AVCO CORPORATION - TEXTRON LYCOMING

STRATFORD ARMY ENGINE PLANT

EPA I.D. CTD001181502

SURFACE IMPOUNDMENT CLOSURE CERTIFICATION

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## STATE OF CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION



May 12, 1992

Mr. John Fleming Chief, Environmental Compliance Avco Lycoming Textron 550 Main Street Stratford, Connecticut 06497-2452

Subject: RCRA Closure Certification and Related Documents

Surface Impoundments

EPA I.D. No. CTD001181502

Dear Mr. Fleming:

The Connecticut Department of Environmental Protection (CTDEP) Site Remediation and Closure Division has reviewed the closure certification documents attached to cover letters dated July 25, 1990, and September 11, 1990. The documents were submitted by Schatz attorneys on behalf of Avco Lycoming Textron (Avco). These documents were submitted pursuant to the requirements of the approved closure plan dated September, 1987 as amended September 30, 1987, January 5, 1988, February 24, 1988, and as amended by the closure plan approval letter dated April 5, 1988.

As a result of this review, the CTDEP has determined that additional information is needed before CTDEP can determine whether the hazardous waste management units have been closed in accordance with the specifications in the approved closure plan.

Specific comments are included as Attachment 1 to this letter. Please revise the closure certification documents based on these comments and submit them to the CTDEP no later than 60 days after receipt of this letter.



#### Page 2

To assist CTDEP in reviewing the revised certification documents, please prepare a summary of the revisions made. This summary should direct the reviewer to the page and/or section of the documents where each comment in Attachment 1 was addressed. In addition, it would be helpful to receive the documents in a single bound report.

Very truly yours,

Havid Ringquist

Sanitary Engineer III Site Remediation And Closure Division

Waste Management Bureau

DR:dr Attachment

cc: George Dews, CTDEP WEED Permits

<AVCOCERT.NOD>

## AVCO LYCOMING TEXTRON . stratford, Connecticut

#### REVIEW COMMENTS ON CERTIFICATION DOCUMENTS

- 1. The certification of closure must be resubmitted as an original with a legible professional engineer's stamp.
- 2. The certification of closure references a closure plan dated March, 1988. This must be changed to agree with the closure plan dates in the closure plan approval letter.
- 3. The As-Built Drawings must be modified to include the following:
  - A. Direction of run-off in the stone swale shown on Closure Area 1.
  - B. Point of discharge of run-off for Closure Areas 1 and 2.
  - C. Typical cap cross-section for Closure Areas 1 and 2, with section location shown on plan view.
- 4. To support the departure from the approved closure plan, demonstrate that the as-built final topographic contours and run-on/run-off controls for Closure Area 1 are technically equivalent to those specified in the approved closure plan.
- 5. The 12 foot vegetated drainage channels for Closure Areas 1 and 2 which are shown on Figure 4-2 of the approved closure plan do not appear on the as-built drawings and were not observed to be present in the field. This departure from the approved closure plan must be explained and a demonstration that it is equivalent to that which is specified in the approved closure plan must be provided.
- 6. The "perimeter test for hazardous waste quantity determination", included as Item 4 of the closure certification letter dated July 25, 1990, was not found in the closure documents. Please provide this information.
- 7. The soil verification test results must be accompanied by a map showing the sample locations, including depths below grade. Any deviation from the soil sampling procedures, as required by Modification Number 3 of the closure plan approval letter, must be demonstrated to be equally protective of human health and the environment.

#### AVCO COMMENTS/PAGE 2

- 8. The soil verification test results must be presented with the clean criteria that were developed to define the limits of the excavation. As required by Modification Number 1 of the closure plan approval letter, criteria for both the groundwater exposure pathway and the direct ingestion pathway must be provided. Provide the source or calculation used to derive each clean criteria value.
- 9. The Appendix IX test results must be prefaced by a description of the sample media (waste, soil), the sampling technique, and the sampling locations. Explain why the analysis was performed even though it is not required by the closure plan.
- 10. Provide a topographic survey of the final excavation as required by the approved closure plan.
- 11. The limit of excavation must be shown relative to the footprint of the synthetic membrane cap.
- 12. The synthetic membrane warranty was not found in the closure documents. Please provide this document.
- 13. Provide a list of departures from the approved closure plan together with a demonstration that each departure is equally protective of human health and the environment.
- 14. As required by the approved closure plan, provide the logs recorded during monitoring well replacement.
- 15. Provide a description of the storm water pipeline (from the adjacent contaminated soil piles) which runs diagonally across Closure Area 2. Include the length of time the pipeline will be there, its purpose, and how the pipeline and landfill will be inspected and maintained to meet the requirements of 40 CFR 265.117(c). This regulation states that "post-closure use of the property...must never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system...".

<AVCOCERT.NOD>

## CLOSURE CERTIFICATION SUMMARY OF REVISIONS AVCO CORPORATION - TEXTRON LYCOMING

#### DEP Comment No. 1:

The certification of closure must be resubmitted as an original with a legible professional engineer's stamp.

#### Textron Response No. 1:

The certification of closure with an original professional engineer's stamp from VFL Technology Corporation, the contractors who performed the closure work, is included in Section B.

#### DEP Comment No. 2:

The certification of closure references a closure plan dated March, 1988. This must be changed to agree with the closure plan dates in the closure plan approval letter.

#### Textron Response No. 2:

The date on the certification of closure has been changed to reflect the closure plan dates in the closure plan approval letter. This is included in Section B.

#### DEP Comment No. 3:

The As-Built Drawings must be modified to include the following:

- A. Direction of run-off in the stone swale shown on Closure Area 1.
- B. Point of discharge of run-off for Closure Areas 1 and 2.
- C. Typical cap cross-section for Closure Areas 1 and 2, with section location shown on plan view.

#### Textron Response No. 3:

The As-Built Drawings have been modified to include the requested changes. These are included in Section E.

#### DEP Comment No. 4:

To support the departure from the approved closure plan, demonstrate that the As-Built final topographic contours and run-on/run-off controls for Closure Area 1 are technically equivalent to those specified in the approved closure plan.

#### Textron Response No. 4:

A comparison between the As-Built cross section drawings and the design drawings was performed by A M Engineering, P.C. According to their survey the elevations between the two drawings substantially agree. Based upon the similarity between the elevations and run-on/run-off controls for Closure Area 1 in the As-Built drawings and the approved closure plan, it was concluded by A M Engineering that there was no departure from the approved closure plan. A copy of the letter from A M Engineering to Textron is included in Section E with the As-Built drawings.

#### DEP Comment No. 5:

The 12 foot vegetated drainage channels for Closure Areas 1 and 2 which are shown on Figure 4-2 of the approved closure plan do not appear on the As-Built drawings and were not observed to be present in the field. This departure from the approved closure plan must be explained and a demonstration that it is equivalent to that which is specified in the approved closure plan must be provided.

#### Textron Response No. 5:

The As-Built Drawings and the conditions in the field accurately reflect the closure plan drawings prepared by Metcalf & Eddy, March 16, 1992. Figure 4.2 in the closure plan text is an approximation of these blue-print drawings. A copy of these closure plan drawings prepared by Metcalf & Eddy are included in Section F for reference.

#### DEP Comment No. 6:

The "perimeter test for hazardous waste quantity determination," included as Item 4 of the closure certification letter dated July 25, 1990, was not found in the closure documents. Please provide this information.

#### Textron Response No. 6:

The "perimeter test for hazardous waste quantity determination" is included in Section D.

#### DEP Comment No. 7:

The soil verification test results must be accompanied by a map showing the sample locations, including depths below grade. Any deviation from the soil sampling procedures, as required by Modification Number 3 of the closure plan approval letter, must be demonstrated to be equally protective of human health and the environment.

#### Textron Response No. 7:

The sample locations for the soil verification tests are shown on the As-Built Drawings included in Section E. The test results are included in Section G.

#### DEP Comment No. 8:

The soil verification test results must be presented with the clean criteria that were developed to define the limits of the excavation. As required by Modification Number 1 of the closure plan approval letter, criteria for both the groundwater exposure pathway and the direct ingestion pathway must be provided. Provide the source or calculation used to derive each clean criteria value.

#### Textron Response No. 8:

The corrective action limits for the contaminated soil removal were based upon the Connecticut Health and Environmental Based Standards listed in Appendix C of the closure plan. Any residual contamination that might have been below the low water tide level was left in-situ as the site was closed as a landfill per Section 265.310 of 40 CFR.

#### DEP Comment No. 9:

The Appendix IX test results must be prefaced by a description of the sample media (waste, soil), the sampling technique, and the sampling locations. Explain why the analysis was performed even though it is not required by the closure plan.

#### Textron Response No. 9:

The Appendix IX tests were performed for the purpose of obtaining background information for possible later use in groundwater analysis. The appendix IX test results are included in Section H.

#### DEP Comment No. 10:

Provide a topographic survey of the final excavation as required by the approved closure plan.

#### Textron Response No. 10:

The approximate elevations of the final excavation are shown in the cross section diagrams included with the As-Built Drawings in Section E.

#### DEP Comment No. 11:

The limit of excavation must be shown relative to the footprint of the synthetic membrane cap.

#### Textron Response No. 11:

The limits of excavation for Closure Areas 1 and 2 are shown on the As-Built Drawings included in Section E.

#### DEP Comment No. 12:

The synthetic membrane warranty was not found in the closure documents. Please provide this document.

#### Textron Response No. 12:

The synthetic membrane warranty is included in Section I.

#### DEP Comment No. 13:

Provide a list of departures from the approved closure plan together with a demonstration that each departure is equally protective of human health and environment.

#### Textron Response No. 13:

Two changes were made to the closure plan. A catch basin was left in place to aid in the drainage of Closure Area 2 and insitu stabilization was used in Closure Area 2 to allow construction of the cap. Information pertaining to these minor changes is included in Section J.

Because of a re-evaluation of the actual elevations of the site and the drainage patterns around Closure Area 2, a catch basin was left in place on the north side of the Closure Area. This catch basin discharges to the same location as the original drainage pattern from the closure plan area and thus was deemed to have no adverse affect upon human health or the environment and did not require a modification to the closure plan.

As documented in a letter from VFL Technology to Textron Lycoming dated October 27, 1988, due to poor subsurface conditions below elevation 2 in Lagoons 2, 3, and 4, the closure cap as designed by Metcalf & Eddy could not be installed. The material on-site did not have the structural strength to support the cap structure. In order to construct the designed cap for Closure Area 2, an in-situ stabilization of the subsurface of Closure Area 2 was performed using cement and/or cement kiln dust up to a 15% mix ratio. In the letter from VFL, it was stated they felt there would be no requirement to modify the closure plan since the work was performed on the subsurface (below the closure base elevation). The letter from VFL Technology Corp. is included in Section J along with a copy of the letter sent to Mr. George Dews documenting the change.

#### DEP Comment No. 14:

As required by the approved closure plan, provide the logs recorded during monitoring well replacement.

#### Textron Response No. 14:

The logs recorded during monitoring well replacement are included in Section K.

#### DEP Comment No. 15:

Provide a description of the stormwater pipeline (from the adjacent contaminated soil piles) which runs diagonally across Closure Area 2. Include the length of time the pipeline will be there, its purpose, and how the pipeline and landfill will be inspected and maintained to meet the requirements of 40 CFR 265.117(c). This regulation states that "post-closure use of the property...must never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system..."

#### Textron Response No. 15:

The pipeline was used to transfer collected stormwater from the bermed soil area adjacent to Closure Area 1. The pipe transferred the stormwater to the Oil Abatement Treatment Plant that treats the stormwater run-off throughout the facility. The pipe support rested on top of the cap vegetation cover and was inspected regularly to ensure that the integrity of the cover was not impaired. As the soil is being relocated, the pipeline is being removed.

## AFFIDAVIT OF LAND USE

# MADE PURSUANT TO 40 C.F.R. 5265.119(b)(-1) (1989)

STATE OF CONNECTICUT)
) ss. Stratford
COUNTY OF FAIRFIELD )

- I, Robert Dennis, Director of Manufacturing Services, Avco Corporation, Textron Lycoming Division, do hereby depose, say and swear to the truth of, the following statements:
- 1. I am over eighteen (18) years of age and believe in the obligations of an oath.
- 2. The United States of America is the legal Owner (as such term is defined at 40 C.F.R. \$260.10 (1989)) of certain real property located at the intersection of Main Street and Sniffen Lane in the Town of Stratford, County of Fairfield and State of Connecticut—as-more particularly described in Schedule A attached hereto and made a part hereof.
- 3. This property (hereinafter the "Facility," as such term is defined at 40 C.F.R. \$260.10) is subject to Federal and State of Connecticut laws pertaining to Hazardous Waste Management (as such term is defined at 40 C.F.R. \$260.10); the Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seg. (1989), as amended; the United States Environmental Protection Agency (EPA) regulations pertaining to the hazardous waste treatment, storage, and disposal facilities, and specifically 40 C.F.R. \$\$265.1-.405 (1989), as amended; Titles 22a of the Connecticut General Statutes and the Regulations of Connecticut State Agencies.
- 4. The Operator (as such term is defined at 40 C.F.R. \$260.10) of the Facility is Textron Lycoming, a Division of Avco Corporation.

This affidavit is made pursuant to 40 C.F.R. \$265.119(b)(1) and is intended to provide the requisite notice that:

- a. The Facility has been used to manage hazardous waste; and
- b. The future use of the Facility is restricted under 40 C.F.R. \$265.110-120 as amended at 54 Fed. Reg. 33,396 397 (1909); and

STATE OF CONNECTICUT)

Stratford SS.

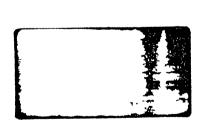
TOWN OF STRATFORD

OFFICE OF THE TOWN CLERK

COUNTY OF FAIRFIELD)

Assistant Town Clerk of said Stratford, duly appointed and qualified according to law, and having custody of the Seal of said Town of Stratford, hereby certify that the annexed instrument is a true copy from the records of said Town, and that the original Instrument, from which said copy is taken, is recorded in Volume 744 Page 170-174 of the Stratford Land Records at 11:28 Am on 7/25/70

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the Seal of said Town of Stratford, this \_26 th day of \_uly\_A. D. 19\\_90. Istant Town Clerk



c. A survey plat, as described at 40 C.F.R. \$265.116, and a record of the type, location, and quantity of hazardous wastes disposed of at the Facility, as described at 40 C.F.R. \$\$265.116 and 265.119(a), has been filed with the Town of Stratford Zoning Commission, the EPA Regional Administrator for Region 1 and the Connecticut Department of Environmental Protection Senior Sanitary Engineer.

Further your deponent sayeth not.

Robert Dennis

Subscribed and sworn to before me this 25th day of July, 1990.

Riva Posner

Commissioner of the Superior Court

"SURVEY SURFACE IMPOUNDMENT CLOSURE PROJECT NO. FY82/01B STRATFORD ARMY ENGINE PLANT AT AVCO PROPERTY STRATFORD, CONN."

All those certain pieces or parcels of land located in the Town of Stratford, County of Fairfield and State of Connecticut and shown on a map entitled, "Survey Surface Impoundment Closure Project No. FY82/01B Stratford Army Engine Plant at Avco Property Stratford, Conn.", dated July 23, 1990, prepared by A M Engineering, P.C., to be filed in the Town of Stratford Land Records, being more particularly bounded and described as follows:

CLOSURE AREA 1 Containing 56,947+ Sq. Ft.

Beginning at a point, said point being the Northwesterly corner of the Closure Area 1, said point also being the Southwesterly property corner of land now or formerly of United States of America, and is shown on a map entitled "Map of Survey of Property in Stratford, Conn. for United Aircraft Corp." dated June 14, 1949, by Fuller & Company, said point being the following bearings and distances from the Southerly street line of Sniffen Lane, South 51° 18' 14" East for a distance of 294.42 feet, South 38° 39' 16" East for a distance of 65.13 feet and South 01° 02' 15" East for a distance of 197.76 feet, all being along the Westerly property line as shown on said map of United Aircraft Corp.;

Thence, in an Easterly direction North 88° 57' 45" East for a distance of 219.63 feet along the Southerly property line as shown on said map of United Aircraft Corp.;

Thence, in a Southerly direction South 18° 35' 45" West for a distance of 27.70 feet along the Easterly property line as shown on said map of United Aircraft Corp. and also on a map entitled "Map of Survey of Property in Stratford, Conn. The Land and Home Development Co.", dated September 27, 1952 prepared by Frank B. Jaynes and Associates.;

Survey Surface Impoundment Closure Project No. FY82/01B Stratford Army Engine Plane at Avco Property Stratford, Conn.

Thence, in a Southerly direction again South 18° 50' 08" West for a distance of 13.91 feet, South 50° 21' 19" East for a distance of 42.37 feet, South 46° 17' 25" East for a distance of 43.12 feet, South 09° 28' 38" West for a distance of 107.96 feet and South 34° 03' 02" West for a distance of 25.31 feet;

Thence, in a Westerly direction North 80° 24' 23" West for a distance of 314.77 feet; thence, Northerly North 05° 25' 14"

East for a distance of 27.57 feet and North 26° 37' 01" East for a distance of 144.25 feet, North 24° 45' 30" East for a distance of 11.96 feet all being along a fence and across land of the United States of America to the point and place of beginning.

