OBSERVATION:

- 1330 GRADED NORTH WEST END
- LEAD RLL ASSISTED IN DEPLOYMENT OF BENTOFIX ; PVC LINER - 10 ROLLS GCL INSTALLED
- 11:00 FIRST PVC LINER DEPLOYED
- LUNCH
- DEPLOYMENT OF BENTOFIX CONTINUED
- 230 SECOND PVC PANEL INSTALLED
- GRADING OF SUBBASE CONTINUED
- 4:15 PANEL 1 & 2 SEAMED
- 1 DESTRUCTIVE TAKEN ON THE SEAM
- SEAMS WILL BE AIR LANCED 4-21-94
- 21 ROLL BENTOFIX INSTALLED 31,500 sqft GROSS DEPLOYED ; 30,695 sqft INSTALLED

PROBLEMS / RESOLUTIONS:

COPY TO: R. MITCH FLEWEL DANIELS

OBSERVER: HERBERT A. LUKIE

PAGE 2 of 3

Date: 4-21-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

- | | | | |
|----------|---------------------------------|----------|------------------------------------|
| <u>C</u> | A. Stripping of Existing Soil | _____ | J. Topsoil Placement |
| <u>C</u> | B. Grading Subbase | <u>X</u> | K. Survey Work |
| <u>X</u> | C. Bento-Fix Installation | _____ | L. Access Roads |
| <u>X</u> | D. PVC Installation (Secondary) | _____ | M. Mechanical Installation |
| _____ | E. Geocomposite Installation | _____ | N. Seed & Fertilization |
| _____ | F. PVC Installation (Primary) | _____ | O. Erosion & Sediment Control |
| _____ | G. Sand Placement | <u>X</u> | P. Other <u>REMOVAL of SUBBASE</u> |
| _____ | H. Geotextile Installation | _____ | Q. Other _____ |
| _____ | I. Subsoil Placement | _____ | R. Other _____ |

[illegible]**WEATHER:**

AM - COOL - CLOUDY - Lt to med WINDS - 50's
PM - COOL - CLEAR - Lt to med WINDS 60's

COPY TO: P. Mutch, FLUOR DANIELS

OBSEVER: [Signature] PAGE 1 of 3

Q:\9117FIELD\DRPT.XLS\HACH\4/6/94

CBA 005 0851

Date: 1-20-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

*SPOKE W/ A. NICARRETA ABOUT SUBBASG CERTIFICATION NOT BEING RELIEVED
AND EXPRESSED THAT CONTI WAS AT RISK PUTTING LINER IN THE CELL
HE AGREED

*SPOKE W/ J. STUART ON DESTRUCTIVE WORK AROUND ON RESULTS.
PER SPEC WE ARE ALLOWED UP TO 72 HOURS.

*SPOKE W/ P. MITCH ECKENFELDER IS NOT TO BE THE HEALTH & SAFETY
INSPECTORS ON THE JOB. FLOOR DANIELS IS TO RESUME THE POSITION

OTHER:

7:00 ON SITE
1/2 LUNCH
18:00 OFF SITE
10 1/2 HOURS

COPY TO: P. MITCH, FLOOR DANIELS OBSERVER: HEATHER A. CURRIE PAGE 3 of 3

Date: 4-21-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- CONTINUED DEPLOYMENT OF BENTOFIX GCL - 26 ^{ROLLS} ~~ROLLS~~ DEPLOYED
- SURVEYORS CONTINUED SHOOTING TOPO OF SUBBASE
- REMOVED STOCKPILE OF SUBBASE TO WEST SIDE CELL #3
- CONTINUED TO DEPLOY PVC LINER 3 PANELS DEPLOYED

CONSTRUCTION OBSERVATION:

- LOAD ALL AND D37P USED TO DEPLOY GCL
- 950E STAGED BENTOFIX TO BE USED (REMOVED MATERIAL (SUBBASE) TO CELL #3 (WEST SIDE))
- 0930 3RD PVC PANEL DEPLOYED # - PC220LC USED TO ASSIST IN DEPLOYMENT
- 1045 PANELS 2 & 3 SEAMED
- BENTOFIX DEPLOYMENT CONTINUED
- DESTRUCTIVE SAMPLE #2 TAKEN OUT OF SEAM 2/3
- 1:00 4TH PVC PANEL DEPLOYED
- 350 PANELS 3 & 4 SEAMED DESTRUCTIVE #3 TAKEN
- 345 PANEL #5 DEPLOYED
- SEE OTHER

PROBLEMS / RESOLUTIONS:

COPY TO: P. MITCH, FLUCK, DANIELS

OBSERVER: HEATHER A. CURRIE

PAGE 2 of 3

Date: 7-21-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

OTHER:

4:45 ~~4:45~~ SCAMS 4/5 SCAMER DESTRUCTIVE #4 TAKEN

NOTE: WATER FROM TEMPORARY LINER CAP & FILLING ANCHOR TRENCH CHANNELS
WILL BE CUT TO REROUTE THE WATER.

700 ON SITE

- 1/2 LUNCH

630 OFFSITE

11.0 HOURS

COPY TO: P. Mutch, FLUCK DANIELS

OBSERVER: [Signature]

PAGE 3 of 3

Date: 4-77-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u>C</u>	A. Stripping of Existing Soil
<u>C</u>	B. Grading Subbase
<u>X</u>	C. Bento-Fix Installation
<u>X</u>	D. PVC Installation (Secondary)
_____	E. Geocomposite Installation
_____	F. PVC Installation (Primary)
_____	G. Sand Placement
_____	H. Geotextile Installation
_____	I. Subsoil Placement

☐ J. Topsoil Placement
☐ K. Survey Work
☒ L. Access Roads
☐ M. Mechanical Installation
☐ N. Seed & Fertilization
☐ O. Erosion & Sediment Control
☒ P. Other Removal of SUBBASE STABIL
☒ Q. Other ANCHOR TIE ROD EXCAVATION
☐ R. Other

[illegible]

WEATHER:

AM SUNNY - Cool - Lt to MED WINDS
PM SUNNY - mid 50's, WINDS Lt to MED.

COPY TO: P. Mitchell FIVER DANIELS

OBSEVER:

P.D. Mutch
P.D. Mutch

PAGE 1 of 3

Date: 4-22-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- CONTINUED TO DEPLOY BENTONITE
- 900 5th PVC PANEL DEPLOYED
- 1600 PANELS 4/5 SEAMED DESTRUCTIVE SAMPLE #5 TAKEN
- LEAD ALL ASSISTED IN GEOSYNTHETIC DEPLOYMENT
- 9500 TRANSFERRED SUBBASE STOCKPILE TO EAST END CELL #3
- PC220LC CONTINUED CUTTING ANCHOR TRENCH
- 1100 6th PANEL (PVC) DEPLOYED
- 2:00 - 3:00 PANELS 6/7 SEAMED - DESTRUCTIVE SAMPLE #6 TAKEN
- PC 220LC DIGGING ANCHOR TRENCH ALONG SOUTH SIDE (SOUTHWEST CORNER) AND ALONG WESTERN SIDE, ALSO EXCAVATED OUTLET (ANCHOR TRENCH) TO SOUTHERN SWALE
- LINER CREW FILLING SANDBAGS AND DISTRIBUTING ACROSS PVC PANELS

CONSTRUCTION OBSERVATION:

PROBLEMS / RESOLUTIONS:

COPY TO: PD. MITCH, ELVA DANEL

OBSERVER: P.D. MURPHY

PAGE 2 of 3

Date: 4/22/94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:**KEY CONVERSATIONS and DISCUSSIONS:**

- ~~AS~~ INDICATED TO LENNY (CONTI FOREMAN) THAT SPEC REQUIRES ROLLING OF PVC FIELD SEAMS (THEY ARE USING WOODEN DEPRESSIONS)
LENNY INFORMED ME THAT THE MANUFACTURER RECOMMENDS THIS FOR INSTALLATION AND ALSO SUPPLY WOODEN DEPRESSIONS.
I INFORMED LENNY THAT THIS METHOD IS ADEQUATE PENDING THE RESULTS OF THE DESTRUCTIVE SEAM TEST RESULTS.
LENNY AGREED.
- SPOKE WITH FRANK ESTAVANIK (CIBA) AND INFORMED HIM THAT CONTI/FOREMAN RECOMMEND TAKING DESTRUCTIVE PVC SEAM SAMPLE ON EVERY FIELD SEAM RATHER THAN EVERY 500 FT (PER SPEC). THE COST WILL INCREASE BY APPROXIMATELY \$500. BUT IF A SEAM FAILS - CONTRACTOR WILL ONLY HAVE TO CUT STRIP THE FAILED SEAM (i.e. APPROXIMATELY 200 FT.) FRANK AGREED.

OTHER:

7:00 AM ON-SITE
12:00 - 12:30 LUNCH
12:30 - 4:30 OFF-SITE

9.0 HRS.

COPY TO: P. Mutch / Frank DanielOBSERVER: PD MutchPAGE 3 of 3

Date: 4-25-44

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u>C</u>	A. Stripping of Existing Soil
<u>C</u>	B. Grading Subbase
<u>X/C</u>	C. Bento-Fix Installation
<u>X/C</u>	D. PVC Installation (Secondary)
<u>X</u>	E. Geocomposite Installation
<u> </u>	F. PVC Installation (Primary)
<u> </u>	G. Sand Placement
<u> </u>	H. Geotextile Installation
<u> </u>	I. Subsoil Placement

_____ J. Topsoil Placement
 _____ K. Survey Work
 _____ L. Access Roads
 _____ M. Mechanical Installation
 _____ N. Seed & Fertilization
 _____ O. Erosion & Sediment Control
 _____ X P. Other GRADING CELL # 3
 _____ Q. Other _____
 _____ R. Other _____

[illegible]**WEATHER:**

WARM - SUNNY - Lt WINDS
COOLER - Pt CLOUDY - MED WINDS

COPY TO: P. Mutch Fwor Daniels

OBSEVER:

-PAGE 1 of 3

HEATHER A. CURRIE

Date: 4-25-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

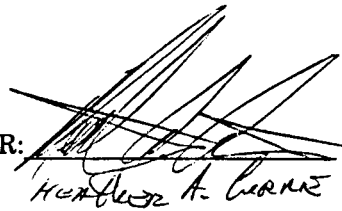
- BENTONITE Deployment CONTINUED & COMPLETED - LOAD ALL ASSISTED
- 945 PANEL 8 (PVC LINED) DEPLOYED - LOAD ALL / PC220 LC ASSISTED
- 1030 PANEL 7/8 SEAMED DESTRUCTIVE SAMPLE #7 TAKEN
- GEOTEXTILE (GDL) DEPLOYMENT BEGAN
- SEAMS 1/2, 2/3 & 3/4 AIR LANCED AND PASSED
- 3 REPAIRS MADE TO PANEL #2 (SEE DRAWINGS)
- GEOTEXTILE TIED EVERY 10 FEET - SEWING BEGAN

CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

COPY TO: P. MITCH FLUOR DANIELS

OBSERVER: 

PAGE 2 of 3

Date: 7-25-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

SPOKE W/ MTL REGARDING SCAMS (DESTRUCTIVES) #1'S 1-6 PASSED
SPOKE W/ P. MUTCH REGARDING L.D.P. PITCH - VERIFICATION MUST BE MADE
CONT. WILL SHOOT PIPE

OTHER:

0700 ARRIVED ON SITE
42 / LUNCH
530 / OFF SITE
10 HOURS

COPY TO: P. MUTCH EVER DANIELS

OBSERVER: [Signature]

PAGE 3 of 3

Date: 4-26-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- GEOCOMPOSITE DEPLOYMENT CONTINUED
- EXTENSION PIPES PLACED
- STONE FILLED IN AREX-80 PIPES
- LDP PLACED IN WEST ANCHOR TRENCH
- GRADING CELL #3 CONTINUED
- SURVEYORS WORKING IN CELL #3
- PVC PANEL #1 DEPLOYED (PRIMARY) 3:30
- 4:15 PRIMARY TO SECONDARY PVC PANELS SEAMED ALONG EAST ANCHOR TRENCH
- CLEANUP AROUND CELL

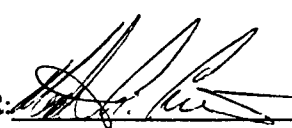
CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

- NONE -

COPY TO: P. MITCH, FLORIAN DANIELS

OBSERVER: 

PAGE 2 of 3

Date: 4-26-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

• SUBBASE CERTS WILL BE IN TOMMOROW FOR L. NICARETTA
• ANCHOR TRENCH NEEDS TO BE SHOT BY CERTIFIED SURVEYOR CONTE IS AT RISK
IF SAND IS PLACED. CONTE WILL LEAVE ENDS OPEN TO ALLOW SURVEY TO BE
PERFORMED

OTHER:

700 ARRIVED ON SITE
1/2 LUNCH
530 OFF SITE
10 HOURS

COPY TO: P. MITCH, FLUOR DANIELS

OBSERVER: [Signature]

HEATHER A. CURRIE

PAGE 3 of 3

Date: 4-27-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- GEOTEXTILE DEPLOYMENT CONTINUED
- BACKFILL OF EAST ANCHOR TRENCH BEGAN
- 0900 PANEL #2 PRIMARY INSTALLED - LOAD ALL ASSIGNED
- 0945 PANEL #2 SEAMED & SAMPLE #8 TAKEN
- 1015 PANEL #3 INSTALLED
- 1235 PANEL #3 SEAMED DESTRUCTIVE SAMPLE #9 TAKEN
- B.D.P. PLACEMENT ALONG SOUTH ANCHOR TRENCH BEGAN
- TRENCH #3 CONTINUED TO BE GRADED
- GAS VENT PIPE BOOTS INSTALLED FOR SECONDARY PVC AND TESTED / PASSED
- 215 PANEL #4 DEPLOYED
- CLEAN-UP OF CELL AREA
- PVC SECONDARY TO PRIMARY SEAMED ALONG CELL #2 TRENCH (NORTH)
- SEAM 3/4 SEAMED (ACC) DESTRUCTIVE SAMPLE #10 TAKEN
- SEAM 4/5-5/6 AIR LANCED : PASSED

CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

- NONE -

COPY TO: P. Mutch, FLORA DANIELS

OBSERVER: [Signature]

PAGE 2 of 3

Date: 4-27-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

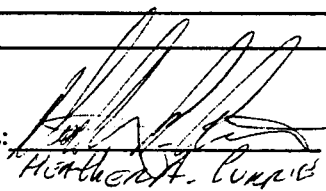
KEY CONVERSATIONS and DISCUSSIONS:

- * Secondary to Primary PVC sewered in east anchor-trench - Extra stone was added therefore there was not enough material to just overlap - P. Mutch agreed - Along the south trench the material will be installed per plan
- * SUBSILE Certification Approved by ECKENFELDER
- * D. Sample #7 results in. the sample was tested early (per spec) the shear values were not acceptable. MTL has enough material to retest.

OTHER:

700 Arrived on site
1/2 lunch
530 off site
10 hours

COPY TO: P. Mutch, Fluor Daniels

OBSERVER: 

PAGE 3 of 3

Date: 4-28-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u>C</u>	A. Stripping of Existing Soil
<u>C</u>	B. Grading Subbase
<u>C</u>	C. Bento-Fix Installation
<u>C</u>	D. PVC Installation (Secondary)
<u>X</u>	E. Geocomposite Installation
<u>X</u>	F. PVC Installation (Primary)
<u>X</u>	G. Sand Placement
_____	H. Geotextile Installation
_____	I. Subsoil Placement

☐ J. Topsoil Placement
☒ K. Survey Work
☐ L. Access Roads
☒ M. Mechanical Installation
☐ N. Seed & Fertilization
☐ O. Erosion & Sediment Control
☐ P. Other _____
☐ Q. Other _____
☐ R. Other _____

[illegible]**WEATHER:**

AM cool Sunny-CLEAR Lt winds
PM warm Sunny-CLEAR Lt to med winds

COPY TO: P. MITCH FLUOR DANIELS

OBSEVER:

PAGE 1 of 3

Q:9117FIELDRPT.XLS/HAC/4/8/94

CBA 005 0867

Date: 4-28-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- * CONTINUED DEPLOYMENT OF GELCOMPOSITE
- * BEGAN SAND PLACEMENT ON EAST END A64 & J37P USED TO PUSH SAND
- * SEAM 4/3 AIR LANDED & PASSED (SECONDARY) - PRIMARY SEAMS 1/2 - 2/3 - 3/4 AIR LANDED AND PASSED
- * SEAM 7/E AIR LANDED - PASSED (SECONDARY)
- * 300 PANEL # 5 DEPLOYED (PRIMARY)
- * 4:10 PANELS 4/5 SCANNED DESTRUCTIVE SAMPLE # 11 TAKEN

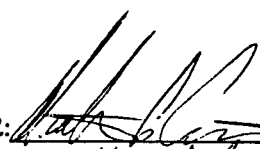
CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

- NONE -

COPY TO: P. Muter FLUOR DANIELS

OBSERVER: 

PAGE ____ of ____

HEATHER A. CURRIE

Date: 4-28-74

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

SAND BROUGHT IN SEEMED DIFFERENT AS THE PROPOSED MATERIAL THAT WAS APPROVED EARLIER BY ELKENFELDER - REQUIRED INDEX TESTING WILL BE DONE TO ASSURE THE SAND IS IN SPEC

DUE TO THE START OF SAND PLACEMENT I WILL NOT ATTEND PROGRESS MEET. P. MITCH WILL REPRESENT ELKENFELDER

OTHER:

0700 ARRIVED ON SITE
1/2 LUNCH
530 OFF SITE
10 1/2 HOURS

COPY TO: P. MITCH, FLUOR DANIELS

OBSERVER: [Signature]

PAGE 3 of 3

Date: 4-29-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

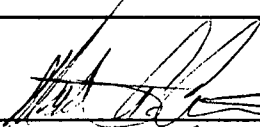
*THE LDP ON SOUTH WEST CORNER WAS PLACED DIFFERENTLY THEN PLANS CALL FOR DUE TO CIBA'S PROPERTY IN THE WAY PER FLUOR DANIEL THE TANK MAY BE MOVED FOR THE PIPE PLACEMENT

*PANEL 7 AND 8 WERE SWITCHED BY CONTI - ECKENFELDER DID NOT HAVE A PROBLEM WITH THAT BECAUSE THE LENGTHS WERE THE SAME

OTHER:

7:00 ARRIVED ON SITE
1/2 LUNCH
4:30 / OFF SITE
9 HOURS

COPY TO: P. Mutch FLUOR DANIELS

OBSERVER: 

PAGE 3 of 3

Heather A. Currie

Date: 4-29-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u>C</u>	A. Stripping of Existing Soil
<u>C</u>	B. Grading Subbase
<u>C</u>	C. Bento-Fix Installation
<u>C</u>	D. PVC Installation (Secondary)
<u>X</u>	E. Geocomposite Installation
<u>X</u>	F. PVC Installation (Primary)
<u>X</u>	G. Sand Placement
<u> </u>	H. Geotextile Installation
<u> </u>	I. Subsoil Placement

☐ J. Topsoil Placement
☐ K. Survey Work
☐ L. Access Roads
☒ M. Mechanical Installation
☐ N. Seed & Fertilization
☐ O. Erosion & Sediment Control
☐ P. Other _____
☐ Q. Other _____
☐ R. Other _____

[illegible]

WEATHER:

A.M. Cloudy - Cool - lt to med winds
P.M. Cloudy / RAINY - lt to med winds

COPY TO: P. Mutch FLUCK DANIELS

OBSEVER:

PAGE 1 of 3

HEATHER A. CURRIE

CBA 005 0871

Date: 9-29-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- BED COMPOSITE DEPLOYMENT CONTINUED
- SAND PLACEMENT CONTINUED
- 930 PRIMARY PANEL # 6 DEPLOYED
- 1095 PANELS 5/6 SEAMED DESTRUCTIVE SAMPLE # 12 TAKEN
- LDP ON WEST CORNER (SOUTH) PLACED CORRECTLY - SEE DISCUSSIONS -
- 815 PRIMARY PANEL # 7 DEPLOYED
- 320 PANELS 6/7 SEAMED DESTRUCTIVE SAMPLE # 13 TAKEN

CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

NONE -

COPY TO: P. Mutch, FLOR DANIELS

OBSERVER: HEATHER A CURRIE

PAGE 2 of 3

Date: 5-12-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

☐	A. Stripping of Existing Soil
☐	B. Grading Subbase
☐	C. Bento-Fix Installation
☐	D. PVC Installation (Secondary)
☐	E. Geocomposite Installation
☐	F. PVC Installation (Primary)
☐	G. Sand Placement
☐	H. Geotextile Installation
☐	I. Subsoil Placement

☒ J. Topsoil Placement
☐ K. Survey Work
☐ L. Access Roads
☐ M. Mechanical Installation
☐ N. Seed & Fertilization
☐ O. Erosion & Sediment Control
☐ P. Other _____
☐ Q. Other _____
☐ R. Other _____

[illegible]**WEATHER:**

AM - COOL CLEAR - lt winds

PM - WARM CLEAR MED WINDS

COPY TO: P. Mutch, FLVOR DANIELS

OBSEVER: M. J. J. PAGE 1 of 3

Date: 5-12-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- 450E REUSED REMAINING TOPSOIL FOR NEW TOPSOIL PLACEMENT
- D6H USED TO SPREAD OUT TOPSOIL
- D379 GRADED TOPSOIL
- 2 LABORERS RAKED SLOPES

CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

- NONE -

COPY TO: P. Mutch, FLUOR DANIELS

OBSERVER:


HEATHER A. CURRIE

PAGE 2 of 3

Date: 5-12-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

- None -

OTHER:

0700 ARRIVED ON SITE
1/2 LUNCH
4:30 OFF SITE
9 HOURS

COPY TO: P. MURPHY, FLORA DANIELS OBSERVER: [Signature] PAGE 3 of 3

Date: 5-13-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

 A. Stripping of Existing Soil

 B. Grading Subbase

 C. Bento-Fix Installation

 D. PVC Installation (Secondary)

 E. Geocomposite Installation

 F. PVC Installation (Primary)

 G. Sand Placement

 H. Geotextile Installation

 I. Subsoil Placement

X J. Topsoil Placement
____ K. Survey Work
____ L. Access Roads
____ M. Mechanical Installation
____ N. Seed & Fertilization
____ O. Erosion & Sediment Control
____ P. Other _____
____ Q. Other _____
____ R. Other _____

[illegible]

WEATHER:

AM - COOL SUNNY Lt. WINDS
PM WARM SUNNY MED WINDS

COPY TO: P. Mutch, FLOR DANIELS

OBSEVER:

PAGE 1 of 3

Heather A. Gurnea

Date: 5-13-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

· 950 REPLACED PARKING BUMPERS ON NORTH BERM'S CREST
· TOPSOIL PLACEMENT CONTINUED

CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

- NONE -

COPY TO: P. Mutch, FLORA DANIELS

OBSERVER: 

PAGE 2 of 3

Date: 5-13-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

SPOKE W/ L. NICKRETTA ON TOPSOIL TESTING FOR SEED FERTILIZATION
COMPATIBILITY - THE TEST WILL BE PERFORMED

OTHER:

700 ARRIVED ON SITE
12 LUNCH
330 OFF SITE
8 HOURS

COPY TO: L. MITCH FLUOR DANIELS OBSERVER: [Signature]

PAGE 3 of 3

Date: 5-16-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

- C. Stripping of Existing Soil
- D. Grading Subbase
- E. Bento-Fix Installation
- F. PVC Installation (Secondary)
- G. Geocomposite Installation
- H. PVC Installation (Primary)
- I. Sand Placement
- J. Geotextile Installation
- K. Subsoil Placement

 X J. Topsoil Placement
 K. Survey Work
 L. Access Roads
 M. Mechanical Installation
 X N. Seed & Fertilization
 O. Erosion & Sediment Control
 P. Other _____
 Q. Other _____
 R. Other _____

[illegible]**WEATHER:**

- CLOUDY RAINY - PARTLY CLEARING, MED WINDS
- PARTLY CLOUDY - HIGH WINDS

COPY TO: P. Mubayi, FLUOR DANIELS OBSERVER: [Signature] PAGE 1 of 3

Date: 5-16-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

*TOPSOIL PLACEMENT CONTINUED
*TRACTOR USED TO FERTILIZE TOPSOIL - SEEDING BEGAN
*HAY TRUCK USED TO STABILIZE SEED & FERTILIZER

CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

NONE

COPY TO: P. Mutch FAVOR DANIELS OBSERVER: HEATHER A. CURRIE

PAGE 2 of 3

Date: 5-12-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

*OUTCOME ON SAND SURVEY WILL BE DECIDED TOMORROW

OTHER:

0700 ARRIVED ON SITE
1 1/2 LUNCH
330 OFF SITE
8 HOURS

COPY TO: P. Mutch, FLUOR DANIELS

OBSERVER: [Signature]

PAGE 3 of 3

Robert A. Curre

Date: 5-17-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

ITEMS WORKED ON

<u>C</u>	A. Stripping of Existing Soil		J. Topsoil Placement
<u>C</u>	B. Grading Subbase	<u>X</u>	K. Survey Work
<u>C</u>	C. Bento-Fix Installation		L. Access Roads
<u>C</u>	D. PVC Installation (Secondary)		M. Mechanical Installation
<u>C</u>	E. Geocomposite Installation		N. Seed & Fertilization
<u>C</u>	F. PVC Installation (Primary)		O. Erosion & Sediment Control
<u>C</u>	G. Sand Placement		P. Other _____
<u>C</u>	H. Geotextile Installation		Q. Other _____
<u>C</u>	I. Subsoil Placement		R. Other _____

EQUIPMENT	HOURS WORKING	STAND BY/ DOWNTIME	REMARKS

WEATHER:
AM - RAIN - COLD - MED to HIGH WINDS

COPY TO: R. MITCH, FLUOR DANIELS OBSERVER: [Signature] PAGE 1 of 3

Date: 5-17-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- NO WORK WAS DONE TODAY DUE TO RAIN - & NOT RELIEVING TOPSOIL
- SURVEY WORK WAS DONE - TOPO FOR FINAL COVER BEGAN

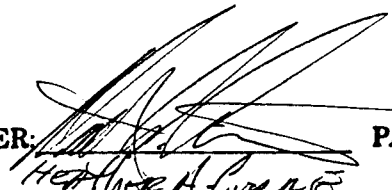
CONSTRUCTION OBSERVATION:

SCE ABOVE

PROBLEMS / RESOLUTIONS:

NONE

COPY TO: P. Mutch, FLOR DANIELS

OBSERVER: 

PAGE 2 of 3

Date: 5-17-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

NONE

OTHER:

0700 ARRIVED ON SITE
1000 OFF SITE
3 HOURS

COPY TO: P. Mutch, FLUOR DANIELS OBSERVER: [Signature] PAGE 3 of 5

Date: 5-18-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

- | | | | |
|----------|---------------------------------|----------|------------------------------------|
| <u>C</u> | A. Stripping of Existing Soil | _____ | J. Topsoil Placement |
| <u>C</u> | B. Grading Subbase | _____ | K. Survey Work |
| <u>C</u> | C. Bento-Fix Installation | _____ | L. Access Roads |
| <u>C</u> | D. PVC Installation (Secondary) | _____ | M. Mechanical Installation |
| <u>C</u> | E. Geocomposite Installation | _____ | N. Seed & Fertilization |
| <u>C</u> | F. PVC Installation (Primary) | _____ | O. Erosion & Sediment Control |
| <u>C</u> | G. Sand Placement | <u>X</u> | P. Other <u>Grading of Cell #3</u> |
| <u>C</u> | H. Geotextile Installation | _____ | Q. Other _____ |
| <u>C</u> | I. Subsoil Placement | _____ | R. Other _____ |

J. Topsoil Placement

K. Survey Work

L. Access Roads

M. Mechanical Installation

N. Seed & Fertilization

O. Erosion & Sediment Control

P. Other GRADING of CELL #3

Q. Other

R. Other

[illegible]**WEATHER:**

AM - Cloudy cool Lt winds

Pm P. Cloudy COOL Lt to med winds

COPY TO: P. Mutch, FLORIAN DANIELS

OBSEVER:

PAGE 1 **of** 3

Date: 5-18-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

GRADING CELL #3

CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

TOPSOIL PIT SHUT DOWN NO PROPOSED SITE AS OF YET

COPY TO: P. MITCH, FLOOR DANIELS

OBSERVER:


Heather A. Currie

PAGE 2 of 3

Date: 5-18-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

TOPSOIL PROPOSED TO COMPLETE CELL #1 WAS REJECTED, DUE TO A LARGE
AMOUNT OF CLAY. NIDOT 909.10 ALLOWS UP TO 30% CLAY THIS MATERIAL WAS WELL
OVER THAT LIMIT.

OTHER:

0700 ARRIVED ON SITE
1/2 LUNCH
330 / off SITE
8 HOURS

COPY TO: R MITCH, FLUOR DANIELS

OBSERVER: [Signature]

PAGE 3 of 3

Date: 5-19-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u> </u>	A. Stripping of Existing Soil
<u> </u>	B. Grading Subbase
<u> </u>	C. Bento-Fix Installation
<u> </u>	D. PVC Installation (Secondary)
<u> </u>	E. Geocomposite Installation
<u> </u>	F. PVC Installation (Primary)
<u> </u>	G. Sand Placement
<u> </u>	H. Geotextile Installation
<u> </u>	I. Subsoil Placement

 X J. Topsoil Placement
 K. Survey Work
 L. Access Roads
 M. Mechanical Installation
 N. Seed & Fertilization
 O. Erosion & Sediment Control
 P. Other _____
 Q. Other _____
 R. Other _____

[illegible]

WEATHER:

Am/PM RAIN COOL

COPY TO: P. Mutch Fluor Daniels

OBSEVER:

HEATHER A. CURRIE

PAGE 1 of 3

Date: 5-19-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

FLOOR DANIELS/CIBA Set up DELIVERY of TOP SOIL FROM SBA
- J. BENN COULD NOT BE OUT TO COLLECT TICKETS FOR TOP SOIL IF WAS REQUESTED
that ECKENFELDER DO IT
- ALL TOP SOIL WAS DELIVERED A TOTAL of 44 LOADS

CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

BETWEEN 10:15 LOADS WERE SHORTED - CALLED SBA WHEN IT FIRST
HAPPENED - SPOKE w/ BILLY (DISPATCHER) - 2 LOADS WERE DELIVERED AT NO
COST - INFORMED D. CROUSE OF THE SITUATION HE WOULD TALK TO F. ESSAVANIC
ON THE SITUATION

COPY TO: P. MITCH. FLOOR DANIELS

OBSERVER: 

PAGE 2 of 3

HEATHER A. CURRIE

Date: 5-19-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

-See PROBLEMS... -

OTHER:

0700 ARRIVED ON SITE
1/2 LUNCH
430 / off site
9 HOURS

COPY TO: P. MITCH, FLUOR DANIELS

OBSERVER:

Heather A. Currie
HEATHER A. CURRIE

PAGE 3 of 3

Date: 5-20-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

 C A. Stripping of Existing Soil
 C B. Grading Subbase
 C C. Bento-Fix Installation
 C D. PVC Installation (Secondary)
 C E. Geocomposite Installation
 C F. PVC Installation (Primary)
 C G. Sand Placement
 C H. Geotextile Installation
 C I. Subsoil Placement

X/c

X

J. Topsoil Placement

K. Survey Work

L. Access Roads

M. Mechanical Installation

X

N. Seed & Fertilization

O. Erosion & Sediment Control

P. Other _____

Q. Other _____

R. Other _____

[illegible]**WEATHER:**

AM RAIN - OVERCAST - COOL
PM CLEARING - COOL

COPY TO: P. Mutch, FLUOR DANIELS OBSERVER: [Signature] PAGE 1 of 3

Date: 5-20-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- TOPSOIL GRADED TO FINAL ELEVATION
- SURVEYORS OUT - SHOT TOPSOIL GRADES - VERBAL APPROVAL
- SEEDING & FERTILIZED TOPSOIL
- STABILIZATION OF SEED USING HAY

CONSTRUCTION OBSERVATION:

SEE ABOVE -

PROBLEMS / RESOLUTIONS:

NONE -

COPY TO: P. Muter, FLVON DANIELS OBSERVER: Heather A. Currie PAGE 2 of 3

Date: 5-20-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

SPOKE W/ L. NICARETTA ON SUBMITTALS NEEDED TO COMPLETE CELL #1

OTHER:

0700 ARRIVED ON SITE

1/2 LUNCH

330 off site

8 HOURS

COPY TO: P. MITCH, FLORA DANIELS

OBSERVER:

[Signature]
HEATHER L. CURRIE

PAGE 3 of 3

APPENDIX E
GEOSYNTHETICS DATA

CBA 005 0894

MANUFACTURER QUALITY CONTROL

CBA 005 0895

GEOSYNTHETIC CLAY LINER

CBA 005 0896

FLUID SYSTEMS

December 22, 1993

Mr. John McCann
CONTI ENVIRONMENTAL, INC.
3001 South Clinton Avenue
South Plainfield, NJ 07080

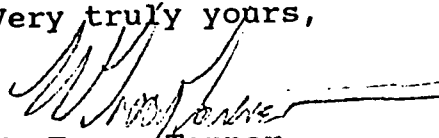
CERTIFICATE OF COMPLIANCE
PURCHASE ORDER # 94159-7825
BILL OF LADING # 000376

Dear Mr. McCann:

Attached is the Certificate of Compliance for BENTOFIX geosynthetic clay liner, shipped December 20, 1993, to Ciba-Geigy.