CLOSURE AREA 2
Containing 37,405± Square Feet
Being more particularly bounded and described as follows:

Beginning at a point, said point being the Southwesterly corner of the Closure Area 2, said point also being on the Southerly property line of land now or formerly of United States of America, also being on the Northerly property line of the Sikorsky Memorial Airport, now or formerly the City of Bridgeport, and shown on a map entitled "Map of Survey of Property in Stratford, Conn. The Land Home Development Co." dated September 27, 1952, prepared by Frank B. Jaynes & Associates. Said parcel is Easterly of the Westerly street line of Main Street by a bearing of North 88° 57' 45" East for a distance of 341.69 feet;

Survey Surface Impoundment Closure Project No. FY82/01B Stratford Army Engine Plant at Avco Property Stratford, Conn.

Thence, in a Northerly direction North 02° 36' 05" West for a distance of 165.23 feet along a fence being across land of United States of America;

Thence, in an Easterly direction North 78° 44' 45" East for a distance of 210.54 feet across land of United States of America;

Thence, in a Southerly direction South 00° 09' 37" East for a distance of 202.54 feet along a fence across land of United States of America;

Thence, in a Westerly direction South 88° 57' 45" West for a distance of 199.59 feet being along the Southerly property line as shown on said map of The Land Home Development Co., also being the Northerly property line of Sikorsky Memorial Airport to the point and place of beginning.

AMENG5 7/25/90

Rec'd. \_\_\_\_\_\_at //:08 ANAttest:

Durie Grace Assistant Town Clerk

## CERTIFICATE OF CLOSURE

OTE: SEE CORRECTED CERTIFICATION OF CLOSURE ATTACHED TO SEPTEMBER 11, 1990 LETTER TO IS. RONA JULIAN. OF EPA

## VFL TECHNOLOGY CORPORATION

42 LLOYD AVENUE • MALVERN, PA 19355 • (215) 296-2233 • FAX (215) 296-9545

May 22, 1990

Ms. Donna Ashford Textron Lycoming Division 550 South Main Street Stratford, CT 06497

Subject: Textron Lycoming Contract No. H236288

VFL Project No. C-2260

Dear Ms. Ashford:

In accordance with the requirements of the contract documents, VFL Technology Corporation (VFL) hereby certifies that all work performed on the above referenced project was carried out in accordance with all federal, state and local regulations.

VFL appreciates the opportunity to have worked for Textron Lycoming on this project and looks forward to future opportunities.

SMICELETA'

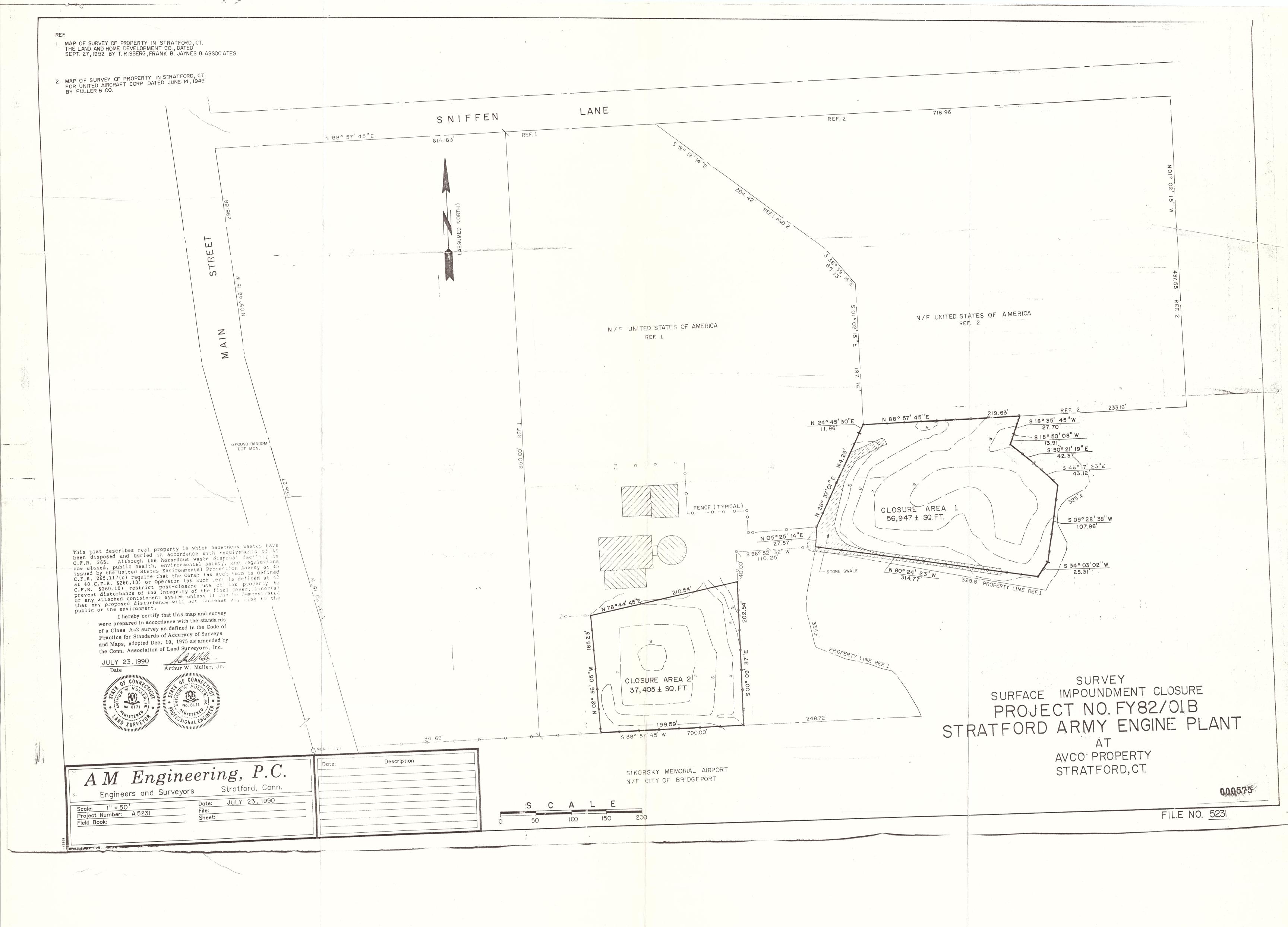
Alexander J. Fazzin H.E

AJF/pls

#### ENGINEER'S CERTIFICATION OF CLOSURE

Engineer registered in Fleming, Chief Environmen Lycoming Division, do h disposal unit of Avco located in Stratford, Con belief, has been closed the approved closure pla 30, 1987, January 5, 1988	no, being a duly licensed Professional the State of Delaware, and I, John S. Ital Engineer of Avco Corporation, Textron ereby certify that the hazardous waste Corporation, Textron Lycoming Division necticut, to the best of our knowledge and in accordance with the specifications in n of September 1987 as amended September 3, and February 24, 1988.  Date: 10 Aug 17
Signature: Louis M.	Auggiano Date: 707103 12
Business Address:	VFL Technology Corporation 42 Lloyd Avenue Malvern, PA 19355
Business Telephone:	(215) 296-2233
Engineer License No.: 6	5248
State of Issue: DECA	WARE.
Subscribed and swor	m before me this of day of Cuquat,
	Notary Public My Commission expires Feb 27.1995
<b>Λ</b> Λ	***********
Signature: John S. F	A. Heming Date: 8/11/97
Business Address:	Avco Corporation Textron Lycoming Corporation 550 Main Street Stratford, CT 06497
Business Telephone:	(203) 385-2000
Subscribed and swor	n before me this //th day of August,
	Maryann Salmiero  Notary Public  My Commission expires 5-31-97
	Notary Public My Commission expires <u>5-3/-97</u>

## SURVEY



### PERIMETER TEST

## TEXTRON Lycoming

Stratford Division
Textron Lycoming /
Subsidiary of Textron Inc.

550 Main Street Stratford, CT 06497 203/385-2000

13 September 1988

Mr. G. Dews Ct. D.E.P. Hazardous Matls. Mgmt. 165 Capitol Avenue Hartford, CT 06106

Dear Mr. G. Dews:

Enclosed you will find a copy of soil analyses on samples taken in the equalization lagoon in our Surface Impoundment Closure.

The schedule plans call for the Cap to be ordered in the next week to ten days. In this regard I am also submitting a copy of the addendum which the Army consultant, Metcalf & Eddy had sent to us, but did not forward to you for review. The closure contractor for the surface impoundments would like to complete work on the equalization lagoon before the sludge impoundments completion.

lf you have any questions, please do not hesitate to contact me.

Very truly yours

FEXTRON LYCOMING

John Fleming, Sup. Environmental Compliance

Enclosure

September 12, 1988

VFL 550 Main St. Stratford CT 06497

RE: LAB. No.88-279-17 P.O. No.VFL-C2260 Inv. No.4776

#### Gentelmen:

The attached report are results of analysis on the above referenced Purchase Order.

The samples were received on August 25, 1988.

The method of analysis was by Gas Chromatography using FID, PID, and/or HECD techniques.

All results are reported in parts per billion unless noted on the report.

Please contact us if you have any questions.

Very truly yours,

Stephen J. Franco Laboratory Director

SJF:hc

connecticut testing aboratories inc.

STEPHEN J. FRAMECO Laboratory Orrecting

PHONE 203/634437711

140 GRACEY AVENUE MERIDEN, CT 106-50

Client : VFL

Lab No.:88-279-17 PO No.:VFL-C2260

Date :9-12-88

Page 6

(Sample Matrix = Solid)

#### EPA MRTHOD 602/8020

-	MDL	1	2	3 '	4
Benzene	50_	BDL	BDL	BDL	BDL
Toluene	50_	BDL	BDL	BDL	BDL
Ethyl Benzene	50_	BDL	BDL	BDL	BDL
P & M Xylene	50_	BDL	BDL	BDL	BDL
O- Xylene	; ;50_;	BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
1,3-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
1,2-Dichlorobenzene	50_	BDL	BDL	BDL	BDL_
Methyl Ethyl Ketone	100	BDL	BDL	BDL_	BDL
Methyl Iso Butyl Ketone	100	BDL_	BDL	BDL_	BDL_
	!	1 1 1 1	! ! !	; ; ;	i

MDL = Minimum Detectable Level

BDL = Below Detection Level

ALL UNITS IN PPB UNLESS NOTED.

connecticut testing aboratories inc.

STEPHEN J. FRANCES

Laboratory Directory

PHONE 203/6:4. 7

140 GRACEY AVENUE MERIDEN, CT O'm o

Client : VFL

Lab No.:88-279-17 PO No.:VFL-C2260 Date:9-12-88

Page 7

(Sample Matrix = Solid)

#### EPA METHOD 602/8020

	MDL	5	6	7	8
Benzene	50_	BDL	BDL	BDL	BDL
Toluene	50_	BDL	BDL	BDL	BDL
Ethyl Benzene	50_	BDL	BDL	BDL_	BDL
P & M Xylene	50_	BDL	BDL	BDL	BDL
O- Xylene	50_	BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	50_	BDL_	BDL	BDL	BDL
1,3-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
1,2-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
Methyl Ethyl Ketone	100	BDL	BDL	BDL	BDL_
Methyl Iso Butyl Ketone	100	BDL	BDL	BDL_	BDL
			; !	i ! 	!!

MDL = Minimum Detectable Level

BDL = Below Detection Level

ALL UNITS IN PPB UNLESS NOTED.



STEPHEN J. FRANCO Laboraton Director

PHONE 203/634+37%

140 GRACEY AVENUE MERIDEN, CT 064 ()

Client :VFL

Lab No.:88-279-17 PO No.:VFL-C2260

Date

:9-12-88

Page 8

(Sample Matrix = Solid)

#### EPA METHOD 602/8020

	MDL	9	10	11	12
Benzene	50_	BDL	BDL	BDL	BDL
Toluene	50_	BDL	BDL	BDL	BDL_
Ethyl Benzene	50_	BDL	BDL	BDL	BDL
P & M Xylene	50_	BDL	BDL	BDL	BDL
O- Xylene	50_	BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	50_	BDL	BDL	BDL	BDL_
1,3-Dichlorobenzene	50_	BDL	BDL_	BDL_	BDL
1,2-Dichlorobenzene	50_	BDL	BDL	BDL_	BDL
Methyl Ethyl Ketone	100	BDL	BDL_	BDL_	BDL_
Methyl Iso Butyl Ketone	100	BDL	BDL_	BDL_	BDL_
	!		! ! !	i ! !	i

MDL = Minimum Detectable Level

BDL = Below Detection Level

ALL UNITS IN PPB UNLESS NOTED.



STEPHEN J. FRANCE Laboratory Director

PHONE 203/634+377 ·

140 GRACEY AVENUE MERIDEN, CT ()6-1-11

Client :VFL

Lab No.:88-279-17 PO No.:VFL-C2260

Date :

:9-12-88

Page 9

(Sample Matrix = Solid)

#### EPA METHOD 602/8020

	MDL	13	14	15	16
Benzene	50_	BDL	BDL	BDL	BDL
Toluene	50_	BDL	BDL	BDL	BDL
Ethyl Benzene	50_	BDL	BDL	BDL	BDL
P & M Xylene	50_	BDL	BDL	BDL	BDL
O- Xylene	50_	BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
1,3-Dichlorobenzene	50_	BDL	BDL	BDL	BDL_
1,2-Dichlorobenzene	50_	BDL	BDL	BDL	BDL_
Methyl Ethyl Ketone	100	BDL	BDL	BDL	BDL
Methyl Iso Butyl Ketone	100	BDL	BDL	BDL	BDL
			! ! ! 	i ! !	i ! !!

MDL = Minimum Detectable Level
ALL UNITS IN PPB UNLESS NOTED.

BDL = Below Detection Level



STEPHEN 1. EPANGT Laboratory Director

PHONE 203/634+ 17.11

140 GRACEY AVENUE MERIDEN, CT Officer.



## VFL TECHNOLOGY CORPORATION

42 LLOYD AVENUE • MALVERN, PENNSYLVANIA 19355 • (215) 296-2233 • FAX (215) 296-9545

October 27, 1988

Ms. Donna Asnford Plant Engineering Textron Lycoming 550 Main Street Stratford, CT 06497-2452

Subject: Initial Test Results - Lagoon 1 and 3 Areas Tentron Lytoming Purchase Order No. H208203 VFL Project No. C2260

Dear Donna:

VFL Tachnology Corporation (VFL) has received test results from Connecticut Testing Laboratory for partial samplings taken in the vicinity of Lagoons 2 and 3. The enclosed sketch shows the test points. Our review of these results show that there are hydrocarbon contaminants that are of potential concern. It is believed that these contaminants are from another source outside of the lagoons.

Your immediate attention to this issue is requested. VFL requests that the issue be addressed at our November 1, 1988 meeting.

Sincerely yours,

James P. Hopkins, P.E.

Vice President Project Management

JPH/tg

Enclosure

cc: Mr. J. Fleming-T/L

Mr. J. R. Landis-VFL Mr. J. J. Tropea-VFL Mr. L. M. Ruggiano-VFL

E Reim blun Ze'3 lagoons

000576

Client : VFL

Lab No.: 108-154-13 PO No. :VFLC2260 Date: :10-21-88 Page 2

	26	27	28	29	
Arsenic-mg/l Barium-mg/l Cadmium-mg/l Chromium, Total-mg/l Lead-mg/l Meroury-mg/l Selenium-mg/l Silver-mg/l	ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.002   ND<0.01	_ND<0.5  0.01   _ND<0.05   _ND<0.05   _ND<0.002   _ND<0.01_	ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.002   ND<0.01	_ND<0.05_ _ND<0.5_ _ND<0.01_ _ND<0.05_ _ND<0.05_ _ND<0.002 _ND<0.01_ _ND<0.01_	
	30				
Arsenic-mg/l	ND<0.05_ ND<0.01_ ND<0.01_ ND<0.05_ ND<0.05_ ND<0.002 ND<0.01_ ND<0.01_				

Please contact us if you have any questions.

Very truly yours

Stephen J. Franco

WATER SOIL Laboratory Director

connecticut testing laboratories inc.

STEPHEN J. FRANCO Laboratory Director PHONE-203/634-3731

140 GRACEY AVENUE .. MERIDEN, CT .. 06450

October 18, 1988

VFL C/O Butterworth Construction 45 Mayfair Pl. Stratford, Ct. 06075

RE: LAB. No.108-101-13 P.O. No.VFL C22-60

Inv. No.5188

#### Gentlemen:

The attached report are results of analysis on the above referenced Purchase Order.

The samples were received on October 11, 1988.

The method of analysis was by Gas Chromatography using FID, PID, and/or HECD techniques.

All results are reported in parts per billion unless noted on the report.

Please contact us if you have any questions.

Very truly yours,

Stephen J. France Laboratory Director

SJF:hc

WATER SOIL AIR



STEPHEN J. FRANCO Laboratory Director PHONE ~ 203/634•3731

140 GRACEY AVENUE - MERIDEN, CT - 06450

Client: VFL

Lab No.: 108-101-13 PO No. :VFL C22-60 Date :Oct. 17, 1988

Page · 1

(Sample Matrix= Solid)

EPA METHOD 601/8010	MDL	18	19	20	21	
Chloromethane	50	BDL	BDL_	BDL	BDL	i 
Bromomethane	50	BDL	BDL_;	BDL	BDL	
	50	BDL.	BDL ;	BDL	BDL	! }
Chloroethane	50_	BDL	BDL_	BDL	BDL	}
	25	BDL	BDL :	BDL	BDL.	l I
Trichlorofluoromethane	25	BDL	BDL	BDL	BDI.	 
11-Dichloroethylene	25	BDL	BDL_;	BDL	BDL	! !
11-Dichloroethane	25	BDL :	BDL	BDL_	BD1	; :
T12-Dichloroethylene	25	BDL	BDL	BDL_	BDL	) )
Chloroform	25	BDL	BDL !	105	BDL_	l 
12-Dichloroethane	25	BDL_	BDL_;	JDG!	BDI.	! !
111-Trichloroethane	25	91.0	BDL_;	BDL_	BDI	1 -
Carbontetrachloride	; 25 ]	BDL.	BDL	BDL	BDL	١.
Bromodichloromethane	25_	BDL_;	BDL_	BDr;	BDL	•
12-Dichloropropane	25_	BDL_	BDL;	BDL;	BDL	;
T13-Dichloropropylene	25	BDL_	BDL!	BDL;	BDL	1
Trichloroethylene	25_	BDL_	BDL;	10.88	BDL	:
Dibromochloromethane	25_	BDL	BDL_	BDL;	BDL	;
112-Trichloroethane	25_	BDL	BDL_	BDL	BDL	;
Cis13-Dichloropropylene	;25_	BDL	BDL	BDL	BDL	! '
2-Chlorethylvinylether	25_	BDL_	BDL	BDL_	BD1	1
Bromoform	25_	BDL	BDL	BDL	BDL	1
1122-Tetrachloroethane	125_	BDL_	BDL	BDL;	BDI'	<del>اے۔</del>
Tetrachloroethylene	25_	29.0	BDL	BDL;	BDL	<b>.</b>
Chlorobenzene	25_	BDL_	BDL_	BDL	BD1	}
Benzyl Chloride	50	BDL	BDL	BDL	BDL_	1
Bis(2-chlorethoxy)methane_	50	BDL_	BDL	BDL	BDL	1
Bis(2-chloroisopropyl)ethe	50_	BDL_	BDL	BDL_	BDL	.1
Bromobenzene	25	BDL_	BDL	BDL;	BDL	
Chloracetaldehyde	150_	BDL_	BDL	BDL	BDL_	
1-Chlorohexane	125	BDL	BDL_	BDL	BDL	
Chloromethyl methyl ether_	150_	BDL_	BDL_	BDL_	BDL	.]
Chlorotoluene	25	BDL	BDL	BDL	BDL	
Dibromomethane	25	BDL	BDL	BDL_	BDI'	.}
12-Dichlorobenzene	25	BDL	BDL_	BDL_	BDL_	
13-Dichlorobenzene	25	BDL	BDL_	BDL_	BDI	.]
14-Dichlorobenzene	25	BDL_	BDL_	BDL_	BDL_	.}
Trichloropropane	25	BDL_	BDL	BDL	BDL_	.;
, , , , , , , , , , , , , , , , , , ,				***		

WATUMDLE Ninimum Detectable Level/BDL= Below Detection Level/UNITS= PPB SOIL / AIR .

connecticut testing laboratories inc.

STEPHEN J. FRANCO Laboratory Director PHONE - 203/634-3731

140 GRACEY AVENUE - MERIDEN, CT - 06450

Client : VFL

Lab No.: 108-101-13 PO No.: VFL C22-60

Date : Oct. 17, 1988

Page · 2

(Sample Matrix= Solid)

EPA METHOD 601/8010	MDL	22	23	24	25	
Chloromethane	50_	BDL	BDL	BDL	BDL	
Bromomethane	50_;	BDL	BDL;	BDL_;	BDL	•
Vinylohloride	50_;	BDT!	BDL	BDL;	BUL!	
(711 I (7) 1 (7) (8) (1) (1) (1) (1)	50_;	BDL_	BDL;	BDL_	BDL	
	25_	BDL	BDL	BDL_	BDL_	
	25_	BDL_	BDL	BDL	BDL;	
	25_	BDL_	BDL	BDL_	BDL;	
	25	BDL;	BDL_	BDL_	BDL!	
	25_	BDL	BDL	BDT	BDL'	
	25_	BDL	BDL;	BDI!	BDI;	
12-Dichloroethane	25_	BDL_	BDL_	BDL	BDL :	
111-Trichloroethane	25_	BDL	BDL	BDL;	BDL	
Carbontetrachloride	25	BDL	BDL	BDL	BDr;	
Bromodichloromethane	25_	BDL	BDL	BDL	BDI	
12-Dichloropropane	25	BDL_	BDL;	BDL	BDL	
T13-Dichloropropylene	25_	BDL	BDL!	BDL	BDL_	,
Trichloroethylene	[25]	92.0	BDL	BDI	BDL	
Dibromochloromethane	25_	BDL_	BDL_	BDL_;	BDL	_
112-Trichloroethane	25	BDL	BDL;	BDL;	BDL	1
Cis13-Dichloropropylene	125_	BDr_	BDL	BDL_	BDI'	,
2-Chlorethylvinylether	25_	BDL	BDL.	BDr-	BDL	
Bromoform	25_	BDL	BDL_	apr	BDI	
1122-Tetrachloroethane	25_	BDL	BDL	BDL;	BDL	
Tetrachloroethylene	25_	29.0		29.0	BDL	-
Chlorobenzene	125_	BDL	BDL_	BDL	BDL	
Benzyl Chloride	50	BDL	BDL_	BDL	BDI.	i i
Bis(2-chlorethoxy)methane_	150	BDL	BDL	BDL;	BDr	,
Bis(2-chloroisopropyl)ethe	50	BDL_	BDL	BDI	BDL	!
Bromobenzene	125	BDL_	BDL_	BDL	BDL	i i
Chloracetaldehyde	150	BDL	BDL_	BDL	BDI.	'
1-Chlorohexane	25	BDL_	BDL_	BDL	BDL	
Chloromethyl methyl ether_	50	BDL_	BDL_	BDL_	BDI	
Chlorotoluene	125_	BDL	BDL	BDL	BDL	i
Dibromomethane	25	:BDL	BDL_	BDL_	BDI.	į
f 12-Dichlorobenzene	25	BDL_	BDL	BDL_	BDL.	1
13-Dichlorobenzene	25	BDL	BDL_	BDL_	BDI	
14-Dichlurobenzene	25	BDL	BDL	BDL_	;BDL	1
Trichloropropane	25		BDL_	BDL_	BDL_	;
						-

WATERDLE Minimum Detectable Level/BDL= Below Detection Level/UNITS= PPB SOIL / ARR

connecticut testing laboratories inc.

STEPHEN J. FRANCO
Laboratory Director
PHONE -- 203/634•3731

140 GRACEY AVENUE - MERIDEN, CT - 06450

Client: : VFL

Lab No.: 108-101-13 PO No. : VFL C2260

Date : Oct. 17, 1988
Page : 3

(Sample Matrix= Solid)

Stronger thane	EPA METHOD 601/8010	MDL	26	27	28	29	
Stromomethane	Chloromethane	50	BDL_	BDL	BDL	EDL	,
Vinylchloride		50	BDL	BDL ;	BDL		
Solid   Soli	Vinylchloride	50	BDL	BDL	BDL	BDL	
Nothylenechloride	Chlorocthane	50	BDL	BDL	BDL	BUI.	
Trichlorofluoromethane	Nothylenechloride		BDL_	BDL	BDL	BDL	
11-Dichloroethane	Trichlorofluoromethane	25_	BDL_	BDL	BDL	BUL	
T12-Dichloroethylene	11-Dichloroethylene		BDL	BDL_;	BDL;	BDL	
T12-Dichloroethylene	11-Dichloroethane		BDL	BDL_;	BDI	BDL_	;
Chloroform	T12-Dichloroethylene		BDI	BDL	BDL_;	BDL_	
12-Dichloroethane		25	BDI	BDL_{	BDL_	BDL	
111-Trichloroethane	12-Dichloroethane	25	BDL	BDL_	BDL		
Strong   S	111-Trichloroethane		BDL_	BDL_	BDL;		
12-Dichloropropylene		25_	BDL_	BDL			•
T13-Dichloropropylene		_	BDL_				,
Trichloroethylene			BDL				·
Trichloroethylene	T13-Dichloropropylene	25	BDL_	BDL			,
Dibromochloromethane	Trichloroethylene	25	BDL_	80.01	25.0;	50.0	
112-Trichloroethane		25	BDL	3DL,;	BDL_	BDI.	}
Cis13-Dichloropropylene         25         BDL         BDL         BDL         BDL         BDL           2-Chlorethylvinylether         25         BDL			BDL_	BDL_	BDL_	BDL	 
2-Chlorethylvinylether		25	BDL_	BDL_	BDL_;	BDL	
Bromoform		25	BDL	BDL	BDL	BDI	ł
Tetrachloroethylene		25_	BDL_	BDL_	BDL	BD[	;
Chlorobenzene         25         BDL         BDL <t< td=""><td>1122-Tetrachloroethane</td><td>125_</td><td>BDL_</td><td>BDL_</td><td></td><td></td><td> </td></t<>	1122-Tetrachloroethane	125_	BDL_	BDL_			
Benzyl Chloride			BDL	164.0;		-	-
Bis(2-chlorethoxy)methane       50       BDL       BDL <td< td=""><td></td><td></td><td>BDL_</td><td>BDL</td><td></td><td></td><td>ļ</td></td<>			BDL_	BDL			ļ
Bis(2-chlorethoxy)methane       50       BDL       BDL <td< td=""><td></td><td>:50</td><td>BDL_</td><td>BDL_</td><td></td><td></td><td>i ;</td></td<>		:50	BDL_	BDL_			i ;
Bis(2-chloroisopropyl)ethe       50       BDL       BDL <t< td=""><td>Big(2-chlorethoxy)methane</td><td>150</td><td>BDL_</td><td>BDL_</td><td></td><td></td><td>†  </td></t<>	Big(2-chlorethoxy)methane	150	BDL_	BDL_			† 
Bromobenzene			BDL_				t t
Chloracetaldehyde         50         BDL				· ·			
Chloromethyl methyl ether   50   BDL   B				· ·			, ,
Chlorotoluene       25       BDL	1-Chlorohexane						!
Chlorotoluene       25       BDL	Chloromethyl methyl ether_	150_		,		, <del></del>	1
12-Dichlorobenzene		125_		· ————			•
13-Dichlorobenzene   26   BDL   BDL			·	·		•	
14-Dichlorobenzene 25 BDL BDL BDL BDL BDL BDL	12-Dichlorobenzene		-			·	-
14-Dichlorobenzene 25 BDL BDL BDL BDL BDL	13-Dichlorobenzene		·				;
							ì
•	Trichloropropane	125_	BDL	BDL_	BDL_	BDL_	i

WATERDLE Ninimum Detectable Level/BDL= Below Detection Level/UNITS= PPB SOIL

STEPHEN J. FI.ANCO Laboratory Director

PHONE ~ 203/634•3731

140 GRACEY AVENUE - MERIDEN, CT -- 06450

Client: VFL

Lab No.:108-101-13 PO No.:VFL C220-60

Chlorotoluene\_

Dibromomethane\_

12-Dichlorobenzene\_

14-Dichlorobenzene\_

Trichloropropane\_

13-Dichlorobenzene

Date :Oct. 17, 1988

Page , 4

EPA METHOD 601/8010	MDL	30				
	<b>50</b>	mm:		1	1	
Chloromethane		BDI.	1	i		
		BDL_	1	·		
	50_1	BDL_	i	·		
Chloroethane Methylenechloride	20 _ ;	BDL	1			
Methylenechloride	25_1	BDL_	<u> </u>	i	<u> </u>	
Trichlorofluoromethane	25_1	BDL				
11-Dichloroethylene	25-1	BDL_				
11 Diablarathane	Z 5 :	BD!	·i			
T12-Dichloroethylene	40_1	UUU1.		<u>'</u>		
Chlaraform	Z3 i	BDL_				
12-Dichlorocthane	25_	BDL				
111-Trichloroethane	25 1	BDL;				
Carbontetrachloride	25_	BDL	i			
Bromodichloromethane	25_	BDL		i		
12-Dichloropropane	25_	BDL_		i		
T13-Dichloropropylene Trichloroethylene	25_	BDL_				
Trichloroethylene	25_	26.0				
Dibmomoobloromethane	:25 :	ו עטפ	i			
112-Trichloroethane:	125 1	BDL ;				
cial3-bichloropropylene	:25 :	BDL :				
2-Chlorethylvinylether	:25 :	ו יותם			ļ [	
: Bromoform	140 1				İ ———— [	
1122-Totruchlorgethane	125 1	BDL			<u> </u>	
m. t ah lamaa bhrelana	125 !	44.0!			<u> </u>	
Chlorobenzene	125_;	RDr!			<u> </u>	
Benzyl Chloride	150_	BDL	1			,
Bis(2-chlorethoxy)methane_	50_	BDL				1
Bis(2-chloroisopropyl)ethe	50	BDL				i
Promobenzene	25	BDL_			.[	į
Chloracetaldehyde	150	BDL_		l	·	1
1-Chlorohexane	25	BDL_		l 	.	1
Chloromethyl methyl ether_		BDL		!	.1	
I OUTOLOME OUTLY WE OUTLY - COMPANY	•			1	1	•

(Sample Matrix= Solid)

WATEMOLH Minimum Detectable Level/BDL= Below Detection Level/UNITS= PPB SOIL AR AR

25\_

25

125\_

25\_

25\_

BDL

BDL

BDL

BDL

BDL

BDL

connecticut testing laboratories inc.

STEPHEN J. FRANCO
Laboratory Director
PHONE - 203/634-3731

140 GRACEY AVENUE - MERIDEN, CT -- 06450

Client : VFL

Lab No.: 108-101-13

PO No. : VFL C2260

Date | Oct. 17, 1988 Page + 5

(Sample Matrix= Solid)

# EPA METHOD 602/8020

	MDL	18	19	20	21
Benzene	50_	BDL_	BDL	BDL_	BDL_
Toluene	50_	BDL_	BDL	BDL	BDI.
Ethyl Benzene	50_	BDL_	JGE	BDL	BDL_
P & M Xylene	50_	BDL	BDL_	BDL	BDL
O- Xylene	50_	BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	50_	BDL	BDL	BDL	BDL_
1,3-Dichlorobenzene	50_	BDL	BDL_	EDL	BDL
1,2-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
Methyl Ethyl Ketone	100	BDL	BDL	BDL	BDL
Methyl Iso Butyl Ketone	100	BDL	BDL	BDL	BDL_
		! ! !	1	i !	

MDL = Minimum Detectable Level

BDL = Below Detection Level

ALL UNITS IN PPB UNLESS NOTED.

WATER SOIL connecticut testing laboratories inc.

STEPHEN J. FRANCO Laboratory Director PHONE = 203/634-3731

140 GRACEY AVENUE - MERIDEN, CT - 06450

Client: VFL

Lab No.: 108-101-13

PO No. :VFL C2260 Date :Oct. 17, 1988

Page . 6

WATER .

(Sample Matrix= Solid)

#### 602/8020 EPA METHOD

	MDL	22	23	24	25
Benzene	50_	BDL	BDL	BDL_	BDT_
Toluene	50_	BDL	BDL_	BDL_	BDL
Ethyl Benzene	50_	יומנו	BDL_	apr	BDL
P & M Xylene	50_	BDL	60.0	BDL	BDL
O- Xylene	50_	BDL	BDL_	BDL	BDL
1,4-Vichlorobenzene	50_	BDL	BDL_	BDL	BDL
1,3-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
1,2-Dichlorobenzene	50_	BDL	BDL	BDI	BDL
Methyl Ethyl Ketone	100	BDL_	BDL	BDL	BDL
Methyl Iso Butyl Ketone	100	BDL	BDL	BDL	BDL
		! ! !		i !	ii

MDL = Minimum Detectable Level

BDL = Below Detection Level

ALL UNITS IN PPB UNLESS NOTED.



STEPHEN J. FRANCO Laboratory Director PHONE - 203/634-3731

140 GRACEY AVENUE - MERIDEN, CT - 06450

Client : VFL

Lab No.: 108-101-13

PO No. :VFL C2260 Date :Oct. 17, 1988

Page . 7

(Sample Matrix= Solid)

#### 602/8020 EPA METHOD

	MDL	26+	27+	28	29
Benzene	50_	108	BDL	BDL	BDL_
Toluene	50_	BDL	114.0	BDL	BDL
Ethyl Benzene	50_	BDL	68.0	BDL	BDL
P & M Xylene	50_	BDL	237.0	63.0	69.0
O- Xylene	50_	BDL	696.0	BDL	207.0
1,4-Dichlorobenzene	50_	BDL	BDL	9DL	BDL_
1,3-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
1,2-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
Methyl Ethyl Ketone	100	BDL	BDL	BDL	BDL_
Methyl Iso Butyl Ketone	100	BDL	BDL	BDL	BDL_
	<u></u>	i ! !			

+ Unknown Hydrocarbon mix present

MDL = Minimum Detectable Level

BDL = Below Detection Level

ALL UNITS IN PPB UNLESS NOTED.