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

Very truly yours,


W. Tracy Tanner
Regional Sales Engineer

WTT/plr
Attachment



ALBARRIE NAUE LTD.

85 MORROW ROAD
BARRIE, ONTARIO CANADA L4N 3V7
TEL: (705) 737-0551
FAX: (705) 737-5877

PACKING LIST

SHIP TO: CONTI ENVIRONMENTAL, INC. C/O CIBA-GEIGY CELL NO. 1 CAPPING SYSTEM ROUTE 37 WEST TOMS RIVER, NJ 08755 U.S.A.		DATE SHIPPED: DECEMBER 20, 1993 CUSTOMER ORDER #: #4066 CUSTOMER REQ. #: JOB #F353-107 A.N. NUMBER: #0609		
SHIPPED VIA: BMD TRANSPORT "PREPAID & ADD"				
QUANTITY	DESCRIPTION AND SIZE	GROSS WEIGHT	NET WEIGHT	NO. OF CARTONS/BALES/ROLLS
2,824.3 /M ²	BENTOFIX MATERIAL SIZE: 100' x 15'2" @ 20 ROLLS MARKS: CONTI ENVIRONMENTAL, INC C/O CIBA-GEIGY TOMS RIVER, NJ 20 ROLLS P.O. #4066 JOB #F353-107 MADE IN CANADA TRAILER #116513.	34,389	LBS.	20 ROLLS

CBA 005 0898

RECEIVED DEC 22 1993

ALBARRIE NAUE LTD.

BENTOFIX MANUFACTURING CERTIFICATION

CUSTOMER: FLUID SYSTEMS

SHIP DATE: 12/20/93

PROJECT: CONTI ENVIRONMENT,
INC. C/O CIBA-GEIGY
ORDER NUMBER: 4066

NO.ROLLS/B.O.L.NO.: 20/376
PRODUCT TYPE: BENTOFIX NS

We hereby certify that the Bentofix geosynthetic clay liner purchased and shipped for the above identified project meets or exceeds Albarrie Naue Ltd.'s specifications for Bentofix. Product has continuously been inspected for the presence of needles and is needle free. The test listed for the bentonite component have been performed on each batch of bentonite. The test listed for the finished geocomposite product have been performed on at least every 280 sq.mt. [3000 sq.ft.] for the: Mass according to method ASTM D3776; Thickness according to method ASTM D1777; and on at least every 930 sq.mt. [10000 sq.ft.] for the Grab Tensile according to method ASTM D4632 and Puncture Strength according to method ASTM D4833; and at least every 9,300 sq.mt. [100,000sq.ft.] for the geotextile component and the finished geocomposite water permeability according to method GRI GCL-2. The roll numbers for this project are as follows:

Lot#121393_____

Roll# 13719, 13769, 13770_____

Lot#121493_____

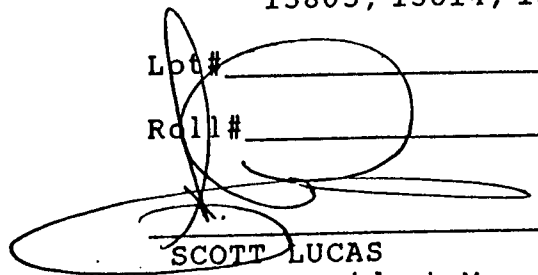
Roll# 13771, 13772, 13773, 13774, 13783, 13785, 13790_____

13791, 13792, 13793, 13801, 13802, 13803, 13804_____

13805, 13814, 13816_____

Lot#_____

Roll#_____


SCOTT LUCAS
Vice President Manufacturing

12.20.93
DATE

Date: 5-2-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u>C</u>	A. Stripping of Existing Soil	_____	J. Topsoil Placement
<u>C</u>	B. Grading Subbase	_____	K. Survey Work
<u>C</u>	C. Bento-Fix Installation	_____	L. Access Roads
<u>C</u>	D. PVC Installation (Secondary)	<u>X</u>	M. Mechanical Installation
<u>X/C</u>	E. Geocomposite Installation	_____	N. Seed & Fertilization
<u>X/C</u>	F. PVC Installation (Primary)	_____	O. Erosion & Sediment Control
<u>X</u>	G. Sand Placement	_____	P. Other _____
_____	H. Geotextile Installation	_____	Q. Other _____
_____	I. Subsoil Placement	_____	R. Other _____

[illegible]

WEATHER:

AM - CLEAR COOL SUNNY MED WINDS
PM - CLEAR COOL MED WINDS

COPY TO: P. Mutch, FLUOR DANIELS

OBSEVER:

PAGE / of 3

Date: 5-8-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- * GECOMPOSITE DEPLOYMENT CONTINUED
- * SAND PLACEMENT CONTINUED
- * LDP PLACED IN WEST ANCHOR TRENCH
- * BLOTS INSTALLED AROUND WELL EXTENSION & LDP - AIR LANDED & PASSED
- * GECOMPOSITE PIECED IN ALONG WEST ANCHOR TRENCH - COMPOSITE HEAT SEALED & TIED
- * 115 PANEL #8 (PRIMARY) INSTALLED - PVC INSTALLATION COMPLETED
- * 200 PANELS #18 (PRIMARY) SEALED DESTRUCTIVE SAMPLE #14 TAKEN
- * SEAMS #15 THROUGH #18 (PRIMARY) AIR LANDED & PASSED
- * CLEAN UP AROUND CELL
- * SAND PLACEMENT AREA FROM PRIMARY PANEL 3 to 1/2 to 4

CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

- NONE -

COPY TO: P. Mutch, FLUOR DANIELS

OBSERVER: 

PAGE 2 of 3

Date: 5-2-77

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

- ~~None~~
- DESTRUCTIVE RESULT BACK ON D.S. # 11-13 ALL PASSED
 - GRADATION RESULTS (VERBAL) FROM CONTIN SAND SAMPLE WAS THE SAME AS PROPOSED MATERIAL

OTHER:

700 ARRIVED ON SITE
1/2 LUNCH
5:00 OFF SITE
10 HOURS

COPY TO: P. Mutch, FLOR DANIELS

OBSERVER: Heather A. Currie

PAGE 3 of 3

Date: 5-3-74

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u>C</u>	A. Stripping of Existing Soil	_____	J. Topsoil Placement
<u>C</u>	B. Grading Subbase	_____	K. Survey Work
<u>C</u>	C. Bento-Fix Installation	_____	L. Access Roads
<u>C</u>	D. PVC Installation (Secondary)	_____	M. Mechanical Installation
<u>C</u>	E. Geocomposite Installation	_____	N. Seed & Fertilization
<u>C</u>	F. PVC Installation (Primary)	_____	O. Erosion & Sediment Control
<u>X</u>	G. Sand Placement	_____	P. Other _____
<u>X</u>	H. Geotextile Installation	_____	Q. Other _____
_____	I. Subsoil Placement	_____	R. Other _____

[illegible]

WEATHER:

AN CLEAR COOL - RIED WINDS
PM CLOUD COOL Lt to med winds

COPY TO: P. Mutch, FAVOR DANIELS

OBSEVER:

PAGE 1 of 3

Heather A Currie

Date: 5-3-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- SAND PLACEMENT CONTINUED
- GEOTEXTILE STAGED AT NORTH BERM
- GEOTEXTILE DEPLOYMENT BEGAN - TEXTILE SEWN USING SEWING MACHINE
- SAND COVERAGE - 1/2 OF PANEL 4 TO PANEL 6

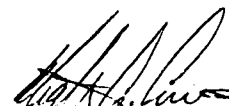
CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

- NONE -

COPY TO: P. Mutch, FLUOR DANIELS

OBSERVER: 

HEATHER A. CURRIE

PAGE 2 of 3

Date: 5-3-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

- SPOKE W/P. MITCH, FREQUENCY OF SAND/SUBSOIL SAMPLING DECREASED TO
1 FOR EVERY 2000 CUP IN PLATE & TOP FOR SUBSOIL LAYER WAVED HOWEVER
6" OF TOPSOIL IS NEEDED TO BE CHECKED VERY CAREFULLY

OTHER:

0700 ARRIVED ON SITE
1/2 LUNCH
530/ OFF SITE
170 HOURS

COPY TO: P. MITCH, FLOOR DANIELS OBSERVER: HEATHER A. CURRIE PAGE 3 of 3

Date: 5-4-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u>C</u>	A. Stripping of Existing Soil
<u>C</u>	B. Grading Subbase
<u>C</u>	C. Bento-Fix Installation
<u>C</u>	D. PVC Installation (Secondary)
<u>C</u>	E. Geocomposite Installation
<u>C</u>	F. PVC Installation (Primary)
<u>X</u>	G. Sand Placement
<u>X</u>	H. Geotextile Installation
<u> </u>	I. Subsoil Placement

J. Topsoil Placement
K. Survey Work
L. Access Roads
M. Mechanical Installation
N. Seed & Fertilization
O. Erosion & Sediment Control
P. Other _____
Q. Other _____
R. Other _____

[illegible]

WEATHER:

Am i PM - Cold - Cloudy - RAINY - MED WINDS

COPY TO: P. Mutch, FLUCR DANIELS

OBSEVER:

Heather A. Currie

PAGE 1 of 3

Date: 5-4-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

GEOTEXTILE DEPLOYMENT CONTINUED - TEXTILE OVERLAPPED & SEWN
SAND PLACEMENT CONTINUED - DGM & D37P USED TO PLACE 1 GRADE SAND LAYER
15 TRUCKS USED TO PLACE SAND FROM PANEL 6 TO PANEL 8 - 75% COMPLETE

CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

- NONE -

COPY TO: P. Mutch, FLORA DANIELS

OBSERVER: HEATHER A. CURRIE

PAGE 2 of 3

Date: 5-4-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

- SPOKE W/ P. MUTCH - CORRECTION FROM CONVERSATION ON SAMPLING FREQUENCY
THE SAMPLE FREQUENCY FOR SAND IS 1000 CU YDS / TEST HOWEVER THE
SUBSOIL LAYER WILL INCREASE TO 1 TEST FOR EVERY 2000 CU YDS IN PLACE

OTHER:

0700 ARRIVED ON SITE
1/2 LUNCH
530 / OFF SITE
10 HOURS

COPY TO: P. MUTCH, ELVOR DANIELS

OBSERVER: HEATHER A CURRIE

PAGE 3 of 3

Date: 5-5-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u>C</u>	A. Stripping of Existing Soil
<u>C</u>	B. Grading Subbase
<u>C</u>	C. Bento-Fix Installation
<u>C</u>	D. PVC Installation (Secondary)
<u>C</u>	E. Geocomposite Installation
<u>C</u>	F. PVC Installation (Primary)
<u>X</u>	G. Sand Placement
<u>X</u>	H. Geotextile Installation
<u>X</u>	I. Subsoil Placement

☒ J. Topsoil Placement
☐ K. Survey Work
☐ L. Access Roads
☐ M. Mechanical Installation
☐ N. Seed & Fertilization
☐ O. Erosion & Sediment Control
☐ P. Other _____
☐ Q. Other _____
☐ R. Other _____

[illegible]

WEATHER:

AM - CLOUDY - COOL - CLEARING MED TO HIGH WINDS

COPY TO: P. Mutch, Floor Daniels

OBSEVER:

HEIDI A. CUCKER

PAGE 7 of 5

Date: 5-5-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- * SAND PLACEMENT CONTINUED
- * SURVEYORS SHOT TOPS FOR SAND LAYER
- * SUBSOIL LAYER PLACEMENT BEGAN ON EAST END - SEE KEY...
- * ANCHOR TRENCH DUG & FILLED FOR TEXTILE ON EAST & SOUTH ENDS
- * GEOTEXTILE INSTALLATION CONTINUED

CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

- NONE -

COPY TO: P. MITCH, FLUOR DANIELS

OBSERVER: HEATHER A. CURRIE PAGE 2 of 3

Date: 5-5-74

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

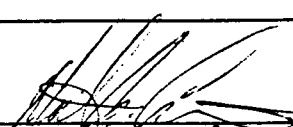
KEY CONVERSATIONS and DISCUSSIONS:

SPOKEW/ CARLOS (CONT.) DUE TO THE SURVEY RESULTS - (NOT RELIEVING) ON SAND
LAYER THEY ARE AT RISK - HE CONCURED

OTHER:

7:00 ON SITE
1/2 LUNCH
1730 OFF SITE
10 HOURS

COPY TO: P. Muter, FLUOR DANIELS

OBSERVER: 

PAGE 3 of 3

HERBERT A. CURRIE

Date: 5-6-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u>C</u>	A. Stripping of Existing Soil
<u>C</u>	B. Grading Subbase
<u>C</u>	C. Bento-Fix Installation
<u>C</u>	D. PVC Installation (Secondary)
<u>C</u>	E. Geocomposite Installation
<u>C</u>	F. PVC Installation (Primary)
<u>X/C</u>	G. Sand Placement
<u>X</u>	H. Geotextile Installation
<u>X</u>	I. Subsoil Placement

_____ J. Topsoil Placement
_____ K. Survey Work
_____ L. Access Roads
_____ M. Mechanical Installation
_____ N. Seed & Fertilization
_____ O. Erosion & Sediment Control
_____ P. Other _____
_____ Q. Other _____
_____ R. Other _____

[illegible]

WEATHER:

AM RAINY - CLEARING - COOL HIGH WINDS
PM CLEAR SUNNY - MED to HIGH WINDS

COPY TO: P. MITCH, FLUOR DANIELS

OBSEVER:

PAGE 1 of 3

HEATHER A. CURRIE

Date: 5-6-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- GRADING OF SAND LAYER COMPLETED
- PLACEMENT OF GEOTEXTILE CONTINUED - TEXTILE SEWING
- PLACEMENT OF SUBSOIL LAYER CONTINUED - SUBSOIL ALSO GRADED
- ANCHOR TRENCH FOR TEXTILE DUG - TEXTILE PLACED & TRENCH BACK FILLED
- 60% OF SUBSOIL LAYER COMPLETED

CONSTRUCTION OBSERVATION:

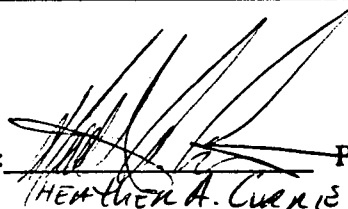
- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

- NONE -

COPY TO: P. Mutch, FLUOR DANIELS

OBSERVER:


HEATHER A. CURRIE

PAGE 2 of 3

Date: 5-6-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

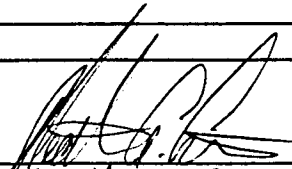
- NONE -

OTHER:

7:00 ARRIVED ON SITE
1/2 LUNCH
5:30 OFF SITE
10 HOURS

COPY TO: P. Muter, FLOR DANIELS

OBSERVER:


HEATHER A. CURRIE

PAGE 3 of 3

Date: 5-4-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u>C</u>	A. Stripping of Existing Soil	_____	J. Topsoil Placement
<u>C</u>	B. Grading Subbase	_____	K. Survey Work
<u>C</u>	C. Bento-Fix Installation	_____	L. Access Roads
<u>C</u>	D. PVC Installation (Secondary)	_____	M. Mechanical Installation
<u>C</u>	E. Geocomposite Installation	_____	N. Seed & Fertilization
<u>C</u>	F. PVC Installation (Primary)	_____	O. Erosion & Sediment Control
<u>C</u>	G. Sand Placement	_____	P. Other _____
<u>X/C</u>	H. Geotextile Installation	_____	Q. Other _____
	I. Subsoil Placement	_____	R. Other _____

[illegible]

WEATHER:

AM CLEAR - COOL - MED WINDS
PM WARM CLEAR - SUNNY - MED WINDS

COPY TO: P. Mutch, FLUOR DANIELS

OBSEVER:

R: 
HEATHER A. CURRIE

PAGE 1 of 3

Date: 5-9-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- GEOTEXTILE DEPLOYMENT CONTINUED - LAST THREE PANELS INSTALLED
- SUBSOIL LAYER CONTINUED W/ 11 TRUCKS HAULING
- ANCHOR TRENCH DUG FOR TEXTILE
- BEGAN REMOVING SILT FENCING FROM AROUND WORK LIMITS
- 85 PERCENT OF SUBSOIL COMPLETED

CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

- NONE -

COPY TO: P. MITCH, FLUOR DANIELS

OBSERVER: 

PAGE 2 of 3

HEATHER A. CURRIE

Date: 5-7-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

*SPOKE w/ L. NICARETTA that Contia is at RISK UNTIL SAND TOPS IS RELIEVED

OTHER:

700 On Site
1/2 LUNCH
1700 / off site
/ 9 1/2 HOURS

COPY TO: P. Mutch, FLOOR DANIELS

OBSERVER: HEATHER A. CURRIE

PAGE 3 of 5

Date: 5-10-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u>X</u>	A. Stripping of Existing Soil
<u>X</u>	B. Grading Subbase
<u>C</u>	C. Bento-Fix Installation
<u>C</u>	D. PVC Installation (Secondary)
<u>C</u>	E. Geocomposite Installation
<u>C</u>	F. PVC Installation (Primary)
<u>C</u>	G. Sand Placement
<u>C</u>	H. Geotextile Installation
<u>X/C</u>	I. Subsoil Placement

J. Topsoil Placement
K. Survey Work
L. Access Roads
M. Mechanical Installation
N. Seed & Fertilization
O. Erosion & Sediment Control
P. Other _____
Q. Other _____
R. Other _____

[illegible]**WEATHER:**

AM. OVERCAST COOL - Lt WINDS
PM CLEAR & SUNNY - WARM MED WINDS

COPY TO: P. MITCH FLUOR DANIELS

OBSEVER:

PAGE 7 of 3

HEATHER A CURRIE

Date: 5-10-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

* SUBSOIL PLACEMENT CONTINUED
* LABORERS REMOVED SILT FENCE & CLEANED UP AROUND CELL
* SAND STOCKPILE MOVED FROM TOPSOIL STOCKPILE TO ADJACENT CELL #3

CONSTRUCTION OBSERVATION:

- SEE ABOVE -

PROBLEMS / RESOLUTIONS:

- NONE -

COPY TO: P. BUTCH, FLUOR DANIELS

OBSERVER: HEATHER A. CURRIS

PAGE 2 of 3

Date: 5-10-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

• CONTI WANTED TO DRIVE IN THE MIDDLE OF CELL FOR TOPSOIL PLACEMENT, PARKING BUMPER PLACEMENT, SEEDING & FERTILIZATION. P. MUTCH SAID THAT REQUEST WAS OUT OF SPEC

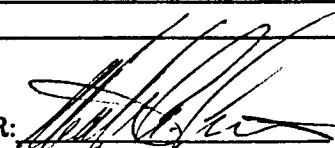
• CONTI WANTED TO USE A SPREADER BOX INSTEAD OF HYDROSEED - A CHANGE WOULD HAVE TO BE FORMALLY SUBMITTED IN WRITING

OTHER:

0700 ON SITE
1 1/2 LUNCH
1700 OFF SITE
9 1/2 HOURS

COPY TO: P. Mutch, FLUOR DANIELS

OBSERVER:


HEATHER A. CURRIE

PAGE 3 of 3

Date: 5-11-94

DAILY FIELD REPORT

FOR

CIBA-GEIGY CORPORATION - CELL NO. 1

Toms River, New Jersey

ITEMS WORKED ON

<u>C</u>	A. Stripping of Existing Soil
<u>C</u>	B. Grading Subbase
<u>C</u>	C. Bento-Fix Installation
<u>C</u>	D. PVC Installation (Secondary)
<u>C</u>	E. Geocomposite Installation
<u>C</u>	F. PVC Installation (Primary)
<u>C</u>	G. Sand Placement
<u>C</u>	H. Geotextile Installation
<u>C</u>	I. Subsoil Placement

 X J. Topsoil Placement
 K. Survey Work
 L. Access Roads
 M. Mechanical Installation
 N. Seed & Fertilization
 O. Erosion & Sediment Control
 P. Other _____
 Q. Other _____
 R. Other _____

[illegible]

WEATHER:

AM- WARM CLEAR LT WINDS
PM WARM CLEAR MED to Hvy WINDS

COPY TO: P. Mutch, FLUOR DANIELS

OBSEVER: Heather A. Currie PAGE 1 of 3
HEATHER A CURRIE

Date: 5-12-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

CONSTRUCTION PROGRESS:

- TOPSOIL PLACEMENT BEGAN - 2 TRUCKS ON SITE TO DUMP FROM STOCKPILE
- ONE TRUCK IMPORTING SOIL
- LABORER FILLED SAND BAGS
- HAY FOR STABILIZATION ARRIVED TODAY - LABORERS UNLOADED TRUCK

CONSTRUCTION OBSERVATION:

PROBLEMS / RESOLUTIONS:

COPY TO: P. Mutch, FLORA DANIELS

OBSERVER:


HEATHER A. CURRIE

PAGE 2 of 3

Date: 5-11-94

DAILY FIELD REPORT
FOR
CIBA-GEIGY CORPORATION - CELL NO. 1
Toms River, New Jersey

REMARKS:

KEY CONVERSATIONS and DISCUSSIONS:

SPOKE W/ P. Mutch AFTER FURTHER REVIEWING. FOR SEEDING & REPLACEMENT OF PARKING BUMPERS CONTI WILL BE PERMITTED TO DRIVE ON THE TOPSOIL - IF ANY RUTTING OF THE SOIL OCCURS - AN ALTERNATIVE METHOD WILL BE USED

* SPOKE W/ CONTI - THE TOPSOIL BEING IMPORTED HAS ROCKS & STUMPS MIXED IN - THE TOPSOIL WILL BE RAKED TO REMOVE ALL LARGE PARTICLES

OTHER:

700 ON SITE
1/2 LUNCH
1700 OFF SITE
10 HOURS

COPY TO: P. Mutch, FLUOR DANIELS

OBSERVER: [Signature]

PAGE 3 of 3

EMIS À LA DEMANDE DE L'EXPÉDITEUR

Reçu sous réserve des classifications et tarifs en vigueur à la date de délivrance de ce document et des tarifs en vigueur à la date de délivrance de ce document et des tarifs en vigueur à la date de délivrance de ce document.

1. approuvées par l'ordonnance générale No. 1-5 de la Commission Canadienne des Transports, en date du 1er février 1965, énoncées aux Classifications canadiennes des marchandises et pouvant être consultées sur demande à tous les bureaux et gares de chemins de fer, et le transport est effectué par rail; ou
2. du connaissance du transporteur maritime, conformément aux dispositions et règlements énoncés dans les tarifs s'appliquant au transport par eau; ou
3. du connaissance du transporteur par camion, conformément aux dispositions et règlements énoncés dans les tarifs s'appliquant au transport par camion; ou
4. du connaissance prescrit par les tarifs, classifications, statuts et règlements se rapportant aux services de camionnage si lesdites marchandises sont transportées par camion; ou
5. approuvées par l'ordonnance générale No. 1-43 de la Commission Canadienne des Transports régissant le transport des marchandises et marchandises de détail et dont le texte peut être obtenu sur demande à toutes les gares de voyageurs et de messageries, ainsi qu'à tous les dépôts de marchandises et les dites marchandises sont transportées par un véhicule du rail, conditions auxquelles l'expéditeur consent et qu'il accepte pour lui-même et ses ayants droit.

Received, subject to the classifications and tariffs in effect on the date of issue of this Original Bill of Lading, or, received, subject to the Rules for the Carriage of Express and Non-Carload Freight Traffic and tariffs in effect on the date of issue of this original Shipping Contract (bill of lading), goods described below, in apparent good order, except as noted (contents and conditions of contents of packages unknown), marked, consigned and destined as indicated below, which said Company agrees to carry to its usual place of delivery at said destination, if on its road, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said goods over all or any portion of said route to destination, and as to each party at any time interested in all or any of said goods, that every service to be performed hereunder shall be subject to all the terms and conditions (which are hereby incorporated by reference and have the same force and effect as if the same were severally, fully and specifically set forth herein).

1. approved by the Board of Transport Commissioners for Canada by General Order No. 1-5, dated February 1, 1965 set forth in the Canadian Freight Classification and also available at all Railway agency stations and freight offices upon request, when said goods are carried by a rail carrier; or
2. of the bill of lading of the water carrier as provided in its tariff of Rules and Regulations when said goods are carried by a water carrier; or
3. of the bill of lading of the motor carrier as provided in its tariff of Rules and Regulations when said goods are carried by a motor carrier; or
4. of the bill of lading form prescribed by O.C. 986-79, April 4, 1979, when the said goods originating in Quebec are to be carried by a Motor Carrier;
5. or approved by the Board of Transport Commissioners for Canada by General Order No. 1-43, set forth in the Rules for the Carriage of Express and Non-Carload Freight Traffic and also available at all express and railway agency stations and express and freight offices upon request, when said goods are carried by a rail carrier and which are agreed to by the shipper and accepted for himself and his assigns.

EXPÉDITEUR SHIPPER: BMD TRANSPORT
 DESTINATAIRE CONSIGNEE: CONTI ENVIRONMENTAL, INC. C/O CIBA-GEIGY
 ALBARRIE NAUÉ LTD. 340 Huronia Rd., Barrie, Ontario L4M 6E7
 ADRESSE POSTALE (NE SERVANT PAS À LA LIVRAISON): MAIL ADDRESS (NOT FOR PURPOSES OF DELIVERY):

CELL NO. 1 CAPPING SYSTEM, ROUTE 37 WEST
 DESTINATION (VILLE) DESTINATION (CITY - TOWN): TOMS RIVER
 PROV. OU ÉTAT PROV/STATE: NJ U.S.A.

ITINÉRAIRE ROUTE: 08755
 MARQUES DU WAGON CAR INITIAL: NO DU WAGON - CAR NO NO DE DÉMURQUE - TRAILER NO NO DU CONTAINER - CONTAINER NO

NOUVEAU DE COLIS PIECES/PACKAGES	DÉSIGNATION ET MARQUES SPÉCIALES DESCRIPTION OF ARTICLES AND SPECIAL MARKS	POIDS (Sauf Corrections) WEIGHT (Subject to Correction)	TARIF RATE
CUSTOMER	ORDER NBR. #4066	34,387 / LBS.	
20 ROLLS	BENTOFIX MATERIAL INVOICE #0490		
	SITE CONTACT: LENNY NIGARETTA 8908-914-2564		
	24 HOURS PRIOR TO DELIVERY TO SCHEDULE UNLOADING		
	MARKS: CONTI ENVIRONMENTAL, INC. C/O CIBA-GEIGY TOMS RIVER, NJ 20 ROLLS P.O. #4066 JOB #F353-107 MADE IN CANADA TRAILER # m6513		

INDIQUEZ SI LE PORT FAYE
 IF CHARGES ARE TO BE PREPAID, WRITE OR
 STAMP HERE
 'TO BE PREPAID'
COLLECT

REÇU RECEIVED	
À VALOIR SUR LE PRIX DU TRANSPORT DES COUS DÉSIGNÉS AUX PRÉSENTES TO APPLY IN PREPAYMENT OF THE CHARGES ON THE PROPERTY DESCRIBED HEREON	
REPRÉSENTANT DU VOITURIER OU CAISSIER AGENT OR CASHIER	
RÉSERVÉ AU VOITURIER FRAIS FOR CARRIER'S USE - CHARGES	
AVANCE DU TRANSPORT ULTÉRIEUR (AU DELÀ ADVANCE AND/OR BEYOND	
DIVERS MSC.	
PRIX DE BASE BASIC	
SUPPL. COLIS PIECE	
SUPPL. VALEUR VALUE	
TOTAL	

Entente spéciale entre l'expéditeur et le transporteur, y faire référence
 Special agreement between consignor and carrier, please advise here

POUR SERVICES DE CAMIONNAGE FOR MOTOR CARRIER SERVICE	Valeur Déclarée / Declared Valuation \$ Responsabilité maximum de \$4.41/Kg (\$2.00/livre), calculé sur le poids total de l'expédition, à moins d'indication contraire par valeur déclarée Maximum liability of \$4.41/Kg (\$2.00/lb.), calculated on the total weight of the shipment, unless declared valuation states otherwise.
AVIS DE RÉCLAMATION a) Le transporteur n'est responsable de pertes, de dommages ou de retard sur marchandises que si le transporteur est avisé de la condition ou du montant approximatif des marchandises, leur destination, leur date d'expédition et le montant approximatif réclamé en réparation de la perte, des dommages ou du retard, ne soit signifié au transporteur initial ou au transporteur de destination, dans les soixante (60) jours suivant la date de la livraison des marchandises, ou dans les cas de non-livraison, dans un délai de neuf (9) mois suivant la date de l'expédition. b) La présentation de la réclamation finale accompagnée d'une preuve du paiement des frais de transport doit être soumise au transporteur dans un délai de neuf (9) mois suivant la date de l'expédition.	NOTICE OF CLAIM a) No carrier is liable for loss, damage or delay to any goods carried under the Bill of Lading unless notice thereof setting out particulars of the origin, destination and date of shipment of the goods and the estimated amount claimed in respect of such loss, damage or delay is given in writing to the originating carrier or the delivering carrier within sixty (60) days after the delivery of the goods, or, in the case of failure to make delivery, within nine (9) months from the date of shipment. b) The final statement of the claim must be filed with nine (9) months from the date of shipment together with a copy of the paid freight bill.

20 ROLLS
 NOUVEAU TOTAL DE COLIS
 TOTAL NUMBER OF PACKAGES: 100' x 15'2"
 DIMENSIONS Dimensions of shipment
 Volume (En P. Cu) Total Cubic Feet
 Poids Pondéré Dimensional Weight
 34,387 / LBS.
 TOTAL TOTAL WEIGHT
 NOMBRE X.L. PIECES/PGS.
 DÉCLARÉ VALUE OF SHIPMENT

EXPÉDITEUR - SHIPPER: ALBARRIE NAUÉ LTD.
 VOITURIER AGENT: [Signature]
 CONSIGNATAIRE - CONSIGNEE: [Signature]
 PAR - PER: [Signature]
 PAR - PER: [Signature]
 ADRESSE POSTALE DE L'EXPÉDITEUR
 POSTAL ADDRESS OF SHIPPER: 000371
 CBA 005 0925

Page No. 1
12/20/93

ALBARRIE NAUE LTD.