Jerm, Hedvalue by state - 100ppm



STEPHEN J. FRANCO Laboratory Director PHONE - 203/634-3731

140 GRACEY AVENUE .. MERIDEN, CT .. 06450

Client : VFL

Lab No.: 108-101-13

Job. No: VFL C2260

Date : Oct. 17, 1988

Page .8

EPA METHOD 602/8020

	MDL	30		•	
Benzene	50_	BDL	***************************************		
Toluene	50_	BDI			
Ethyl Benzene	50_	BDL_			
P & M Xylenc	50_	BDL			
O- Xylene	50_	BDL			
1,4-Dichlorobenzene	50_	BDL_		! ! 	
1,3-Dichlorobenzene	50_	BDL		 	
1,2-Dichlorobenzene	50_	BDL		!	!! !!
Methyl Ethyl Ketone	100	BDL	i i i	† 	i
Methyl Iso Butyl Ketone	100	BDL	1	1	i 1 1
	i	i 	i ! 	i ! !	!I

MDL = Minimum Detectable Level

BDL = Below Detection Level

(Sample Matrix = Solid)

ALL UNITS IN PPB UNLESS NOTED.



STEPHEN J. FRANCO
Laboratory Director
PHONE = 203/634-3731

140 GRACEY AVENUE - MERIDEN, CT .. 06450

Client :VFL Technology Corp.
Lab No.:128-278-19

PO No. : C2260 Date :12-27-88

BPA METHOD 601/8010	MDL.	AQE;	ลา ;	, ar	aa .
Chloromethane	50 ;	BDL	BDL_	BDL	BDL_
Bromomethane	50	BDL_	BDL_	BDL_	BDL_
Vinylchloride	50_;	BDL_	BDL_;	BDL ;	BDL_
Chloroethane	50_	BDL	BDL	BDL;	BDL_
	25_	BDL_	BDL	BDL_	BDL_
.Trichlorofluoromethane	25_	BDL	BDL	BDL	BDL_
11-Dichloroethylene	25_	BDL	BDL_!	BDL	BDL;
11-Dichloroethane	25_	BDL	BDL_;	BDL_	BDL
T12-Diohloroethylene	25_	BDL_;	BDL	BDL;	BDL;
- Chloroform	25_	BDL_	BDL_;	BDL!	BDL_
12-Dichloroethane	25_	BDL_	BDL!	BDL;	BDL!
	25_	39.0	BDL_;	BDL	BDL
Carbontetrachloride	25_	BDL_	BDL_;	BDL	BDL
Bromodichloromethane	25_	BDL_	BDL_;	BDL_:	BDL
12-Dichloropropane	25_	BDL	BDL;	BDT_	BDL
	25_	BDL	BDL_	BDL	BDL
	25_	34.0;	BDL	BDL!	BDL
Dibromochloromethane	25_	BDL;	BDL_	BDL	BDL_
112-Trichloroethane	25_	BDL;	BDL;	BDL;	BDL
Cis13-Dichloropropylene	25_	BDL	BDL	BDL!	BDL -
2-Chlorethylvinylether	25_	BDL	BDL	BDL	BDL
Bromoform	25_	BDL_	BDL_	BDL ;	BDL_;
1122-Tetrachloroethane	25_	BDL_	BDL;	BDL;	BDL_;
Tetrachloroethylene	25_	125.0	76.0	BDL	65.0
Chlorobenzene	25_	BDL_	BDL	BDL	BDL
Benzyl Chloride	150_	BDL	BDL	BDL	BDL
Bis(2-chlorethoxy)methane_	50_	BDL_	BDL	BDL	BDL
Bis(2-ohloroisopropyl)ethe	150	BDL	BDL	BDL	BDL
Bromobensene	25	BDL	BDL	BDL	BDL
Chloracetaldehyde	150_	BDL	BDL	BDL	BDL
1-Chlorohexane	25	BDL	BDL	BDL	BDL
Chloromethyl methyl ether_	:50_	BDL	BDL	BDL	BDL
Chlorotoluene	25	BDL	BDL	BDL	BDL
Dibromomethane	25_	BDL_	BDL	BDL	BDL
12-Dichlorobenzene	25_	BDL	BDL_	266.0	1,421.0
13-Dichlorobenzene	25_	BDL_	BDL	BDL_	BDL
14-Dichlorobenzene	25_	BDL_	BDL_	BDL	66.0
'Trichloropropane	25_	BDL_	BDL	BDL	BDL

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RPA METHOD 601/8010	MDL	34	(35)	36	37
	; ;	;		!	;
Chloromethane	;50_;	BDL_	BDL_	BDL_	BDL;
Bromomethane	:50_;	BDL_;	BDL	BDL_	BDL_
Vinylchloride	;50_;	BDL_	BDL_	BDL_	BDL_
Chloroethane	:50_:	BDL;	BDL	BDL;	BDL
Methylenechloride	:25_;	BDL	BDL!	BDL	BDL_
Trichlorofluoromethane	; 25_;	BDL_	BDL_	BDL	BDL
11-Dichloroethylene	25_!	BDL_	BDL_	BDL;	BDL;
11-Dichloroethane	125_;	BDL_:	BDL	BDL	BDL;
T12-Dichloroethylene	25_	BDL _	BDL	BDL	BDL_
Chloroform	; 25_;	BDL_	BDL	BDL	BDL
12-Dichloroethane	125_	BDL	BDL	27.6	
111-Trichloroethane	125_	BDL	BDL_	BDL_	BDL_
Carbontetrachloride	25_	BDL	BDL	BDL	BDL
Bromodichloromethane	25_	BDL	BDL	BDL_	BDL
12-Dichloropropane	125_;	BDL	BDL	BDL_	BDL_
T13-Dichloropropylene	25_	BDL_	BDL_	BDL_	BDL
Trichlorpethylene Dibromochloromethane	2.5	RNI.	nnr	ותם	ותם
		BDL_	BDL	BDL_	BDL
	25_	BDL_	BDL	BDL_	BDL_
Cis13-Dichloropropylene	25_	BDL	BDL	BDL_	BDL
2-Chlorethylvinylether	125_	BDL	BDL	BDL_	BDL_
	25	BDL	BDL	BDL_	BDL_
1122-Tetrachloroethane		BDL	BDL	BDL	BDL
Tetrachloroethylene	: 25_	43.0	BDL_	26.0	47.0
Chlorobenzene	: 25	BDL_	BDL_	BDL	BDL
Benzyl Chloride	;50	BDL_	BDL	BDL	BDL
Bis(2-chlorethoxy)methane_	:50_	BDL_	BDL	BDL	BDL
Bis(2-chloroisopropyl)ethe	:50	BDL	BDL	BDL	BDL
Bromobenzene	25	BDL	BDL	BDL	BDL
Chloracetaldehyde	50_	BDL	BDL	BDL	BDL
1-Chlorohexane	125	BDL_	BDL	BDL	BDL
Chloromethyl methyl ether_	;50	BDL	BDL	BDL	BDL
Chlorotoluene	: 25	BDL	BDL	BDL	BDL
Dibromomethane	25	BDL	BDL	BDL	BDL
12-Dichlorobenzene		164.0	·	BDL	37.0
13-Dichlorobenzene	25	BDL		BDL	BDL
14-Dichlorobenzene	25	BDL	BDL	BDL	BDL
Trichloropropane	25			BDL	BDL

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EPA METHOD 601/8010	MDL	38	(39)	40	41
Chloromethane	50	BDL	BDL	BDL	BDL
Bromomethane		BDL	BDL	BDL	BDL
	50	BDL	BDL	BDL	BDL ;
VIII TEM TOT THE	50	BDL	BDL	BDL	BDL
	25_	BDL	BDL	BDL	25.0
Trichlorofluoromethane		BDL	BDL	BDL	BDL_
Trichlorolluoromethane	25	BDL	BDL	BDL	BDL_
II-DICHIOLOGGIN ZONG	25	BDL	BDL	BDL	71.0
II-DICHTOLOG CHICATO	25	213.0	BDL	BDL	1,027.0;
	05	DDL_	lag	nni	nn1
	25	29.0	BDL	BDL	76.0
111-Trichloroethane		BDL	BDL	BDL_	BDL_
Carbontetrachloride	25	BDL	BDL;	BDL_	BDL_
Bromodichloromethane	25	BDL	BDL	BDL	BDL
12-Dichloropropane	25	BDL	BDL_	BDL_	BDL_
T13-Dichloropropylene		BDL	BDL_	BDL_	BDL_
Trichloroethylene	25	175.0	BDL	BDL_	719.0
Dibromochloromethane	25_	BDL	BDL	BDL	BDL_
112-Trichloroethane	25	BDL	BDL	BDL	BDL
Cis13-Dichloropropylene	25	BDL	BDL	BDL_	BDL_:
2-Chlorethylvinylether	25	BDL	BDL	BDL	BDL_
Bromoform	25	BDL	BDL	BDL	BDL_
1122-Tetrachloroethane	25	BDL	BDL	BDL	BDL_
Tetrachloroethylene	25	234.0	BDL	BDL_	355.0
Chlorobenzene	25	BDL_	BDL_	BDL_	BDL
Benzyl Chloride	;50	BDL	BDL_	:BDL	BDL
Bis(2-chlorethoxy)methane	50	BDL	BDL	BDL	BDL_
Bis(2-chloroisopropyl)ethe	50	BDL	BDL	BDL_	BDL
Bromobenzene	25	BDL	BDL_	BDL_	BDL_
Chloracetaldehyde	50	BDL	BDL	BDL_	BDL_
1-Chlorohexane	25	BDL	BDL	BDL_	BDL_
Chloromethyl methyl ether	50	BDL	BDL	BDL_	BDL_
Chlorotoluene	25	BDL	BDL	BDL	BDL_
Dibromomethane	:25	BDL	BDL	BDL	BDL
12-Dichlorobenzene	25	BDL	BDL	BDL	50.0
13-Dichlorobenzene	25		BDL_	BDL	BDL
14-Dichlorobenzene			BDL	BDL	BDL_
Trichloropropane	_		BDL	BDL	BDL

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EPA METHOD 601/8010	MDL	42	43	44).	45
Chloromethane	50	BDL	BDL	BDL_	BDL_
Bromomethane	50	BDL	BDL	BDL_	BDL;
Vinylchloride	50	BDL	BDL_	BDL_	BDL
Chloroethane	50	BDL	BDL	BDL_	BDL_;
Methylenechloride	25	BDL	BDL	BDL_	BDL_
Trichlorofluoromethane	25	BDL	BDL	BDL	BDL;
11-Dichloroethylene	25	BDL	BDL	BDL	BDL
11-Dichloroethane	25	BDL_	BDL_;	BDL_	BDL;
T12-Dichloroethylene	25	BDL	BDL	BDL	BDL
Chloroform	25	BDL_	BDL	BDL;	BDL_
12-Dichloroethane	25_	BDL_	BDL_	BDL;	BDT
111-Trichloroethane	25_	BDL_	BDL_	BDL	BDL_
Carbontetrachloride	125_	BDL_	BDL;	BDL	BDL
Bromodichloromethane	25_	BDL	BDL_	BDL	BDL_
12-Dichloropropane	25_	BDL	BDL;	BDL	BDL_
T13-Dichloropropylene	125_	BDL	BDL_	BDL	BDL_
Trichloroethylene	25_	BDL_	BDL;	BDL	BDL
Dibromochloromethane	; 25	BDL	BDL	BDL	BDL
112-Trichloroethane	25	BDL	BDL	BDL	BDL_
Cis13-Dichloropropylene	25	BDL	BDL	BDL	BDL
2-Chlorethylvinylether	25	BDL	BDL	BDL	BDL_
Bromoform	25	BDL	BDL	BDL	BDL_
1122-Tetrachloroethane	25	BDL	BDL	BDL	BDL
Tetrachloroethylene	25	30.0	172.0	BDL	BDL
Chlorobenzene	25	BDL	BDL	BDL	BDL_
Benzyl Chloride	50	BDL	BDL	BDL	BDL
Bis(2-chlorethoxy)methane	_ ` _	BDL	BDL	BDL	BDL
Pin(?=ohlomoidoppoppl)atha		nni	BDI.	RDI	Rnt
Bromobenzene	25	BDL	BDL	BDL	BDL_
Chloracetaldehyde	50	BDL	BDL	BDL	BDL
1-Chlorohexane	25	BDL	BDL	BDL	BDL
Chloromethyl methyl ether	50	BDL	BDL	BDL	BDL
Chlorotoluene		BDL	BDL	BDL	BDL
Dibromomethane	25	BDL	BDL	BDL	BDL
12-Dichlorobenzene	·	BDL	BDL	BDL	BDL
13-Dichlorobenzene		BDL	BDL	BDL	BDL
14-Dichlorobenzene	25	BDL	BDL	BDL	BDL
Trichloropropane	25		BDL	BDL_	BDL_

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EPA METHOD 601/8010	MDL	46	47	48	:
Chlonomethane	50_	RNI	BDI.	BDI.	i
	50	BDL	BDL_	BDL_	j
Vinylchloride		BDL	BDL_;	BDL	!
Chloroethane	50	BDL	BDL	BDL;	!
Methylenechloride	25_	BDL	BDL_!	44.0	;
Trichlorofluoromethane		BDL_	BDL_	BDL_	
11-Dichloroethylene	:25_	BDL	BDL_:	BDL_	
11-Dichloroethane	; 25	BDL	BDL!	BDL_	
T12-Dichloroethylene	125_	BDL;	BDL_	50.0;	
Chloroform	25_	BDL_	BDL!	BDL_	
12-Dichloroethane	; 25	BDL_	BDL!	117.0	
111-Trichloroethane	:25_	BDL	BDL	BDL	
Carbontetrachloride	125_	;BDL;	BDL_	BDL	1 ,
Bromodichloromethane	: 25_	:BDL	BDL	BDL;	
12-Dichloropropane	: 25_	;BDL;	BDL	BDL!	
T13-Dichloropropylene	: 25_	BDL	BDL	BDL!	
Trichloroethylene	125_	BDL	BDL	137.0;	
Dibromochloromethane	25_	BDL	BDL_	BDL	
112-Trichloroethane	25_	BDL	BDL	BDL_!	
Cis13-Dichloropropylene	25	BDL	BDL_	BDL	1
2-Chlorethylvinylether	25	BDL	BDL	BDL_	
Bromoform	25	BDL	BDL	BDL_	!
1122-Tetrachloroethane	; 25	BDL	BDL_	BDL_	
Tetrachloroethylene	125	BDL	87.0	111,0	
Chlorobenzene	25	BDL	BDL	BDL	
Benzyl Chloride	50	BDL	BDL	BDL	
Bis(2-chlorethoxy)methane	50	BDL	BDL	BDL	
Bis(2-chloroisopropyl)ethe	50	BDL	BDL	BDL	
Bromobenzene			BDL	BDL	
Chloracetaldehyde	:50~		BDL	BDL	
1-Chlorohexane	25	BDL	BDL	BDL	
Chloromethyl methyl ether	50	BDL	BDL	BDL	1
Chlorotoluene	25	BDL	BDL	BDL	
Dibromomethane-		BDL	BDL	BDL	
12-Dichlorobenzene	25		BDL	BDL	
13-Dichlorobenzene	25	BDL	BDL	BDL_	
14-Dichlorobenzene	25	BDL	BDL	BDL	!
Trichloropropane	[   25	BDL	BDL	BDL	1

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# **EPA METHOD** 602/8020

	WDL	30A	31	32	· 33
Benzene	50_	BDL	BDL	BDL_	BDL
Toluene	50_	74.0	64.0	BDL	63.0
E+hrl Dongono	:  50_	RNI.	ากส.	ומת	BDL
P & M Xylene	50_	153.0	86.0	BDL	135.0
O- Xylene	50_	132.0	61.0	58.0	301.0
1,4-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
1,3-Dichlorobenzene	50_	BDL	BDL	BDL	BDL_
1,2-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
Methyl Ethyl Ketone	100	BDL_	BDL	BDL	BDL
Methyl Iso Butyl Ketone	100	;BDL	BDL	BDL	BDL_
		! !	1	† † !	1

MDL = Minimum Detectable Level '
ALL UNITS IN PPB UNLESS NOTED. '

BDL = Below Detection Level

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# **BPA METHOD** 602/8020

	MDL	34	35	36	37
Benzene	50_	BDL	BDL	BDL_	BDL
Toluene	50_	BDL	BDL	BDL	BDL
Ethyl Benzene	50_	BDL	BDL	BDL	BDL
P & M Xylene	50_	BDL_	BDL	BDL	BDL
O- Xylene	50_	119.0	BDL	BDL_	81.0
1,4-Dichlorobenzene	50	BDL	BDL	BDL,	BDL_
1,3-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
1,2-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
Methyl Ethyl Ketone	100	BDL	BDL	BDL_	BDL
Methyl Iso Butyl Ketone	100	BDL_	: :BDL	BDL_	BDL
,	!		1	!	1

MDL = Minimum Detectable Level.

BDL = Below Detection Level

ALL UNITS IN PPB UNLESS NOTED.

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## **RPA METHOD** 602/8020

	MDL	38	39	40	41
Benzene	50_	BDL	BDL	BDL	BDL
Toluene	50_	BDL	BDL	BDL	BDL
Ethyl Benzene	50_	BDL	BDL	BDL	BDL_
P & M Xylene	50_	BDL	BDL	BDL	BDL
O- Xylene	50_	BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	50_	BDL	BDL_	BDL	BDL
1,3-Dichlorobenzene	50_	BDL	BDL	BDL	BDL_
1,2-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
Mathyl Ethyl Kotone	100	nor	ppr	bdl	คกฅ
Methyl Iso Butyl Ketone	100	BDL	BDL_	BDL	BDL
	i !		! !		

MDL = Minimum Detectable Level .

ALL UNITS IN PPB UNLESS NOTED.

BDL = Below Detection Level

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## BPA METHOD 602/8020

	WDL	42	43	44	45
Benzene	50_	BDL	BDL	BDL	BDL
Toluene	50_	BDL	BDL	BDL	BDL
Ethyl Benzene	50_	BDL	BDL	BDL	BDL
P & M Xylene	50_	BDL	BDL	BDL	BDL
O- Xylene	50_	BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
1,3-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
1,2-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
Methyl Ethyl Ketone	100	BDL	BDL	BDL	BDL
Methyl Iso Butyl Ketone	100	BDL	BDL	BDL	BDL
	İ	i !	i ! !	i ! !	

MDL = Minimum Detectable Level BDL = Below Detection Level ALL UNITS IN PPB UNLESS NOTED. '

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# **EPA METHOD 602/8020**

	MDL	46	47	48	, ,
Benzene	50_	BDL	BDL	BDL	
Toluene	50_	BDL	BDL	BDL	
Ethyl Benzene	50_	BDL	BDL	BDL	
P & M Xylene	50_	BDL	BDL	BDL	
O- Xylene	50_	BDL	BDL	BDL	
1,4-Dichlorobenzene	50_	BDL	BDL	BDL	
1,3-Dichlorobenzene	50_	BDL	BDL	BDL	
1,2-Dichlorobenzene	50_	BDL	BDL	BDL	
Methyl Ethyl Ketone	100	BDL	BDL	BDL	
Methyl Iso Butyl Ketone	100	BDL	BDL	BDL_	
	i !	-			

MDL = Minimum Detectable Level ALL UNITS IN PPB UNLESS NOTED.

BDL = Below Detection Level

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RESULTS OF ANALYSIS	30A	31	32	33
. , , , , ,	ND40 05	! אוז כס. סט	ND<0.05	_ND<0.05_
Arsenic-mg/L	ND (0.00_	ל מאר יי	ND<0.5	_ND<0.5
Barium-mg/L	ND<0.01	ND<0.01	ND<0.01	ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.002   ND<0.001   ND<0.001   ND<0.005   ND<
Cadmium-mg/LChromium, local-mg/L	110 (0.08	ND(0.06_	[_MD(0 05_	ַי_אווארווּהַהַּהַ.
I and ma/I	ND<0.05_	ND<0.05_	_NDK0.05_	ND<0.05
Lead-mg/LMercury-mg/L	ND<0.002	_ND<0.002	_ND<0.003	_ND<0.002
Selenium-mg/L	_ND<0.01_	_ND<0.01_	_ND(U.UI_	י אסגטיטים י
Silver-mg/L	_ND<0.01_	-ND<0.01-	: _ND(0.01	בי אחלטיסיבי
Nickel-mg/L	_ND<0.05_	.; _ND<0.05_	.; _ND(0.05	-1-ND(0.05-1
Chromium-Hex-mg/L	_ND<0.05_	_ND<0.05_		ND<0.05
Cyanide-Amenable-mg/L	_ND<0.05_	', <b>_</b> ИД<0.05_	-; _WDKO.OD	_ND<0.05_
	34	35	36	37
	! ND<0.05	! ND<0.05	ND<0.05	_ _ND<0.05_
Arsenic-mg/L	ל.סגמא	ND<0.5	_ND<0.5_	ND<0.5
Barium-mg/L	ND<0.01	ND<0.01	ND<0.01	- ND<0.01 - ND<0.05 - ND<0.05
Cadmium-mg/LChromium, Total-mg/L	ND<0.05	ND<0.05	ND<0.05	_ _ND<0.05_
Chromium, total-ma/n	ND<0.05	ND(0.05	0.05מא_	_ _ND<0.05_
	ј አከረበ በበነ	2! NDCU.OU	Z: ND(U.UV	SI MDIOIGORI
Mercury-mg/L	1 ND (0.01	! ND(0.01	I ND CO. UI	' ' ' WD (O • O I _ !
Selenium-mg/L	I MDZO O1	1 ND(0 01	. ' ND (O. O.	: ND(O'GT!
Silver-mg/LNickel-mg/L	ND<0.05	ND<0.05	_;_ND<0.05	_1_00.05_
Chromium-Hex-mg/L	ND<0.05	ND<0.05	_  ND<0.05	ND<0.05_
Cyanide-Amenable-mg/L	ND<0.05	ND<0.05	_ND<0.08	[ ND<0.05_
Cyanitie-Americana				
	38	39	40	41
	1 3000 05	י אחצם. מה	! ND<0.0!	5_ _ND<0.05_
Arsenic-mg/L	ND<0.00	ND CO. 5	ND<0.5	ND<0.5
Barium-mg/L	-1 ND(0.01	ND<0.01	ND<0.0	1_ ND<0.01_
Cadmium-mg/L	_,_ND<0.01	ND(0.05	ND<0.0	5 ND (0.05
Chromium, Total-mg/L	I ND/O OF	. ' ND<0.05	. ! ND<0.0	5 ! ND<0.05_;
Lead-mg/L	ט , מאמאי	12! ND<0.00	12: ND<0.0	02; ND(U.UU2;
Mercury-mg/L	. אחגט.01	. ! ND<0.01	. , ND<0.0	T"!"ND(A.AT"!
Selenium-mg/L	1 אמע י	! ND<0.01	סיס>מא ו	1"; "WD<0.01";
Silver-mg/L	יים מאר ביי	ND<0.0	5 ND (0.0	5_ _ND<0.05_
Nickel-mg/L	יים מאריים או	ND(0.0	5 ND (0.0	5   ND<0.05   5   ND<0.05
Chromium-Hex-mg/L	יס. סיס מאר י	מא ס.ס	ND(0.0	5 ND (0.05
Cyanide-Amenable-mg/L				unge f unte

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RESULTS OF ANALYSIS	42	43	44	45
		<b>1</b> 1	_	
Arsenio-mg/L	ND<0.05_	_ND<0.05_	_ND<0.05_	_ND<0.05_
	ND(0.5	סאמאי וע י	! ND <u.b< td=""><td>ן ביטיעאן</td></u.b<>	ן ביטיעאן
Darram may 2	NDZO 01	! ND<0_01	. ND<0.01	ND<0.01_;
m-h-1 me/1	ND(0.05	! ( 0.08)	ND<0.05	י"מחיחים"!
On our day	ND/O OF	1 NOCO . 115	! ND<0.05	! ND<0.05 :
11	. 200 - 00 ממא	! ND<0.002	! ND<0.002	;_ND<0.002;
The court is the c	מאתע"י ו	! אסגס.01	! ND<0.01	_ND<0.01_;
	. אחלט. 01	! ND<0.01	ND<0.01_	ND<0.01_;
	. אסלט 02	! ND<0.05	! ND<0.05	ND<0.05_;
The second of th	ND<0.05	! ND<0.05	! ND<0.05	ND<0.06_;
Cyanide-Amenable-mg/L	ND<0.05	ND<0.05	_ND<0.05_	_;_ND<0.05_;
Cyanius Americord may o	-			
	46	47	48	
Arsenic-mg/L	! ND<0.05	ND<0.05	_ND<0.05_	_
Donium-md/L	_ND<0.05_   ND<0.5	ND<0.05_   ND<0.5_	_ND<0.05_	_
Barium-mg/L Cadmium-mg/L	_ND<0.05_   _ND<0.5   ND<0.01	ND<0.05   ND<0.5   ND<0.01	ND<0.05   ND<0.5   ND<0.01	
Barium-mg/L Cadmium-mg/L	_ND<0.05_   _ND<0.5_   _ND<0.01_	ND<0.05   ND<0.5   ND<0.01   ND<0.05	ND<0.05   ND<0.5   ND<0.01   ND<0.05	
Barium-mg/LCadmium-mg/LChromium, Total-mg/L	_ND<0.05_   _ND<0.5_   _ND<0.01_   _ND<0.05_   _ND<0.05	ND<0.05   ND<0.5   ND<0.01   ND<0.05   ND<0.05	ND<0.05   ND<0.5   ND<0.01   ND<0.05   ND<0.05	-
Barium-mg/L	ND<0.05   ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.005	ND<0.05   ND<0.5   ND<0.01   ND<0.05   ND<0.05	ND<0.05   ND<0.5   ND<0.01   ND<0.05   ND<0.05	-
Barium-mg/L	_ND<0.05_   _ND<0.5_   _ND<0.01_   _ND<0.05_   _ND<0.05_   _ND<0.001	ND<0.05   ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.002	ND<0.05   ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.00	2
Barium-mg/L	ND<0.05   ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.001   ND<0.01	ND<0.05   ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.002   ND<0.01	ND<0.05   ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.001   ND<0.01	2
Barium-mg/L	_ND<0.05   _ND<0.05   _ND<0.01   _ND<0.05   _ND<0.05   _ND<0.002   _ND<0.001   _ND<0.01	ND<0.05   ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.002   ND<0.01   ND<0.01	ND<0.05   ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.001   ND<0.01   ND<0.01	2
Barium-mg/L	_ND<0.05   _ND<0.5   _ND<0.01   _ND<0.05   _ND<0.05   _ND<0.001   _ND<0.01   _ND<0.05   _ND<0.05	ND<0.05   ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.01   ND<0.01   ND<0.05   ND<0.05	ND<0.05   ND<0.05   ND<0.01   ND<0.05   ND<0.05   ND<0.01   ND<0.01   ND<0.05   ND<0.05	2

# AS BUILT DRAWINGS

# A M Engineering, P.C.

**Engineers & Surveyors** 

959 Main Street Stratford, Connecticut 06497 Tel: (203) 375-7063 Fax: (203) 375-7063

July 22, 1992

Mr. Dennis Babcock Textron Lycoming 550 Main Street Stratford, CT 06497-2452

Re: Lagoon Closure Stratford Facility Job #5231

Dear Mr. Babcock,

Please find enclosed copies of the "As-Built" Survey of the Surface Impoundment Closure at your facility, dated Oct. 6, 1988 and revised as of July 15, 1992. In addition, please find a second drawing entitled, "Cross Section As-Built Survey Surface Impoundment Closure" dated July 15, 1992. These drawings were either prepared or updated at your request to assist you in addressing Items 3, 4, 5, 10 and 11 outlined in the State of Connecticut, Department of Environmental Protection letter dated May 12, 1992.

The plan view has been updated to include the following:

- Additional physical features adjacent to the closure areas to give a better overall picture of the site.
- The existing storm drainge system and tidal drainage ditch adjacent to the closures.
- 3. Indication of surface flow direction.
- 4. "As-Built" cross section reference indicators.
- 5. Delineation of the area of drainage swales near the perimeter of closures.

Mr. Dennis Babcock Textron Lycoming 550 Main Street Stratford, Ct. 06497-2452

July 22, 1992 - 2 -

Re: Lagoon Closure Stratford Facility Job #5231

The cross section drawing was prepared utilizing data from the final as-built plan and from previous field locations of the plastic cover (ie: woven geotextile fabric). The cross sections also depict the limit of excavation as confirmed by VFL Technology Corporation in their letter to you dated June 18, 1992.

During our recent field work, it was noted that the areas of 1-1/2" washed stone and 3/4" trap rock that was used to protect the surface runoff swales from erosion adjacent to the closures, are now nearly covered with a growth of grass-type vegetation which is being maintained by cutting at regular intervals. There was no evidence of erosion in these areas and, therefore, the swales appear to be functioning properly. We also noted that when the as-built cross sections are compared to the design drawing, the elevations substantially agree.

If you have any questions concerning the enclosed or require additional information, please give me a call.

Very truly yours,

A M ENGINEERING, P.C.

Arthur W. Muller, P.E., L.S.

AWM:sm3 Encls.

#### AS BUILT DRAWINGS

# AM Engineering, P.C.

**Engineers & Surveyors** 

959 Main Street Stratford, Connecticut 06497 Tel: (203) 375-7063 Fax: (203) 375-7063

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If you have any questions concerning the enclosed or require additional information, please give me a call.

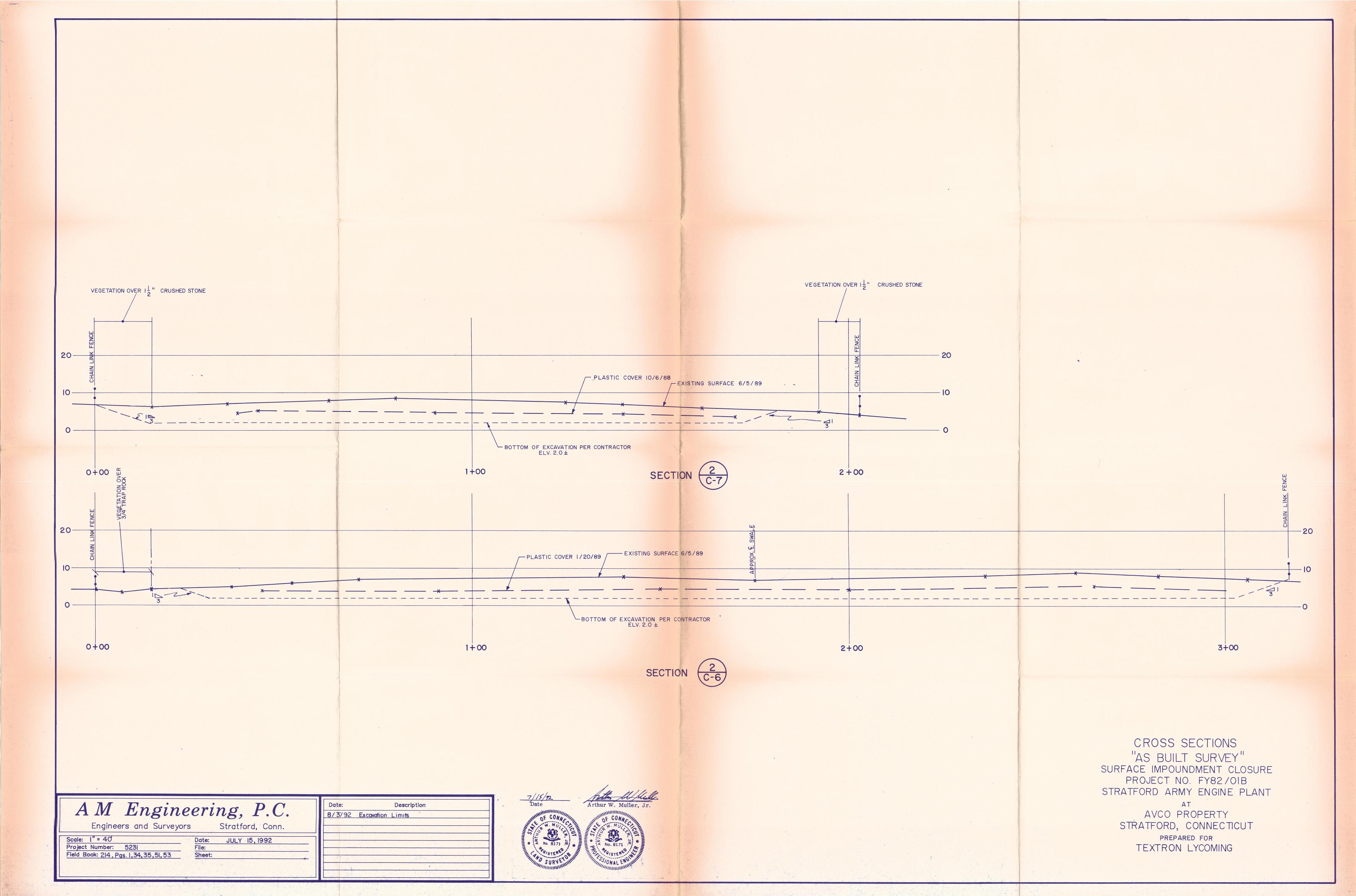
Very truly yours,

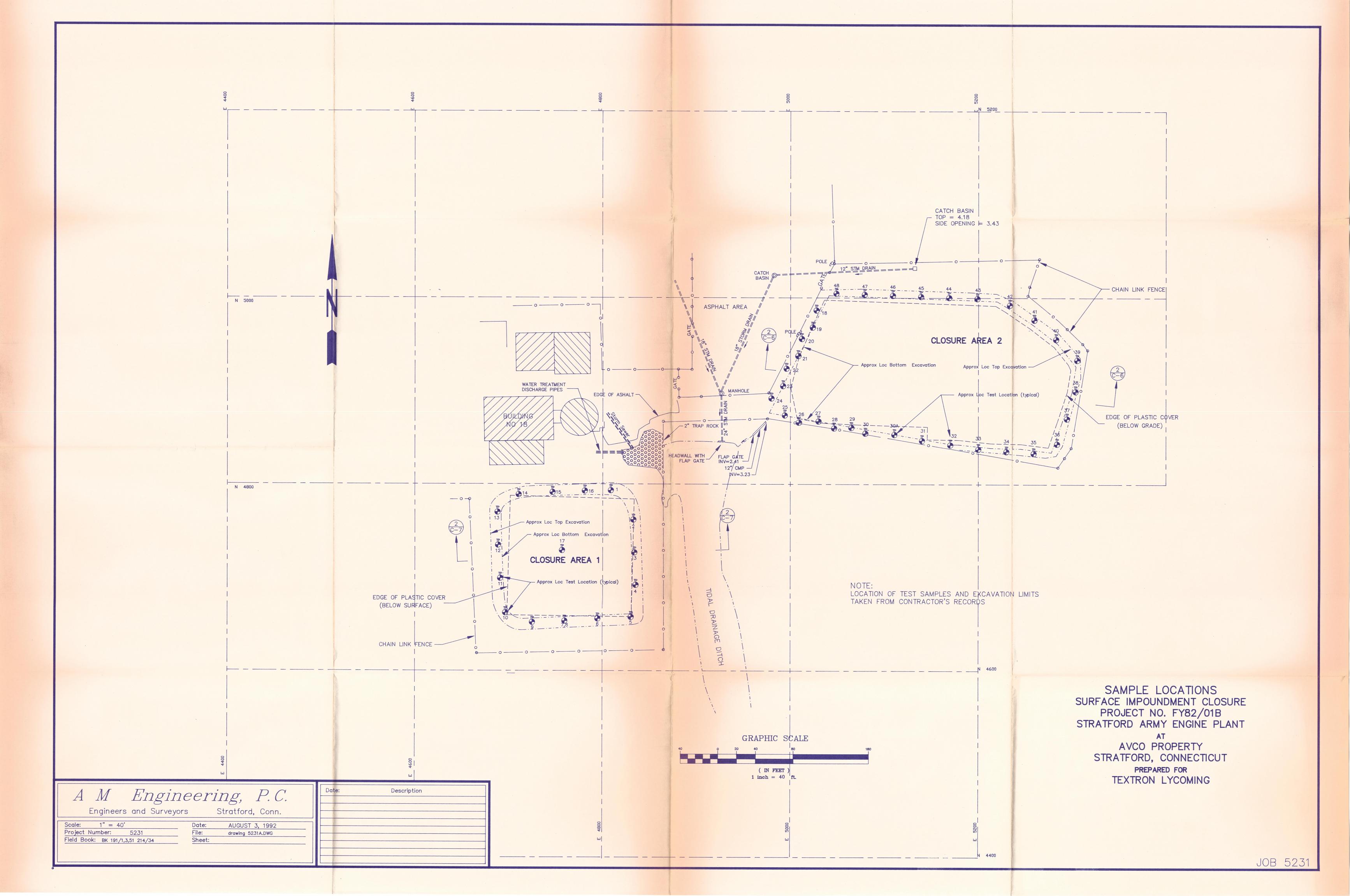
A M ENGINEERING, P.C.