Shipment by B.O.L. Roll Lists

ROLL #	SHIP DATE	LENGTH	WIDTH
** B.O.L. # 376			
* LOT # 121393			
13719	12/20/93	30.5	462.0
13769	12/20/93	30.5	462.0
13770	12/20/93	30.5	462.0
* Subsubtotal *		91.5	
* LOT # 121493			
13771	12/20/93	30.5	462.0
13772	12/20/93	30.5	462.0
13773	12/20/93	30.5	462.0
13774	12/20/93	30.5	462.0
13783	12/20/93	30.5	462.0
13785	12/20/93	30.5	462.0
13790	12/20/93	30.5	462.0
13791	12/20/93	30.5	462.0
13792	12/20/93	30.5	462.0
13793	12/20/93	30.5	462.0
13801	12/20/93	30.5	462.0
13802	12/20/93	30.5	462.0
13803	12/20/93	30.5	462.0
13804	12/20/93	30.5	462.0
13805	12/20/93	30.5	462.0
13814	12/20/93	30.5	462.0
13816	12/20/93	30.5	462.0
* Subsubtotal *		518.5	
** Subtotal **		610.0	
*** Total ***		610.0	

ALBARRIE NAUE LTD

=====

QUALITY CONTROL CERTIFICATES

LOT # ROLL # DATE
121393 13769 12/14/93

PRODUCT: BENTOFIX NS

DIMENSIONS: 100 FT. X 15.2 FT.
30.5 M X 4.62 M

1. FINISHED PRODUCT TYPE: BENTOFIX NS

TENSILE (kg)		ELONGATION (%)		PUNCTURE (kg)		MOISTURE CONTENT (%)
MASS(g/m2)	THICKNESS (mm)	LENGTH	CROSS	LENGTH	CROSS	
6505 ✓	6.5 ✓	65 ✓	185	125	64	6.8

RESISTANCE 83 ✓ PERMEABILITY, K (cm/s) <1E9 ✓

2. TOP LAYER TYPE: NON-WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg)		TEAR (kg)	
				LENGTH	CROSS	LENGTH	CROSS
159971	266 ✓	3	404	56	136	25	76

3. BOTTOM LAYER TYPE: WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg)		TEAR (kg)	
				LENGTH	CROSS	LENGTH	CROSS
632261	110	2	290	77	65	32	39

4. BENTONITE TYPE: 30 MESH

SHIPMENT #	% MONTMORILLONITE	SWELL INDEX (ml)	MOISTURE CONTENT (%)	MOISTURE ABSORPTION (%)	MASS OF BENTONITE (g/m2)
170507	90	27	6.8	710	6129

CBA 005 0927

ALBARRIE NAUE LTD

=====

QUALITY CONTROL CERTIFICATES

LOT # ROLL # DATE
121493 13801 12/17/93

PRODUCT: BENTOFIX NS

DIMENSIONS: 100 FT. X 15.2 FT.
 30.5 M X 4.62 M

1. FINISHED PRODUCT TYPE: BENTOFIX NS

		TENSILE (kg)		ELONGATION (%)		PUNCTURE (kg)		MOISTURE CONTENT (%)
MASS(g/m2)	THICKNESS (mm)	LENGTH	CROSS	LENGTH	CROSS	RESISTANCE	PERMEABILITY, K (cm/s)	
5574 ✓	6.4 ?	59 ✓	124	189	60	85 ✓	<1E9 ✓	6.4

2. TOP LAYER TYPE: NON-WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg)		TEAR (kg)	
				LENGTH	CROSS	LENGTH	CROSS
167899	303 ✓	3	383	49	136	27	68

3. BOTTOM LAYER TYPE: WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg)		TEAR (kg)	
				LENGTH	CROSS	LENGTH	CROSS
639303	110 ✗	2	303	68	63	23	34

4. BENTONITE TYPE: 30 MESH

SHIPMENT #	% MONTMORILLONITE	SWELL INDEX (ml)	MOISTURE CONTENT (%)	MOISTURE ABSORPTION (%)	MASS OF BENTONITE (g/m2)
96113	90	29	6.4	655	5161

ALBARRIE

Barrie, Ontario

CUSTOMER: CONTI ENVIRONMENTAL INC.

ORDER NUMBER: 4066

PRODUCT: NS

DATE: DEC. 20, 1993.

B.O.L.#: 376

TRAILER#: M6513

NO.	ROLL #	NET WEIGHT lbs.	LENGTH FEET	WIDTH FT. IN.	NO.	ROLL #	NET WEIGHT	LENGTH	WIDTH
✓ 1	13801	1672	100'	15'2"	24				
2	13802	"	"	"	25				
3	13803	"	"	"	26				
4	13804	"	"	"	27				
5	13805	"	"	"	28				
6	13814	"	"	"	29				
7	13816	"	"	"	30				
8	13792	"	"	"	31				
9	13790	"	"	"	32				
10	13791	"	"	"	33				
11	13793	"	"	"	34				
✓ 12	13769	"	"	"	35				
13	13770	"	"	"	36				
14	13771	"	"	"	37				
15	13772	"	"	"	38				
16	13773	"	"	"	39				
17	13774	"	"	"	40				
18	13785	"	"	"	41				
19	13783	"	"	"	42				
20	13719	"	"	"	43				
21					44				
22					45				
23					46				

CBA 005 0929

FLUID SYSTEMS

December 22, 1993

Mr. John McCann
CONTI ENVIRONMENTAL, INC.
3001 South Clinton Avenue
South Plainfield, NJ 07080

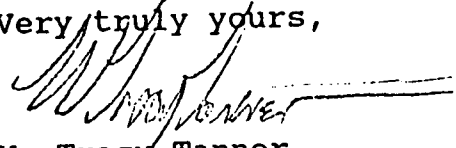
CERTIFICATE OF COMPLIANCE
PURCHASE ORDER # 94159-7825
BILL OF LADING # 000374

Dear Mr. McCann:

Attached is the Certificate of Compliance for BENTOFIX geosynthetic clay liner, shipped December 17, 1993, to Ciba-Geigy.

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

Very truly yours,


W. Tracy Tanner
Regional Sales Engineer

WTT/plr
Attachment



ALBARRIE NAUE LTD.

DE HORDOW ROAD
BARRIE, ONTARIO CANADA L4N 3V7
TEL: (705) 737-0551
FAX: (705) 737-5877

PACKING LIST

SHIP TO: CONTI ENVIRONMENTAL, INC. C/O CIBA-GEIGY CELL NO. 1 CAPPING SYSTEM ROUTE 37 WEST TOMS RIVER, NJ 08755 U.S.A.		DATE SHIPPED: DECEMBER 17, 1993 CUSTOMER ORDER #: #4066 CUSTOMER REQ. #: JOB #F353-107 A.N. NUMBER: #0607		
SHIPPED VIA: LARWAY TRANSPORT "PREPAID & ADD"				
QUANTITY	DESCRIPTION AND SIZE	GROSS WEIGHT	NET WEIGHT	NO. OF CARTONS/BALES/ROLLS
2,824.2 /M ²	BENTOFIX MATERIAL SIZE: 100' x 15'2" @ 20 ROLLS. MARKS: CONTI ENVIRONMENTAL, INC C/O CIBA-GEIGY TOMS RIVER, NJ 20 ROLLS P.O. #4066 JOB #F353-107 MADE IN CANADA TRAILER # 9416	34,462	LBS.	20 ROLLS

P.04/05 N.S.C.

TD

DEC-17-1993 15:49 FROM ALBARRIE CANADA

12.17.93 04:06 PM P04

CBA 005 0931

ALBARRIE

Barrie, Ontario

CUSTOMER: Conti Environmental Inc.ORDER NUMBER: 4066PRODUCT: NSDATE: DEC. 17, 1993B.O.L.#: 374TRAILER#: 9416

NO.	ROLL #	NET WEIGHT lbs.	LENGTH FEET	WIDTH FT. IN.	NO.	ROLL #	NET WEIGHT	LENGTH	WIDTH
1	13776	1672	100'	15' 2"	24				
2	13777	"	"	"	25				
3	13700	"	"	"	26				
4	13705	"	"	"	27				
5	13795	"	"	"	28				
6	13794	"	"	"	29				
7	13792	"	"	"	30				
8	13797	"	"	"	31				
9	13784	"	"	"	32				
10	13778	"	"	"	33				
11	13780	"	"	"	34				
12	13781	"	"	"	35				
13	13782	"	"	"	36				
14	13784	"	"	"	37				
15	13783	"	"	"	38				
16	13798	"	"	"	39				
17	13701	"	"	"	40				
18	13699	"	"	"	41				
19	13293	"	"	"	42				
20	13712	"	"	"	43				
21					44				
22					45				
23					46				

N.S.C. P. 06/06

TO

ALBARRIE CANADA FROM 15:50 DEC-17-1993

12. 17. 93 04:06 PM P06

CBA 005 0933

RECEIVED DEC 22 1993

ALBARRIE NAUE LTD.

BENTOFIX MANUFACTURING CERTIFICATION

CUSTOMER: FLUID SYSTEMS

SHIP DATE: 12/17/93

PROJECT: CONTI ENVIRONMENTAL,
INC. C/O CIBA-GEIGY
ORDER NUMBER: 4066

NO.ROLLS/B.O.L.NO.: 20/374

PRODUCT TYPE: BENTOFIX NS

We hereby certify that the Bentofix geosynthetic clay liner purchased and shipped for the above identified project meets or exceeds Albarrie Naue Ltd.'s specifications for Bentofix. Product has continuously been inspected for the presence of needles and is needle free. The test listed for the bentonite component have been performed on each batch of bentonite. The test listed for the finished geocomposite product have been performed on at least every 280 sq.mt. [3000 sq.ft.] for the: Mass according to method ASTM D3776; Thickness according to method ASTM D1777; and on at least every 930 sq.mt. [10000 sq.ft.] for the Grab Tensile according to method ASTM D4632 and Puncture Strength according to method ASTM D4833; and at least every 9,300 sq.mt. [100,000sq.ft.] for the geotextile component and the finished geocomposite water permeability according to method GRI GCL-2. The roll numbers for this project are as follows:

Lot#112393_____

Roll# 13284, 13292, 13293, 13294, 13295_____

Lot#112593_____

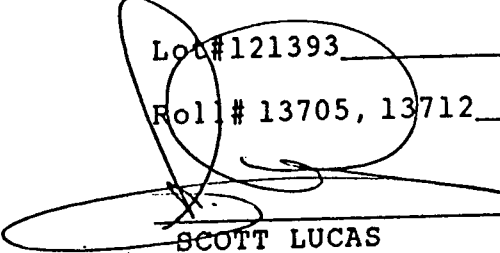
Roll# 13297, 13299_____

Lot#121093_____

Roll# 13698, 13699, 13700, 13701_____

Lot#121393_____

Roll# 13705, 13712_____


SCOTT LUCAS

Vice President Manufacturing

12.20.93
DATE

CBA 005 0934

ALBARRIE NAUE LTD.

BENTOFIX MANUFACTURING CERTIFICATION

CUSTOMER: FLUID SYSTEMS

SHIP DATE: 12/17/93

PROJECT: CONTI ENVIRONMENTAL,
INC. C/O CIBA-GEIGY
ORDER NUMBER: 4066

NO.ROLLS/B.O.L.NO.: 20/374
PRODUCT TYPE: BENTOFIX NS

We hereby certify that the Bentofix geosynthetic clay liner purchased and shipped for the above identified project meets or exceeds Albarrie Naue Ltd.'s specifications for Bentofix. Product has continuously been inspected for the presence of needles and is needle free. The test listed for the bentonite component have been performed on each batch of bentonite. The test listed for the finished geocomposite product have been performed on at least every 280 sq.mt. [3000 sq.ft.] for the: Mass according to method ASTM D3776; Thickness according to method ASTM D1777; and on at least every 930 sq.mt. [10000 sq.ft.] for the Grab Tensile according to method ASTM D4632 and Puncture Strength according to method ASTM D4833; and at least every 9,300 sq.mt. [100,000sq.ft.] for the geotextile component and the finished geocomposite water permeability according to method GRI GCL-2. The roll numbers for this project are as follows:

Lot#121493_____

Roll# 13776, 13777, 13778, 13780, 13781, 13782, 13784_____

Lot#_____

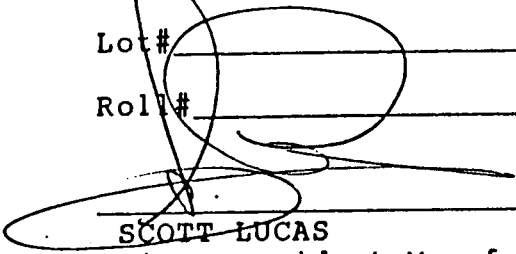
Roll#_____

Lot#_____

Roll#_____

Lot#_____

Roll#_____


SCOTT LUCAS

Vice President Manufacturing

12.20.93
DATE

ISSUED AT SHIPPER'S REQUEST

EMIS À LA DEMANDE DE L'EXPÉDITEUR

Reçu sous réserve des classifications et tarifs en vigueur à la date de détail et des tarifs en vigueur à la date de contenu des ce tenues aux présentes (le contenu et l'état du contenu des ce tenues étant sujet de livraison, pourvu que telle destination soit sur son parcours, ou par-dessus les marchandises sur tout ou partie du parcours, que assujettis à toutes les conditions (lesquelles, par renvoi, sont innombrables).

de délivrance de ce connaissement original, ou sous réserve des conditions de transport (connaissement), les marchandises désignées (connues), marquées et consignées tel que ci-après indiquées, et que sinon à les livrer à un autre volutier (selon route vers cette destinataire personne intéressée en aucun temps) à tout ou partie desdites livrées aux présentes et ont la même force et le même effet que règlements régissant le transport des

messageries et marchandises d'assortiment, apparemment en bon état, sans les remarques conla Compagnie s'engage à transporter à destination à son lieu habitation. Il est de plus convenu que tout volutier transportant tout marchandises et que tous services présentes seront si elles étaient ucu énoncées séparément, intégralement et expresse.

1. approuvées par l'ordonnance générale No. T-5 de la Commission Canadienne des Chemins de fer, si le transport est effectué par rail; ou
2. consultées sur demande à tous les bureaux et gares de marchandises des chemins de fer, si le transport est effectué par rail; ou
3. du connaissement du transporteur maritime, conformément aux dispositions et règlements énoncés dans les tarifs s'appliquant au transport par eau; ou
4. du connaissement prescrit par les tarifs, classifications, statuts et règlements se rapportant aux services de camionnage et lesdites marchandises sont transportées par camion; ou
5. approuvées par l'ordonnance générale No. T-43 de la Commission Canadienne des Transports régissant le transport des messageries et marchandises de détail et dont le texte peut être obtenu sur demande à toutes les gares de voyageurs et de messageries, ainsi qu'à tous les dépôts de marchandises si les dites marchandises sont transportées par un volutier du rail, conditions auxquelles l'expéditeur consent et qu'il accepte pour lui-même et ses ayants droit.

Received, subject to the classifications and tariffs in effect on the date of issue of this Original Bill of Lading, or, received, subject to the Rules for the Carriage of Express and Non-Carload Freight Traffic and the Rules for the Carriage of Motor Carrier Freight Traffic, goods described below, in apparent good order, except as noted (contents and conditions of contents of packages unknown), marked, consigned and destined as indicated below, which said Company agrees to carry to its usual place of delivery at said destination, if on its road, otherwise to deliver to another carrier on the route to said destination, it is mutually agreed, as to each carrier of all or any of said goods over all or any portion of said route to destination, and as to each party at any time interested in all or any of said goods, that every service to be performed hereunder shall be subject to all the terms and conditions (which are hereby incorporated by reference and have the same force and effect as if the same were severally, fully and specifically set forth herein).

1. approved by the Board of Transport Commissioners for Canada by General Order No. T-5, dated February 1, 1965 set forth in the Canadian Freight Classification and also available at all Railway agency stations and freight offices upon request, when said goods are carried by a rail carrier; or
2. of the bill of lading of the water carrier as provided in its tariff of Rules and Regulations when said goods are carried by a water carrier; or
3. of the bill of lading set forth in or prescribed by the relevant tariffs, classification, statutes and regulations pertaining to motor carrier's services when said goods are carried by a motor carrier; or
4. of the bill of lading form prescribed by O.C. 986-79, April 4, 1979, when the said goods originating in Quebec are to be carried by a Motor Carrier;
5. or approved by the Board of Transport Commissioners for Canada by General Order No. T-43, set forth in the Rules for the Carriage of Express and Non-Carload Freight Traffic and also available at all express and railway agency stations and express and freight offices upon request, when said goods are carried by a rail carrier and which are agreed to by the shipper and his assigns.

POINT D'EXPÉDITION / POINT OF ORIGIN

EXPÉDITEUR LE
SHIPPING DATE
DECEMBER 17, 1993

VOLUTIER NAME / CARRIER
BRKX TRANSPORT

BARRIE, ONTARIO

DESTINATAIRE CONSIGNEE
CONTI ENVIRONMENTAL, INC. C/O CIBA-GEIGY

ALBARRIE NAUE LTD. 340 Huronia Rd., Barrie, Ontario L4M 6E7

EXPÉDITEUR SHIPPER

ADRESSE POSTALE (NE SERVANT PAS À LA LIVRAISON) - MAIL ADDRESS (NOT FOR PURPOSES OF DELIVERY)

ADRESSE DU DESTINATAIRE (NO ET RUE) CONSIGNEE'S STREET ADDRESS
CELL NO. 1 CAPPING SYSTEMS, ROUTE 37 WEST

DESTINATION (VILLE) DESTINATION (CITY - TOWN)

PROV. OU ÉTAT PROVINCE/STATE

COMTÉ / COUNTY OF

TOMS RIVER

08755

NJ

U.S.A.

ITINÉRAIRE ROUTE

MARQUER DU WAGON
CAR INITIAL

NO DU WAGON - CARRIAGE
NO DE LA MOTOCYCLE - TRAILER NO
NO DU CONTAINER - CONTAINER NO

INDIQUER SI LES CHARGES SONT À PAYER EN AVANCE
IF CHARGES ARE TO BE PREPAID, WRITE ON
STAMP HERE

'TO BE PREPAID'
COLLECT

REÇU
RECEIVED \$
A VALOIR SUR LE PRIX DU TRANSPORT DES
COLIS DÉSIGNÉS AUX PRÉSENTES
TO APPLY IN PREPAYMENT OF THE CHARGES
ON THE PROPERTY DESCRIBED HEREON.

REPRÉSENTANT DU VOLUTIER OU CAISSIER
AGENT OR CASHIER

RÉSERVE AU VOLUTIER - FRAIS
FOR CARRIERS USE - CHARGES

AVANCE DU TRANSPORT ULTÉRIEUR (AU DELÀ)
ADVANCE AND/OR
BEYOND

DIVERS
MSC.

PRIX DE BASE
BASIC

SUPPL. COLIS
PIECE

SUPPL. VALEUR
VALUE

TOTAL

RÉSERVE À L'EXPÉDITEUR ENVOIS CR (C O D)
SHIPPER SHOW AMOUNT OF C O D

C MONTANT
AMOUNT

O DROITS
FEE

□ A PERCEVOIR
COLLECT □ PAYÉ D'AVANCE
PREPAID

D TOTAL

ÉVALUATION
OU
\$50 OR 50¢ LB □ \$100 □ \$200 LB □

VALEUR DÉCLARÉE

DECLARED VALUE OF SHIPMENT

NUMÉRO DE L'EXPÉDITEUR
SHIPPER'S NO

000374

CBA 005 0936

Entente spéciale entre l'expéditeur et le transporteur, y faire référence
Special agreement between consignor and carrier, please advise here

POUR SERVICES DE CAMIONNAGE
FOR MOTOR CARRIER SERVICE

Valeur Déclarée / Declared Valuation

Responsabilité maximum de \$4.41/Kg (\$2.00/livre),
calculé sur le poids total de l'expédition, à moins d'in-
dication contraire par valeur déclarée.

Maximum liability of \$4.41/Kg (\$2.00/lb.), calculated on
the total weight of the shipment, unless declared
valuation states otherwise.

AVIS DE RÉCLAMATION

a) Le transporteur n'est responsable de pertes, de dommages ou de retard sur marchandises
transportées, quel soit décrites au connaissement, qu'à la condition qu'un avis écrit précisant
l'origine des marchandises, leur destination, leur date d'expédition et le montant approximatif
réclamé en réparation de la perte, des dommages ou du retard, ne soit signifié au transporteur
avant ou au transporteur de destination, dans les soixante (60) jours suivant la date de la livraison
des marchandises, ou dans le cas de non-livraison, dans un délai de neuf (9) mois suivant la
date de l'expédition.

b) La présentation de la réclamation finale accompagnée d'une preuve du paiement des frais de
transport doit être soumise au transporteur dans un délai de neuf (9) mois suivant la date de
l'expédition.

NOTICE OF CLAIM

a) No carrier is liable for loss, damage or delay to any goods carried under the Bill of Lading
unless notice thereof setting out particulars of the origin, destination and date of shipment of
the goods and the estimated amount claimed in respect of such loss, damage or delay is
given in writing to the originating carrier or the delivering carrier within sixty (60) days after
the delivery of the goods, or, in the case of failure to make delivery, within nine (9) months
from the date of shipment.

b) The final statement of the claim must be filed with nine (9) months from the date of
shipment together with a copy of the paid freight bill.

SI LE TARIF L'EXIGE L'EXPÉDITEUR REMPLIRA LE CADRE SUIVANT.
WHERE REQUIRED BY THE TARIFF, SHIPPER MUST SHOW DIMENSIONS OF SHIPMENT:

NUMÉRO COLIS XL

20 ROLLS
NOMBRE TOTAL DE COLIS
TOTAL NUMBER OF PACKAGES

100' x 15'2"

DIMENSIONS Dimensions
of shipment

Volume (En Pl. Cu.)
Total Cubic Feet

Poids Pondéré
Dimensional Weight

34,462 LBS.

TOTAL
TOTAL WEIGHT

NUMBER XL
PIECES/PKGS.

DECLARED VALUE OF SHIPMENT

EXPÉDITEUR - SHIPPER
ALBARRIE NAUE LTD.

VOLUTIER AGENT

CONSIGNATURE - CONSIGNEE

PAR - PER

PAR - PER

PAR - PER

ADRESSE POSTALE DE L'EXPÉDITEUR
POSTAL ADDRESS OF SHIPPER

Page No. 1
12/20/93

ALBARRIE NAUE LTD.

Shipment by B.O.L. Roll Lists

ROLL #	SHIP DATE	LENGTH	WIDTH
** B.O.L. # 374			
* LOT # 112393			
13284	12/17/93	30.5	462.0
13292	12/17/93	30.5	462.0
13293	12/17/93	30.5	462.0
13294	12/17/93	30.5	462.0
13295	12/17/93	30.5	462.0
* Subsubtotal *		152.5	
* LOT # 112593			
13297	12/17/93	30.5	462.0
13299	12/17/93	30.5	462.0
* Subsubtotal *		61.0	
* LOT # 121093			
13698	12/17/93	30.5	462.0
13699	12/17/93	30.5	462.0
13700	12/17/93	30.5	462.0
13701	12/17/93	30.5	462.0
* Subsubtotal *		122.0	
* LOT # 121393			
13705	12/17/93	30.5	462.0
13712	12/17/93	30.5	462.0
* Subsubtotal *		61.0	
* LOT # 121493			
13776	12/17/93	30.5	462.0
13777	12/17/93	30.5	462.0
13778	12/17/93	30.5	462.0
13780	12/17/93	30.5	462.0
13781	12/17/93	30.5	462.0
13782	12/17/93	30.5	462.0
13784	12/17/93	30.5	462.0
* Subsubtotal *		213.5	
** Subtotal **		610.0	
*** Total ***		610.0	

CBA 005 0937

ALBARRIE NAUE LTD

=====

QUALITY CONTROL CERTIFICATES

LOT # ROLL # DATE
112393 13295 11/24/93

PRODUCT: BENTOFIX NS

DIMENSIONS: 100 FT. X 15.2 FT.
 30.5 M X 4.62 M

1. FINISHED PRODUCT TYPE: BENTOFIX NS

MASS(g/m2)	THICKNESS (mm)	TENSILE (kg) LENGTH CROSS	ELONGATION (%) LENGTH CROSS	PUNCTURE (kg) RESISTANCE	PERMEABILITY, K (cm/s)	MOISTURE CONTENT (%)
5741 ✓	6.7 ✓	61 ✓ 192	121 58	83 ✓	<1E9 ✓	7.8

2. TOP LAYER TYPE: NON-WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg) LENGTH CROSS	TEAR (kg) LENGTH CROSS
166538	293 ✓	3	303	64 152	33 91

3. BOTTOM LAYER TYPE: WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg) LENGTH CROSS	TEAR (kg) LENGTH CROSS
614501	110 ✓	2	350	61 72	33 31

4. BENTONITE TYPE: 30 MESH

SHIPMENT #	% MONTMORILLONITE	SWELL INDEX (ml)	MOISTURE CONTENT (%)	MOISTURE ABSORPTION (%)	MASS OF BENTONITE (g/m2)
170135X	90	35	7.8	725	5338

ALBARRIE NAUE LTD

=====

QUALITY CONTROL CERTIFICATES

LOT # ROLL # DATE
112593 13297 11/25/93

PRODUCT: BENTOFIX NS

DIMENSIONS: 100 FT. X 15.2 FT.
 30.5 M X 4.62 M

1. FINISHED PRODUCT TYPE: BENTOFIX NS

		TENSILE (kg)		ELONGATION (%)		PUNCTURE (kg)		MOISTURE
MASS(g/m2)	THICKNESS (mm)	LENGTH	CROSS	LENGTH	CROSS	RESISTANCE	PERMEABILITY, K (cm/s)	CONTENT (%)
6353	6.7	59	177	127	60	85	<1E9	7.8

2. TOP LAYER TYPE: NON-WOVEN

		TENSILE (kg)		TEAR (kg)	
ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	LENGTH	CROSS
166544	278	3	370	62	135

3. BOTTOM LAYER TYPE: WOVEN

		TENSILE (kg)		TEAR (kg)	
ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	LENGTH	CROSS
597624	110	2	295	77	64

4. BENTONITE TYPE: 30 MESH

SHIPMENT #	% MONTMORILLONITE	SWELL INDEX (ml)	MOISTURE CONTENT (%)	MOISTURE ABSORPTION (%)	MASS OF BENTONITE (g/m2)
170135X	90	35	7.8	725	5965

ALBARRIE NAUE LTD
=====

QUALITY CONTROL CERTIFICATES

LOT # ROLL # DATE
121093 13700 12/13/93

PRODUCT: BENTOFIX NS

DIMENSIONS: 100 FT. X 15.2 FT.
30.5 M X 4.62 M

1. FINISHED PRODUCT		TYPE: BENTOFIX NS									
			TENSILE (kg)		ELONGATION (%)		PUNCTURE (kg)		PERMEABILITY, K (cm/s)		MOISTURE
MASS(g/m2)	THICKNESS (mm)	LENGTH	CROSS	LENGTH	CROSS	RESISTANCE					CONTENT (%)
5850 ✓	6.6 ✓	61 ✓	186	123	60	88 ✓	<1E9 ✓				6.8

2. TOP LAYER		TYPE: NON-WOVEN							
ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg)	TEAR (kg)				
159983	285 ✓	3	364	LENGTH CROSS	LENGTH CROSS				
				51 131	31 77				

3. BOTTOM LAYER		TYPE: WOVEN							
ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg)	TEAR (kg)				
630963	110	2	307	LENGTH CROSS	LENGTH CROSS				
				66 55	35 39				

4. BENTONITE		TYPE: 30 MESH							
SHIPMENT #	% MONTMORILLONITE	SWELL INDEX (ml)	MOISTURE CONTENT (%)	MOISTURE ABSORPTION (%)	MASS OF BENTONITE (g/m2)				
170507	90	27	6.8	710	5455				

CBA 005 0940

ALBARRIE NAUE LTD

=====

QUALITY CONTROL CERTIFICATES

LOT # ROLL # DATE
121393 13705 12/13/93

PRODUCT: BENTOFIX NS

DIMENSIONS: 100 FT. X 15.2 FT.
30.5 M X 4.62 M

1. FINISHED PRODUCT TYPE: BENTOFIX NS

MASS(g/m2)	THICKNESS (mm)	TENSILE (kg)	ELONGATION (%)	PUNCTURE (kg)	MOISTURE
		LENGTH CROSS	LENGTH CROSS	RESISTANCE	CONTENT (%)
6505 ✓	6.5 ✓	65 ✓ 185	125 64	83 ✓ 1E9 ✓	6.8

2. TOP LAYER TYPE: NON-WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg)	TEAR (kg)
				LENGTH CROSS	LENGTH CROSS
159971	266 ✓	3	404	56 136	25 76

3. BOTTOM LAYER TYPE: WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg)	TEAR (kg)
				LENGTH CROSS	LENGTH CROSS
632261	110 ✓	2	290	77 65	32 39

4. BENTONITE TYPE: 30 MESH

SHIPMENT #	% MONTMORILLONITE	SWELL INDEX (ml)	MOISTURE CONTENT (%)	MOISTURE ABSORPTION (%)	MASS OF BENTONITE (g/m2)
170507	90	27	6.8	710	6129

ALBARRIE NAUE LTD

QUALITY CONTROL CERTIFICATES

LOT # ROLL # DATE
121493 13776 12/14/93

PRODUCT: BENTOFIX NS

DIMENSIONS: 100 FT. X 15.2 FT.
30.5 M X 4.62 M

1. FINISHED PRODUCT TYPE: BENTOFIX NS

MASS(g/m2)	THICKNESS (mm)	LENGTH	TENSILE (kg) CROSS	ELONGATION (%) LENGTH CROSS	PUNCTURE (kg) RESISTANCE	PERMEABILITY, K (cm/s)	MOISTURE CONTENT (%)
5574 ✓	6.4 ✓	59 ✓	124	189 60	85 ✓	<1E9 ✓	6.4

2. TOP LAYER TYPE: NON-WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg) LENGTH CROSS	TEAR (kg) LENGTH CROSS
167899	303 ✓	3	383	49 136	27 68

3. BOTTOM LAYER TYPE: WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg) LENGTH CROSS	TEAR (kg) LENGTH CROSS
639303	110	2	303	68 63	33 34

4. BENTONITE TYPE: 30 MESH

SHIPMENT #	% MONTMORILLONITE	SWELL INDEX (ml)	MOISTURE CONTENT (%)	MOISTURE ABSORPTION (%)	MASS OF BENTONITE (g/m2)
96113	90	29	6.4	655	5161

FLUID SYSTEMS

December 22, 1993

Mr. John McCann
CONTI ENVIRONMENTAL, INC.
3001 South Clinton Avenue
South Plainfield, NJ 07080

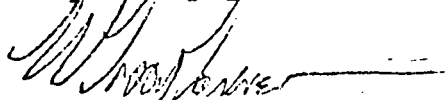
CERTIFICATE OF COMPLIANCE
PURCHASE ORDER # 94159-7825
BILL OF LADING # 000375

Dear Mr. McCann:

Attached is the Certificate of Compliance for BENTOFIX geosynthetic clay liner, shipped December 20, 1993, to Ciba-Geigy.

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

Very truly yours,



W. Tracy Tanner
Regional Sales Engineer

WTT/plr
Attachment

CBA 005 0943



Attn: *Alinda Vertner*

ALBARRIE NAUE LTD.

85 MORROW ROAD
BARRIE, ONTARIO CANADA L4N 3V7
TEL: (705) 737-0551
FAX: (705) 737-5877

PACKING LIST

SHIP TO: CONTI ENVIRONMENTAL, INC. C/O CIBA-GEIGY CELL NO. 1 CAPPING SYSTEM ROUTE 37 WEST TOMS RIVER, NJ 08755 U.S.A.		DATE SHIPPED: DECEMBER <i>20</i> , 1993 CUSTOMER ORDER #: #4066 CUSTOMER REQ. #: JOB #F353-107 A.N. NUMBER: #0608		
SHIPPED VIA: BRICO TRANSPORT "PREPAID & ADD"				
QUANTITY	DESCRIPTION AND SIZE	GROSS WEIGHT	NET WEIGHT	NO. OF CARTONS/BALES/ROLLS
<i>2,824.3</i> /M ²	BENTOFIX MATERIAL SIZE: 100' x 15'2" @ <i>20</i> ROLLS MARKS: CONTI ENVIRONMENTAL, INC. C/O CIBA-GEIGY TOMS RIVER, NJ <i>20</i> ROLLS P.O. #4066 JOB #F353-107 MADE IN CANADA TRAILER # <i>128484</i>	<i>35,623.1</i> LBS.		<i>20</i> ROLLS

CBA 005 0944

ALBARRIE

Barrie, Ontario

CUSTOMER: CONTI ENVIRONMENTAL INC.

ORDER NUMBER: 4066

PRODUCT: NS

DATE: DEC. 20, 1993.

B.O.L.#: 375

TRAILER#: 128484

NO.	ROLL #	NET WEIGHT lbs	LENGTH FEET	WIDTH FT. IN.	NO.	ROLL #	NET WEIGHT	LENGTH	WIDTH
1	13821	1672	100'	15'2"	24				
2	13806	"	"	"	25				
3	13807	"	"	"	26				
4	13808	"	"	"	27				
5	13809	"	"	"	28				
6	13810	"	"	"	29				
7	13811	"	"	"	30				
8	13812	"	"	"	31				
9	13813	"	"	"	32				
10	13815	"	"	"	33				
11	13817	"	"	"	34				
12	13818	"	"	"	35				
13	13820	"	"	"	36				
14	13794	"	"	"	37				
15	13795	"	"	"	38				
16	13796	"	"	"	39				
17	13797	"	"	"	40				
18	13798	"	"	"	41				
19	13799	"	"	"	42				
20	13800	"	"	"	43				
21					44				
22					45				
23					46				

RECEIVED DEC 22 1993

ALBARRIE NAUE LTD.

BENTOFIX MANUFACTURING CERTIFICATION

CUSTOMER: FLUID SYSTEMS

SHIP DATE: 12/20/93

PROJECT: CONTI ENVIRONMENT,
INC. C/O CIBA-GEIGY
ORDER NUMBER: 4066

NO.ROLLS/B.O.L.NO.: 20/375

PRODUCT TYPE: BENTOFIX NS

We hereby certify that the Bentofix geosynthetic clay liner purchased and shipped for the above identified project meets or exceeds Albarrie Naue Ltd.'s specifications for Bentofix. Product has continuously been inspected for the presence of needles and is needle free. The test listed for the bentonite component have been performed on each batch of bentonite. The test listed for the finished geocomposite product have been performed on at least every 280 sq.mt. [3000 sq.ft.] for the: Mass according to method ASTM D3776; Thickness according to method ASTM D1777; and on at least every 930 sq.mt. [10000 sq.ft.] for the Grab Tensile according to method ASTM D4632 and Puncture Strength according to method ASTM D4833; and at least every 9,300 sq.mt. [100,000sq.ft.] for the geotextile component and the finished geocomposite water permeability according to method GRI GCL-2. The roll numbers for this project are as follows:

Lot#121493_____

Roll# 13794, 13795, 13796, 13797, 13798, 13799, 13800_____

13806, 13807, 13808, 13809, 13810, 13811, 13812_____

13813, 13815, 13817, 13818, 13820, 13821_____

Lot#_____

Roll#_____

Lot#_____

Roll#_____

SCOTT LUCAS

Vice President Manufacturing

12.20.93

DATE

CBA 005 0947

Page No. 1
12/20/93

ALBARRIE NAUE LTD.

Shipment by B.O.L. Roll Lists

ROLL #	SHIP DATE	LENGTH	WIDTH
** B.O.L. # 375			
* LOT # 121493			
13794	12/20/93	30.5	462.0
13795	12/20/93	30.5	462.0
13796	12/20/93	30.5	462.0
13797	12/20/93	30.5	462.0
13798	12/20/93	30.5	462.0
13799	12/20/93	30.5	462.0
13800	12/20/93	30.5	462.0
13806	12/20/93	30.5	462.0
13807	12/20/93	30.5	462.0
13808	12/20/93	30.5	462.0
13809	12/20/93	30.5	462.0
13810	12/20/93	30.5	462.0
13811	12/20/93	30.5	462.0
13812	12/20/93	30.5	462.0
13813	12/20/93	30.5	462.0
13815	12/20/93	30.5	462.0
13817	12/20/93	30.5	462.0
13818	12/20/93	30.5	462.0
13820	12/20/93	30.5	462.0
13821	12/20/93	30.5	462.0
* Subsubtotal *		610.0	
** Subtotal **		610.0	
*** Total ***		610.0	

CBA 005 0949

ALBARRIE NAUE LTD

=====

QUALITY CONTROL CERTIFICATES

LOT # ROLL # DATE
121493 13821 12/17/93

PRODUCT: BENTOFIX NS

DIMENSIONS: 100 FT. X 15.2 FT.
 30.5 M X 4.62 M

1. FINISHED PRODUCT TYPE: BENTOFIX NS

MASS(g/m2) THICKNESS (mm)		TENSILE (kg)		ELONGATION (%)		PUNCTURE (kg)		MOISTURE
		LENGTH	CROSS	LENGTH	CROSS	RESISTANCE	PERMEABILITY, K (cm/s)	CONTENT (%)
5574 ✓	6.4 ✓	59 ✓	124	189	60	85 ✓	<1E9 ✓	6.4

2. TOP LAYER TYPE: NON-WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg)		TEAR (kg)	
				LENGTH	CROSS	LENGTH	CROSS
167899	303 ✓	3	383	49	136	27	68

3. BOTTOM LAYER TYPE: WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg)		TEAR (kg)	
				LENGTH	CROSS	LENGTH	CROSS
639303	110 X	2	303	68	63	33	34

4. BENTONITE TYPE: 30 MESH

SHIPMENT #	% MONTMORILLONITE	SWELL INDEX (ml)	MOISTURE CONTENT (%)	MOISTURE ABSORPTION (%)	MASS OF BENTONITE (g/m2)
96113	90	29	6.4	655	5161

FLUID SYSTEMS

RECEIVED

DEC 28 1993



December 22, 1993

Mr. John McCann
CONTI ENVIRONMENTAL, INC.
3001 South Clinton Avenue
South Plainfield, NJ 07080

CERTIFICATE OF COMPLIANCE
PURCHASE ORDER # 94159-7825
BILL OF LADING # 000373

Dear Mr. McCann:

Attached is the Certificate of Compliance for BENTOFIX geosynthetic clay liner, shipped December 17, 1993, to Ciba-Geigy.

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

Very truly yours,

A handwritten signature in dark ink, appearing to read "W. Tracy Tanner", with a horizontal line underneath.

W. Tracy Tanner
Regional Sales Engineer

WTT/plr
Attachment

CBA 005 0951



ALBARRIE NAUE LTD.

85 MORROW ROAD
BARRIE, ONTARIO CANADA L4N 3V7
TEL: (705) 737-0551
FAX: (705) 737-5877

PACKING LIST

SHIP TO: CONTI ENVIRONMENTAL, INC. C/O CIBA-GEIGY CELL NO. 1 CAPPING SYSTEM ROUTE 37 WEST TOMS RIVER, NJ 08755 U.S.A.		DATE SHIPPED: DECEMBER 17, 1993 CUSTOMER ORDER #: #4066 CUSTOMER REQ. #: JOB #F353-107 A.N. NUMBER: #0606		
SHIPPED VIA: LARWAY TRANSPORT "PREPAID & ADD"				
QUANTITY	DESCRIPTION AND SIZE	GROSS WEIGHT	NET WEIGHT	NO. OF CARTONS/ BALBE/ROLLS
2.683.085 /M ²	BENTOFIX MATERIAL SIZE: 100' x 15.2" @ 19. ROLLS BENTONITE POWDER SIZE: 2 Skids @ 2000 LBS. MARKS: CONTI ENVIRONMENTAL, INC. C/O CIBA-GEIGY TOMS RIVER, NJ 19 ROLLS + 2 Skids. P.O. #4066 JOB #F353-107 MADE IN CANADA TRAILER #LL8711.	35,750 LBS.		19 ROLLS + 2 Skids

CBA 005 0952

DEC-17-1993 15:47 FROM ALBARRIE CANADA

P.01/05

12.17.93 04:06 PM P01

ALBARRIE

Barrie, Ontario

CUSTOMER: CONTI ENVIRONMENTAL INC.

ORDER NUMBER: 4066

PRODUCT: NS

DATE: DEC. 17, 1993.

B.O.L.#: 373

TRAILER#: LL8711

NO.	ROLL #	NET WEIGHT lbs.	LENGTH FEET	WIDTH FT. IN.	NO.	ROLL #	NET WEIGHT	LENGTH	WIDTH
1	13285	1672	100'	15'2"	24				
2	13296	"	"	"	25				
3	13298	"	"	"	26				
4	13288	"	"	"	27				
5	15749	"	"	"	28				
6	13740	"	"	"	29				
7	13722	"	"	"	30				
8	13710	"	"	"	31				
9	13750	"	"	"	32				
10	13751	"	"	"	33				
11	13752	"	"	"	34				
12	13780	"	"	"	35				
13	13788	"	"	"	36				
14	13789	"	"	"	37				
15	13782	"	"	"	38				
16	13786	"	"	"	39				
17	13743	"	"	"	40				
18	13744	"	"	"	41				
19	13725	"	"	"	42				
20					43				
21	2 Skids Poxles				44				
22	40 Bags				45				
23					46				

TO

12-17-93 14:44 PM ALBARRIE LUMBER

12. 17. 93 04:06 PM P03

CBA 005 0954

RECEIVED DEC 22 1993

ALBARRIE NAUE LTD.

BENTOFIX MANUFACTURING CERTIFICATION

CUSTOMER: FLUID SYSTEMS

SHIP DATE: 12/17/93

PROJECT: CONTI ENVIRONMENTAL,
INC. C/O CIBA-GEIGY

NO.ROLLS/B.O.L.NO.: 19/373

ORDER NUMBER: 4066

PRODUCT TYPE: BENTOFIX NS

We hereby certify that the Bentofix geosynthetic clay liner purchased and shipped for the above identified project meets or exceeds Albarrie Naue Ltd.'s specifications for Bentofix. Product has continuously been inspected for the presence of needles and is needle free. The test listed for the bentonite component have been performed on each batch of bentonite. The test listed for the finished geocomposite product have been performed on at least every 280 sq.mt. [3000 sq.ft.] for the: Mass according to method ASTM D3776; Thickness according to method ASTM D1777; and on at least every 930 sq.mt. [10000 sq.ft.] for the Grab Tensile according to method ASTM D4632 and Puncture Strength according to method ASTM D4833; and at least every 9,300 sq.mt. [100,000sq.ft.] for the geotextile component and the finished geocomposite water permeability according to method GRI GCL-2. The roll numbers for this project are as follows:

Lot#112393_____

Roll# 13283, 13288_____

Lot#112593_____

Roll# 13296, 13298_____

Lot#121093_____

Roll#13702_____

Lot#121393_____

Roll# 13710, 13740, 13742, 13743, 13744, 13749, 13750_____
13751, 13752_____

SCOTT LUCAS

Vice President Manufacturing

12.20.93
DATE

CBA 005 0955

ALBARRIE NAUE LTD.

BENTOFIX MANUFACTURING CERTIFICATION

CUSTOMER: FLUID SYSTEMS

SHIP DATE: 12/17/93

PROJECT: CONTI ENVIRONMENTAL,
INC. C/O CIBA-GEIGY
ORDER NUMBER: 4066

NO.ROLLS/B.O.L.NO.: 19/373
PRODUCT TYPE: BENTOFIX NS

We hereby certify that the Bentofix geosynthetic clay liner purchased and shipped for the above identified project meets or exceeds Albarrie Naue Ltd.'s specifications for Bentofix. Product has continuously been inspected for the presence of needles and is needle free. The test listed for the bentonite component have been performed on each batch of bentonite. The test listed for the finished geocomposite product have been performed on at least every 280 sq.mt. [3000 sq.ft.] for the: Mass according to method ASTM D3776; Thickness according to method ASTM D1777; and on at least every 930 sq.mt. [10000 sq.ft.] for the Grab Tensile according to method ASTM D4632 and Puncture Strength according to method ASTM D4833; and at least every 9,300 sq.mt. [100,000sq.ft.] for the geotextile component and the finished geocomposite water permeability according to method GRI GCL-2. The roll numbers for this project are as follows:

Lot#121493 _____

Roll# 13775, 13786, 13787, 13788, 13789 _____

Lot# _____

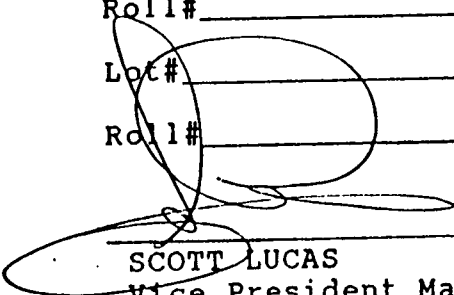
Roll# _____

Lot# _____

Roll# _____

Lot# _____

Roll# _____


SCOTT LUCAS

Vice President Manufacturing

12.20.93
DATE

Page No. 1
12/20/93

ALBARRIE NAUE LTD.

Shipment by B.O.L. Roll Lists

ROLL #	SHIP DATE	LENGTH	WIDTH
** B.O.L. # 373			
* LOT # 112393			
13283	12/17/93	30.5	462.0
13288	12/17/93	30.5	462.0
* Subsubtotal *		61.0	
* LOT # 112593			
13296	12/17/93	30.5	462.0
13298	12/17/93	30.5	462.0
* Subsubtotal *		61.0	
* LOT # 121093			
13702	12/17/93	30.5	462.0
* Subsubtotal *		30.5	
* LOT # 121393			
13710	12/17/93	30.5	462.0
13740	12/17/93	30.5	462.0
13742	12/17/93	30.5	462.0
13743	12/17/93	30.5	462.0
13744	12/17/93	30.5	462.0
13749	12/17/93	30.5	462.0
13750	12/17/93	30.5	462.0
13751	12/17/93	30.5	462.0
13752	12/17/93	30.5	462.0
* Subsubtotal *		274.5	
* LOT # 121493			
13775	12/17/93	30.5	462.0
13786	12/17/93	30.5	462.0
13787	12/17/93	30.5	462.0
13788	12/17/93	30.5	462.0
13789	12/17/93	30.5	462.0
* Subsubtotal *		152.5	
** Subtotal **		579.5	
*** Total ***		579.5	

ALBARRIE NAUE LTD

QUALITY CONTROL CERTIFICATES

LOT # ROLL # DATE
112393 13283 11/23/93

PRODUCT: BENTOFIX NS

DIMENSIONS: 100 FT. X 15.2 FT.
30.5 M X 4.62 M

1. FINISHED PRODUCT TYPE: BENTOFIX NS
 TENSILE (kg) ELONGATION (%) PUNCTURE (kg) MOISTURE
 MASS(g/m2) THICKNESS (mm) LENGTH CROSS LENGTH CROSS RESISTANCE PERMEABILITY, K (cm/s) CONTENT (%)
 5741 ✓ 6.7 ✓ 61 ✓ 192 121 ✓ 58 83 ✓ <1E9 ✓ 7.8

2. TOP LAYER TYPE: NON-WOVEN
 ROLL # MASS (g/m2) THICKNESS (mm) BURST PSI TENSILE (kg) TEAR (kg)
 166538 293 ✓ 3 383 64 152 33 91

3. BOTTOM LAYER TYPE: WOVEN
 ROLL # MASS (g/m2) THICKNESS (mm) BURST PSI TENSILE (kg) TEAR (kg)
 614501 110 ✓ 2 350 61 72 33 31

4. BENTONITE TYPE: 30 MESH
 SHIPMENT # % MONTMORILLONITE SWELL INDEX (ml) MOISTURE CONTENT (%) MOISTURE ABSORPTION (%) MASS OF BENTONITE (g/m2)
 170135X 90 35 7.8 725 5338

CBA 005 0959

ALBARRIE NAUE LTD

=====

QUALITY CONTROL CERTIFICATES

LOT # ROLL # DATE
112593 13296 11/25/93

PRODUCT: BENTOFIX NS

DIMENSIONS: 100 FT. X 15.2 FT.
30.5 M X 4.62 M

1. FINISHED PRODUCT TYPE: BENTOFIX NS

MASS(g/m ²)	THICKNESS (mm)	TENSILE (kg) LENGTH CROSS	ELONGATION (%) LENGTH CROSS	PUNCTURE (kg) RESISTANCE	PERMEABILITY, K (cm/s)	MOISTURE CONTENT (%)
6353 ✓	6.7 ✓	59 177 ✓	127 60	85 ✓	<1E9 ✓	7.8

2. TOP LAYER TYPE: NON-WOVEN

ROLL #	MASS (g/m ²)	THICKNESS (mm)	BURST PSI	TENSILE (kg) LENGTH CROSS	TEAR (kg) LENGTH CROSS
166544	278 ✓	3	370	62 135	38 79

3. BOTTOM LAYER TYPE: WOVEN

ROLL #	MASS (g/m ²)	THICKNESS (mm)	BURST PSI	TENSILE (kg) LENGTH CROSS	TEAR (kg) LENGTH CROSS
597624	110 ✓	2	295	77 64	26 32

4. BENTONITE TYPE: 30 MESH

SHIPMENT #	% MONTMORILLONITE	SWELL INDEX (ml)	MOISTURE CONTENT (%)	MOISTURE ABSORPTION (%)	MASS OF BENTONITE (g/m ²)
170135X	90	35	7.8	725	5965

ALBARRIE NAUE LTD

=====

QUALITY CONTROL CERTIFICATES

LOT # ROLL # DATE
121393 13749 12/14/93

PRODUCT: BENTOFIX NS

DIMENSIONS: 100 FT. X 15.2 FT.
30.5 M X 4.62 M

1. FINISHED PRODUCT TYPE: BENTOFIX NS

MASS(g/m2)	THICKNESS (mm)	TENSILE (kg) LENGTH CROSS	ELONGATION (%) LENGTH CROSS	PUNCTURE (kg) RESISTANCE	PERMEABILITY, K (cm/s)	MOISTURE CONTENT (%)
6505 ✓	6.5 ✓	65 ✓ 185	125 64	83 ✓	<1E9 ✓	6.8

2. TOP LAYER TYPE: NON-WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg) LENGTH CROSS	TEAR (kg) LENGTH CROSS
159971	266 ✓	3	404	56 136	25 76

3. BOTTOM LAYER TYPE: WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg) LENGTH CROSS	TEAR (kg) LENGTH CROSS
632261	110 ✓	2	290	77 65	32 39

4. BENTONITE TYPE: 30 MESH

SHIPMENT #	% MONTMORILLONITE	SWELL INDEX (ml)	MOISTURE CONTENT (%)	MOISTURE ABSORPTION (%)	MASS OF BENTONITE (g/m2)
170507	90	27	6.8	710	6129

ALBARRIE NAUE LTD

QUALITY CONTROL CERTIFICATES

LOT # ROLL # DATE
121093 13702 12/13/93

PRODUCT: BENTOFIX NS

DIMENSIONS: 100 FT. X 15.2 FT.
30.5 M X 4.62 M

1. FINISHED PRODUCT TYPE: BENTOFIX NS

MASS(g/m2)	THICKNESS (mm)	LENGTH	TENSILE (kg) CROSS	ELONGATION (%) LENGTH CROSS	PUNCTURE (kg) RESISTANCE	PERMEABILITY, K (cm/s)	MOISTURE CONTENT (%)
5850	6.6	61	186	123 60	88	1E9	6.8

2. TOP LAYER TYPE: NON-WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg) LENGTH CROSS	TEAR (kg) LENGTH CROSS
159983	285	3	364	51 131	31 77

3. BOTTOM LAYER TYPE: WOVEN

ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	TENSILE (kg) LENGTH CROSS	TEAR (kg) LENGTH CROSS
630963	110	2	307	66 55	35 39

4. BENTONITE TYPE: 30 MESH

SHIPMENT #	% MONTMORILLONITE	SWELL INDEX (ml)	MOISTURE CONTENT (%)	MOISTURE ABSORPTION (%)	MASS OF BENTONITE (g/m2)
170507	90	27	6.8	710	5455

CBA 005 0962

ALBARRIE NAUE LTD

QUALITY CONTROL CERTIFICATES

LOT # ROLL # DATE
121493 13787 12/14/93

PRODUCT: BENTOFIX NS

DIMENSIONS: 100 FT. X 15.2 FT.
30.5 M X 4.62 M

1. FINISHED PRODUCT TYPE: BENTOFIX NS		TENSILE (kg)		ELONGATION (%)		PUNCTURE (kg)		MOISTURE	
MASS(g/m2)	THICKNESS (mm)	LENGTH	CROSS	LENGTH	CROSS	RESISTANCE	PERMEABILITY, K (cm/s)	CONTENT (%)	
5574	6.4 7.02	59	124	189	60	85	1E9	6.4	

2. TOP LAYER		TYPE: NON-WOVEN		TENSILE (kg)		TEAR (kg)	
ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	LENGTH	CROSS	LENGTH	CROSS
167899	303	3	383	49	136	27	68

3. BOTTOM LAYER		TYPE: WOVEN		TENSILE (kg)		TEAR (kg)	
ROLL #	MASS (g/m2)	THICKNESS (mm)	BURST PSI	LENGTH	CROSS	LENGTH	CROSS
639303	110	2	303	68	63	33	34

4. BENTONITE		TYPE: 30 MESH					
SHIPMENT #	% MONTMORILLONITE	SWELL INDEX (ml)	MOISTURE CONTENT (%)	MOISTURE ABSORPTION (%)	MASS OF BENTONITE (g/m2)		
96113	90	29	6.4	655	5161		

FLUID SYSTEMS**FAX MEMO**

PAGES 4 DATE 2/18 FAX# 908-914-2915
 TO JIM BEUN FLUOR DANIEL
 FROM L. NICARETTA
 CC CONTI ENV.
 FILE 908-ST-9025 FAX#

February 17, 1994

Mr. Lenny Nicaretta
 Conti Environmental, Inc.
 3001 South Clinton Avenue
 South Plainfield, NJ 07080

"CIBA GEIGY"/Cell No. 1 Cap
 Toms River, NJ
 Resubmittal Information

Dear Lenny:

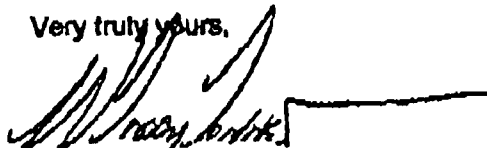
I hope, with this letter, to satisfactorily respond to the submittal issues as part of your fax to me on January 25, 1994. The fax included the first page of a letter, apparently, from Eckenfelder, Inc. to Mr. Dennis Crouse of Fluor Daniel, Inc.

The Bentofix (Geosynthetic Clay Liner) submittal did not include quality control tests for: 1) Wide Width Stress, 2) Internal Friction Angle, and 3) Differential Settlement. This is because these are not standard QC tests for any of the GCL manufacturers. (See my letter of November 22, 1993 regarding submittal requirements.) However, we did provide a letter certifying that the material would meet the specifications for these properties; a copy is attached for your review.

I would like to know specifically what Eckenfelder, Inc. needs in addition to the already provided geocomposite data. Between the Certificates of Compliance, the Certificates of Analysis, and Product Specification Sheets, it seems to address the necessary items of the specifications.

It is our intent to satisfy the engineer's needs with respect to these submittals. I would be pleased to talk to them directly, should they deem it appropriate at this time. Please do not hesitate to call if you have any questions or require anything further.

Very truly yours,



W. Tracy Tanner
 Regional Sales Engineer

cc: Joel Freundt (FSI)

CEA 005 0964



FLUID SYSTEMS

Project: Ciba-Geigy
Toms River

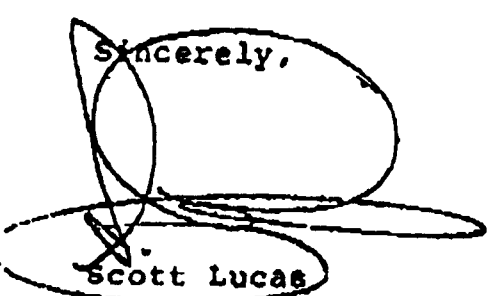
Prepared for: Conti Environmental

We certify that the Bentofix Product will meet the following Property Values:

TABLE 02233-1
REQUIRED GCL PROPERTY VALUES

PROPERTY	TEST METHOD	MIN. VALUE
Grab Elongation	ASTM D 4632	20
Wide Width Stress (lbs/inch)	ASTM D 4595	35
Differential Settlement (ft/ft, Vertical to Horizontal without compromising permeability	----	0.35

Sincerely,


Scott Lucas

Vice President Manufacturing

32 Triangle Park Drive • Suite 3201 • Cincinnati, Ohio 45248 • Phone: 513/771-5656 • 800/346-9107 • Fax 513/771-484
526 Reactor Way • Reno, Nevada 89502 • Phone: 702/856-2232 • Fax 702/856-2234

Summary of Direct Shear Data on Bentofix®

Internal Shear Strength

<u>Lab</u>	<u>Moisture Condition</u>	<u>Shear Rate (in/min)</u>	<u>Normal Stress (psi)</u>	<u>Cohesion (psi)</u>	<u>Friction Angle (°)</u>
GRI ¹	Dry ²	0.035	0.5 - 40	9.8	36
→	Hydrated ^{2,3}	0.035	0.12 - 10	1.0	31
	Hydrated ⁴	0.035	0.12 - 10	1.0	34
	Hydrated ⁵	0.035	0.12 - 10	0.7	43
UH	Hydrated	-	7 - 29	1.2	30

Notes:

1. GRI = Geosynthetic Research Institute (used 6-in. shear box)
UH = University of Hannover
2. "Dry" = sample tested in the as-received moisture state
"Hydrated" = sample was hydrated prior to testing, although the actual hydration methods vary.
Samples were hydrated with water unless otherwise indicated.
- 3,4. Hydrated in distilled and tap water, respectively.
5. Hydrated in leachate.

9 July 1993

WIDE WIDTH TENSILE PROPERTIES OF *BENTOFIX NS*
(Research No: 93121N)

<u>MACHINE DIRECTION</u>				
Specimens	Peak Load Observed	Stress at Peak Load	Strain at Peak Load	Thickness
	LBS	PPI (N/cm)	Percent	Inches
1	468.3	58.5 (102.4)	21.3	0.2772
2	407.0	50.9 (89.1)	26.3	0.2671
3	385.0	48.1 (84.2)	31.2	0.2804
4	453.0	56.6 (99.1)	21.2	0.2553
5	391.7	49.0 (85.8)	21.2	0.2781
6	423.2	52.9 (92.6)	22.5	0.2703
Avg	421.4	52.7 (92.2)	24.0%	0.2714
SD	33.5	4.2 (7.3)	4.1	0.0094
C. of Var.	8.0%	8.0% (7.9%)	17.1%	3.5%

<u>TRANSVERSE DIRECTION</u>				
Specimens	Peak Load Observed	Stress at Peak Load	Strain at Peak Load	Thickness
	LBS	PPI (N/cm)	Percent	Inches
1	780.9	97.6 (170.8)	60.0%	0.2691
2	984.4	123.1 (215.4)	71.3	0.2676
3	899.6	112.5 (196.9)	62.5	0.2841
4	+1000 ¹	****	****	0.2742
5	601.6	75.2 (131.6)	66.3	0.2938
6	876.0	109.5 (191.6)	63.8	0.2412
Avg	828.5	103.6 (181.3)	64.8%	0.2712
SD	146.1	18.3 (32.0)	4.3	0.0200
C. of Var.	17.6%	17.7% (17.6%)	6.6%	7.4%

¹ Peak load higher than capacity of load cell. Values are not included in average.



TRI/ENVIRONMENTAL, INC.
A Texas Research International Company

GEOCOMPOSITE LINER TEST RESULTS

Fluid Systems
Attn: Tracey Tanner
32 Triangle Park Drive, Suite 3201
Cincinnati, OH 45246

TRI Log Number: E3000-07-03
Report Date: 07-15-93
Product: Bentofix

Wide Width Tensile Properties ASTM D4595

	Tensile Strength (piw)		Elongation (%)	
	MD	TD	MD	TD
1	49	116	20	90
2	47	99	20	60
3	48	128	20	80
4	53	141	20	70
5	50	130	20	70
6	50	146	20	70
AVG	50	127	20	73

MD: Machine Direction
TD: Transverse Direction

SEA
Quality Review

The testing herein is based upon accepted industry practice as well as the test method listed.
TRI neither accepts responsibility for nor makes claim as to the final use and purpose of the material.

POLYVINYL CHLORIDE MEMBRANE

CBA 005 0969



Canadian General-Tower Limited is a family owned, privately held Company with its head office located in Cambridge, Ontario.

Our main product lines are Automotive, Containment and Construction Products, Pool Liner, Book Binding, and a vast array of General Products.

In total, the Company operates six PVC Calenders producing flexible PVC roll goods.

In 1987 Canadian General-Tower Limited installed a new, wide Calender at a cost of \$22.0 million dollars.

The total capacity for the Cambridge Plant is approximately 80 million pounds of PVC per year of which the new Calender alone is capable of producing 25 million pounds.

Canadian General-Tower Limited is one of the only North American PVC Manufacturing plants to have been awarded both the General Motors Spear 1 Quality Award and the Ford Motor Company Q1 Quality Award. Our quality control process employs S.P.C. or Statistical Process Control in all our manufacturing and product lines.

We have also received the General Motors "Targets for Excellence" award in all five categories.



GEOLINER® PVC AND ALLOY CONTAINMENT MEMBRANES

Canadian General-Tower Limited is a major producer and supplier of (PVC) flexible polyvinyl chloride sheeting to major North American and World markets.

These markets include Containment, Construction, Automotive, Pool and Graphic Arts to name just a few.

Canadian General-Tower Limited is committed to the PVC Containment Industry, having produced liner materials for a number of years.

In 1991, Canadian General-Tower produced approximately 32,000,000 sq. ft. of Geoliner PVC and 1992 estimates indicate even greater participation in this important market.

Please review the enclosed information at your convenience and if you should require further information, please do not hesitate to contact us at 519-623-1630 or fax #519-622-3656.

Member - Geosynthetics Research Institute
- PVC Geomembrane Institute
- IFAI - Geomembrane Division



QUALITY ASSURANCE OF GEOLINER® PVC

Incoming raw materials are supplied by a limited number of suppliers which have stringent Quality Assurance Programmes of their own. Nevertheless, all resins are screened with a cone strainer in the incoming line to verify that the transportation system has not introduced any foreign materials. The conveying line into the Blending Plant has a rotary sifter that ejects impurities. All liquid adds are strained before entering the Weighing Plant with fine mesh filters.

Before the finished dry blend is introduced to the Plastification process it passes through sensitive metal detectors that reject any metallic contamination. The Plastification process is being done in close tolerance Planetary Gear Extruders which fuse the material with high shear, mixing in a very short barrel to ensure totally homogeneous material with a short heat history. The fused material is again checked by a extremely sensitive metal detector. Processed material is further strained by a 10-40 screening pack before it is introduced to a four-roll Calender operation.

The Calendered material is picked off by close nested pick-off rolls to minimize unsupported WEB areas and thereby reducing sheet distortion until it is embossed and cooled with a close nested cooling train to room temperature.

The WEB thickness is automatically controlled by an isotope powered nuclear thickness measuring device that controls thickness within specified tolerances. The material is finally passed over a 6' x 3' backlit inspection section before being wound up into shipping rolls.

From every ninth roll two samples are taken to be used for our in-house testing and certification procedure.

The machine operators are trained to check the running production for any imperfections and are also trained in Statistical Process Control for WEB thickness, width, shrinkage, and color.

The Calender line is controlled by a computer system that stores data from previous runs and duplicates operating conditions for future repeat orders.

All aspects of the above ongoing Q.C. testing ensures our customers are supplied with first quality goods with each and every order they receive from CGT.


PALCO LININGS, INC.
**PALCO 30-MIL PVC
POND LINER SPECIFICATION**

PVC liner shall be compounded from first quality virgin materials with no regrind or reprocessed materials added. The liner compound shall be specifically designed for pond liner application.