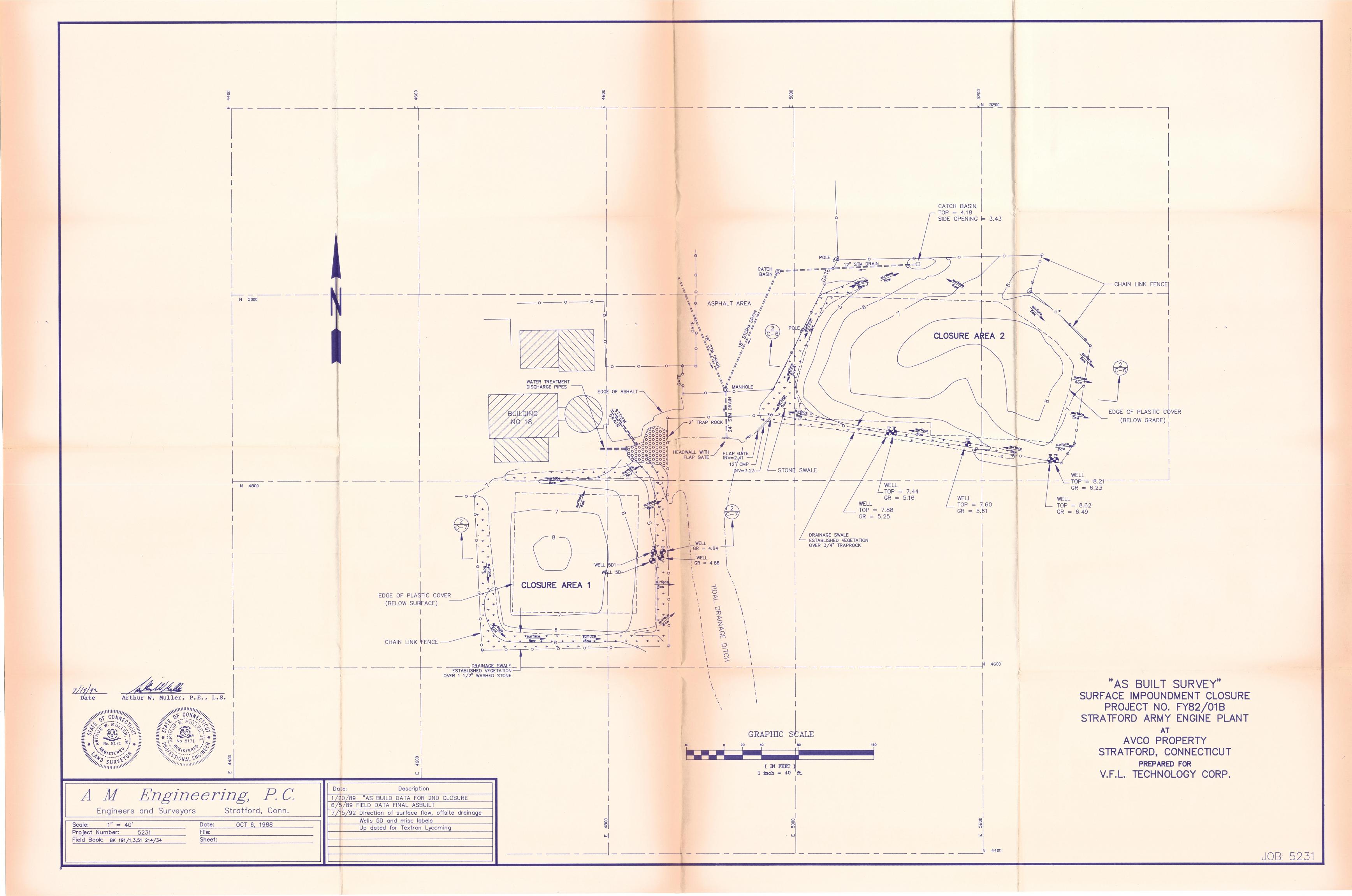
Arthur W. Muller, P.E., L.S.

AWM: sm3 Encls.

# CLOSURE PLAN DRAWINGS







# SOIL VERIFICATION TEST RESULTS

## SOIL VERIFICATION TEST RESULTS

The sample locations for the soil verification test results are shown on the As-Built Drawings. Samples 1 - 17 were taken from Closure Area 1. Samples 18 - 30 and 30A - 48 were taken from Closure Area 2.

# TEXTRON Lycoming

Stratford Division
Textron Lycoming /
Subsidiary of Textron Inc.

550 Main Street Stratford, CT 06497 203/385-2000

13 September 1988

Mr. G. Dews Ct. D.E.P. Hazardous Matls. Mgmt. 165 Capitol Avenue Hartford, CT 06106

Dear Mr. G. Dews:

Enclosed you will find a copy of soil analyses on samples taken in the equalization lagoon in our Surface Impoundment Closure.

The schedule plans call for the Cap to be ordered in the next week to ten days. In this regard I am also submitting a copy of the addendum which the Army consultant, Metcalf & Eddy had sent to us, but did not forward to you for review. The closure contractor for the surface impoundments would like to complete work on the equalization lagoon before the sludge impoundments completion.

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

Very truly yours.

TEXTRON LICOMING

John Fleming, Survi. Environmental Compliance

Enclosure

September 12, 1988

VFL 550 Main St. Stratford CT 06497

RE: LAB. No.88-279-17 P.O. No.VFL-C2260 Inv. No.4776

### Gentelmen:

The attached report are results of analysis on the above referenced Purchase Order.

The samples were received on August 25, 1988.

The method of analysis was by Gas Chromatography using FID, PID, and/or HECD techniques.

All results are reported in parts per billion unless noted on the report.

Please contact us if you have any questions.

Very truly yours,

Stephen J. Franco Laboratory Director

SJF:hc

connecticut testing laboratories inc.

STEPHEN J. FRANCO Laboratory Direction PHONE 203/634437777

140 GRACEY AVENUE MERIDEN, CT 184211

October 18, 1988

VFL C/O Butterworth Construction 45 Mayfair Pl. Stratford, Ct. 06075

RE: LAB. No.108-101-13 P.O. No.VFL C22-60 Inv. No.5188

#### Gentlemen:

The attached report are results of analysis on the above referenced Purchase Order.

The samples were received on October 11, 1988.

The method of analysis was by Gas Chromatography using FID, PID, and/or HECD techniques.

All results are reported in parts per billion unless noted on the report.

Please contact us if you have any questions.

Very truly yours,

Stephen J. Franco Laboratory Director

SJF:he



STEPHEN J. FRANCO
Laboratory Director
PHONE - 203/634-3731

140 GRACEY AVENUE - MERIDEN, CT - 106450

September 9, 1988

VFL 550 Main Street Stratford, Ct. 06497

RE Lab. #88-274-17 PO/Job #VFL-C2260 Invoice #4763

#### Gentlemen:

The following is a report of analysis on samples received: August 25, 1988.

RESULTS OF ANALYSIS	1	2	3	4
	1	! !	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	;
	_ND<0.05_	_ND<0.05_	_ND(0.05_	_ND<0.05_
Barium-mg/l	_ND<0.5	_ND<0.5	_ND<0.5	_ND<0.5
· · · · · · · · · · · · · · · · · · ·	_ND<0.01_	_ND<0.01_	_ND<0.01_	0.03
Chromium, Total-mg/l	_ND<0.05_	_ND<0.05_	_ND<0.05_	_ND<0.05_
Lead-mg/1	_ND<0.05_	_ND<0.05_	_ND<0.05_	_ND<0.05_
Mercury-mg/l	;_ND<0.02_	_ND<0.02_	_ND<0.02_	_ND<0.02_
Selenium-mg/l	_ND<0.01_	_ND<0.01_	_ND<0.01_	_ND<0.01_
Silver-mg/l	_ND<0.01_	_ND<0.01_	_ND<0.01_	_ND<0.01_
Chromium, Hexmg/l	ND<0.05_	_ND<0.05_	_ND<0.05_	_ND<0.05_
Nickel-mg/l	0.19_	10.06_	_ND<0.05_	006_
Cyanide, Total-mg/l	ND<0.05	ND<0.05_	_ND<0.05_	_ND<0.05_
J	_			
	5	6	7	·8
Angenie mg/l	-		•	-
***************************************	ND<0.05_	_ND<0.05_	_ND<0.05_	_ND<0.05_
Barium-mg/l	_ND<0.05_   ND<0.5_	_ND<0.05_  _ND<0.5	_ND<0.05_  _ND<0.5	_ND<0.05_   _ND<0.5
Barium-mg/lCadmium-mg/l	_ND<0.05_ _ND<0.5	_ND<0.05_  _ND<0.5   0.01	_ND<0.05_  _ND<0.5   0.01	_ND<0.05_   _ND<0.5    0.02
Barium-mg/lCadmium-mg/lChromium,total-mg/l	_ND<0.05_  _ND<0.5_  0.02_   ND<0.05_	_ND<0.05_  _ND<0.5_  0.01_  _ND<0.05_	_ND<0.05_  _ND<0.5_  0.01_  0.11_	_ND<0.05_  _ND<0.5  0.02_  0.06_
Barium-mg/lCadmium-mg/lChromium,total-mg/l Lead-mg/l	_ND<0.05_   _ND<0.5_  0.02_   _ND<0.05_   ND<0.05	_ND<0.05_   ND<0.5_  0.01_   ND<0.05_   ND<0.05_	_ND<0.05_   _ND<0.5_  0.01_  0.11_   _ND<0.05_	_ND<0.05_ _ND<0.5 0.02_ 0.06_ _ND<0.05_
Barium-mg/lCadmium-mg/lChromium,total-mg/l Lead-mg/lMercury-mg/l	ND<0.05_   ND<0.5_   0.02_   ND<0.05_   ND<0.05_   ND<0.02	ND<0.05   ND<0.5   0.01   ND<0.05   ND<0.05   ND<0.02	_ND<0.05_  _ND<0.5_  0.01_  0.11_  _ND<0.05_  _ND<0.02_	_ND<0.05_ _ND<0.5_ 0.02_ 0.06_ _ND<0.05_ _ND<0.02_
Barium-mg/lCadmium-mg/lChromium,total-mg/l Lead-mg/lMercury-mg/lSelenium-mg/l	_ND<0.05_ _ND<0.5_ 0.02_ _ND<0.05_ _ND<0.05_ _ND<0.02_ _ND<0.01_	_ND<0.05   _ND<0.5  0.01   _ND<0.05   _ND<0.05   _ND<0.02   _ND<0.01	_ND<0.05_  _ND<0.5_  0.01_  0.11_  _ND<0.05_  _ND<0.02_  _ND<0.01_	_ND<0.05_ _ND<0.5_ 0.02_ 0.06_ _ND<0.05_ _ND<0.02_ _ND<0.01_
Barium-mg/lCadmium-mg/lChromium, total-mg/l	_ND<0.05_ _ND<0.5_ 0.02_ _ND<0.05_ _ND<0.05_ _ND<0.02_ _ND<0.01_ _ND<0.01_	_ND<0.05  _ND<0.5  0.01  _ND<0.05  _ND<0.05  _ND<0.02  _ND<0.01  _ND<0.01	_ND<0.05   ND<0.5  0.01  0.11   _ND<0.05   ND<0.02   ND<0.01   ND<0.01	_ND<0.05_ _ND<0.5_ 0.02_ 0.06_ _ND<0.05_ _ND<0.02_ _ND<0.01_ _ND<0.01_
Barium-mg/l Cadmium-mg/l Chromium, total-mg/l Lead-mg/l Mercury-mg/l Selenium-mg/l Silver-mg/l Chromium, Hexmg/l	_ND<0.05 _ND<0.5 0.02 ND<0.05 ND<0.05 ND<0.02 ND<0.01 ND<0.01 ND<0.05	_ND<0.05   _ND<0.5  0.01   _ND<0.05   _ND<0.05   _ND<0.02   _ND<0.01   _ND<0.01   _ND<0.05	_ND<0.05   ND<0.5  0.01  0.11   _ND<0.05   _ND<0.02   ND<0.01   _ND<0.01   _ND<0.05	_ND<0.05     ND<0.5    0.02    0.06     ND<0.05     ND<0.01     ND<0.01     ND<0.05
Barium-mg/lCadmium-mg/lChromium, total-mg/l	_ND<0.05 _ND<0.5 0.02 _ND<0.05 _ND<0.05 _ND<0.02 _ND<0.01 _ND<0.01 _ND<0.01 _ND<0.05 _ND<0.05	_ND<0.05   ND<0.5  0.01   _ND<0.05   ND<0.05   ND<0.02   ND<0.01   ND<0.01   ND<0.05   _ND<0.05	ND<0.05 ND<0.5 0.01 0.11 ND<0.05 ND<0.02 ND<0.01 ND<0.01 ND<0.01 ND<0.05 0.17	_ND<0.05_ _ND<0.5_ 0.02_ 0.06_ _ND<0.05_ _ND<0.02_ _ND<0.01_ _ND<0.01_

connecticut testing aboratories inc.

STEPHEN J. FRANCE Laboratory Die k

PHONE 203/634 -- "

140 GRACEY AVENUE MERIDEN, CT 1964 7

Client :VFL

Lab No.:88-274-17 PO No.:VFL-C2260

Date :Sept. 9, 1988

Page 2

RESULTS OF ANALYSIS	9	10	11	12
	VD 40 05	1 170 40 05	ND40 05	ND<0.05
Arsenic-mg/l	_ND<0.05_	_ND(0.05_	_70.0.03_	-40.0.0
Barium-mg/l	_ND<0.5	_ND<0.5	_ND(0.5	_ND<0.5
Cadmium-mg/l	0.01_	0.02	-ND<0.01-	_ND<0.01_
Chromium, total-mg/l	0.06_	0.12_	0.51_	0.16
Lead-mg/l	_ND<0.05_	_ND<0.05_	_ND<0.05_	_ND<0.05_
Mercury-mg/l	_ND<0.02_	_ND<0.02_	_ND<0.02_	ND<0.02_
Selenium-mg/l	_ND<0.01_	_ND<0.01_	_ND<0.01_	_ND<0.01_
Silver-mg/l	ND<0.01_	_ND<0.01_	_ND<0.01_	_ND<0.01_
Chromium Hey -mg/1	ND<0.05	ND<0.05_	_ND<0.05_	ND<0.05_
Nickel-mg/l	0.03	0.21_	_ND<0.05_	_ND<0.05_
Cyanide, Total-mg/l	ND<0.05	ND<0.05	ND<0.05_	_ND<0.05_
	_			
•	13	14	15	16
Arsenic-mg/]	ND<0.05	ND<0.05	_ND<0.05_	_ND<0.05_
Arsenic-mg/l	_ND<0.05_   ND<0.5	_ND<0.05_   ND<0.5	_ND<0.05_   ND<0.5_	_ND<0.05_   _ND<0.5
Arsenic-mg/lBarium-mg/l	_ND<0.05_ _ND<0.5 0.06	_ND<0.05_  _ND<0.5   0.05	ND<0.05_ ND<0.5_ 0.07_	_ND<0.05 _ND<0.5 0.02
Arsenic-mg/l Barium-mg/l Cadmium-mg/l Chromium. Total-mg/l	_ND<0.05_ _ND<0.5 0.06_ 0.09	_ND<0.05_   _ND<0.5  0.05  0.10	_ND<0.05_ _ND<0.5_ 0.07_ 0.05_	_ND<0.05_     _ND<0.5_    0.02_    0.05_
Arsenic-mg/l Barium-mg/l Cadmium-mg/l Chromium, Total-mg/l	_ND<0.05_ _ND<0.5_ 0.06_ 0.09_ _ND<0.05	_ND<0.05   _ND<0.5  0.05  0.10   ND<0.05	ND<0.05 ND<0.5 0.07 0.05 ND<0.05	_ND<0.05_     _ND<0.5_    0.02_    0.05_     _ND<0.05_
Arsenic-mg/l	_ND<0.05_ _ND<0.5_ 0.06_ 0.09_ _ND<0.05_ ND<0.02	_ND<0.05   _ND<0.5  0.05  0.10   _ND<0.05   ND<0.02	ND<0.05 ND<0.5 0.07 0.05 ND<0.05 ND<0.02	_ND<0.05 _     _ND<0.5 _    0.02 _    0.05 _     _ND<0.05 _     _ND<0.02 _
Arsenic-mg/l	_ND<0.05_ _ND<0.5_ 0.06_ 0.09_ _ND<0.05_ _ND<0.02_ ND<0.01	_ND<0.05   _ND<0.5  0.05  0.10   _ND<0.05   _ND<0.02   ND<0.01	ND<0.05 ND<0.5 0.07 0.05 ND<0.05 ND<0.02 ND<0.01	_ND<0.05 _     _ND<0.5 _    0.02 _    0.05 _     _ND<0.05 _     _ND<0.02 _     _ND<0.01 _
Arsenic-mg/l	_ND<0.05 _ND<0.5 0.06 0.09 _ND<0.05 _ND<0.02 _ND<0.01 _ND<0.01	ND<0.05   ND<0.5   0.05   0.10   ND<0.05   ND<0.02   ND<0.01   ND<0.01	ND<0.05 ND<0.5 0.07 0.05 ND<0.05 ND<0.02 ND<0.01 ND<0.01	ND<0.05 ND<0.5 0.02 0.05 ND<0.05 ND<0.02 ND<0.01 ND<0.01
Arsenic-mg/l	_ND<0.05 _ND<0.5 0.06 0.09 _ND<0.05 _ND<0.01 _ND<0.01 _ND<0.01 _ND<0.05	ND<0.05   ND<0.5   0.05   0.10   ND<0.05   ND<0.02   ND<0.01   ND<0.01   ND<0.05	ND<0.05 ND<0.5 0.07 0.05 ND<0.05 ND<0.02 ND<0.01 ND<0.01 ND<0.01	_ND<0.05 _     _ND<0.5 _    0.02 _    0.05 _     _ND<0.05 _     _ND<0.02 _     _ND<0.01 _     _ND<0.01 _     _ND<0.05 _
Arsenic-mg/l	_ND<0.05 _ND<0.5 0.06 0.09 _ND<0.05 _ND<0.01 _ND<0.01 _ND<0.01 _ND<0.05 _ND<0.05	ND<0.05 ND<0.5 0.05 0.10 ND<0.05 ND<0.02 ND<0.01 ND<0.01 ND<0.01 ND<0.05 0.13	ND<0.05 ND<0.5 0.07 0.05 ND<0.05 ND<0.02 ND<0.01 ND<0.01 ND<0.05 0.18	_ND<0.05_ _ND<0.5_ 0.02_ 0.05_ _ND<0.05_ _ND<0.01_ _ND<0.01_ _ND<0.01_ _ND<0.05_ 0.27_



STEPHEN J. FRANCE.
Laboratory Director

PHONE 203/634. 77

2140 GRACEY AVENUE MISIDEN, CT 1054 TO

Client: VFL

Lab No.:88-274-17 PO No.: VFL-C2260

Date :Sept. 9, 1988

Page

RESULTS OF ANALYSIS	17	ı	1		1
Arsenic-mg/l	; ; ND<0.05_	1 	1 1 	1	 
Barium-mg/l	_ND<0.5		! !	!	:
Cadmium-mg/l	_ND<0.01_		·	!	į
Chromium, Total-mg/l	10.07_		!		i
Lead-mg/l	_ND<0.05_				i
Mercury-mg/l	_ND<0.02_		!	.!	i
Selenium-mg/l	_ND<0.01_				į
Silver-mg/l	_ND<0.01_			.!	į
Chromium, Hex-mg/l	_ND<0.05_		!	.!	į
Nickel-mg/l	10.02_	i	·	.!	i
Cyanide, Total-mg/1	ND<0.05	1	!	. i	i

Please contact us if you have any questions.

Very truly yours,

Stephen J. Franco Laboratory Director

STEPHEN J. SRANET. Laboratory Directo

PH ONE 203/634447

140 GRACEY AVENUE MERIDEN, CT 196270

Lab No.: 38-279-17 PO No. : VFL-C2260

Date :9-12-88

6 Page

(Sample Matrix= Solid)

RDA	METHOD	602/8020
r.r.n	(TRY TITOD	

-	MDL	1	2	3 <sup>;</sup>	4	
Dammana	50_	BDL_	BDL_	BDL	BDL_	:
Benzene	50	BDL	BDL	BDL	BDL	
Toluene	50	BDL	BDL_	BDL	BDL	
Ethyl Benzene	50	BDL	BDL	BDL	BDL	.;
P & M Xylene	50	BDL	BDL	BDL	BDL	
O- Xylene	`	BDL	BDL	BDL	BDL_	
1,4-Dichlorobenzene	50_		BDL	BDL	BDL	-!
1,3-Dichlorobenzene	50_  	BDL		BDL	BDL_	1
1,2-Dichlorobenzene	- 50_	BDL_	BDL		BDL	- 1
Methyl Ethyl Ketone	100	BDL_	BDL_	BDL_		-¦
Methyl Iso Butyl Ketone	_ 100	BDL	- BDL_	BDL_	BDL_	-
	_	!		t	_!	_;

MDL = Minimum Detectable Level ALL UNITS IN PPB UNLESS NOTED.

BDL = Below Detection Level



STEPHEN I FRANCE Laborator, Director

PHONE 203/634417

140 GRACEY AVENUE MERIDEN, CT Office to

Lab No.:88-279-17 PO No.:VFL-C2260

Date

:9-12-88

Page 7

**EPA METHOD** 602/8020

RPA MRTHOD GOZ/GOZO	MDL	5	6	7	8 !
2	50	BDL_	BDL_	BDL	BDL
Benzene	50	BDL	BDL	BDL_	BDL
Toluene	50_	BDL_	BDL	BDL_	BDL
Ethyl Benzene	50_	BDL	BDL_	BDL	BDL_
P & M Xylene	50_	BDL	BDL_	BDL	BDL
O- Xylene	50	BDL	BDL	BDL	BDL
1,3-Dichlorobenzene	50	BDL_	BDL	BDL	BDL
·	50	BDL_	BDL_	BDL	BDL_
1,2-Dichlorobenzene	100	BDL_	BDL	BDL	BDL
Methyl Ethyl Ketone	100		BDL_	BDL_	BDL
Methyl Iso Butyl Ketone	_   .				
	'				

MDL = Minimum Detectable Level
ALL UNITS IN PPB UNLESS NOTED.

BDL = Below Detection Level

(Sample Matrix= Solid)

connecticut testing laboratories inc.

STEPHEN J. FRANCO Laboratory Director PHONE 203/634+373 : 140 GRACEY AVENUE MERIDEN, CT 06400

Lab No.:88-279-17 PO No.:VFL-C2260

Date :9-12-88

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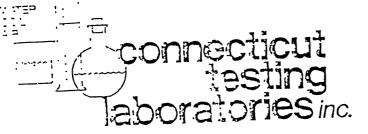
(Sample Matrix = Solid)

EPA METHOD 602/8020

RPA METHOD 6027 3020	MDL	9	10	11	12
	50	BDL	BDL_	BDL	BDL
Benzene	50	BDL	BDL_	BDL	BDL
Toluene	50	BDL	BDL	BDL	BDL
Ethyl Benzene	50	BDL	BDL	BDL	BDL
P & M Xylene	50	BDL	BDL_	BDL	BDL
O- Xylene	50	BDL	BDL	BDL	BDL_
1,4-Dichlorobenzene	50	BDL_	BDL_	BDL	BDL_
1,3-Dichlorobenzene	50	BDL_	BDL_	BDL	BDL
1,2-Dichlorobenzene	100	1	BDL_	BDL	BDL_
Methyl Ethyl Ketone	100		BDL_	BDL_	BDL
Methyl Iso Butyl Ketone	_				_
	'	.	_ '		

MDL = Minimum Detectable Level
ALL UNITS IN PPB UNLESS NOTED.

BDL = Below Detection Level



STEPHEN J. FRANCE Laboratory Director PHONE 203/624-27

140 GRACEY AVENUE MERIDEN, CT Undie

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Page

(Sample Matrix= Solid)

602/8020 BPA METHOD

RPA METHOD 602/8020	MDL '	13	14	15	16
	:50	BDL	BDL	BDL	BDL
Benzene	50	BDL	BDL	BDL	BDL_
Toluene	50	BDL	BDL	BDL	BDL
Ethyl Benzene	50	BDL_	BDL	BDL	BDL
P & M Xylene	50	BDL	BDL	BDL	BDL
O- Xylene	50_	BDL_	BDL	BDL	BDL
1,4-Dichlorobenzene	50	BDL_	BDL	BDL	BDL_
1,3-Dichlorobenzene	50	BDL	BDL_	BDL	BDL
1,2-Dichlorobenzene	100	BDL_	BDL_	BDL_	BDL
Methyl Ethyl Ketone	100	1	BDL_	BDL	BDL_
Methyl Iso Butyl Ketone_	-  100			! !	
	i	. 1	. 1		~

MDL = Minimum Detectable Level ALL UNITS IN PPB UNLESS NOTED.

BDL = Below Detection Level



STEPHEN J. FRANKS Laboratory Director PHONE 203/634+171

140 GRACEY AVENUE MERIDEN, CT (1945).

Lab No.:88-279-17 PO No.:VFL-C2260

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(Sample Matrix = Solid)

#### EPA METHOD 602/8020

	MDL	,	17		
Benzene	50_		BDL		
Toluene	50_		BDL	 	
Ethyl Benzene	50_		BDL	·	
P & M Xylene	50_		BDL	! ! !	
O- Xylene	50_		BDL_	! ! !	
1,4-Dichlorobenzene	50_		BDL_	1	
1,3-Dichlorobenzene	50_		BDL	! ! !	
1,2-Dichlorobenzene	50_		BDL	1	!
Methyl Ethyl Ketone	100		BDL_		
Methyl Iso Butyl Ketone	100		BDL_	<u> </u>	
		! ! ! !	! !	1 1 1	 

MDL = Minimum Detectable Level

BDL = Below Detection Level

ALL UNITS IN PPB UNLESS NOTED.



STEPHEN J. FRANCO Laboratory Directo

PHONE 203/634 • -7 \* \*

140 GRACEY AVENUE MERIDEN, CT 1964 (1)

Lab No.:88-279-17 PO No.:VFL-C2260 Date:9-12-88

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(Sample Matrix = Solid)

MDL	1	2	3	4
; ; ;50 ;	BDL :	- BDL	BDL	BDL
			BDL;	BDL_
		BDL	BDL_	BDL_
		BDL	BDL :	BDL
	BDL	BDL	BDL	BDL_
	BDL	BDL	BDL_	BDL:
25	BDL	BDL	BDL	BDL!
25	BDL	BDL	BDL	BDL
	BDL	BDL	BDL	BDL_:
25	BDL	BDL	BDL_	BDL_:
	BDL	BDL	BDL	BDL;
25	BDL	BDL	BDL :	BDL:
		BDL	BDL	BDL
		BDL	BDL	BDL_
25	BDL	BDL	BDL_;	BDL_
25	BDL	BDL	BDL_:	BDL_
125		BDL	BDL	BDL_:
25	BDL	BDL	BDL	BDL-
25	BDL	BDL	BDL	BDL
			BDL	BDL;
	·	·	BDL	BDL
· —	·	BDL	BDL	BDL:
				BDL ;
25			BDL	BDL
			BDL	BDL_:
			BDL	BDL
			BDL	BDL
: 50	·		BDL	BDL
25			BDL	BDL
150		·		BDL
	·			BDL
	·			BDL
25		· ———	BDL	BDL
	· ——	·		BDL
25	·			BDL
			·	BDL
25				BDL
				BDL
	50 _ 50 _ 50 _ 50 _ 25 _ 25 _ 25 _ 25 _ 25 _ 25 _ 25 _ 25	50	50         BDL         BDL         BDL           50         BDL         BDL         BDL           50         BDL         BDL         BDL           50         BDL         BDL         BDL           25         BDL         BDL         BDL	SO

MDL= Minimum Detectable Level/BDL= Below Detection Level/UNITS= PPB



STEPHEN J. FRAME TO Laboratory Of the first

PHONE 203/634. 7

140 GRACEY AVENUE MERIDEN, CT 111-11

Lab No.:88-279-17 PO No.:VFL-C2260

Date :9-12-88

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(Sample Matrix= Solid)

EPA METHOD 601/8010	MDL	5	6	7	8 !
Chloromethane	50	BDL	BDL	BDL	BDL
Bromomethane ·	50	BDL	BDL	BDL!	BDL_
Vinylchloride	50	BDL	BDL	BDL	BDL_
	50	BDL	BDL	BDL;	BDL_
	25	BDL	BDL_	BDL_	BDL_
	25	BDL_	BDL_	BDL_	BDL;
11-Dichloroethylene	25	BDL ;	BDL_	BDL_	BDL_
11-Dichloroethane	25	BDL	BDL	BDL_	BDL;
T12-Dichloroethylene	25	BDL	BDL_	BDL_	BDL;
Chloroform	25 :	BDL	BDL	BDL	BDL_
	25	BDL	BDL	BDL_	BDL:
	25	BDL	BDL	BDL	BDL_
Carbontetrachloride	25	BDL	BDL	BDL_	BDL;
Bromodichloromethane		BDL	BDL	BDL	BDL_
12-Dichloropropane	25	BDL	BDL_	BDL	BDL
T13-Dichloropropylene		BDL	BDL	BDL	BDL;
Trichloroethylene	25	BDL	BDL_	BDL	BDL
Dibromochloromethane	25	BDL	BDL	BDL	BDL
112-Trichloroethane	25	BDL	BDL	BDL	BDL
Cis13-Dichloropropylene	25	BDL	BDL_	BDL_	BDL
2-Chlorethylvinylether	25	BDL	BDL_	BDL	BDL
Bromoform	25	BDL	BDL	BDL	BDL
1122-Tetrachloroethane	25	BDL	BDL	BDL_	BDL
Tetrachloroethylene	25	BDL	BDL_	BDL	BDL
Chlorobenzene	25	BDL	BDL	BDL	BDL
Benzyl Chloride	:50	BDL	BDL_	BDL	BDL_
Bis(2-chlorethoxy)methane_	;50_	BDL	BDL	BDL	BDL_
Bis(2-chloroisopropyl)ethe	:50_	BDL	BDL	BDL_	BDL_
Bromobenzene	125_	BDL	BDL	BDL	BDL_
Chloracetaldehyde	:50	BDL	BDL_	BDL_	BDL
1-Chlorohexane	;25_	BDL	BDL_	BDL	BDL_
Chloromethyl methyl ether	;50	BDL	BDL	BDL_	BDL_
Chlorotoluene		BDL	BDL_	BDL_	BDL
Dibromomethane	;25	BDL	BDL	BDL	BDL_
12-Dichlorobenzene	25	BDL	BDL_	BDL_	BDL
13-Dichlorobenzene	25	BDL	BDL_	BDL_	BDL_
	25_	BDL	BDL_	BDL_	BDL_
Trichloropropane	25_	BDL_	BDL_	BDL_	:BDL;

MDL= Minimum Detectable Level/BDL= Below Detection Level/UNITS= PPB



STEPHEN J. FRANCE Laboratory Director

PHONE 203/634+37

140 GRACEY AVENUE MERIDEN, CT That is

Lab No.:88-279-17 PO No.:VFL-C2260

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(Sample Matrix = Solid)