MINIMUM MATERIAL PROPERTIES

<u>PROPERTY</u>	<u>TEST METHOD</u>	<u>TEST VALUE</u>
Gauge (nominal)		30 mils
Thickness, minimum	ASTM D1593 Par. 9.1.3	28.5 mils
Specific Gravity (minimum)	ASTM D792 MTD A	1.24 to 1.30
Minimum Tensile Properties (each direction)	ASTM D882	
1. Breaking Factor (lbs/inch width)	MTD A or B (one inch wide)	69 lbs/in width (2300 psi)
2. Elongation at Break (percent)	MTD A or B	300%
3. Modulus (Force) @ 100% Elongation (lbs/inch width)	MTD A or B	27 lbs/in width (900 psi)
Tear Resistance (minimum average pounds)	ASTM D1004 Die C	8 lbs (267 lbs/in)
Low Temperature Impact (50% pass)	ASTM D1790	-20° F
Dimensional Stability (each direction, percent change maximum)	ASTM D1204 212° F 15 min.	±5%
Water Extraction (max % wt loss)	ASTM D3083 (as modified by NSF)	0.35%
Volatile Loss (max % wt loss)	ASTM D1203 MTD A	0.7%

(continued on reverse)

CBA 005 0973

**30 MIL PVC
POND LINER SPECIFICATION****MINIMUM MATERIAL PROPERTIES**

Resistance to Soil Burial (percent change maximum in original value)	ASTM D3083 (as modified by NSF)	
1. Breaking Factor		5%
2. Elongation at Break		20%
3. Modulus @ 100% Elongation		20%
Hydrostatic Resistance (pounds/sq in minimum)	ASTM D751 MTD A	82 psi

FACTORY SEAM REQUIREMENTS

Factory Seaming Method		Dielectric Fusion Weld
Bonded Seam Strength (factory seam breaking factor, ppi width)	ASTM D3083 (as modified by NSF)	55.2 lbs/in width
Peel Adhesion (pounds/inch minimum)	ASTM D413 (as modified by NSF)	10 lbs/ in or F.T.B.*
Resistance to Soil Burial (percent change maximum in original value)	ASTM D3083 (as modified by NSF)	
Bonded Seam Strength		-20%
Peel Adhesion		-20%

*F.T.B. - Film Tearing Bond



QUALITY CONTROL REPORTS
CIBA GIEGY LANDFILL CAPPING SYSTEM
CELL - 1
TOMS RIVER, NEW JERSEY
30 MIL PVC LINER

Panels

1A	84'	x	194'	16,776
2A	84'	x	189'	15,876
3A	84'	x	180'	15,120
4A	84'	x	180'	15,120
5A	84'	x	180'	15,120
6A	84'	x	180'	15,120
7A	84'	x	211'	17,724
8A	70'	x	211'	14,770
3B	84'	x	180'	15,120
4B	84'	x	180'	15,120
5B	84'	x	180'	15,120
6B	84'	x	180'	15,120
8B	70'	x	211'	14,770

CBA 005 0975



FOLLOWING IS A LIST OF ROLL NUMBERS, AND LOT NUMBERS
USED TO MAKE UP THE PANELS

Lot #P3532A

1
2
3
4
9
10
11
13
14
15
16
54
55
56
57
58
59
60
61

Lot #P3538A

1
2
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6
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8
9
10
11
12
13
14
15
16

CBA 005 0976



Certification Results:
Containment Liners

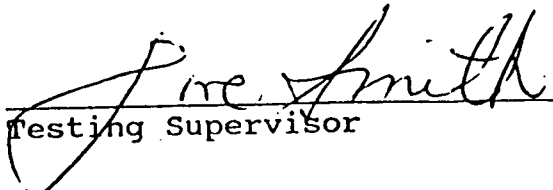
Polyvinyl Chloride

<u>Property</u>	<u>N.S.F. Spec Specified</u>	<u>Result</u>	<u>Test Method</u>
Thickness (mils)	30.0	30.0	ASTM D1593 ✓
	min 28.5		
Specific Gravity (min)	1.20	1.27	ASTM D792 ✓
Tensile (lbs, min)	69	78.7 x 80.9	ASTM D882 ✓
Elongation (%) At Break	325	574 x 611	ASTM D882 ✓
100% Modulus (lbs, min)	30	41.3 x 38.4	ASTM D882 ✓
Tear Resistance (lbs, min)	8	10.0 x 9.5	ASTM D1004 ✓
Low Temperature (F)	-20	PASSED	ASTM D1790
Dim. Stability (% max)	5.0	2.2 x +0.3	ASTM D1204 (100°C 15 min.)
Water Extraction (% max)	0.25	0.06	ASTM D3083
Volatile Loss (% max)	0.70	0.6	ASTM D1203
Resistance to Soil Burial		Formula Used Previously Tested Satisfactorily	
Hydrostatic Resistance (psi)	82	PASSED 120	ASTM D751 METHOD A

CGT Identification No.: 56283

CGT Lot No.: P3532A

Roll Numbers: 1 - 9


Testing Supervisor

Dec. 16, 1993

Date

CBA 005 0977



Certification Results:
Containment Liners

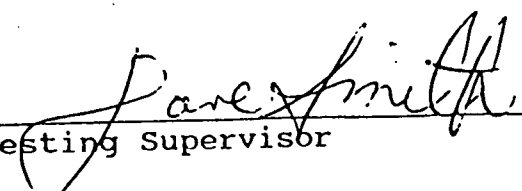
Polyvinyl Chloride

<u>Property</u>	<u>N.S.F. Spec Specified</u>	<u>Result</u>	<u>Test Method</u>
Thickness (mils)	30.0	29.3	ASTM D1593 ✓
	min 28.5		
Specific Gravity (min)	1.20	1.27	ASTM D792 ✓
Tensile (lbs, min)	69	83.1 x 78.3	ASTM D882 ✓
Elongation (%) At Break	325	589 x 617	ASTM D882 ✓
100% Modulus (lbs, min)	30	41.2 x 37.4	ASTM D882
Tear Resistance (lbs, min)	8	10.3 x 9.8	ASTM D1004
Low Temperature (F)	-20	PASSED	ASTM D1790
Dim. Stability (% max)	5.0	2.2 x +0.3	ASTM D1204 (100°C 15 min.)
Water Extraction (% max)	0.25	0.07	ASTM D3083
Volatile Loss (% max)	0.70	0.6	ASTM D1203
Resistance to Soil Burial		Formula Used Previously Tested Satisfactorily	
Hydrostatic Resistance (psi)	82	PASSED 120	ASTM D751 METHOD A

CGT Identification No.: 56283

CGT Lot No.: P3532A

Roll Numbers: 10 - 18


Testing Supervisor

Dec. 16, 1993

Date

CBA 005 0978



Certification Results:
Containment Liners

Polyvinyl Chloride

<u>Property</u>	<u>N.S.F. Spec Specified</u>	<u>Result</u>	<u>Test Method</u>
Thickness (mils)	30.0 min 28.5	29.2	ASTM D1593 ✓
Specific Gravity (min)	1.20	1.27	ASTM D792 ✓
Tensile (lbs, min)	69	83.6 x 79.2	ASTM D882
Elongation (%) At Break	325	591 x 593	ASTM D882 ✓
100% Modulus (lbs, min)	30	40.2 x 38.6	ASTM D882
Tear Resistance (lbs, min)	8	10.2 x 9.5	ASTM D1004
Low Temperature (F)	-20	PASSED	ASTM D1790
Dim. Stability (% max)	5.0	2.2 x +0.2	ASTM D1204 (100°C 15 min.)
Water Extraction (% max)	0.25	0.09	ASTM D3083
Volatile Loss (% max)	0.70	0.5	ASTM D1203
Resistance to Soil Burial		Formula Used Previously Tested Satisfactorily	
Hydrostatic Resistance (psi)	82	PASSED 120	ASTM D751 METHOD A
CGT Identification No.:	56283		
CGT Lot No.:	P3532A		
Roll Numbers:	46 - 54		

Joe Smith
Testing Supervisor

Dec. 16, 1993

Date

CBA 005 0979



Certification Results:
Containment Liners

Polyvinyl Chloride

<u>Property</u>	<u>N.S.F. Spec Specified</u>	<u>Result</u>	<u>Test Method</u>
Thickness (mils)	30.0	29.4	ASTM D1593 ✓
	min 28.5		
Specific Gravity (min)	1.20	1.27	ASTM D792 ✓
Tensile (lbs, min)	69	82.1 x 76.1	ASTM D882
Elongation (%) At Break	325	578 x 591	ASTM D882 ✓
100% Modulus (lbs, min)	30	41.0 x 36.8	ASTM D882 ✓
Tear Resistance (lbs, min)	8	10.0 x 9.7	ASTM D1004
Low Temperature (F)	-20	PASSED	ASTM D1790
Dim. Stability (% max)	5.0	2.5 x +0.1	ASTM D1204 (100°C 15 min.)
Water Extraction (% max)	0.25	0.07	ASTM D3083
Volatile Loss (% max)	0.70	0.5	ASTM D1203
Resistance to Soil Burial		Formula Used Previously Tested Satisfactorily	
Hydrostatic Resistance (psi)	82	PASSED 120	ASTM D751 METHOD A

CGT Identification No.: 56283

CGT Lot No.: P3532A

Roll Numbers: 55 - 63

Testing Supervisor

Dec. 16, 1993

Date

CBA 005 0980

CANADIAN
GENERAL-TOWER
LIMITED



Certification Results:
Containment Liners

Polyvinyl Chloride

<u>Property</u>	<u>N.S.F. Spec Specified</u>	<u>Result</u>	<u>Test Method</u>
Thickness (mils)	30.0	29.0	ASTM D1593 ✓
	min 28.5		
Specific Gravity (min)	1.20	1.27	ASTM D792 ✓
Tensile (lbs, min)	69	87.7 x 77.9	ASTM D882 ✓
Elongation (%) At Break	325	613 x 620	ASTM D882 ✓
100% Modulus (lbs, min)	30	41.4 x 37.6	ASTM D882 ✓
Tear Resistance (lbs, min)	8	9.1 x 8.4	ASTM D1004 ✓
Low Temperature (F)	-20	PASSED	ASTM D1790 ✓
Dim. Stability (% max)	5.0	3.1 x +0.2	ASTM D1204 (100°C 15 min.)
Water Extraction (% max)	0.25	0.11	ASTM D3083 ✓
Volatile Loss (% max)	0.70	0.6	ASTM D1203 ✓
Resistance to Soil Burial		Formula Used Previously Tested Satisfactorily	
Hydrostatic Resistance (psi)	82	PASSED 120	ASTM D751 METHOD A

CGT Identification No.: 56283

CGT Lot No.: P3538A

Roll Numbers: 1 - 9

Testing Supervisor

Dec. 17, 1993

Date

CBA 005 0981



Certification Results:
Containment Liners

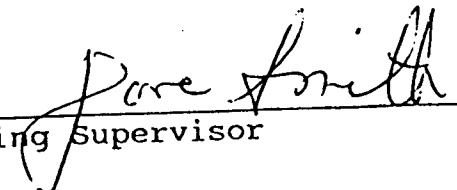
Polyvinyl Chloride

<u>Property</u>	<u>N.S.F. Spec Specified</u>	<u>Result</u>	<u>Test Method</u>
Thickness (mils)	30.0	28.8	ASTM D1593
	min 28.5		
Specific Gravity (min)	1.20	1.27	ASTM D792
Tensile (lbs, min)	69	85.2 x 78.8	ASTM D882
Elongation (%) At Break	325	604 x 613	ASTM D882 ✓
100% Modulus (lbs, min)	30	40.6 x 37.6	ASTM D882 ✓
Tear Resistance (lbs, min)	8	9.2 x 8.5	ASTM D1004
Low Temperature (F)	-20	PASSED	ASTM D1790
Dim. Stability (% max)	5.0	3.2 x +0.5	ASTM D1204 (100°C 15 min.)
Water Extraction (% max)	0.25	0.10	ASTM D3083
Volatile Loss (% max)	0.70	0.6	ASTM D1203
Resistance to Soil Burial		Formula Used Previously Tested Satisfactorily	
Hydrostatic Resistance (psi)	82	PASSED 120	ASTM D751 METHOD A

CGT Identification No.: 56283

CGT Lot No.: P3538A

Roll Numbers: 10 - 18


Testing Supervisor

Dec. 17, 1993

Date

CBA 005 0982

PALCO LININGS, INC.



FACTORY SEAM QUALITY CONTROL REPORT

ESTER: Kear

DATE: 12/14/93

JOB NUMBER: E93212 TRWC 1

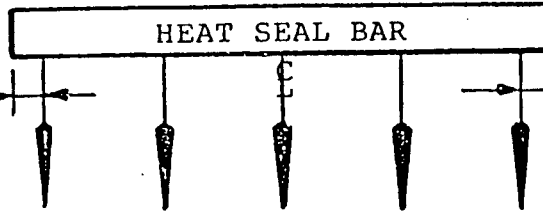
MATERIAL TYPE: 30 PVC LSTN

SHEET 1 OF 1

TEST RESULTS

OPERATOR END

INSPECTOR END



HEAR OR EEL		PANEL													MACHINE SETTINGS			
		NO.	TIME	DATE						AVG.	H	C	AMPS	RF				
S	P																	
		1A, 2A 3A	Am	12/14	76.3	72.0	77.2	80.0	66.2	74.3	.50	.50	3.5	2.2				
		4A, 5A 6A	Pm		65.0	67.0	71.0	74.4	73.2	70.1								
		7A, 8A	Am	12/15	66.8	80.0	71.2	75.0	85.7	75.7								
		3B, 4B 5B			70.0	68.8	75.0	73.1	61.8	69.7								
		6B, 8B	Pm		66.0	73.0	74.0	70.7	72.2	71.2								
	X	1A, 2A 3A			26.8	35.0	38.2	34.0	34.2	33.6								
		4A, 5A 6A			17.2	28.9	34.5	31.7	33.1	28.9								
		7A, 8A			34.0	39.3	39.7	39.2	37.3	37.9								
		3B, 4B 5B			30.1	34.8	45.0	38.5	32.5	36.2								
		6B, 8B			26.7	32.6	44.7	37.0	36.0	35.4								

COMMENTS:

MACHINE SETTINGS

H C AMPS RF

AVG. .50 .50 3.5 2.2

SHEAR PEEL

AVG. 72.2 34.4

CBA 005 0983



QUALITY CONTROL REPORTS
CIBA GIEGY LANDFILL CAPPING SYSTEM
CELL - 1
TOMS RIVER, NEW JERSEY
30 MIL PVC LINER

Panels

1B 84' x 194'	16 284
2B 84' x 189'	15 870
7B 84' x 211'	17 724

49 878

CBA 005 0984



FOLLOWING IS A LIST OF ROLL NUMBERS, AND LOT NUMBERS
USED TO MAKE UP THE PANELS

Lot #P3538A

16
17
18
19
20
21
22
23
24

CBA 005 0985

**CANADIAN
GENERAL-TOWER
LIMITED**

**Certification Results:
Containment Liners**

Polyvinyl Chloride

<u>Property</u>	<u>N.S.F. Spec Specified</u>	<u>Result</u>	<u>Test Method</u>
Thickness (mils)	30.0	28.8	ASTM D1593 ✓
Specific Gravity (min)	min 28.5 1.20	1.27	ASTM D792 ✓
Tensile (lbs, min)	69	85.2 x 78.8	ASTM D882 ✓
Elongation (%) At Break	325	604 x 613	ASTM D882 ✓
100% Modulus (lbs, min)	30	40.6 x 37.6	ASTM D882 ✓
Tear Resistance (lbs, min)	8	9.2 x 8.5	ASTM D1004 ✓
Low Temperature (F)	-20	PASSED	ASTM D1790
Dim. Stability (% max)	5.0	3.2 x +0.5	ASTM D1204 (100°C 15 min.)
Water Extraction (% max)	0.25	0.10	ASTM D3083
Volatile Loss (% max)	0.70	0.6	ASTM D1203
Resistance to Soil Burial		Formula Used Previously Tested Satisfactorily	
Hydrostatic Resistance (psi)	82	PASSED 120	ASTM D751 METHOD A
CGT Identification No.:	56283		
CGT Lot No.:	P3538A		
Roll Numbers:	10 - 18		

Jane Smith
Testing Supervisor

Dec. 17, 1993

Date

CBA 005 0986



Certification Results:
Containment Liners

Polyvinyl Chloride

<u>Property</u>	<u>N.S.F. Spec Specified</u>	<u>Result</u>	<u>Test Method</u>
Thickness (mils)	30.0	28.8	ASTM D1593 ✓
Specific Gravity (min)	min 28.5	1.27	ASTM D792 ✓
Tensile (lbs, min)	69	85.5 x 77.0	ASTM D882 ✓
Elongation (%) At Break	325	609 x 634	ASTM D882 ✓
100% Modulus (lbs, min)	30	39.9 x 36.2	ASTM D882 ✓
Tear Resistance (lbs, min)	8	9.2 x 8.3	ASTM D1004 ✓
Low Temperature (F)	-20	PASSED	ASTM D1790
Dim. Stability (% max)	5.0	2.5 x +0.5	ASTM D1204 (100°C 15 min.)
Water Extraction (% max)	0.25	0.07	ASTM D3083
Volatile Loss (% max)	0.70	0.6	ASTM D1203 ✓
Resistance to Soil Burial		Formula Used Previously Tested Satisfactorily	
Hydrostatic Resistance (psi)	82	PASSED 120	ASTM D751 METHOD A ✓
CGT Identification No.:	56283		
CGT Lot No.:	P3538A		
Roll Numbers:	19 - 27		

Testing Supervisor

Dec. 17, 1993

Date

CBA 005 0987

PALCO LININGS, INC.



FACTORY SEAM QUALITY CONTROL REPORT

TESTER: Karn

DATE:

13/16/93

JOB NUMBER:

E93213 Truck 3

MATERIAL TYPE:

30 PULC 55N

SHEET

1 OF

TEST RESULTS

OPERATOR END

INSPECTOR END

HEAT SEAL BAR

± 1"

± 1 "

[illegible]

COMMENTS:

MACHINE SETTINGS			
H	C	AMPS	RF
10	10	10	10

AVG.	.60	.50	3.5	2.7
------	-----	-----	-----	-----

	SHEAR	PEEL
AVG.	69.5	35.6

**PALCO LININGS, INC.**RECEIVED
FEB 07 1994

February 3, 1994

Mr. Len Nicaretta
Conti Environmental
3001 South Clinton Avenue
South Plainfield, NJ 07080

RE: Ciba Giegy Cell No. 1

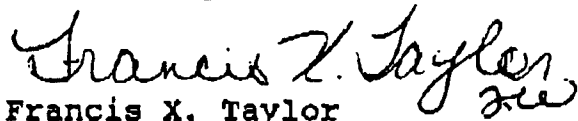
Dear Len,

Enclosed please find the actual soil burial test results for the
30 mil PVC liner.

The water extraction property test result and the NSF standard 54
specification noted on the Canadian General-Tower certification
is missing the negative sign as this is an extraction test.

Please feel free to call me if you have any questions regarding
this matter.

Yours truly,



Francis X. Taylor
Regional Sales Manager
PALCO LININGS, INC.

FXT/kew

CBA 005 0989

ASTM D5083
SOIL BURIAL TEST RESULTS
CANADIAN GENERAL TOWER
PVC GEOMEMBRANE
SEPTEMBER 17, 1982

IDENTIFICATION					TEST RESULTS		
QMS SAMPLE NUMBER	QMT LOT NUMBER	THICKNESS	PROPERTY	DIRECTION	SPECIMEN	AVERAGE	STANDARD DEVIATION
		inches			(%Change)	(%Change)	(%Change)
0841	58283 P0788A	30	100% MODULUS	LONG	-0.10	-3.27	3.63
					-8.43		
					-5.25		
					-3.55		
					-2.27		
					1.11		
				TRANS	-5.23	-8.58	0.52
					-5.11		
					-5.24		
					-5.85		
					-8.44		
					-8.48		
			BREAK ELONGATION	LONG	3.00	-3.00	5.00
					-7.00		
					-2.00		
					-10.00		
					-1.00		
					-1.00		
				TRANS	-8.00	-0.50	4.00
					0.00		
					1.00		
					2.00		
					3.00		
					-1.00		
			BREAK STRESS	LONG	3.73	1.47	3.22
					-4.13		
					1.71		
					-0.23		
					3.88		
					3.85		
				TRANS	-5.88	-1.43	2.27
					-1.48		
					0.35		
					-0.84		
					-0.76		
					-0.18		

CANADIAN GENERAL-TOWER LIMITED

CONTAINMENT LINER MATERIAL LIMITED WARRANTY

PROJECT: Ciba-Geigy Cell 1 Closure

APPROXIMATE SIZE: 250,292 SF 30 mil PVC Liner

INSTALLATION DATE: May 15, 1994

Canadian General-Tower Limited (CGT) warrants that the liner material to be used in the above referenced project will perform satisfactorily when incorporated into a liner to be used for the containment of the aqueous effluent which is defined as follows according to the conditions set forth in any additional pages of this agreement:

CGT further warrants that the material, if properly fabricated and installed, will have a useful service life for a period of 20 years providing the liner material is continuously protected against weathering exposure and mechanical damage at all times, with a covering of soil or equivalent to a minimum of 12 inches. In addition, the maximum effluent temperature is not to exceed ambient and the pH of the effluent is to be maintained between 4 and 9.

This warranty does not cover damage caused by mechanical, physical or other external forces or damage caused by solutions of greater concentrations than the one defined above.

This warranty is subject to the following:

1. This warranty is conditional upon (a) normal use and service of the liner for the purpose and in the manner for which it is designed and manufactured, (b) installation of the liner on preconsolidated soil, free of sharp protrusions, (c) proper sealing, fabricating and installation of the liner, and (d) the liner being covered on the sides and bottom with 12 inches of soil or equivalent at all times after installation. Deviation from any of these conditions will void this warranty.
2. CGT shall not be responsible for damage to the liner due to external agents, including but not limited to, damage resulting from exposure of the liner to harmful chemicals; abuse by machinery, equipment or people; excessive pressure or stress from any sources; or acts of God, casualty or catastrophe, such as, but not limited to, unusual storms or other weather conditions, flooding, earthquakes, floating debris, insects or animals.
3. Upon breach of warranty, CGT's sole liability shall be, at its option, either to (a) repair the defective material or (b) supply the owner with repair or replacement material, charging the owner only for a portion of that material (at the then-

current price) in proportion to the portion of the 20 year warranty period that has elapsed since the installation date. In no event, however, shall CGT's liability under this warranty exceed an amount equal to the sales price of the defective portion of the liner multiplied by a fraction, the numerator of which shall be the number of years remaining in the 20 year warranty period and the denominator of which shall be 20.

4. To enable CGT technical staff to properly determine the cause of any alleged defect and to take appropriate steps to effect timely corrective measures, if such defect is within the warranty, any claim for alleged breach of warranty must be made and presented to CGT within 30 days after the alleged defect is first noticed, or all warranties will be deemed to have been waived by the owner.
5. This warranty shall come into effect only upon payment in full to CGT of the purchase price of the original liner material.
6. THERE ARE NO WARRANTIES GIVEN BY US TO YOU WITH RESPECT TO THE MERCHANDISE COVERED HERewith OTHER THAN THOSE SPECIFICALLY DESCRIBED HEREIN. THOSE WARRANTIES ARE IN THE PLACE AND INSTEAD OF THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE. In no event shall CGT be liable for any special, incidental or consequential damages for, resulting from, or in connection with, any breach of warranty or any loss resulting from use of the liner by the owner. CGT does not assume nor authorize any person to assume for it, any other or additional liability of any kind in connection with the sale of the liner to the owner or the owner's use of the liner.

CANADIAN GENERAL-TOWER LIMITED

BY: _____

TITLE: _____

DATE: _____

ACKNOWLEDGED AND ACCEPTED

(Name of Owner)

BY: _____

TITLE: _____

DATE: _____

**NONWOVEN GEOTEXTILE /
GEOCOMPOSITE DRAINAGE LAYER**

CBA 005 0993

CERTIFICATE OF COMPLIANCE
(COM-94-093)

Technical Fibers Group
Hoechst Celanese Corporation
Spunbond Business Unit
Post Office Box 5850
Spartanburg, SC 29304-5850
803 579 5007
Toll Free 1 800 845 7597
Fax 803 579 5930

March 14, 1994

TRACY
FLUID SYSTEMS
SUITE 300
1245 CORPORATE BOULEVARD
AURORA IL 60504

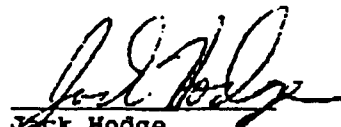
HOECHST CELANESE ORDER NO.
CUSTOMER ORDER NO.
SPECIFICATION NO.
PROJECT NO.

Manufacturer: Hoechst Celanese Corporation
Product Description: Nonwoven, Needle punched Continuous Filament,
100 Percent Polyester

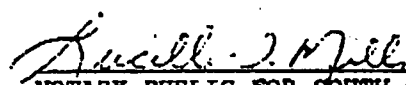
Product Identification: 1120

This letter is to state that the TREVIRA® Spunbond fabric specified above complies with published physical property data. Actual test values are attached.

Sincerely,


Jack Hodge
Manager Quality Control
TREVIRA® Spunbond
Hoechst Celanese Corporation

STATE OF SOUTH CAROLINA
COUNTY OF SPARTANBURG
SWORN TO BEFORE ME THIS
14TH DAY OF MARCH 1994.


NOTARY PUBLIC FOR SOUTH CAROLINA
MY COMMISSION EXPIRES APRIL 1997

JNH/lm
cc: File

PLEASE REFERENCE CERTIFICATE (COM. NO.) IF YOU HAVE QUESTIONS CONCERNING THIS LETTER (803-579-5361).

Hoechst 

CBA 005 0994

TEX182 011200

11/05/93 - 11/06/93

LOTS 200-2-102

11/08/93

ROLL NO.	WEIGHT OZ/YD2	COEF VAR Z	THICK MILS	GRAB TENSILE				RATIO S/V	TRAPEZOID TEAR		MULLEN BURST PSI	PUNC 5/16" LBS	WATER PERM GPH/ FT2 VERT	EOS	SHRINKAGE	
				BRK STR	ELONG Z	BRK STR	ELONG Z		LBS	LBS					2200 C	
				MD	MD	CD	CD	CD	MD	CD					MD	CD
231059890	6.1	7.79	94	231	76	183	84	.	76	70	310	91	172	100	.	.
231059905	6.2	4.35	96	221	73	186	83	.	81	63	315	100	.	.	.	.
231059927	6.2	6.03	92	227	73	191	79	.	74	68	336	99	.	.	.	.
231059949	6.2	4.43	83	220	77	196	83	.	71	65	310	85	.	.	.	.
231059970	6.1	3.96	86	232	76	197	83	.	79	68	333	98	.	.	.	.
231059995	6.2	5.14	86	219	74	189	80	.	76	66	326	99	159	.	.	.
231060017	6.0	5.85	86	236	77	180	83	.	79	63	317	101	.	.	.	.
231060024	6.2	7.59	.	.	.	196	85	.	.	.	320	.	.	.	.	.
AVERAGE:	6.2	5.64	89	226	75	189	82	0.00	76	66	322	96	166	100	0.0	0.0
ST DEV :	0.1	1.46	5.2	6.9	1.8	6.9	2.0	0.00	9.5	2.6	9.0	5.7	9.2	0.0	0.0	0.0
MINIMUM:	6.0	3.96	83	219	73	180	79	0.00	71	63	310	85	159	100	0.0	0.0
MAXIMUM:	6.2	7.79	96	236	77	197	85	0.00	81	70	336	101	172	100	0.0	0.0
NO OBS.:	0	0	7	7	7	0	0	0	7	7	0	7	2	1	0	0
NO. ROLLS:	0															

CBA 005 0995

CERTIFICATE OF COMPLIANCE

(COM-93-597)

Fibers & Film Group
Hoechst Celanese Corporation
Spunbond Business Unit
Post Office Box 5887
Spartanburg, SC 29304-5887
803 579 5551
Toll Free 1 800 845 7597
Telex 9102404053
Fax 803 579 5930

AUGUST 2, 1993

NATIONAL SEAL COMPANY
SUITE 300
1245 CORPORATE BOULEVARD
AURORA IL 60504-6419

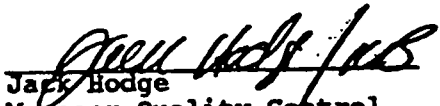
HOECHST CELANESE ORDER NO. 25817788
CUSTOMER ORDER NO. 9998/6T
SPECIFICATION NO.
PROJECT NO.

Manufacturer: Hoechst Celanese Corporation
Product Description: Nonwoven, Needle punched Continuous Filament,
100 Percent Polyester

Product Identification: 1120

This letter is to state that the TREVIRA® Spunbond fabric specified above complies with published physical property data. Actual test values are attached. The material has been continuously inspected for the presence of needles and no needles were detected.

Sincerely,


Jack Hodge
Manager Quality Control
TREVIRA® Spunbond
Hoechst Celanese Corporation

STATE OF SOUTH CAROLINA
COUNTY OF SPARTANBURG
SWORN TO BEFORE ME THIS
2ND DAY OF AUGUST 1993.


NOTARY PUBLIC FOR SOUTH CAROLINA
MY COMMISSION EXPIRES OCTOBER 1998.

JWH/mm
cc: File
68817

Fax - 708-898-2567

PLEASE REFERENCE CERTIFICATE (COM. NO.) IF YOU HAVE QUESTIONS CONCERNING THIS LETTER (803-579-5361).

Hoechst 

CBA 005 0996

ROLL NO.	WEIGHT VAR OZ/YD2 %	CORY VAR %	THICK MILS	GRAB TENSILE				RATIO S/W	TRAPEZOID TEAR		MULLEN PUNC		WATER PERM		SHRINKAGE	
				STR	ELONG	STR	ELONG		LBS	LBS	BURST PSI	5/16" LBS	GPM/ FT2 VERT	EOS	8200 C	
				LBS	%	LBS	%								%	%
				MD	MD	CD	CD								MD	CD
231046887	6.2	4.85	91	226	70	194	79	.	73	68	315	105	174	70	.	.
231046901	6.2	6.84	94	213	73	184	76	.	89	79	332	99	.	.	.	.
231046924	6.3	6.13	93	227	74	192	81	.	79	73	307	98	.	.	.	.
231046948	6.1	6.93	87	217	74	184	83	.	81	73	322	92	168	70	.	.
231046993	6.0	7.43	85	214	73	180	80	.	81	75	324	101	.	.	.	.
231046994	6.0	4.95	87	212	78	176	86	.	91	79	300	87	.	.	.	.
231047039	6.3	3.12	86	228	69	172	76	.	70	69	315	103	.	.	.	.
231047040	6.3	4.80	92	225	72	198	83	.	72	65	342	100	.	.	.	.
231047071	6.2	5.84	101	232	72	196	82	.	74	68	352	92	.	.	.	.
231047072	6.1	6.03	86	218	78	204	81	.	71	63	336	104	.	.	.	.
231047110	6.2	6.68	91	219	72	192	79	.	72	68	345	106	.	.	.	.
231047111	6.2	3.26	90	215	70	188	78	.	70	75	345	102	.	.	.	.
231047146	5.9	5.14	89	217	86	188	101	.	73	68	334	97	176	70	.	.
AVERAGE:	6.2	5.54	90	220	74	188	82	0.00	77	71	328	99	173	70	0.0	0.0
ST DEV :	0.1	1.35	4.3	6.5	4.6	9.0	6.3	0.00	6.9	5.0	16.0	5.8	4.2	0.0	0.0	0.0
MINIMUM:	5.9	3.12	85	212	69	172	76	0.00	70	63	300	87	168	70	0.0	0.0
MAXIMUM:	6.3	7.43	101	232	86	204	101	0.00	91	79	352	106	176	70	0.0	0.0
NO OBS.:	13	13	13	13	13	13	13	0	13	13	13	13	3	3	0	0
NO. ROLLS:	13															

CERTIFICATE OF COMPLIANCE
(COM-93-374)

June 3, 1993

NATIONAL SEAL COMPANY
SUITE 300
1245 CORPORATE BOULEVARD
AURORA IL 60504-6419

Fibers & Film Group
Hoechst Celanese Corporation
Spunbond Business Unit
Post Office Box 5887
Spartanburg, SC 29304-5887
803 579 5551
Toll Free 1 800 845 7597
Telex 9102404053
Fax 803 579 5930

HOECHST CELANESE ORDER NO. 25817285
CUSTOMER ORDER NO. 9998/3T
SPECIFICATION NO.
PROJECT NO.

Manufacturer: Hoechst Celanese Corporation
Product Description: Nonwoven, Needle punched Continuous Filament,
100 Percent Polyester

Product Identification: 1120

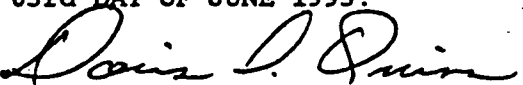
This letter is to state that the TREVIRA® Spunbond fabric specified above complies with published physical property data. Actual test values are attached. The material has been continuously inspected for the presence of needles and no needles were detected.

Sincerely,


Jack Hodge
Manager Quality Control
TREVIRA® Spunbond
Hoechst Celanese Corporation

JWH/dq
cc: File

STATE OF SOUTH CAROLINA
COUNTY OF SPARTANBURG
SWORN TO BEFORE ME THIS
03rd DAY OF JUNE 1993.


NOTARY PUBLIC FOR SOUTH CAROLINA
MY COMMISSION EXPIRES OCTOBER 2002

PLEASE REFERENCE CERTIFICATE (COM. NO.) IF YOU HAVE QUESTIONS CONCERNING THIS LETTER (803-579-5361).

ROLL NO.	WEIGHT OZ/YD2	COEF VAR Z	THICK MILS	GRAB TENSILE								MULLEN PUNC		WATER		SHRINKAGE	
				STR LBS MD	ELONG Z MD	STR LBS CD	ELONG Z CD	RATIO S/W CD	TRAPEZOID		BURST PSI	5/16" LBS	PERM GPM/ FT2 VERT	EOS	2000 C		
									LBS MD	LBS CD					Z MD	Z CD	
23111612	6.0	5.39	92	234	69	194	77	0.39	79	77	360	108	146	70	.	.	
23111615	6.1	6.37	87	230	66	200	76	0.43	79	74	326	101	.	.	.	.	
23111641	6.2	4.53	91	239	68	200	76	0.42	79	72	344	104	145	70	.	.	
23111645	6.2	4.44	87	239	71	203	77	0.43	83	77	345	104	.	.	.	.	
23111662	6.3	6.52	87	236	66	200	74	0.42	83	86	341	104	.	.	.	.	
23111688	6.0	6.59	89	232	68	194	75	0.42	74	77	358	106	.	.	.	.	
23111700	5.9	5.99	89	232	65	203	76	0.45	83	72	347	104	.	.	.	.	
23111729	6.1	5.72	89	230	66	194	73	0.42	83	72	351	110	.	.	.	.	
23111750	6.2	4.96	87	234	64	200	74	0.42	81	77	338	99	149	70	.	.	
23111772	6.1	5.78	88	232	66	203	75	0.43	83	81	327	106	.	.	.	.	
23111818	6.3	6.30	88	241	67	205	75	0.43	81	77	346	104	.	.	.	.	
23111870	6.2	3.14	95	234	68	205	77	0.43	81	72	329	106	.	.	.	.	
23111905	6.1	6.25	93	230	69	196	77	0.42	88	74	359	108	.	.	.	.	
23111951	6.2	4.88	95	236	69	194	76	0.41	83	81	331	101	.	.	.	.	
23112002	6.1	4.91	89	239	69	205	79	0.44	88	79	345	99	146	70	.	.	
AVERAGE:	6.1	5.45	90	234	67	200	76	0.42	82	76	343	104	147	70	0.0	0.0	
ST DEV :	0.1	0.97	2.7	3.7	1.9	4.4	1.5	0.01	3.5	3.9	11.3	3.2	1.7	0.0	0.0	0.0	
MINIMUM:	5.9	3.14	87	230	64	194	73	0.39	74	72	326	99	145	70	0.0	0.0	
MAXIMUM:	6.3	6.59	95	241	71	205	79	0.45	88	86	360	110	149	70	0.0	0.0	
NO OBS.:	15	15	15	15	15	15	15	15	15	15	15	15	4	4	0	0	
NO. ROLLS:	15																

CERTIFICATE OF COMPLIANCE

(COM-93-572)

Fibers & Film Group
Hoechst Celanese Corporation
Spunbond Business Unit
Post Office Box 5887
Spartanburg, SC 29304-5887
803 579 5551
Toll Free 1 800 845 7597
Telex 9102404053
Fax 803 579 5930

July 27, 1993

NATIONAL SEAL COMPANY
SUITE 300
1245 CORPORATE BOULEVARD
AURORA IL 60504-6419

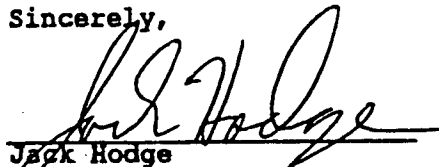
HOECHST CELANESE ORDER NO. 25818561
CUSTOMER ORDER NO. 9998/OT
SPECIFICATION NO.
PROJECT NO.

Manufacturer: Hoechst Celanese Corporation
Product Description: Nonwoven, Needle punched Continuous Filament,
100 Percent Polyester

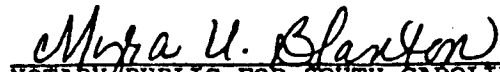
Product Identification: 1120

This letter is to state that the TREVIRA® Spunbond fabric specified above complies with published physical property data. Actual test values are attached. The material has been continuously inspected for the presence of needles and no needles were detected.

Sincerely,


Jack Hodge
Manager Quality Control
TREVIRA® Spunbond
Hoechst Celanese Corporation

STATE OF SOUTH CAROLINA
COUNTY OF SPARTANBURG
SWORN TO BEFORE ME THIS
27TH DAY OF JULY 1993.


NOTARY PUBLIC FOR SOUTH CAROLINA
MY COMMISSION EXPIRES OCTOBER 1997.

JWH/rnn
cc: File

Fax - 708-898-2567

PLEASE REFERENCE CERTIFICATE (COM. NO.) IF YOU HAVE QUESTIONS CONCERNING THIS LETTER (803-579-5361).

ROLL NO.	CONF		THICK MILS	GRAB TENSILE				RATIO S/W	TRAPEZOID TEAR		MULLEN PUNC		WATER PERM GPM/ FT2 VERT	R05	SHRINKAGE								
	WEIGHT OZ/YD2	VAR		STR	ELONG	STR	ELONG		LBS	LBS	PSI	5/16" LBS			8200 C	%	%						
																		LBS	%	LBS	%	CD	CD
231046887	6.2	4.85	91	226	70	194	79	.	73	68	315	105	174	70	.	.							
231046901	6.2	6.84	94	213	73	184	76	.	89	79	332	99	.	.	.	.							
231046924	6.3	6.13	93	227	74	192	81	.	79	73	307	98	.	.	.	.							
231046948	6.1	6.93	87	217	74	184	83	.	81	73	322	92	168	70	.	.							
231046993	6.0	7.43	85	214	73	180	80	.	81	75	324	101	.	.	.	.							
231046994	6.0	4.95	87	212	78	176	86	.	91	79	300	87	.	.	.	.							
231047039	6.3	3.12	86	228	69	172	76	.	70	69	315	103	.	.	.	.							
231047040	6.3	4.80	92	225	72	198	83	.	72	65	342	100	.	.	.	.							
231047071	6.2	5.84	101	232	72	196	82	.	74	68	352	92	.	.	.	.							
231047072	6.1	6.03	86	218	78	204	81	.	71	63	336	104	.	.	.	.							
231047110	6.2	6.68	91	219	72	192	79	.	72	68	345	106	.	.	.	.							
231047111	6.2	3.26	90	215	70	188	78	.	70	75	345	102	.	.	.	.							
231047146	5.9	5.14	89	217	86	188	101	.	73	68	334	97	176	70	.	.							
AVERAGE:	6.2	5.54	90	220	74	188	82	0.00	77	71	328	99	173	70	0.0	0.0							
ST DEV :	0.1	1.35	4.3	6.5	4.6	9.0	6.3	0.00	6.9	5.0	16.0	5.8	4.2	0.0	0.0	0.0							
MINIMUM:	5.9	3.12	85	212	69	172	76	0.00	70	63	300	87	168	70	0.0	0.0							
MAXIMUM:	6.3	7.43	101	232	86	204	101	0.00	91	79	352	106	176	70	0.0	0.0							
NO OBS.:	13	13	13	13	13	13	13	0	13	13	13	13	3	3	0	0							
NO. ROLLS:	13																						

CERTIFICATE OF COMPLIANCE

(COM-93-507)

Fibers & Film Group
Hoechst Celanese Corporation
Spunbond Business Unit
Post Office Box 5887
Spartanburg, SC 29304-5887
803 579 5551
Toll Free 1 800 845 7597
Telex 9102404053
Fax 803 579 5930

July 8, 1993

NATIONAL SEAL COMPANY
SUITE 300
1245 CORPORATE BOULEVARD
AURORA IL 60504-6419

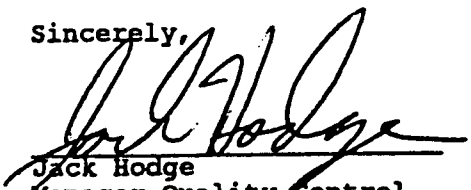
HOECHST CELANESE ORDER NO. 25818312
CUSTOMER ORDER NO. 9998/8T
SPECIFICATION NO.
PROJECT NO.

Manufacturer: Hoechst Celanese Corporation
Product Description: Nonwoven, Needle punched Continuous Filament,
100 Percent Polyester

Product Identification: 1120

This letter is to state that the TREVIRA® Spunbond fabric specified above complies with published physical property data. Actual test values are attached. The material has been continuously inspected for the presence of needles and no needles were detected.

Sincerely,


Jack Hodge
Manager Quality Control
TREVIRA® Spunbond
Hoechst Celanese Corporation

STATE OF SOUTH CAROLINA
COUNTY OF SPARTANBURG
SWORN TO BEFORE ME THIS
8TH DAY OF JULY 1993.


NOTARY PUBLIC FOR SOUTH CAROLINA
MY COMMISSION EXPIRES OCTOBER 1998.

JWH/mm
cc: File

Fax - 708-898-2567

PLEASE REFERENCE CERTIFICATE (COM. NO.) IF YOU HAVE QUESTIONS CONCERNING THIS LETTER (803-579-5361).

Hoechst 

CBA 005 1002

L NO.	WEIGHT OZ/YD2	CONF VAR	THICK MILS	GRAB TENSILE				RATIO S/W	TRAPAZOID TEAR		HULLER PUNC		WATER PERM		SHRINKAGE	
				BREK	BREK	BREK	BREK		LBS	LBS	PSI	5/16" LBS	GPM/ FT2 VERT	KOS	8200 C	
				STR	ELONG	STR	ELONG								ND	CD
				LBS	%	LBS	%								ND	CD
211073613	6.2	5.45	91	235	68	180	84	.	90	75	332	100	188	70	.	.
211073620	5.8	6.23	92	239	70	163	83	.	82	70	339	94	.	.	.	.
211073655	6.2	6.54	92	228	68	167	76	.	100	76	348	105	.	.	.	.
211073670	6.0	5.84	90	252	73	166	85	.	87	77	329	98	.	.	.	.
211073696	6.0	7.55	94	236	71	170	81	.	91	75	338	97	.	.	.	.
211073720	6.2	4.70	97	240	70	167	81	.	80	68	336	97	187	70	.	.
211073745	6.1	4.49	91	222	66	174	79	.	86	73	342	95	.	.	.	.
211073767	6.2	7.56	94	236	68	165	81	.	88	69	339	106	.	.	.	.
211073787	6.1	7.95	91	219	68	180	82	.	82	76	336	106	.	.	.	.
211073813	6.2	6.56	94	237	70	177	83	.	84	71	325	98	.	.	.	.
211073851	6.1	4.88	94	240	69	166	84	.	86	76	347	106	.	.	.	.
211073875	6.2	7.79	100	235	70	181	82	.	85	77	351	95	179	70	.	.
211073885	6.1	5.75	100	235	70	172	80	.	85	74	361	98	.	.	.	.
211073896	6.3	5.08	100	244	69	177	84	.	83	77	329	101	.	.	.	.
211073904	6.2	8.20	94	235	71	179	84	.	66	62	334	104	.	.	.	.
211073917	6.1	5.49	96	242	68	184	82	.	78	62	340	106	.	.	.	.
211073927	6.0	4.82	94	230	66	164	78	.	83	71	349	103	.	.	.	.
211073937	6.2	6.84	101	239	72	178	81	.	89	74	347	106	178	70	.	.
211073946	6.3	4.98	99	246	73	179	78	.	94	79	332	99	.	.	.	.
211073958	6.2	6.98	91	238	70	180	78	.	92	74	324	109	.	.	.	.
211073968	6.1	8.08	93	246	69	176	85	.	80	63	353	107	.	.	.	.
211073977	6.2	4.79	93	243	72	180	88	.	94	79	321	100	.	.	.	.
211073987	6.0	5.81	94	237	63	169	76	.	92	90	338	103	.	.	.	.
211073997	6.3	7.74	92	239	72	173	82	.	79	70	321	103	176	70	.	.
211074007	5.9	5.29	97	231	71	167	81	.	90	77	344	104	.	.	.	.
211074019	6.2	6.82	93	248	72	167	81	.	83	75	342	100	.	.	.	.
211074042	6.2	5.77	95	247	71	183	84	.	97	78	357	98	.	.	.	.
211074064	6.3	7.33	97	240	70	167	83	.	81	67	346	93	.	.	.	.
211074078	6.2	8.61	94	241	67	175	75	.	73	65	343	102	.	.	.	.
211074106	6.0	6.53	96	250	72	175	85	.	95	83	335	95	192	70	.	.
211074120	6.2	7.03	95	243	72	184	82	.	92	82	338	93	.	.	.	.
211074152	6.2	8.05	98	237	71	176	80	.	81	83	337	100	.	.	.	.
211074178	6.3	5.71	98	238	73	175	83	.	112	91	319	99	.	.	.	.
211074208	6.2	8.18	97	218	73	176	79	.	87	74	331	95	.	.	.	.
211074244	6.2	7.48	97	236	72	185	80	.	91	84	338	104	.	.	.	.
211074269	6.0	8.84	90	242	68	169	82	.	102	89	327	110	183	70	.	.
211074278	6.2	5.48	87	237	73	181	83	.	100	86	338	.	.	.	.	.
211074287	6.0	4.41	90	232	71	171	80	.	111	86	323	98	.	.	.	.
211074296	6.3	7.08	93	236	72	178	82	.	99	88	335	.	.	.	.	.
211074305	6.1	5.31	91	245	70	178	76	.	82	68	331	104	.	.	.	.

LL NO.	WEIGHT OZ/YD2	CONF VAR	THICK MILS	GRAB TENSILE				RATIO S/W	TRAPZOID TEAR		MULLER PUNC		WATER PERM		SHRINKAGE	
				BRK		BRK										
				STR	ELONG	STR	ELONG				BURST	5/16"	GPM/	EOS	8200 C	
				LBS	%	LBS	%		PSI	LBS	FT2		%	CD		
				MD	MD	CD	CD	CD	MD	CD			VERT		MD	CD
211074314	6.2	7.83	94	242	69	187	84	.	80	68	341	106	186	70	.	.
211074315	6.1	7.71	91	237	72	176	81	.	76	67	322	100	.	.	.	.
211074329	5.9	4.69	96	226	70	170	80	.	82	65	333	106	.	.	.	.
211074348	6.1	6.30	93	234	69	175	78	.	88	77	341	92	.	.	.	.
211074374	6.3	7.71	91	243	71	170	79	.	82	77	354	110	186	70	.	.
211074391	6.1	8.30	93	244	69	172	79	.	87	76	332	91	.	.	.	.
211074414	6.3	5.80	99	243	68	169	80	.	83	74	350	116	.	.	.	.
211074422	6.1	8.67	102	238	70	175	81	.	85	71	341	97	.	.	.	.
211074444	5.9	5.63	96	219	68	172	80	.	80	70	336	100	.	.	.	.
211074466	6.2	8.94	92	223	70	167	79	.	87	69	332	96	.	.	.	.
211074488	6.0	6.09	92	227	66	166	82	.	81	71	340	98	.	.	.	.
211074510	6.1	7.68	97	243	69	179	82	.	85	72	348	102	.	.	.	.
211074532	6.3	6.21	97	243	70	171	79	.	85	70	334	100	191	70	.	.
211074554	6.1	6.96	94	232	67	178	83	.	85	64	323	97	.	.	.	.
211074576	6.3	9.19	96	242	69	190	83	.	79	72	340	101	.	.	.	.
211074598	6.3	6.98	91	243	73	174	84	.	81	71	337	101	.	.	.	.
211074620	6.3	7.96	94	252	74	178	85	.	80	71	369	106	.	.	.	.
211074642	6.0	4.98	91	226	69	169	76	.	79	71	346	111	.	.	.	.
211074642	6.0	4.98	91	226	69	169	76	.	79	71	346	111	.	.	.	.
211074657	6.2	6.34	96	256	70	175	81	.	80	71	344	102	.	.	.	.
211074689	6.1	9.20	98	249	71	174	81	.	87	69	342	102	.	.	.	.
211074708	6.2	8.01	87	244	64	185	79	.	84	69	339	98	.	.	.	.
211074738	6.1	6.05	90	250	70	175	81	.	90	70	358	94	189	70	.	.
211074768	6.1	6.71	93	228	73	174	84	.	81	70	340	97	.	.	.	.
211074798	6.1	5.63	99	240	71	169	81	.	83	67	342	104	.	.	.	.
211074830	6.3	6.49	95	227	67	187	82	.	89	68	334	98	.	.	.	.
211074863	6.2	7.14	97	252	67	180	81	.	78	70	352	95	.	.	.	.
211074878	6.2	5.63	93	237	70	174	76	.	80	70	324	101	.	.	.	.
211074909	6.2	8.13	91	238	71	173	80	.	93	77	330	101	184	70	.	.
211074934	6.3	8.10	97	239	70	176	82	.	90	78	357	107	.	.	.	.
211074971	6.3	7.08	89	253	71	182	79	.	88	73	329	99	.	.	.	.
211074999	6.1	4.75	93	225	71	176	81	.	85	67	336	105	.	.	.	.
211075030	6.0	3.06	94	239	72	191	84	.	81	69	348	98	.	.	.	.
211075048	5.9	7.80	93	202	72	166	82	.	75	62	330	93	.	.	.	.
211075068	6.3	8.46	92	238	71	170	82	.	72	68	279	86	179	70	.	.
211075084	5.9	8.82	86	215	70	178	84	.	89	78	325	96	.	.	.	.
211075095	6.3	8.76	92	238	73	180	82	.	81	71	290	95	.	.	.	.
211075108	6.3	6.76	95	230	76	169	82	.	81	68	317	101	.	.	.	.
211075114	6.1	4.48	98	224	73	175	83	.	87	72	335	102	.	.	.	.

ROLL NO.	WEIGHT VAR OZ/YD2	CONP %	THICK MILS	GRAB TENSILE				RATIO S/W	TRAPEZOID TEAR		MULLEN PUNC		WATER PERM		SHRINKAGE	
				STR	ELONG	STR	ELONG		LBS	LBS	5/16"	5/16"	GPM/	KOS	8200 C	
				LBS	%	LBS	%		PSI	LBS	PSI	LBS	FT2		%	%
				MD	MD	CD	CD	CD	MD	CD			VERY		MD	CD

AVERAGE:	6.2	6.68	94	237	70	175	81	0.00	86	73	337	101	184	70	0.0	0.0
ST DEV :	0.1	1.40	3.3	9.6	2.2	6.3	2.5	0.00	8.0	6.5	13.4	5.3	5.2	0.0	0.0	0.0
MINUM:	5.8	3.06	86	202	63	163	75	0.00	66	62	279	86	176	70	0.0	0.0
MINUM:	6.3	9.20	102	256	76	191	88	0.00	112	91	369	116	192	70	0.0	0.0
NO OBS.:	79	79	79	79	79	79	79	0	79	79	79	77	13	13	0	0
ROLLS:	79															

FLUID SYSTEMS

January 3, 1994

Mr. Lenny Nicaretta
CONTI ENVIRONMENTAL, INC.
3001 South Clinton Avenue
South Plainfield, NJ 07080

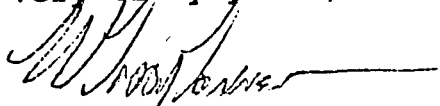
CERTIFICATE OF COMPLIANCE
PURCHASE ORDER # 94159-7825
BILL OF LADING # F-1311 & F-1313

Dear Mr. Nicaretta:

Attached is the Certificate of Compliance for TEX-NET® TN3002/1120 geocomposite, shipped December 17, 1993, to Ciba-Geigy.

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

Very truly yours,



W. Tracy Tanner
Regional Sales Engineer

WTT/plr
Attachment

CBA 005 1006



POLY-NET® PN3000 PRODUCT DESCRIPTION

POLY-NET® is a profiled geonet manufactured by extruding two sets of polyethylene strands to form a diamond shape drainage material. The resulting net provides superior planar water flow, is inert to biological attack, naturally encountered chemicals, alkalies, and acids and is resistant to UV light exposure. POLY-NET PN3000 conforms to the property values listed below.

<u>PROPERTY</u>	<u>METHOD</u>	<u>UNITS</u>	<u>QUALIFIER</u>	<u>VALUE</u>
Roll Length	-	ft	Nominal	300
Roll Width	-	ft	Nominal	7.54 & 14.5
Thickness	ASTM D1777 ✓	inches	Minimum	0.200 ✓
Area per Roll	-	ft ²	Nominal	2262 & 4350
Weight per Roll	-	lbs	Nominal	370 & 705
Mass per Unit Area	ASTM D3776 ✓ (Option C)	lbs/ft ²	Minimum	0.162 ✓
Carbon Black Content	ASTM D1603 ✓	percent	Minimum	2.0 ✓
Resin Density ¹	ASTM D1505 ✓	g/cm ³	Minimum	0.94 ✓
Melt Flow Index	ASTM D1238 (Condition E)	g/10 min.	Maximum	1.0
Tensile Strength (Machine Direction)	ASTM D1682 ✓ (Modified)	lb/in.	Minimum	42 ✓
Transmissivity ² (gradient = 1.0 at 15,000 psf)	ASTM D4716 ✓	m ² /sec	Minimum	1 x 10 ⁻³ ✓

¹ Fully Compounded

² Measured between two steel plates one hour after application of the confining pressure in the machine direction



Fibers & Film Group
Hoechst Celanese Corporation
Spunbond Business Unit
Post Office Box 5887
Spartanburg, SC 29304-5887
803 579 5551
Toll Free 1 800 845 7597
Fax 803 579 5930

PRODUCT DESCRIPTION FOR
TREVIRA® SPUNBOND TYPE 1120

TREVIRA® SPUNBOND TYPE 1120 IS A 100% CONTINUOUS FILAMENT POLYESTER NONWOVEN NEEDLEPUNCHED ENGINEERING FABRIC. THE FABRIC IS RESISTANT TO BIOLOGICAL AND NATURALLY ENCOUNTERED CHEMICALS, ALKALIES, ACIDS, AND ULTRAVIOLET LIGHT EXPOSURE. TREVIRA® SPUNBOND TYPE 1120 CONFORMS TO THE PROPERTY VALUES LISTED IN THE FOLLOWING TABLE:

FABRIC PROPERTY	UNIT	TEST METHOD	TYPICAL VALUE ¹	MINIMUM TEST VALUES
FABRIC WEIGHT	OZ/YD ²	ASTM D-3776	6.0	5.7
THICKNESS	MILS	ASTM D-1777	90	75
GRAB STRENGTH (MD/CD)	LBS	ASTM D-4632	230/180	160
GRAB ELONGATION (MD/CD)	%	ASTM D-4632	75/85	60
TRAPEZOID TEAR STRENGTH (MD/CD)	LBS	ASTM D-4533	80/75	60
PUNCTURE RESISTANCE (5/16")	LBS	ASTM D-4833	95	80
MULLEN BURST STRENGTH	PSI	ASTM D-3786	320	275
VERTICAL WATER FLOW @ 2" HEAD	GPM/FT ²	ASTM D-4491	170-	130
COEFFICIENT OF PERMEABILITY, k	CM/SEC	ASTM D-4491	.52	.33
AOS (MOD. TO 10 MIN.)	SIEVE SIZE	ASTM D-4751	70/100	70

MD - MACHINE DIRECTION
CD - CROSS MACHINE DIRECTION

1) THE VALUES LISTED ARE AVERAGE VALUES.

(S1120.WP)
NOVEMBER 12, 1990

STRAIGHT BILL OF LADING
ORIGINAL - NOT NEGOTIABLE

F 1311

ORDER NO. F-353-107

AL NO.

NAME OF CARRIER FREDRICK		DATE 12/17/93
TO: CONSIGNEE CONTI ENVIRONMENTAL, INC.	FROM: SHIPPER FLUID SYSTEMS, INC.	
STREET C/O CIBA GEIGY	STREET 1255 MONMOUTH BLVD.	
DESTINATION CELL NO. 1 CAPPING SYSTEM	ORIGIN GALESBURG, ILLINOIS 61402-1448	
ROUTE TOUTE 37, WEST TOMS RIVER, NJ 08755 Lenny Nigaretta 908-914-2564		

NO. SHIPPING UNITS	HM	KIND OF PACKAGING, DESCRIPTION OF ARTICLES SPECIAL MARKS AND EXCEPTIONS	WEIGHT (SUBJECT TO CORRECTION)	SQ. FEET
19 ROLLS		TN3002/1120 14.5'	30.255	79.318

ID NO.	LENGTH	SIZE	WIDTH	SF	WT	ID NO.	LENGTH	SIZE	WIDTH	SF	WT
TN3002/1120	14.5'										
19 ROLLS											

ADDITIONAL ITEMS:

REMIT C.O.D. TO: ADDRESS	COD Amt: \$	C.O.D. FEE: PREPAID ☐ \$ COLLECT ☐
NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding \$ _____ per _____	This is to certify that the above-named articles are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. Signature _____	Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. (Signature of Consignor) _____
TOTAL CHARGES \$		Freight Prepaid ☐ Freight Collect ☐ Freight Prepaid ☐ Freight Collect ☐

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification and the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER FLUID SYSTEMS, INC.	CARRIER Fredrick
PER <i>[Signature]</i>	PER <i>[Signature]</i>
	DATE

ORIGINAL

12. 17. 93 02:06 PM P01

CBA 005 1009

PACKING LIST F-353-107

B/L # 1311

30255

79318

19

3002/1120

14.5'

1	277	14.50	4017	C30T7517-3I19012B6
3	274	14.50	3973	C30T7303-3I18007B6
5	300	14.50	4350	C30T0935-3I15001B6
7	300	14.50	4350	C30T0935-3I14009B6
9	280	14.50	4060	C30T0935-3I18015B6
11	269	14.50	3901	C30T7805-3I20006B6
13	300	14.50	4350	C30T7516-3I15004B6
15	300	14.50	4350	C30T0935-3I18014B6
17	300	14.50	4350	C30T7516-3I19009B6
19	300	14.50	4350	C30T0935-3I14011B6

2	282	14.50	4089	C30T0935-3I09010B6
4	285	14.50	4133	C30T7516-3I15005B6
6	295	14.50	4278	C30T7303-3I15006B6
8	254	14.50	3683	C30T0935-3I10005B6
10	253	14.50	3669	C30T7805-3I20014B6
12	300	14.50	4350	C30T0935-3I09009B6
14	301	14.50	4365	C30T0935-3I15003B6
16	300	14.50	4350	C30T0935-3I10002B6
18	300	14.50	4350	C30T0935-3I09015B6

CBA 005 1010

12.17.93 02:06 PM P02

F 1313

ORDER NO. F-353-107

DATE 12/17/93

FROM: SHIPPER **FLUID SYSTEMS, INC.**

STREET 1255 MONMOUTH BLVD.

ORIGIN	GALESBURG, ILLINOIS 61402-1448
--------	--------------------------------

DESTINATION ROUTE 377 WEST TOMS RIVER, NJ 08755 LENNY NIGARETTA 908-914-2564

ROUTE		KIND OF PACKAGING, DESCRIPTION OF ARTICLES SPECIAL MARKS AND EXCEPTIONS		(SUBJECT TO CORRECTION)	SQ. FEET
NO. SHIPPING	UNIT				

HM

19 RLS.	3002/1120	14.5'	29280	76997
---------	-----------	-------	-------	-------

ADDITIONAL ITEMS

Signature

FREIGHT PREPAID
 on left of box
 box on right
 is checked

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, and on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

CARRIER

PER	<i>Michael H. H.</i>	PER	
		DATE	

PEAC

DATE

12. 17. 93 01:16 PM POI

CBA 005 1011

Packing List

PACKING LIST F-353-107

19

TN3002/1120 14.5'

1	270	14.50	3915	C30T7303-3116012
2	285	14.50	4133	C30T7303-3116010
3	249	14.50	3611	C30T7303-3118001
4	272	14.50	3944	C30T7303-3117008
5	294	14.50	4263	C30T7303-3116006
6	298	14.50	4321	C30T0935-3117006
*7	290	14.50	4205	C30T0935-3115008
8	300	14.50	4350	C30T7517-3115009
9	300	14.50	4350	C30T0935-3109013
10	257	14.50	3727	C30T0935-3110001
*11	300	14.50	4350	C30T7303-3115005
*12	300	14.50	4350	C30T0935-3109011
13	300	14.50	4350	C30T7516-3112006
14	263	14.50	3814	C30T0935-3109014
*15	300	14.50	4350	C30T0935-3110016
*16	150	14.50	2175	C30T0935-3114010
*17	300	14.50	4350	C30T0935-3115007
*18	282	14.50	4089	C30T0935-3115008
*19	300	14.50	4350	C30T0935-3110000

* Returned to Salesburg
Customer did not offload

CBA 005 1012

12 17 02 01:16 PM P02

RECEIVED JAN 3 1994

December 20, 1993

TEX-NET CERTIFICATE OF ANALYSIS

Customer: CONTI ENVIRONMENTAL, INC.
P.O. # 94159-7825

Project: CIBA-GEIGY

Ship Date: December 17, 1993

P.O. Number: 4065

Order Number: F-353-107

Type: TN3002/1120

Bill(s) of Lading: F-1311 & F-1313

The Tex-Net referenced above was manufactured using first quality Poly-Net and Trevira. The Poly-Net meets all of Fluid Systems specifications for Poly-Net. The geotextile has been certified by Hoechst Celanese to meet all of their specifications for Trevira geotextiles.

The Tex-Net was tested for percent adhesion, ply adhesion strength and thickness according to Fluid Systems specifications. The values are reported on the following pages:

FLUID SYSTEMS



Michael L. Ross
Asst. Quality Control Manager

CBA 005 1013

Page No. 1
12/20/93

TEX-NET QUALITY CONTROL TEST DATA

ORDER NUMBER: STOCK

TYPE: TN3002/1120

DATE OF MANUFACTURE	ROLL NUMBER	PLY ADHESION (ppi)		PERCENT ADHESION		THICKNESS (inches)
		TOP	BOTTOM	TOP	BOTTOM	
09/09/93	3I0909B6	3.9	- 2.7	98	- 97	0.3154
	3I0911B6	3.7	- 2.6	97	- 98	0.3116
	3I0913B6	6.1	- 2.5	98	- 97	0.3094
	3I0915B6	2.8	- 3.6	98	- 97	0.3357
09/10/93	3I1002B6	3.8	- 3.4	99	- 99	0.3137
	3I1004B6	7.1	- 2.6	98	- 98	0.3162
	3I1006B6	3.1	- 2.3	98	- 97	0.3197
	3I1016B6	3.1	- 2.7	99	- 98	0.3055
09/12/93	3I1205B6	2.3	- 3.3	97	- 97	0.3127
09/14/93	3I1407B6	4.1	- 3.6	100	- 99	0.3123
	3I1409B6	3.0	- 3.3	99	- 99	0.3154
09/15/93	3I1411B6	3.6	- 2.4	100	- 99	0.3144
	3I1501B6	3.6	- 2.8	99	- 99	0.3021
	3I1503B6	2.7	- 2.4	99	- 98	0.3020
	3I1505B6	2.5	- 2.2	97	- 96	0.3202
	3I1507B6	2.5	- 5.1	97	- 96	0.3210
	3I1509B6	2.0	- 3.3	99	- 97	0.3108
	3I1511B6	3.5	- 3.3	99	- 98	0.3120
	3I1513B6	2.0	- 4.5	99	- 99	0.3132
	3I1515B6	2.7	- 3.9	98	- 98	0.3039
	3I1601B6	2.9	- 2.1	100	- 98	0.3053
	3I1605B6	2.4	- 2.0	99	- 98	0.3147
	3I1607B6	3.4	- 2.6	99	- 99	0.3102
09/17/93	3I1609B6	4.2	- 4.1	99	- 98	0.3110
	3I1611B6	4.9	- 2.8	99	- 98	0.3163
	3I1615B6	3.1	- 2.2	99	- 98	0.3151
	3I1705B6	2.0	- 2.0	99	- 99	0.2998
	3I1707B6	2.5	- 5.6	99	- 100	0.2809
	3I1711B6	2.0	- 2.4	99	- 99	0.3003
	3I1802B6	3.4	- 3.3	99	- 99	0.2873
09/18/93	3I1804B6	3.6	- 4.0	98	- 99	0.2994
	3I1806B6	2.6	- 4.1	99	- 97	0.3003
	3I1812B6	2.3	- 2.1	98	- 98	0.2949
	3I1814B6	3.5	- 2.9	99	- 98	0.2912
	3I1901B6	2.5	- 4.6	97	- 99	0.2906
09/19/93	3I1907B6	2.8	- 2.5	97	- 96	0.2959
	3I1909B6	2.2	- 3.5	99	- 96	0.3084
	3I1911B6	2.6	- 4.4	94	- 93	0.3065
	3I1913B6	3.1	- 4.6	98	- 97	0.3082
	3I2005B6	8.2	- 6.1	99	- 98	0.2969
09/20/93	3I2007B6	3.0	- 4.3	98	- 96	0.3103
	3I2009B6	6.2	- 5.2	98	- 97	0.3010
	3I2011B6	4.5	- 3.8	97	- 97	0.3085
	3I2013B6	5.3	- 3.9	96	- 96	0.2996

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1 CORRELATION OF POLY-NET AND GEOTEXTILE NUMBERS
FOR JOB NUMBER - STOCK

EXNT NUM	MFG DATE	NET NUM	MFG DATE	GEOTEXTILE	
				TOP	BOTTOM
3I0909B6	09/09/93	3I0512-4	09/05/93	211075109	231046890
3I0910B6	09/09/93	3I0512-4	09/05/93	211075109	231046890
3I0911B6	09/09/93	3I0423-4	09/04/93	231046905	231046924
3I0912B6	09/09/93	3I0423-4	09/04/93	231046905	231046924
3I0913B6	09/09/93	3I0510-4	09/05/93	211075085	211075099
3I0914B6	09/09/93	3I0510-4	09/05/93	211075085	211075099
3I0915B6	09/09/93	3I0522-4	09/05/93	211075097	211075092
3I1001B6	09/10/93	3I0522-4	09/05/93	211075097	211075092
3I1002B6	09/10/93	3I0504-4	09/05/93	211075094	231046945
3I1003B6	09/10/93	3I0504-4	09/05/93	211075094	231046945
3I1004B6	09/10/93	3I0503-4	09/05/93	231046889	211075080
3I1005B6	09/10/93	3I0503-4	09/05/93	231046889	211075080
3I1006B6	09/10/93	3I0421-4	09/04/93	211075076	211075079
3I1007B6	09/10/93	3I0421-4	09/04/93	211075076	211075079
3I1008B6	09/10/93	3I1003-4	09/10/93	211075112	211074375
3I1009B6	09/10/93	3I1003-4	09/10/93	211075112	211074375
3I1010B6	09/10/93	3I1005-4	09/10/93	211075073	211075082
3I1011B6	09/10/93	3I1005-4	09/10/93	211075073	211075082
3I1012B6	09/10/93	3I1010-4	09/10/93	211075086	211075114
3I1013B6	09/10/93	3I1010-4	09/10/93	211075086	211075114
3I1014B6	09/10/93	3I1015-4	09/10/93	211075084	211075111
3I1015B6	09/10/93	3I1015-4	09/10/93	211075084	211075111
3I1016B6	09/10/93	3I0422-4	09/04/93	231046932	211075077
3I1017B6	09/10/93	3I0422-4	09/04/93	231046932	211075077
3I1201B6	09/12/93	3I1134-4	09/11/93	211080013	211080007
3I1203B6	09/12/93	3I1132-4	09/11/93	211080008	211079976
3I1204B6	09/12/93	3I1132-4	09/11/96	211080008	211079976
3I1205B6	09/12/93	3I1004-4	09/10/93	211080009	211079972
3I1206B6	09/12/93	3I1004-4	09/10/93	211080009	211079972
3I1207B6	09/12/93	3I1205-4	09/12/93	211080010	211080006
3I1208B6	09/12/93	3I1205-4	09/12/93	211080010	211080006
3I1209B6	09/12/93	/	/	231046902	211074279
3I1210B6	09/12/93	/	/	231046902	211074279
3I1211B6	09/12/93	3I1211-4	09/12/93	211079990	211079950
3I1212B6	09/12/93	3I1211-4	09/12/93	211079990	211079950
3I1301B6	09/13/93	3I1219-4	09/12/93	231046943	211079953
3I1302B6	09/13/93	3I1219-4	09/12/93	231046943	211079953
3I1303B6	09/13/93	3I1212-4	09/12/93	211079949	211079973
3I1304B6	09/13/93	3I1212-4	09/12/93	211079949	211079973
3I1305B6	09/13/93	3I1204-4	09/12/93	211079971	211079974
3I1306B6	09/13/93	3I1204-4	09/12/93	211079971	211079974
3I1307B6	09/13/93	3I1304-4	09/13/93	211080012	211079988
3I1308B6	09/13/93	3I1304-4	09/13/93	211080012	211079988
3I1309B6	09/13/93	3I1305-4	09/13/93	211079951	211079948
3I1310B6	09/13/93	3I1305-4	09/13/93	211079951	211079948
3I1311B6	09/13/93	3I1133-4	09/11/93	211079986	211079987
3I1312B6	09/13/93	3I1133-4	09/11/93	211079986	211079987
3I1313B6	09/13/93	3I1009-4	09/10/93	211079978	211075096
3I1314B6	09/13/93	3I1009-4	09/10/93	211079978	211075096
3I1315B6	09/13/93	3I1214-4	09/12/93	211079981	211080011
3I1316B6	09/13/93	3I1214-4	09/12/93	211079981	211080011
3I1401B6	09/13/93	3I1337-4	09/13/93	211075078	211079985

2 CORRELATION OF POLY-NET AND GEOTEXTILE NUMBERS
FOR JOB NUMBER - STOCK

EXNT NUM	MFG DATE	NET NUM	MFG DATE	GEOTEXTILE	
				TOP	BOTTOM
3I1402B6	09/13/93	3I1337-4	09/13/93	211075078	211079985
3I1403B6	09/13/93	3I0508-4	09/05/93	211075105	231046904
3I1404B6	09/13/93	3I0508-4	09/05/93	211075105	231046904
3I1406B6	09/14/93	3I1406-4	09/14/93	211079975	211079984
3I1407B6	09/14/93	3I1409-4	09/14/93	231046900	211079970
3I1408B6	09/14/93	3I1409-4	09/14/93	231046900	211079970
3I1409B6	09/14/93	3I0509-4	09/05/93	211079989	211075083
3I1410B6	09/14/93	3I0509-4	09/05/93	211079989	211075083
3I1411B6	09/14/93	3I0519-4	09/05/93	211075074	211079994
3I1501B6	09/15/93	3I0415-4	09/04/93	211080015	211080023
3I1502B6	09/15/93	3I0415-4	09/04/93	211080015	211080023
3I1503B6	09/15/93	3I1109-4	09/11/93	211080021	211080041
3I1504B6	09/15/93	3I1109-4	09/11/93	211080021	211080041
3I1505B6	09/15/93	3I1501-4	09/15/93	211080020	211080039
3I1506B6	09/15/93	3I1501-4	09/15/93	211080020	211080039
3I1507B6	09/15/93	3I0426-4	09/04/93	211080024	211080004
3I1508B6	09/15/93	3I0426-4	09/04/93	211080024	211080004
3I1509B6	09/15/93	3I1213-4	09/12/93	211079996	211080019
3I1510B6	09/15/93	3I1213-4	09/12/93	211079996	211080019
3I1511B6	09/15/93	3I0411-4	09/04/93	211080018	211080017
3I1512B6	09/15/93	3I0411-4	09/04/93	211080018	211080017
3I1513B6	09/15/93	3I0413-4	09/04/93	211080014	211079997
3I1514B6	09/15/93	3I0413-4	09/04/93	211080014	211079997
3I1515B6	09/15/93	3I1217-4	09/12/93	211080016	211080038
3I1516B6	09/15/93	3I1217-4	09/12/93	211080016	211080038
3I1601B6	09/16/93	3I1218-4	09/12/93	211079980	211079992
3I1602B6	09/16/93	3I1218-4	09/12/93	211079980	211079992
3I1603B6	09/16/93	3I0410-4	09/04/93	211080025	211079979
3I1604B6	09/16/93	3I0410-4	09/04/93	211080025	211079979
3I1605B6	09/16/93	3I1601-4	09/16/93	211080000	211080001
3I1606B6	09/16/93	3I1601-4	09/16/93	211080000	211080001
3I1607B6	09/16/93	3I1605-4	09/16/93	211080002	211080003
3I1608B6	09/16/93	3I1605-4	09/16/93	211080002	211080003
3I1609B6	09/16/93	3I1602-4	09/16/93	211075106	211075103
3I1610B6	09/16/93	3I1602-4	09/16/93	211075106	211075103
3I1611B6	09/16/93	3I1612-4	09/16/93	211080026	211079991
3I1612B6	09/16/93	3I1612-4	09/16/93	211080026	211079991
3I1613B6	09/16/93	3I1224-4	09/12/93	211079993	211080022
3I1614B6	09/16/93	3I1224-4	09/12/93	211079993	211080022
3I1615B6	09/16/93	3I0409-4	09/04/93	211079999	211080005
3I1616B6	09/16/93	3I0409-4	09/04/93	211079999	211080005
3I1617B6	09/16/93	3I1632-4	09/16/93	023111633	023111700
3I1618B6	09/16/93	3I1632-4	09/16/93	023111633	023111700
3I1701B6	09/17/93	3I1633-4	09/16/93	23111625	23111628
3I1702B6	09/17/93	3I1633-4	09/16/93	23111625	23111628
3I1703B6	09/17/93	3I1634-4	09/16/93	23111697	23111661
3I1704B6	09/17/93	3I1634-4	09/16/93	23111697	23111661
3I1705B6	09/17/93	3I0412-4	09/04/93	23111666	23111678
3I1706B6	09/17/93	3I0412-4	09/04/96	23111666	23111678
3I1707B6	09/17/93	3I1709-4	09/17/93	23111662	23111667
3I1708B6	09/17/93	3I1709-4	09/17/93	23111662	23111667
3I1711B6	09/17/93	3I1713-4	09/17/93	211079998	023111617

POLY-NET QUALITY CONTROL TEST DATA

DATE	BATCH NUMBER	ROLL NUMBER	AVERAGE THICKNESS (inches)	TENSILES MD (ppi)	WEIGHT (lbs/ft ²)
09/03/93	0952	3I0304-4	0.2194	58.2	0.1935
	0952	3I0309-4	0.2215	61.7	0.2040
09/04/93	0952	3I0403-4	0.2212	61.3	0.1981
	0935	3I0407-4	0.2210	59.5	0.1998
	0935	3I0413-4	0.2182	54.4	0.1937
	0935	3I0417-4	0.2198	57.0	0.1931
	0935	3I0421-4	0.2184	62.0	0.2027
	0935	3I0426-4	0.2202	59.5	0.1975
09/05/93	0935	3I0504-4	0.2217	59.8	0.1953
	0935	3I0508-4	0.2224	58.7	0.1968
	0935	3I0512-4	0.2227	59.0	0.1929
	0935	3I0516-4	0.2197	57.4	0.1947
	0935	3I0520-4	0.2231	61.5	0.2001
	0935	3I0524-4	0.2217	62.3	0.1969
09/06/93	0935	3I0604-4	0.2234	59.9	0.2005
	0935	3I0608-4	0.2214	57.1	0.1925
	0935	3I0612-4	0.2222	59.3	0.1969
	0935	3I0619-4	0.2194	61.4	0.2004
	0935	3I0626-4	0.2176	61.2	0.1994
	0935	3I0632-4	0.2231	61.8	0.2015
09/07/93	0935	3I0703-4	0.2242	58.8	0.2012
	0935	3I0710-4	0.2260	59.0	0.1962
	0935	3I0718-4	0.2262	58.7	0.1989
	0935	3I0725-4	0.2238	58.8	0.1977
	0935	3I0732-4	0.2230	56.5	0.1925
	0935	3I0739-4	0.2254	58.2	0.1967
	0935	3I0746-4	0.2256	59.5	0.1993
09/08/93	0935	3I0805-4	0.2241	55.8	0.1952
	0935	3I0811-4	0.2271	58.2	0.2019
	7516	3I0818-4	0.2280	58.3	0.2005
	7516	3I0824-4	0.2232	56.8	0.1948
	7516	3I0830-4	0.2248	55.4	0.1969
	7516	3I0834-4	0.2254	56.7	0.1952
	7516	3I0840-4	0.2301	54.0	0.1958
09/09/93	7516	3I0907-4	0.2276	57.5	0.1968
	7516	3I0914-4	0.2222	55.0	0.1938
	7516	3I0921-4	0.2200	54.2	0.1861
	7516	3I0928-4	0.2206	55.7	0.1893
	7516	3I0935-4	0.2227	57.6	0.1947
	7516	3I0942-4	0.2215	54.7	0.1941
09/10/93	7516	3I1002-4	0.2274	57.7	0.2004
	7516	3I1006-4	0.2268	57.1	0.1967
	7516	3I1010-4	0.2278	54.5	0.1965
	7516	3I1014-4	0.2240	55.3	0.1927
	7516	3I1019-4	0.2270	54.5	0.1931
	7516	3I1026-4	0.2267	58.9	0.1966
	7516	3I1033-4	0.2282	53.6	0.1918
09/11/93	7516	3I1101-4	0.2290	52.7	0.2000
	7516	3I1107-4	0.2257	58.0	0.2028
	7516	3I1113-4	0.2300	55.3	0.1989

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3 CORRELATION OF POLY-NET AND GEOTEXTILE NUMBERS
FOR JOB NUMBER - STOCK

EXNT NUM	MFG DATE	NET NUM	MFG DATE	GEOTEXTILE	
				TOP	BOTTOM
3I1712B6	09/17/93	3I1713-4	09/17/93	211079998	023111617
3I1713B6	09/17/93	3I1732-4	09/17/93	023111675	023111622
3I1801B6	09/18/93	3I1732-4	09/17/93	023111675	023111622
3I1802B6	09/18/93	3I1737-4	09/17/93	0211079983	211080035
3I1803B6	09/18/93	3I1737-4	09/17/93	0211079983	211080035
3I1804B6	09/18/93	3I1747-4	09/17/93	211079982	023111651
3I1805B6	09/18/93	3I1747-4	09/17/93	211079982	023111651
3I1806B6	09/18/93	3I1802-4	09/18/93	211080037	211080030
3I1807B6	09/18/93	3I1802-4	09/18/93	211080037	211080030
3I1808B6	09/18/93	3I1222-4	09/12/93	211079956	211079960
3I1809B6	09/18/93	3I1222-4	09/12/93	211079956	211079960
3I1810B6	09/18/93	3I1221-4	09/12/93	211079962	211080033
3I1811B6	09/18/93	3I1221-4	09/12/93	211079962	211080033
3I1812B6	09/18/93	3I0408-4	09/04/93	211079965	211079966
3I1813B6	09/18/93	3I0408-4	09/04/93	211079965	211079966
3I1814B6	09/18/93	3I0406-4	09/04/93	211079964	211080034
3I1815B6	09/18/93	3I0406-4	09/04/93	211079964	211080034
3I1901B6	09/19/93	3I1223-4	09/12/93	211079957	211079969
3I1902B6	09/19/93	3I1223-4	09/12/93	211079957	211079969
3I1903B6	09/19/93	3I1225-4	09/12/93	211079961	211080036
3I1904B6	09/19/93	3I1225-4	09/12/93	211079961	211080036
3I1907B6	09/19/93	3I1016-4	09/10/93	211079967	211080032
3I1908B6	09/19/93	3I1016-4	09/10/93	211079967	211080032
3I1909B6	09/19/93	3I1014-4	09/10/93	211079955	211080040
3I1910B6	09/19/93	3I1014-4	09/10/93	211079955	211080040
3I1911B6	09/19/93	3I1216-4	09/12/93	211079968	211080042
3I1912B6	09/19/93	3I1216-4	09/12/93	211079968	211080042
3I1913B6	09/19/93	3I0607-4	09/06/93	211080029	211080028
3I1914B6	09/19/93	3I0607-4	09/06/93	211080029	211080028
3I2001B6	09/20/93	3I0834-4	09/08/93	211079963	211079959
3I2002B6	09/20/93	3I0834-4	09/08/93	211079963	211079959
3I2003B6	09/20/93	3I0424-4	09/04/93	211080027	211079958
3I2004B6	09/20/93	3I0424-4	09/04/93	211080027	211079958
3I2005B6	09/20/93	3I2002-4	09/20/93	211079952	023111615
3I2006B6	09/20/93	3I2002-4	09/20/93	211079952	023111615
3I2007B6	09/20/93	3I0602-4	09/06/93	023111677	023111618
3I2008B6	09/20/93	3I0602-4	09/06/93	023111677	023111618
3I2009B6	09/20/93	3I2018-4	09/20/93	211079954	023111676
3I2010B6	09/20/93	3I2018-4	09/20/93	211079954	023111676
3I2011B6	09/20/93	3I0601-4	09/06/93	023111674	023111627
3I2012B6	09/20/93	3I0601-4	09/06/93	023111674	023111627
3I2013B6	09/20/93	3I2025-4	09/20/93	211079977	023111636
3I2014B6	09/20/93	3I2025-4	09/20/93	211079977	023111636

POLY-NET QUALITY CONTROL TEST DATA

DATE	BATCH NUMBER	ROLL NUMBER	AVERAGE THICKNESS (inches)	TENSILES MD (ppi)	WEIGHT (lbs/ft ²)
09/11/93	7516	3I1120-4	0.2252	54.1	0.1907
	7516	3I1127-4	0.2230	52.5	0.1893
	7516	3I1132-4	0.2251	54.0	0.1943
	7516	3I1137-4	0.2252	56.2	0.1938
09/12/93	7516	3I1202-4	0.2281	55.8	0.1957
	7516	3I1206-4	0.2270	58.0	0.1961
	7517	3I1212-4	0.2269	57.9	0.1935
	7517	3I1216-4	0.2272	54.5	0.1842
	7517	3I1220-4	0.2210	52.1	0.1841
	7517	3I1224-4	0.2231	55.3	0.1954
	7517	3I1230-4	0.2244	55.0	0.1936
	7517	3I1304-4	0.2266	54.6	0.1943
	7517	3I1310-4	0.2273	57.5	0.1974
	7517	3I1317-4	0.2281	55.6	0.1924
09/13/93	7517	3I1324-4	0.2306	58.1	0.1944
	7517	3I1331-4	0.2248	55.9	0.1941
	7517	3I1337-4	0.2260	57.7	0.1968
	7517	3I1344-4	0.2270	56.9	0.1993
	7517	3I1406-4	0.2267	56.1	0.1985
	7517	3I1413-4	0.2257	55.3	0.1896
	7517	3I1422-4	0.2146	47.1	0.1770
	7517	3I1429-4	0.2283	52.5	0.1930
	7517	3I1436-4	0.2267	53.8	0.1853
	7303	3I1443-4	0.2252	57.2	0.1871
09/15/93	7303	3I1505-4	0.2249	49.1	0.1792
	7303	3I1514-4	0.2274	54.1	0.1869
	7303	3I1521-4	0.2261	54.3	0.1867
	7303	3I1528-4	0.2248	54.5	0.1858
	7303	3I1604-4	0.2259	51.3	0.1839
09/16/93	7303	3I1610-4	0.2279	59.5	0.1887
	7303	3I1616-4	0.2276	55.2	0.1878
	7303	3I1623-4	0.2307	57.1	0.1900
	7303	3I1630-4	0.2260	56.5	0.1859
	7303	3I1634-4	0.2265	57.0	0.1945
	7303	3I1641-4	0.2264	54.3	0.1866
	7303	3I1704-4	0.2271	56.4	0.1917
	7303	3I1709-4	0.2260	57.7	0.1883
	7303	3I1716-4	0.2259	59.6	0.1893
	7303	3I1723-4	0.2284	54.3	0.1862
09/17/93	7303	3I1730-4	0.2276	57.8	0.1862
	7303	3I1736-4	0.2227	55.2	0.1830
	7303	3I1742-4	0.2274	51.6	0.1867
	7303	3I1801-4	0.2243	56.0	0.1847
	7805	3I1807-4	0.2236	55.6	0.1906
	7805	3I1812-4	0.2230	51.7	0.1792
	7805	3I1819-4	0.2250	53.4	0.1820
	7805	3I1826-4	0.2225	53.4	0.1813
	7805	3I1833-4	0.2239	54.7	0.1845
	7805	3I1840-4	0.2266	54.0	0.1868
09/19/93	7805	3I1901-4	0.2264	52.0	0.1835

POLY-NET QUALITY CONTROL TEST DATA

DATE	BATCH NUMBER	ROLL NUMBER	AVERAGE THICKNESS (inches)	TENSILES MD (ppi)	WEIGHT (lbs/ft ²)
09/19/93	7805	3I1908-4	0.2228	54.0	0.1835
	7805	3I1915-4	0.2230	52.6	0.1837
	7805	3I1922-4	0.2269	53.7	0.1882
	7805	3I1929-4	0.2248	53.2	0.1850
	7805	3I1936-4	0.2285	59.5	0.1927
	7805	3I1943-4	0.2252	55.9	0.1871
	7805	3I1950-4	0.2224	54.5	0.1826
09/20/93	7805	3I2006-4	0.2232	53.7	0.1836
	7805	3I2014-4	0.2252	53.1	0.1879
	7805	3I2019-4	0.2280	53.9	0.1882
	7805	3I2023-4	0.2253	53.6	0.1806
	7805	3I2027-4	0.2282	54.5	0.1881
	7805	3I2031-4	0.2252	55.1	0.1915
	7805	3I2101-4	0.2298	56.7	0.2008
09/21/93	7805	3I2105-4	0.2284	57.5	0.1955
	7805	3I2109-4	0.2268	55.2	0.1888
	7805	3I2113-4	0.2274	59.7	0.1950
	7806	3I2121-4	0.2259	55.4	0.1885
	7806	3I2129-4	0.2233	51.0	0.1842

GEOSYNTHETIC CONFORMANCE TEST RESULTS

CBA 005 1021

GEOSYNTHETIC CLAY LINER

BENTONITE MAT TEST RESULTS

CLIENT: ECKENFELDER INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLQ5652

MATERIAL: POLYPROPYLENE/BENTONITE
CLIENT ID: GCL-1 / 013699
DATE TESTED: 03/31/94

INDIVIDUAL SPECIMENS

[illegible]

SUMMARY RESULTS

[illegible]

COMMENTS

* SPECIFICATIONS AS PER ECKENFELDER, INC.

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BENTONITE MAT TEST RESULTS

CLIENT: ECKENFELDER INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLQ5652

MATERIAL: POLYPROPYLENE/BENTONITE
CLIENT ID: GCL-2/13288
DATE TESTED: 03/31/94

INDIVIDUAL SPECIMENS

[illegible]

SUMMARY RESULTS

[illegible]

COMMENTS

* SPECIFICATIONS AS PER ECKENFELDER, INC.

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POLYVINYL CHLORIDE MEMBRANE

CBA 005 1025



MATERIAL: POLYVINYL CHLORIDE
CLIENT ID: E93212 PANEL # 3A
DATE TESTED: 03/30/94

CLIENT: ECKENFELDER, INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLQ5652

INDIVIDUAL SPECIMENS

[illegible]

SUMMARY RESULTS

[illegible]

COMMENTS:

RD = ROLL DIRECTION

XD = CROSS-ROLL DIRECTION

* SPECIFICATIONS AS PER ECKENFELDER, INC.

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CEA 005 1026

GEOMEMBRANE TEST RESULTS

CLIENT: ECKENFELDER, INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLQ5652

MATERIAL: POLYVINYL CHLORIDE
CLIENT ID: 93212 PANEL # 7B
DATE TESTED: 04/15/94

INDIVIDUAL SPECIMENS

[illegible]

SUMMARY RESULTS

[illegible]

COMMENTS:

RD = ROLL DIRECTION

XD = CROSS-ROLL DIRECTION

* SPECIFICATIONS AS PER ECKENFELDER, INC.

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GEOMEMBRANE TEST RESULTS

CLIENT: ECKENFELDER, INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLQ5652

MATERIAL: POLYVINYL CHLORIDE
CLIENT ID: E93212 8B
DATE TESTED: 03/30/94

INDIVIDUAL SPECIMENS

[illegible]

SUMMARY RESULTS

[illegible]

COMMENTS:

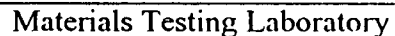
RD = ROLL DIRECTION

XD = CROSS-ROLL DIRECTION

* SPECIFICATIONS AS PER ECKENFELDER, INC.

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**NONWOVEN GEOTEXTILE /
GEOCOMPOSITE DRAINAGE LAYER**



GEOTEXTILE TEST RESULTS

CLIENT: ECKENFELDER INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLO5652

MATERIAL: POLYESTER
CLIENT ID: GT-1 / 231059954
DATE TESTED: 03/30/94

INDIVIDUAL SPECIMENS

[illegible]

SUMMARY RESULTS

[illegible]

COMMENTS:

RD = ROLL DIRECTION

XD = CROSS-ROLL DIRECTION

* SPECIFICATIONS AS PER ECKENFELDER, INC.

** PERMEABILITY VALUES ARE CALCULATED BY MULTIPLYING THE INDIVIDUAL SPECIMEN THICKNESS (ASTM D1777, 2kPa LOADING) TIMES THE PERMITTIVITY AND MAY NOT CORRELATE WITH THE PERMEABILITY VALUES UNDER FIELD CONDITIONS

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CEA 005 1030

GEOTEXTILE TEST RESULTS

CLIENT: ECKENFELDER INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLQ5652

MATERIAL: POLYESTER
CLIENT ID: GT-2 / 231060006
DATE TESTED: 03/30/94

INDIVIDUAL SPECIMENS

[illegible]

SUMMARY RESULTS

[illegible]

COMMENTS:

RD = ROLL DIRECTION

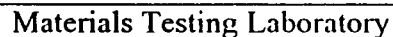
XD = CROSS-ROLL DIRECTION

* SPECIFICATIONS AS PER ECKENFELDER, INC.

** PERMEABILITY VALUES ARE CALCULATED BY MULTIPLYING THE INDIVIDUAL SPECIMEN THICKNESS (ASTM D1777, 2KPa LOADING) TIMES THE PERMITTIVITY AND MAY NOT CORRELATE WITH THE PERMEABILITY VALUES UNDER FIELD CONDITIONS.

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CRA 005 1031



MATERIAL: POLYESTER
CLIENT ID: GT-3 / C30T0935-3118015B6
DATE TESTED: 03/30/94

CLIENT: ECKENFELDER INC.
PROJECT: 9117 CELL. NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLQ5652

SUMMARY RESULTS

[illegible]

** PERMEABILITY VALUES ARE CALCULATED BY MULTIPLYING THE INDIVIDUAL SPECIMEN THICKNESS (ASTM D1777, 2kPa LOADING) TIMES THE PERMITTIVITY AND MAY NOT CORRELATE WITH THE PERMEABILITY VALUES UNDER FIELD CONDITIONS.

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CEA 005 1075

GEOTEXTILE TEST RESULTS

CLIENT: ECKENFELDER INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLO5652

MATERIAL: POLYESTER
CLIENT ID: GT-4 / C30T0935-3117006B6
DATE TESTED: 03/30/94

INDIVIDUAL SPECIMENS

[illegible]

SUMMARY RESULTS

[illegible]

COMMENTS:

RD = ROLL DIRECTION

XD = CROSS-ROLL DIRECTION

* SPECIFICATIONS AS PER ECKENFELDER, INC.

** PERMEABILITY VALUES ARE CALCULATED BY MULTIPLYING THE INDIVIDUAL SPECIMEN THICKNESS (ASTM D1777, 2kPa LOADING) TIMES THE PERMITTIVITY AND MAY NOT CORRELATE WITH THE PERMEABILITY VALUES UNDER FIELD CONDITIONS.

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CHIA 005 1033

GEOTEXTILE TEST RESULTS

CLIENT: ECKENFELDER INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLQ5652

MATERIAL: POLYESTER
CLIENT ID: GT-5 / C30T0935-3115006B6
DATE TESTED: 03/30/94

INDIVIDUAL SPECIMENS

[illegible]

SUMMARY RESULTS

[illegible]

COMMENTS:

RD = ROLL DIRECTION

XD = CROSS-ROLL DIRECTION

* SPECIFICATIONS AS PER ECKENFELDER, INC.

** PERMEABILITY VALUES ARE CALCULATED BY MULTIPLYING THE INDIVIDUAL SPECIMEN THICKNESS (ASTM D1777, 2kPa LOADING) TIMES THE PERMITTIVITY AND MAY NOT CORRELATE WITH THE PERMEABILITY VALUES UNDER FIELD CONDITIONS.

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CEA 005 1034

GEOMEMBRANE

DESTRUCTIVE SEAM TESTING SAMPLE RESULTS

CLIENT: ECKENFELDER, INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLO5652

MATERIAL: POLYVINYL CHLORIDE
SEAM TYPE: ADHESION
DATE TESTED: 04/23/94

[illegible][illegible]



GEOSYNTEC CONSULTANTS
Materials Testing Laboratory

QUALITY ASSURANCE TESTING
GEOMEMBRANE SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: ECKENFELDER, INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLQ5652

MATERIAL: POLYVINYL CHLORIDE
SEAM TYPE: ADHESION
DATE TESTED: 04/25/94

SAMPLE NUMBER	SPEC. #	PEEL						SHEAR					
		THICKNESS (mil)	MAXIMUM TENSION (ppi)	MAXIMUM STRESS (psi)	SEAM SEPARATION (%)	LOCUS OF FAILURE	PASS OR FAIL*	THICKNESS (mil)	MAXIMUM TENSION (ppi)	MAXIMUM STRESS (psi)	ELONGATION AT BREAK (%)	LOCUS OF FAILURE	PASS OR FAIL*
GEOSYNTEC:	1.	29.5	23.3	N/R	100	P	P	29.8	55.7	N/R	>100	B	P
	2.	28.9	17.2		100	P	P	29.1	61.8		>100	B	P
CLIENT:	3.	29.2	16.5		100	P	P	29.0	56.8		>100	T	P
DS-2	4.	29.4	18.3		100	P	P	29.1	68.7		>100	T	P
	5.	29.6	20.2		100	P	P	28.9	57.2		>100	B	P
PASS	MEAN	29.3	19.1					29.2	60.0				
	S.D.	0.3	2.7					0.4	5.4				
GEOSYNTEC:	1.	29.1	18.4	N/R	100	P	P	28.9	65.1	N/R	>100	B	P
	2.	29.3	17.8		100	P	P	28.6	65.3		>100	B	P
CLIENT:	3.	29.4	18.3		100	P	P	28.4	66.2		>100	T	P
DS-3	4.	28.9	18.6		100	P	P	28.7	60.3		>100	T	P
	5.	29.1	16.7		100	P	P	28.9	54.7		>100	B	F
PASS	MEAN	29.2	18.0					28.7	62.3				
	S.D.	0.2	0.8					0.2	4.8				
GEOSYNTEC:	1.	29.8	17.5	N/R	100	P	P	29.8	70.4	N/R	>100	B	P
	2.	29.9	15.7		100	P	P	29.2	64.8		>100	T	P
CLIENT:	3.	29.4	20.3		100	P	P	29.4	62.3		>100	B	P
DS-4	4.	29.4	20.8		100	P	P	29.8	63.0		>100	B	P
	5.	29.5	20.5		100	P	P	29.7	64.8		>100	B	P
PASS	MEAN	29.6	19.0					29.6	65.1				
	S.D.	0.2	2.3					0.3	3.2				
GEOSYNTEC:	1.	28.9	17.1	N/R	100	P	P	29.4	69.5	N/R	>100	B	P
	2.	29.6	21.4		100	P	P	29.3	65.2		>100	T	P
CLIENT:	3.	29.1	17.8		100	P	P	29.7	60.5		>100	T	P
DS-5	4.	29.0	17.9		100	P	P	29.3	61.7		>100	T	P
	5.	28.8	16.3		100	P	P	29.6	62.6		>100	T	P
PASS	MEAN	29.1	18.1					29.5	63.9				
	S.D.	0.3	2.0					0.2	3.6				
GEOSYNTEC:	1.	29.3	19.0	N/R	100	P	P	28.5	57.4	N/R	>100	T	P
	2.	28.5	20.0		100	P	P	28.1	56.2		>100	T	P
CLIENT:	3.	28.0	17.8		100	P	P	28.3	64.2		>100	T	P
DS-6	4.	28.0	17.9		100	P	P	28.7	55.3		>100	T	P
	5.	28.9	16.3		100	P	P	28.5	55.6		>100	T	P
PASS	MEAN	28.5	18.2					28.4	57.7				
	S.D.	0.6	1.4					0.2	3.7				

NOTE: See Technical Notes page for explanation of abbreviations.

* PASS/FAIL SPECIFICATIONS: PEEL >10.0 lb/in., SHEAR >55.2 lb/in.

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CBA 005 1037

CLIENT: ECKENFELDER, INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLO5652

MATERIAL: POLYVINYL CHLORIDE
SEAM TYPE: ADHESION
DATE TESTED: 04/26/94

[illegible]

CLIENT: ECKENFELDER, INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLQ5652

MATERIAL:	POLYVINYL CHLORIDE
SEAM TYPE:	ADHESION
DATE TESTED:	04/27/94

[illegible]



GEOSYNTEC CONSULTANTS
Materials Testing Laboratory

QUALITY ASSURANCE TESTING
GEOMEMBRANE SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: ECKENFELDER, INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLQ5652

MATERIAL: POLYVINYL CHLORIDE
SEAM TYPE: ADHESION
DATE TESTED: 04/28/94

SAMPLE NUMBER	SPEC. #	PEEL						SHEAR					
		THICKNESS (mil)	MAXIMUM TENSION (ppi)	MAXIMUM STRESS (psi)	SEAM SEPARATION (%)	LOCUS OF FAILURE	PASS OR FAIL*	THICKNESS (mil)	MAXIMUM TENSION (ppi)	MAXIMUM STRESS (psi)	ELONGATION AT BREAK (%)	LOCUS OF FAILURE	PASS OR FAIL*
GEOSYNTEC: CLIENT: DS-8	1.	28.4	16.2	N/R	100	P	P	28.3	55.3	N/R	>100	T	P
	2.	28.4	16.0		100	P	P	28.1	57.2		>100	T	P
	3.	28.5	13.4		100	P	P	28.0	65.6		>100	T	P
	4.	28.1	17.5		100	P	P	27.9	65.0		>100	T	P
	5.	28.4	13.6		100	P	P	28.5	55.8		>100	T	P
PASS	MEAN	28.4	15.3					28.2	59.8				
	S.D.	0.2	1.8					0.2	5.1				
GEOSYNTEC: CLIENT: DS-9	1.	28.7	12.2	N/R	100	P	P	28.6	61.0	N/R	>100	T	P
	2.	29.0	14.5		100	P	P	28.9	54.4		>100	T	F
	3.	28.6	12.6		100	P	P	29.0	57.5		>100	T	P
	4.	28.3	13.4		100	P	P	28.6	62.6		>100	T	P
	5.	28.5	13.5		100	P	P	28.5	57.3		>100	T	P
PASS	MEAN	28.6	13.2					28.7	58.6				
	S.D.	0.3	0.9					0.2	3.3				
GEOSYNTEC: CLIENT: DS-10	1.	29.5	16.1	N/R	100	P	P	29.0	61.1	N/R	>100	T	P
	2.	29.0	13.2		100	P	P	29.3	59.2		>100	T	P
	3.	29.2	14.1		100	P	P	28.9	56.6		>100	T	P
	4.	29.8	15.8		100	P	P	29.1	61.9		>100	T	P
	5.	29.0	17.0		100	P	P	29.3	54.4		>100	T	F
PASS	MEAN	29.3	15.2					29.1	58.6				
	S.D.	0.3	1.6					0.2	3.1				



GEOSYNTEC CONSULTANTS
Materials Testing Laboratory

QUALITY ASSURANCE TESTING
GEOMEMBRANE SEAM PEEL AND SHEAR TEST RESULTS

CLIENT: ECKENFELDER, INC.
PROJECT: 9117 CELL NO. 1
CONTACT: MR. PAUL MUTCH
GEOSYNTEC JOB NO.: FLQ5652

MATERIAL: POLYVINYL CHLORIDE
SEAM TYPE: ADHESION
DATE TESTED: 05/02/94

SAMPLE NUMBER	SPEC. #	PEEL						SHEAR					
		THICKNESS (mil)	MAXIMUM TENSION (ppi)	MAXIMUM STRESS (psi)	SEAM SEPARATION (%)	LOCUS OF FAILURE	PASS OR FAIL*	THICKNESS (mil)	MAXIMUM TENSION (ppi)	MAXIMUM STRESS (psi)	ELONGATION AT BREAK (%)	LOCUS OF FAILURE	PASS OR FAIL*
GEOSYNTEC: CLIENT: DS-11	1.	28.7	15.6	N/R	100	P	P	28.5	59.1	N/R	>100	T	P
	2.	28.5	16.2		100	P	P	28.9	68.6		>100	B	P
	3.	28.6	15.9		100	P	P	29.2	55.1		>100	T	F
	4.	28.9	17.9		100	P	P	29.3	59.9		>100	T	P
	5.	29.1	17.9		100	P	P	28.1	56.1		>100	T	P
PASS	MEAN	28.8	16.7					28.8	59.8				
	S.D.	0.2	1.1					0.5	5.3				
GEOSYNTEC: CLIENT: DS-12	1.	29.0	16.8	N/R	100	P	P	29.5	65.4	N/R	>100	B	P
	2.	29.1	15.9		100	P	P	29.1	63.2		>100	T	P
	3.	28.8	17.3		100	P	P	28.9	62.6		>100	T	P
	4.	29.0	24.2		100	P	P	29.3	71.5		>100	B	P
	5.	29.1	25.3		100	P	P	29.0	56.2		>100	T	P
PASS	MEAN	29.0	19.9					29.2	63.8				
	S.D.	0.1	4.5					0.2	5.5				
GEOSYNTEC: CLIENT: DS-13	1.	28.7	16.2	N/R	100	P	P	28.8	54.4	N/R	>100	T	F
	2.	28.9	15.2		100	P	P	29.3	56.8		>100	T	P
	3.	29.1	15.5		100	P	P	28.7	57.9		>100	T	P
	4.	29.3	15.5		100	P	P	28.1	58.0		>100	T	P
	5.	29.5	16.0		100	P	P	28.5	62.9		>100	T	P
PASS	MEAN	29.1	15.7					28.7	58.0				
	S.D.	0.3	0.4					0.4	3.1				

NOTE: See Technical Notes page for explanation of abbreviations.

* PASS/FAIL SPECIFICATIONS: PEEL >10.0 lb/in., SHEAR >55.2 lb/in.

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CLIENT:	ECKENFELDER, INC.
PROJECT:	9117 CELL NO. 1
CONTACT:	MR. PAUL MUTCH
GEOSYNTEC JOB NO.:	FLQ5652

MATERIAL: POLYVINYL CHLORIDE
SEAM TYPE: ADHESION
DATE TESTED: 04/26/94

[illegible]

NOTE: See Technical Notes page for explanation of abbreviations.

* PASS/FAIL SPECIFICATIONS: PEEL >10.0 lb/in., SHEAR >55.2 lb/in.

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GEOMEMBRANE
NON-DESTRUCTIVE SEAM TESTING



geomembrane air/vacuum test record

project no. 94159 project name COL 1 CAPPING SYSTEM
 project location TOMS RIVER N.J. CIBI-GEIGY (PRIMARY LAYER)
 vacuum box no. _____ make _____ model _____

air testing

seam interval tested	tester's name	time	psi	pass/fail	date
<u>SEAM 1-2</u>	<u>C. NARCISO</u>	<u>8:00 AM</u>	<u>80 PSI</u>	<u>PASS</u>	<u>4/25/94</u>
<u>SEAM 2-3</u>	<u>C. NARCISO</u>	<u>8:00 AM</u>	<u>80 PSI</u>	<u>PASS</u>	<u>4/25/94</u>
<u>SEAM 3-4</u>	<u>C. NARCISO</u>	<u>8:00 AM</u>	<u>80 PSI</u>	<u>PASS</u>	<u>4/25/94</u>

vacuum testing

seam interval tested	tester's name	test failure location	test failure no.	repair date	retest approval

inspected by _____

date _____

CBA 005 1044

geomembrane air/vacuum test record

project no. 94159 project name CELL 1 CAPPING SYSTEM
project location TOMS RIVER N.J. CIBA-GEIGY (PRIMARY LAYER)
vacuum box no. make model

air testing

[illegible]

vacuum testing

[illegible]

inspected by _____ date _____

CBA 005 1045

geomembrane air/vacuum test record

project no. 94159 project name CDL 1 CAPPING SYSTEM
project location TOMS RIVER N.J. CIBI-GEIGY (SECONDARY LAYON)
vacuum box no. _____ make _____ model _____

air testing

[illegible]

vacuum testing

[illegible]

inspected by _____ date _____

CBA 005 1046

geomembrane air/vacuum test record

project no. 94159 project name COL 1 CAPPING SYSTEM
project location TOMS RIVER N.J. CIBA-GEIGY (SECONDARY LAYON)
vacuum box no. _____ make _____ model _____

air testing

[illegible]

vacuum testing

[illegible]

inspected by date

geomembrane air/vacuum test record

project no. 94159 project name COLL 1 CAPPING SYSTEM
project location TOMS RIVER N.J. CIBA-GEIGY (SECONDARY LAYOR)
vacuum box no. _____ make _____ model _____

air testing

[illegible]

vacuum testing

[illegible]

inspected by

date

project no. 94159 project name CIBA CELL 1
project location CIBA CELL 1 TOWNS RIVER N.Y. (ADD #1)
vacuum box no. - make - model -

[illegible][illegible]

inspected by date

CBA 005 1049

APPENDIX F
SOIL DATA

CBA 005 1050

SAND DRAINAGE

LAYER

LABORATORY TEST RESULTS

CBA 005 1051



NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE

Standard Soil Aggregate

Gradation Designation I-7

U.S. Standard Sieve SizePercent Finer By Weight
Specifications Test Results

1"	100	100 ✓
1/2"	80-100	99 ✓ 1%
No. 8	35-100	92 ✓
No. 16	25-90	85 ✓
No. 50	5-50	23 ✓
No. 100	0-8	7 ✓
No. 200	0-2	5.6 ✓ .6%

Project: Conti Environmental - Ciba-Geigy

Job No.: 94L001B

Sample No.: S-2

Date: April 4, 1994

Source: Bayshore Construction



PROJECT:

94L001R

DATE: 4/94

*** SEE TEST CURVES**

P. 3/3

CBA 005 1053



TESTWELL CRAIG TESTING LABORATORIES INC.

South Jersey Division 565 E. Harding Highway, Mays Landing, NJ 08330 (809) 825-1700

New York Division
47 Hudson Street
Ossining, NY 10582
(914) 782-8000

Florida Division
7104 N.W. 51st Street
Miami, Florida 33186
(305) 593-0581

Connecticut Division
P.O. Box 2418
Danbury, CT 06810
(203) 743-7281

North Jersey Division
50 Passaic Avenue
Fairfield, NJ 07008
(201) 882-8377

Albany Division
518 Clinton Avenue
Albany, NY 12206
(518) 436-4114

TESTING ENGINEERS • STEEL • WATER • CONCRETE • CHEMICAL ANALYSIS • SOILS • TEST BORINGS • CORE DRILLING • ASPHALT • RESEARCH

Address correspondence to the above:

December 8, 1993

Bay Construction Company

Client:

Project:

Quality Control

Material:

Soil aggregate bulk sample submitted by client
for laboratory analysis

Sample: Road gravel - orange medium sand and gravel

Test Required:

Laboratory analysis - soil aggregate washed gradation

Date Tested:

December 8, 1993

Lab. No.:

90061

Laboratory Analysis Soil Aggregate Washed Gradation Analysis

Sieve Size	Percent Passing	NJDOT Specs Type I-5
	Sample 1	
2"	100	100
3/4"	97.7	70-100
No. 4	79.5	30-80
No. 50	28.5	10-35
No. 200	11.6	5-12

*Note: Sample 1 conforms to NJDOT specs type I-5.

Respectfully submitted,

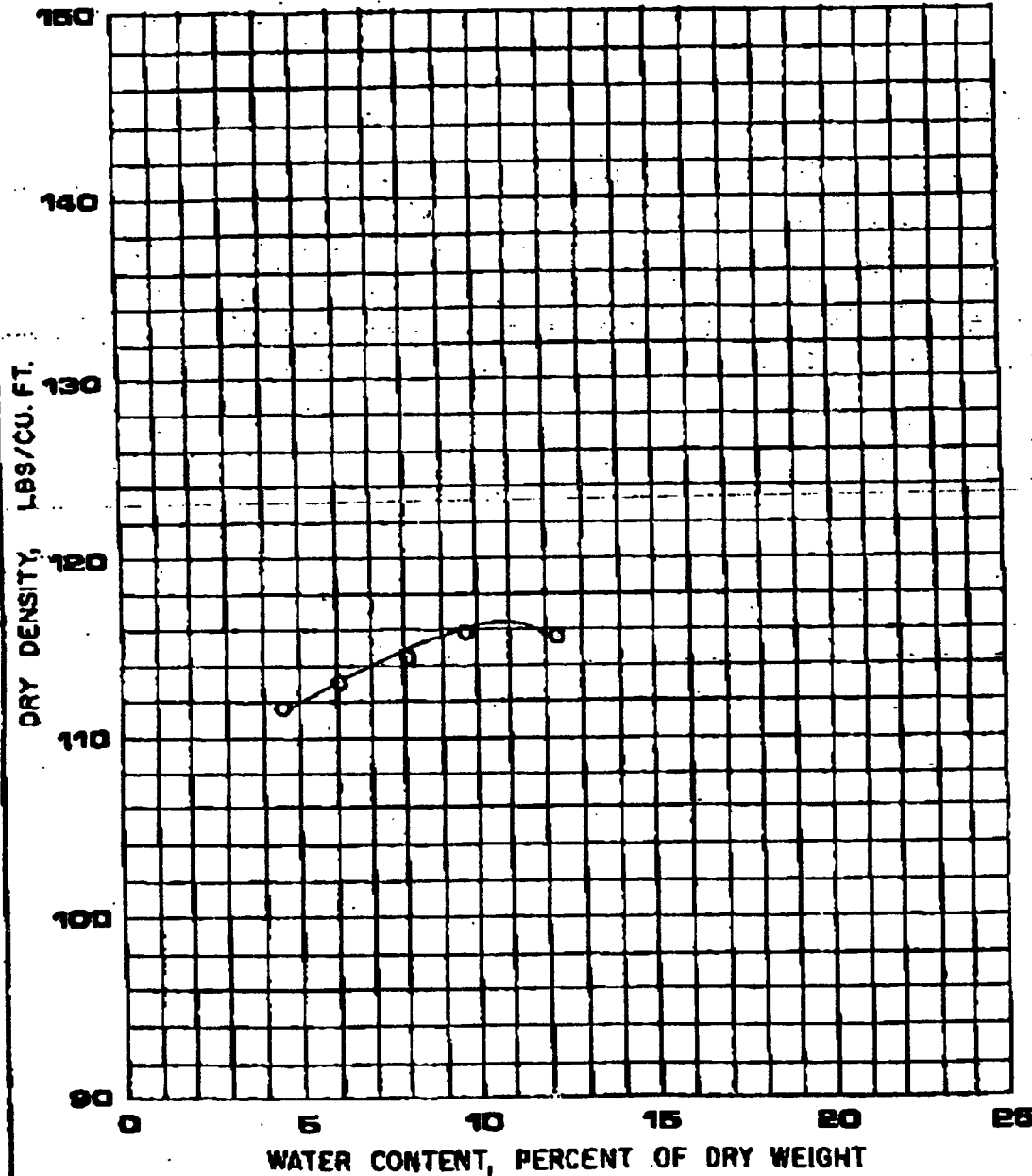
TESTWELL CRAIG TESTING LABORATORIES, INC.

Frank C. Craig, Jr.

Reported to: Client (3)
FCC/jjc

CBA 005 1054

COMPACTION TEST REPORT



FRENCH & PARRELLO
ASSOCIATES, PA.

PROJECT: Conti Environmental -
Ciba Geigy

DATE: 4/94

SOURCE:

TYPE FILL:
T-7 and T-8

DESCRIPTION:
Yellow Brown cm⁺f SAND, trace⁺f
gravel, trace Silt

TEST METHOD:
ASTM D 1557B

SAMPLE NO.
S-2

OPTIMUM WATER CONTENT 11%

MAX. DRY DENSITY 116.5 P.C.F.

OPTIMUM WATER CONTENT CORR. FOR

MAX. DRY DENSITY CORR. FOR



NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE

Standard Soil Aggregate

Gradation Designation I-7

<u>U.S. Standard Sieve Size</u>	<u>Percent Finer By Weight</u>	
	<u>Specifications</u>	<u>Test Results</u>
1"	100	100
1/2"	80 - 100	99
No. 8	35 - 100	93
No. 16	25 - 90	89
No. 50	5 - 50	24
No. 100	0 - 8	6
No. 200	0 - 2	5

Project: Conti Environmental - Ciba Geigy

Job No.: 94L001B

Sample No.: S-11L

Date: May 17, 1994



NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE

Standard Soil Aggregate

Gradation Designation I-7

<u>U.S. Standard Sieve Size</u>	<u>Percent Finer By Weight</u>	
	<u>Specifications</u>	<u>Test Results</u>
1"	100	99
1/2"	80-100	98
No. 8	35-100	86
No. 16	25-90	76
No. 50	5-50	18
No. 100	0-8	4
No. 200	0-2	3

Project: Conti Environmental - Ciba-Geigy
Job No.: 94L001B
Sample No.: S-10L
Date: May 9, 1994

CBA 005 1057

FPA

NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE

Standard Soil Aggregate

Gradation Designation I-7

<u>U.S. Standard Sieve Size</u>	<u>Percent Finer By Weight</u>	
	<u>Specifications</u>	<u>Test Results</u>
1"	100	100
1/2"	80-100	99
No. 8	35-100	94
No. 16	25-90	87
No. 50	5-50	23
No. 100	0-8	6
No. 200	0-2	5

Project: Conti Environmental - Ciba-Geigy
Job No.: 94L001B
Sample No.: S-9L
Date: May 9, 1994

CBA 005 1058



NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE

Standard Soil Aggregate

Gradation Designation I-7

<u>U.S. Standard Sieve Size</u>	<u>Percent Finer By Weight</u>	
	<u>Specifications</u>	<u>Test Results</u>
1"	100	100
1/2"	80-100	98
No. 8	35-100	91
No. 16	25-90	82
No. 50	5-50	19
No. 100	0-8	4
No. 200	0-2	3

Project: Conti Environmental - Ciba-Geigy
Job No.: 94L001B
Sample No.: S-8L
Date: May 9, 1994



NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE

Standard Soil Aggregate

Gradation Designation I-7

<u>U.S. Standard Sieve Size</u>	<u>Percent Finer By Weight</u>	
	<u>Specifications</u>	<u>Test Results</u>
1"	100	100
1/2"	80-100	99
No. 8	35-100	91
No. 16	25-90	82
No. 50	5-50	18
No. 100	0-8	4
No. 200	0-2	3.5

Project: Conti Environmental - Ciba-Geigy
Job No.: 94L001B
Sample No.: S-7L
Date: May 9, 1994



NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE

Standard Soil Aggregate

Gradation Designation I-7

<u>U.S. Standard Sieve Size</u>	<u>Percent Finer By Weight</u>	
	<u>Specifications</u>	<u>Test Results</u>
1"	100	100
1/2"	80-100	98
No. 8	35-100	90
No. 16	25-90	81
No. 50	5-50	19
No. 100	0-8	5
No. 200	0-2	4

Project: Conti Environmental - Ciba-Geigy
Job No.: 94L001B
Sample No.: S-6L
Date: May 9, 1994



NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE

Standard Soil Aggregate

Gradation Designation I-7

<u>U.S. Standard Sieve Size</u>	<u>Percent Finer By Weight</u>	
	<u>Specifications</u>	<u>Test Results</u>
1"	100	100
1/2"	80-100	98
No. 8	35-100	90
No. 16	25-90	84
No. 50	5-50	25
No. 100	0-8	6
No. 200	0-2	5

Project: Conti Environmental - Ciba-Geigy
Job No.: 94L001B
Sample No.: S-5
Date: May 3, 1994



MAY 04 '94 03:53PM CONTI
MAY 04 '94 03:27 F KENJUNG & PARRELLOD

PROJECT: Conti - Ciba Geigy

94L001B

DATE: 5/94

[illegible]

* SEE TEST CURVES

CBA 005 1063



NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE

Standard Soil Aggregate

Gradation Designation I-7

<u>U.S. Standard Sieve Size</u>	<u>Percent Finer By Weight</u>	
	<u>Specifications</u>	<u>Test Results</u>
1"	100	100
1/2"	80-100	98
No. 8	35-100	86
No. 16	25-90	78
No. 50	5-50	20
No. 100	0-8	7
No. 200	0-2	5.5

Project: Conti Environmental - Ciba-Geigy
Job No.: 94L001B
Sample No.: S-4
Date: April 28, 1994

SUMMARY OF LABORATORY TEST RESULTS

PROJECT: Conti Ciba Geigy

94L0018

DATE: 5/94

[illegible]

* SEE TEST CURVES

MAY 03 '94 04:03PM CONTI
1111 W 34 W0.4V RCTH080PARELLO00

P.2.2/5



PROJECT: Conti - Ciba Geigy

94L001B

DATE: 5/92

* SEE TEST RIVES/TABLES

005 1066

SUBSOIL LAYER
LABORATORY TEST RESULTS

CBA 005 1067



NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE
Standard Soil Aggregate Gradation I-4

<u>U.S. Standard Sieve Size</u>	<u>Percent Finer By Weight</u>	
	<u>Specifications</u>	<u>Test Results</u>
2"	100	100
1"	60-100	100
1/2"	40-100	100
No. 4	25-100	100
No. 8	20-100	99
No. 16	15-85	85
No. 50	8-45	23
No. 200	5-10	5.6 ✓ 6%

Project: Conti Environmental - Ciba Geigy
Job No.: 94L001B
Sample No: S-2
Date: April 4, 1994
Source: Bayshore Construction



NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE

Standard Soil Aggregate Gradation I-4

<u>U.S. Standard Sieve Size</u>	<u>Percent Finer By Weight</u>	
	<u>Specifications</u>	<u>Test Results</u>
2"	100	
1"	60-100	100
1/2"	40-100	99
No. 4	25-100	95
No. 8	20-100	92
No. 16	15-85	83
No. 50	8-45	22
No. 200	5-10	5

Project: Conti Environmental - Ciba Geigy
Job No.: 94L001B
Sample No: S-1U
Date: May 9, 1994



NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE
Standard Soil Aggregate Gradation I-4

<u>U.S. Standard Sieve Size</u>	<u>Percent Finer By Weight</u>	
	<u>Specifications</u>	<u>Test Results</u>
2"	100	
1"	60-100	100
1/2"	40-100	99
No. 4	25-100	95
No. 8	20-100	92
No. 16	15-85	87
No. 50	8-45	23
No. 200	5-10	4

Project: Conti Environmental - Ciba Geigy
Job No.: 94L001B
Sample No: S-2U
Date: May 9, 1994

CBA 005 1070



NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE
Standard Soil Aggregate Gradation I-4

<u>U.S. Standard Sieve Size</u>	<u>Percent Finer By Weight</u>	
	<u>Specifications</u>	<u>Test Results</u>
2"	100	
1"	60 - 100	100
1/2"	40 - 100	98
No. 4	25 - 100	94
No. 8	20 - 100	90
No. 16	15 - 85	85
No. 50	8 - 45	26
No. 200	5 - 10	5

Project: Conti Environmental - Ciba Geigy
Job No.: 94L001B
Sample No.: S-3U
Date: May 17, 1994

LEAK DETECTION STONE

CBA 005 1072

QUALITY ASSURANCE REPORT**5/8" SUMMARY**

LOCATION: MILLINGTON
MATERIAL: #67
STONE SIZE: 5/8 INCH

DATE: 1/31/94
SAMPLES: 1/21

WEATHER: CLEAR

SIEVE SIZE

1/21
**

SPECIFICATIONS

1 INCH	100.0	100
3/4 INCH	95.3	90-100
1/2 INCH	48.8	----
3/8 INCH	24.4	20-55
#4	5.8	0-10
#8	2.3	0-5

ABSORPTION : ---

SAMPLED BY : R.R.
TESTED BY : R.R.

NOTES: *
**

SAMPLE TAKEN FROM BELT DURING DAILY PRODUCTION.
SAMPLE TAKEN FROM SHIPPING FACE OF STOCKPILE

ACCESS ROAD STONE

CBA 005 1074



FRENCH & PARRELLO
ASSOCIATES, P.A.
CONSULTING ENGINEERS

670 NORTH BEERS STREET, BLDG. 1
HOLMDEL, NEW JERSEY, 07733
(908) 885-7700

December 11, 1991

Ocean County Recycling
1497 Lakewood Road
Toms River, NJ 08755

Attn: Mr. Lou Sanzaro

Re: Laboratory Test Results
Ocean County Recycling
FPA No. 91L065AC1

Gentlemen:

Enclosed are the results of laboratory testing performed on a sample of proposed NJDOT I-5 material produced from recycled concrete. The sample was taken by a representative of our firm on December 3, 1991 for grain size analysis.

Sample No. 1 is classified as a coarse to fine gravel with a medium amount of coarse to fine sand (39.1%) and a small amount of silt (4.1%). This material meets the gradational requirements for NJDOT dense graded aggregate.

We thank you for the opportunity to be of service to you. If you have any questions, please feel free to call.

Very truly yours,

FRENCH & PARRELLO ASSOCIATES, P.A.

David I. Calnan, P.E.
Laboratory Manager

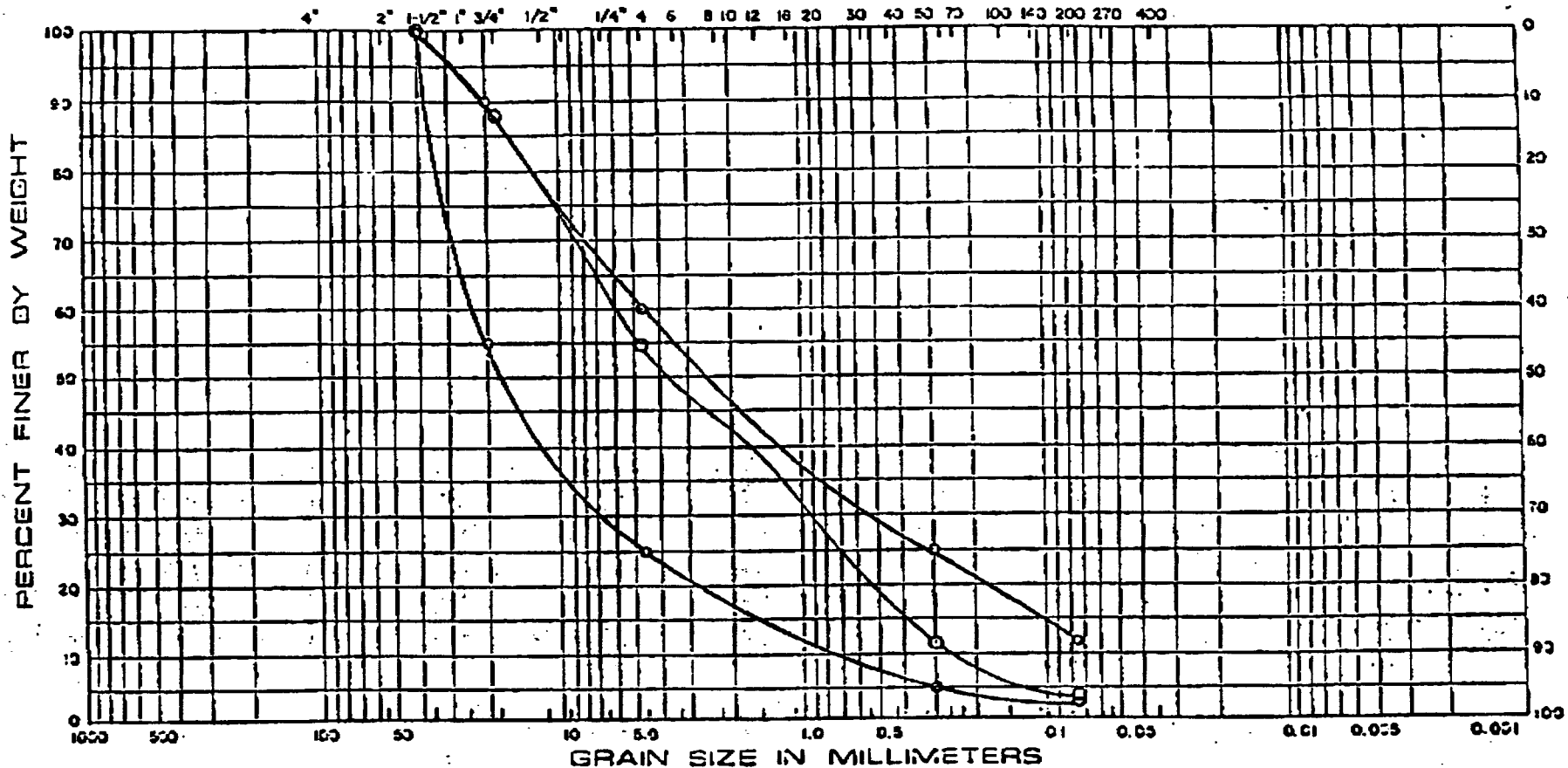
DIC/clt

Enclosures

CBA 005 1075

SENT BY: CIBA-GEIGY/TOMS RIVER ; 4- 8-94 ; 2:29PM ; ENGINEERING - 201 529 0818;# 8/10

U.S. STANDARD SIEVE NUMBER



BURMISTER
CLASSIFICATION

COBBLES		GRAVEL			SAND			SILT OR CLAY	
c		m			f				
76.2		25.4			0.59			Millimeters	
3 in.		1 in.			30			Sieves	
		9.52			0.25				
		3/8 in.			60				
		Nos. 10			200				

NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE

DENSE GRADED AGGREGATE

Ocean County Recycling

S-1

GRADATION CURVES

FRENCH & PARRELLO
ASSOCIATES PA



FRENCH & PARRELL
ASSOCIATES P.C.

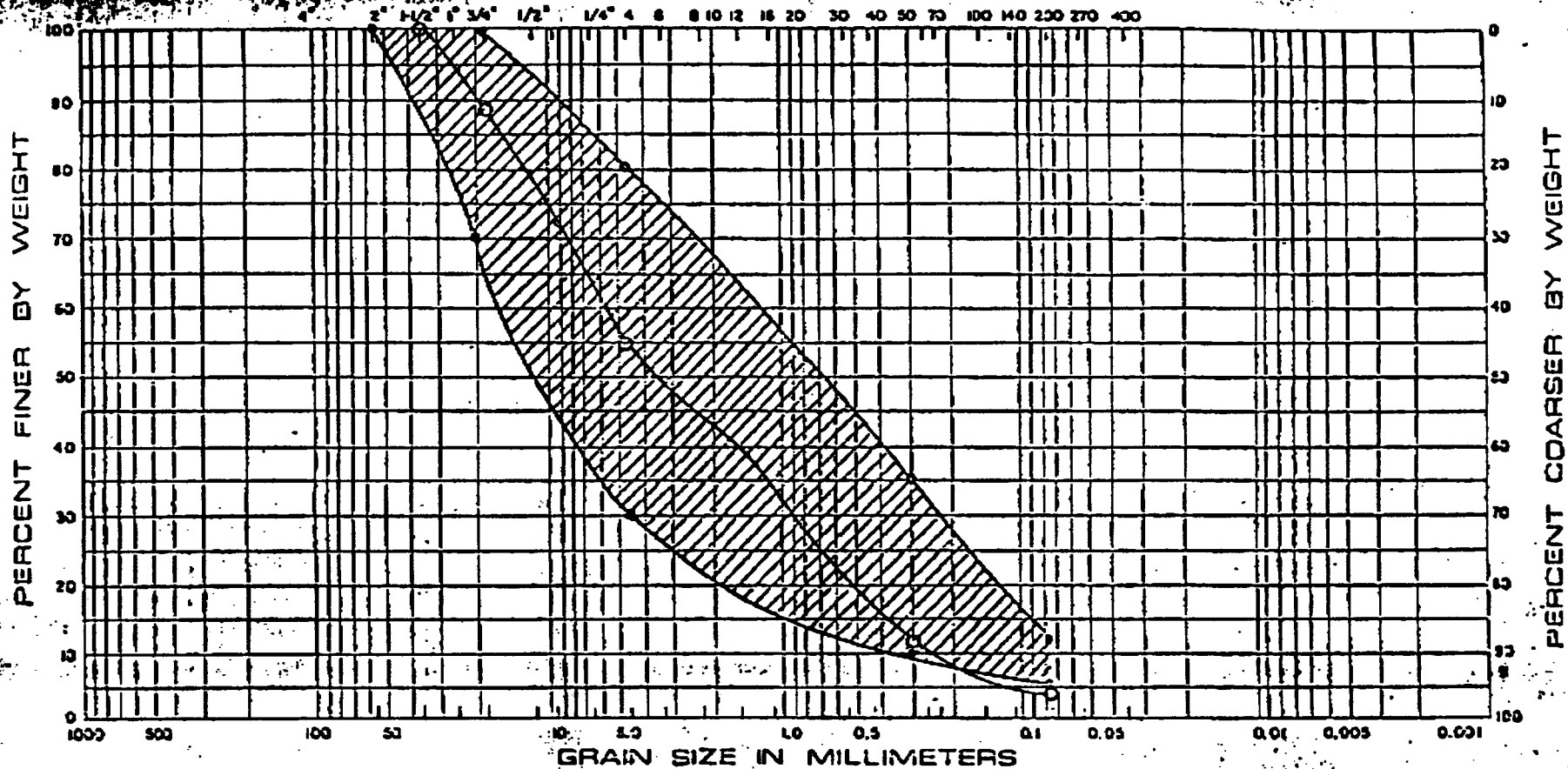
91L065A

DATE: 12/91

[illegible]

* SEE TEST CURVES

U.S. STANDARD SIEVE NUMBER



BURMISTER
CLASSIFICATION

COBBLES		GRAVEL			SAND			SILT OR CLAY	
	c	m	f		c	m	f		
76.2		25.4	9.52	2.0	0.59	0.25	0.074	Millimeters	
3 in.		1 in.	3/8 in.	No. 10	30	60	200	Sieves	

NEW JERSEY INTERAGENCY ENGINEERING COMMITTEE
STANDARD SOIL AGGREGATE GRADATION DESIGNATION: 1-5

Ocean County Recycling
S-1

GRADATION CURVES



FRENCH & PARRELLO
ASSOCIATES, PA

SUBGRADE ACCEPTANCE CERTIFICATE

CBA 005 1079

CERTIFICATE OF ACCEPTANCE
OF SOIL SUBGRADE

Project Name Ciba-Geigy Cell No. 1 Capping System

Project No. 94159

Location Toms River, New Jersey

Installation Contractor Representative Conti Environmental, Inc.,
Leonard Nicaretta, Project Engineer

Area to be Accepted Cell No. 1 Subgrade

I, the undersigned, duly authorized representative of the installer, do hereby accept the soil subgrade surface conditions and shall be responsible for maintaining its integrity and a suitability in accordance with the specifications. I do not accept any responsibility for the conditions or character of the subsurface soil, or any effects the subsurface soil might have on the liner system.

Leonard Nicaretta
Leonard Nicaretta
Signature

Project Engineer
Title

4/20/94
Date

APPENDIX G
LEACHATE FORCEMAIN HYDROSTATIC
TEST RESULTS

HYDROSTATIC TEST REPORT

Date of Test 5/26/94

Line(s) under Test Cell #1 Leachate C/s line

Test Media H²O

Test Pressure 35-40 psi

Duration of Test 1/2 hour

Remarks: Ciba's Waste Treatment Supervisor K. Erikson had a
concern with pressurizing the leachate line above 40 psi. Ciba
approved the hydrotest using Treatment plant water pressure and
dead heading the system for a period of 1/2 hour.
Weld joint ok

Acceptance: Name James R. Benn

Title Construction Superintendent

Date 5/26/94