EPA METHOD 601/8010	MDL	9	10	11	12
Chlcromethane	50_	BDL	BDL	BDL	BDL
Bromomethane	50 :	BDL_!	BDL_	BDL;	BDL_
Vinylchloride	50 ]	BDL_;	BDL	BDL;	BDL;
	;50 <sup>-</sup> ;	BDL	BDL_	BDL;	BDL!
Methylenechloride	25 ;	BDL	BDL_	BDL;	BDL
Trichlorofluoromethane	25 ;	BDL	BDL	BDL;	BDL_
11-Dichloroethylene	25 ;	BDL	BDL	BDL_	BDL_
11-Dichloroethane	25	BDL	BDL	BDL	BDL
T12-Dichloroethylene	25	BDL	BDL_;	BDL_	BDL
Chloroform	25	BDL	BDL	BDL_	BDL!
12-Dichloroethane	25	BDL	BDL ;	BDL	BDL
111-Trichloroethane	25	BDL	BDL	BDL	BDL;
Carbontetrachloride		BDL	BDL	BDL	BDL
Bromodichloromethane	25	BDL	BDL	BDL	BDL;
	25	BDL	BDL	BDL	BDL
T13-Dichloropropylene	25	BDL	BDL	BDL	BDL_:
Trichloroethylene	25	BDL	BDL	BDL	BDL
Dibromochloromethane	25	BDL	BDL	BDL	BDL
112-Trichloroethane	25_	BDL	BDL	BDL	BDL
	25	BDL	BDL	BDL	BDL
01010 D10	25	BDL	BDL	BDL	BDL
	25	BDL	BDL	BDL	BDL :
DI OMOZ GZ SI	25	BDL	BDL	BDL	BDL
	25	BDL	BDL	BDL	BDL
	25	BDL	BDL	BDL	BDL
	50	BDL	BDL	BDL	BDL
Bis(2-chlorethoxy)methane_	50	BDL	BDL	BDL	BDL
Bis(2-chlorosopropyl)ethe	50	BDL	BDL	BDL	BDL
Bromobenzene	25	BDL_	BDL	BDL	BDL
Chloracetaldehyde	50	BDL	BDL	BDL	BDL
1-Chlorohexane	25	BDL	BDL	BDL	BDL
Chloromethyl methyl ether_		BDL	BDL	BDL	BDL
Chlorotoluene	25	BDL	BDL	BDL	BDL
Dibromomethane	25	BDL	BDL	BDL	BDL
	25	BDL_	·	BDL	BDL
13-Dichlorobenzene	25	BDL	BDL	BDL	BDL
14-Dichlorobenzene	25	BDL	BDL	BDL	BDL
Trichloropropane	25	BDL	BDL	BDL	BDL
Trichioropropane	.145_	·			

MDL= Minimum Detectable Level/BDL= Below Detection Level/UNITS= PPB



STEPHEN J. TOA TO Laborator Director

PHONE 203/ 34++7

140 GRACEY AVENUE MERIDEN, CT Men-

Lab No.:88-279-17 PO No.:VFL-C2260

Date :9-12-88

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(Sample Matrix = Solid)

State	EPA METHOD 601/8010	MDL	13	14	15	16
Bromomethane	Chloromothane	150	BDL	BDL	BDL	BDL;
Vinylehloride				BDL	BDL	BDL
SDL				BDL_	BDL	
Methylenechloride         25         BDL		-:	BDL	BDL;	BDL	
Trichlorofluoromethane				BDL	BDL	
Name		25	BDL	BDL	BDL	BDL
Name				BDL	BDL_	BDL
T12-Dichloroethylene	· · · · · · · · · · · · · · · · · · ·		BDL	BDL	BDL_	BDL!
Chloroform		25	BDL	BDL_	BDL_	
12-Dichloroethane			BDL	BDL_;	BDL!	BDL
Trichloroethane		25		BDL	BDL_	
Carbontetrachloride         25         BDL		25	BDL	BDL	BDL	
Bromodichloromethane		··	BDL	BDL_	BDL_	
12-Dichloropropane			BDL	BDL_	BDL	
T13-Dichloropropylene			BDL	BDL_	BDL_	
Trichloroethylene         25         BDL			BDL	BDL	BDL	
Dibromochloromethane			BDL	BDL	BDL	
SDL	Dibromochloromethane	25	BDL	BDL	BDL	
Cis13-Dichloropropylene         25         BDL	112-Trichloroethane	25	BDL	BDL	BDL	BDL;
2-Chlorethylvinylether         25         BDL			BDL	BDL	BDL	
Bromoform		25	BDL	BDL_	BDL_	
BDL		` `		BDL_	BDL_	
Tetrachloroethylene         25         BDL		25	BDL	BDL_	BDL	
Chlorobenzene         25         BDL         BDL <t< td=""><td></td><td>25</td><td>BDL</td><td>BDL</td><td>BDL</td><td></td></t<>		25	BDL	BDL	BDL	
Benzyl Chloride         50         BDL			BDL	BDL	BDL	
Bis(2-chlorethoxy)methane         50			BDL	BDL_	BDL	
Bis(2-chloroisopropyl)ethe         50         BDL         BDL <td>Bis(2-chlorethoxy)methane</td> <td>50</td> <td>BDL</td> <td>BDL</td> <td></td> <td></td>	Bis(2-chlorethoxy)methane	50	BDL	BDL		
Bromobenzene         25         BDL         BDL <th< td=""><td>Ris(2-chloroisopropyl)eth</td><td>e   50</td><td>BDL</td><td>BDL</td><td>BDL</td><td></td></th<>	Ris(2-chloroisopropyl)eth	e   50	BDL	BDL	BDL	
Chloracetaldehyde         50         BDL		25	BDL	;BDL		
1-Chlorohexane         25         BDL         <		50	BDL_	BDL_	·	
Chloromethyl methyl ether         50         BDL         BDL <td></td> <td>25</td> <td>BDL</td> <td>BDL</td> <td>BDL</td> <td></td>		25	BDL	BDL	BDL	
Chlorotciuene         25         BDL         BDL <t< td=""><td>Chloromethyl methyl ether</td><td>- 50</td><td>BDL</td><td>BDL_</td><td>:BDL</td><td></td></t<>	Chloromethyl methyl ether	- 50	BDL	BDL_	:BDL	
Dibromomethane           25   BDL   BDL   BDL   BDL           BDL   BDL           BDL   BDL           BDL   BDL           BDL   BDL           BDL   BDL           BDL			BDL	;BDL	BDL	
12-Dicnlorobenzene       25   BDL   BD		·	BDL	BDL	;BDL	
13-Dichlorobenzene   25   BDL	25	BDL	BDL	!BDL		
14-Dichlorobenzene 25 BDL BDL BDL BDL BDL		_;25		BDL_	:BDL	
14-Dichiologome   DDI				BDL_	·	
	Trichloropropane	;25_	BDL_	BDL	;BDL	BDL

MDL= Minimum Detectable Level/BDL= Below Detection Level/UNITS= PPB



STEPHEN J. FRANCE Laboratory Direct

PHONE 203/634-77.

140 GRACEY AVENUE MERIDEN, CT 06470

Lab No.:88-279-17 PO No.: VFL-C2260

Date :9-12-88 Page 5

(Sample Matrix = Solid)

EPA METHOD 601/8010	MDL	17
Chloromethane	50_!	BDL
Bromomethane	50_	BDL
Vinvlchloride	50_;	BDL
Chloroethane	50_;	BDL
Methylenechloride	25_;	BDL
Trichlorofluoromethane	25_	BDL
11-Dichloroethylene	25_;	BDL
11-Dichloroethane	25	BDL
T12-Dichloroethylene	25 i	BDL
Chloroform	25_	BDL
12-Dichloroethane	25_;	BDL
111-Trichloroethane	25	BDL
Carbontetrachloride	[25_;	BDL
Bromodichloromethane	; 45_ i	BDL
12-Dichloropropane	25_	BDL
T13-Dichloropropylene	¦ 25 _	BDL
Trichloroethylene -	25	BDL
Dibromochloromethane	; 25_;	BDL
112-TrichloroethaneCis13-Dichloropropylene	25_	BDL
Cis13-Dichloropropylene	25_	BDL
2-Chlorethylvinylether	; 45_;	BDL
Bromoform	¦ 25_¦	BDL
1122-Tetrachloroethane	25_	BDb
Tetrachloroethylene	25_	59.0
Chlorobenzene	25_	BDL
Benzyl Chloride	;50_;	BDL
Bis(2-chlorethoxy)methane_	¦50_¦	BDL
Bis(2-chloroisopropyl)ethe	50_	BDL
Bromobenzene	25_	BDL
Chloracetaldehyde	¦50_¦	BDL
1-Chlorohexane	25	BDL
Chloromethyl methyl ether_	¦50_¦	BDL
Chlorotoluene	25	BDL
Dibromomethane	; 25_;	BDL
12-Dichlorobenzene	25_	BDL
13-Dichlorobenzene	25	BDL
14-Dichlorobenzene	25	BDL
Trichloropropane	25_	BDL

MDL= Minimum Detectable Level/BDL= Below Detection Level/UNITS= PPB



STEPHEN J. FRANCE Laboratory Quinter

PHONE 203/634+--

140 GRACEY AVENUE MERIDEN, CT Obstice

October 21, 1988

VFL c/o Butterworth Constr. 45. Mayfair Pl. Stratford, CT 06497

RE Lab. #108-154-13 PO/Job #VFLC2260 Invoice #5239

#### Gentelmen:

The following is a report of analysis on samples received: October 11, 1988.

RESULTS OF ANALYSIS	. 18	19	20	21	
Arsenic-mg/l	ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.002   ND<0.01	_ND<0.5 _ND<0.01 _ND<0.05_ _ND<0.05_ _ND<0.002 ND<0.01	ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.002   ND<0.01	_ND<0.05_ _ND<0.5_ _ND<0.01_ _ND<0.05_ _ND<0.05_ _ND<0.002 _ND<0.01_ _ND<0.01_	
0 T T A C T _ 1170 \ T					

	•
Arsenic-mg/l	1 5 5 0 2 1



STEPHEN J. FRANCO
Laboratory Director

PHONE · 203/634 • 3731

140 GRACEY AVENUE MERIDEN, CT - 06450

Lab No.: 108-154-13 PO No. :VFLC2260 Date :10-21-88 Page 2

	26	27	28	29
Arsenic-mg/l	ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.002	_ND<0.5  0.01   _ND<0.05   _ND<0.05   _ND<0.00	ND<0.5   ND<0.01   ND<0.05   ND<0.05   ND<0.00	ND<0.05_ ND<0.05_ ND<0.01_ ND<0.05_ ND<0.05_ ND<0.002 ND<0.001_ ND<0.01_
	30	•	:	} ;
Arsenic-mg/lBarium-mg/l	ND<0.05_ ND<0.5_ ND<0.01_	. !		

ND<0.05\_ ND<0.05\_

\_ND<0.002;

\_ND<0.01\_

| ND<0.01\_

Please contact us if you have any questions.

Very truly yours Stephen J. Franco Laboratory Director

Cadmium-mg/1

Mercury-mg/1

Silver-mg/l\_

Selenium-mg/1

Lead-mg/1\_

WATER SCIL

AIR

Chromium, Total-mg/l

connecticut testing laboratories inc.

STEPHEN J. FRANCO Laboratory Director PHONE - 203/634-3731

140 GRACEY AVENUE .. MERIDEN, CT .. 06450

Client: VFL Technology Corp. Lab No.: 128-273-19

PO No. :C2260 Date :12-23-88

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	30 <b>A</b>	31	32	33	ا
RESULTS OF ANALYSIS				177 (O OE	1
	VD<0.05	ND<0.05_	ND<0.05_	_ND(0.05	-!
Arsenic-mg/L	ND (0.5	_ND<0.5	ND<0.50_	- ND(0.5	
Barium-mg/L	10.01	ND<0.01_	ND<0.01_ ND<0.01_	, _ND(0.01	<u>-</u> -
Cadmium-mg/L	10.08	ND (0.06_	ND(0.01_   ND(0.05_   ND(0.05_	- 4030	<u>;-</u> ;
Chromium, Total-ma/L	' VI) (U.U)	' 'AD / O / O		I MENTO OF	12!
Lead-mg/L	ND(0.002	;_ND<0.002	ND<0.002 ND<0.01 ND<0.01 ND<0.05 ND<0.05 ND<0.05	- ND(0.0)	1
Mercury-mg/L	ND<0.01_	ND<0.01_	-! -ND(U.UI-	טיטיטין.	i i
Selenium-mg/L	ND<0.01_	וס.0.01	-; -,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ט.ס.מע"י	5
Silver-mg/L	ND<0.05_	ND<0.05	-: <u>-</u> ND(0.05-	ט.0.0	5 1
Nickel-mg/L	ND(0.05_	ND<0.05	-; _ND(0.03-	ס.סאמא י	5
Chromium-Hex-mg/L	_ND<0.05_	_¦ _ND<0.05	_ _ND(0.05_	_1_1111010	
Cyanide-Amenable-mg/L	_ 1			37	
	34	36	36	•	
			0 05	L NDCO.C	15 !
	! ND<0.05	_¦_ND<0.05	ND<0.05 ND<0.5 ND<0.01 ND<0.05		5
Arsenic-mg/L	ND<0.5	_; _ND<0.5_	_{_\_ND<0.5-	-1-ND(0.0)	) <del>1</del>
Barium-mg/L	ND<0.01	_! _ND<0.01	_ ND (U.U.	יייייייייייייייייייייייייייייייייייייי	0.5
Cadmium-mg/L	ND<0.05	_; _ND<0.05	- ND(0.05	-1-1000	05
Chromium, Total-mg/L	ND<0.05	_{_ND<0.0;	5   ND<0.05	- ' - ND ( 0 .	002!
Lead-mg/L	VD<0.00	2: ND < 0.00	02; ND<0.00 02; ND<0.00		01 !
Mercury-mg/L	- ND<0.01	ND<0.0	1   ND<0.01		01
Selenium-mg/L	ND<0.01	0.0>dM_	1   ND<0.01 1   ND<0.01 5   ND<0.01 5   ND<0.01		05
Silver-mg/L	ND(0.0	0.0>dN_	5_;_ND<0.03	-1-40/0.	05
Nickel-mg/L	- ND < 0.0	0.0>DK	5_{_ND<0.0	5-1-MD(0.	06 !
Chromium-Hex-mg/L	- VD<0.0	5 ND<0.0	5_ _ND<0.0	2-!-un/0.	00_1
Cyanide-Amenable-mg/L				41	
	38	39	40		
		- · VD/0 /	0.0 d   _ND	5 ! ND (0	.05_!
Arsenic-mg/L	\_\D<0.0	5_!_ND(U.	5 ND<0.5 5 ND<0.5 01 ND<0.0	ND<0	.5
Barium-mg/L	_			1 ND CO	.01
Cadmium-mg/L	;_ND<0.0	I_ ND (U.	0 = 1 ND(0 (	ND CO	.05_;
Chromium, Total-mg/L	ן אַטּעטיּר ן	12 - 1 - MD / 0 .	05   10/0 (	ารีไทบเง	.05
Lead-mg/L	ND<0.0	12 -! -ипсо-	00-1-1010	1021 ND (0	.002:
Mercury-mg/L	ט עט י	102; ND(0.	0021_11213		01 1
Selenium-mg/L	;_ND<0.0	יייייייייייייייייייייייייייייייייייייי	01   ND(0.0 01   ND(0.0 05   ND(0.0 05   ND(0.0 05   ND(0.0	01 ND < 0	.01_
Silver-mg/L	;_ND<0.	01-1-MD(0.	OF ND(O.	05   ND < 0	.05_
Nickel-mg/L	!_ND<0.	05-1-4000	חבן אחנה.	05 ND < C	0.05_l
Chromium-Hex-mg/L	!_ND<0.	05-1-40.00	יייי אווייייי	אסא מס	0.05_
Cyanide-Amenable-mg/L_	;_ир<0.	05_;_ND(0.		~ ~ ~ · · · · ·	
Cyanide-America					

Lab No.: 128-273-19

PO No. :C2260 Date :12-23-88

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_	42	43	44	. 4δ
RESULTS OF ANALYSIS			1 1770 05	, אחלט 10
Mercury-mg/L	ND<0.5 ND<0.01 ND<0.05 ND<0.05 ND<0.002 ND<0.001 ND<0.01	ND<0.01 ND<0.002 ND<0.002 ND<0.01 ND<0.01 ND<0.05	ND<0.01 ND<0.05 ND<0.05 ND<0.002 ND<0.001 ND<0.01 ND<0.05	_ND<0.05_ ND<0.5_ ND<0.01_ ND<0.05_ ND<0.05 ND<0.002 ND<0.01_ ND<0.01_ ND<0.05_ ND<0.05_ ND<0.05_ ND<0.05_
Cyanide-Amenable-mg/L	46	47	48	
Arsenic-mg/L_ Barium-mg/L_ Cadmium-mg/L_ Chromium, Total-mg/L_ Lead-mg/L_ Mercury-mg/L_ Selenium-mg/L_ Silver-mg/L_ Nickel-mg/L_ Chromium-Hex-mg/L_ Cyanide-Amenable-mg/L_	ND<0.05  ND<0.05  ND<0.05  ND<0.05  ND<0.05  ND<0.06  ND<0.06  ND<0.06  ND<0.06	ND<0.05  ND<0.05  ND<0.05  ND<0.05  ND<0.05  ND<0.05  ND<0.05  ND<0.05  ND<0.05  ND<0.05  ND<0.05  ND<0.05	ND<0.01   ND<0.05   ND<0.05   ND<0.05   ND<0.00   ND<0.00   ND<0.00   ND<0.00	5

CONNECTICUT TESTING LABORATORIES, INC. 140 Gracey Avenue / Meriden, CT 06450 (203)-634-3731

Lab No.: 108-101-13

PO No. : VFL C2260 Oct. 17, 1988

Date nge · 5

WATER SOIL

(Sample Matrix= Solid)

EPA METHOD 602/8020

	MDL	18	19	20	21
Benzene	50_	BDL	BDL	BDL_	BDL_
Toluene	50_	BDL	BDL_		BDI
Ethyl Benzene	50_	BDL_	BDL	BDL	BDL`
	50	BDL_	BDL	BDL	BDL
P & M Xylene	50	BDL	BDL	BDL	BDr
O- Xylene	50	BDL_	BDL_	BDL	BDL_
1,4-Dichlorobenzene	50	1	BDL_	BDL	BDL
1,3-Dichlorobenzene	50	7	BDL_	BDL_	BDL_
1,2-Dichlorobenzene	-i -	1	BDL	BDL	BDL
Methyl Ethyl Ketone	-¦100	1		BDL_	BDL
Methyl Iso Butyl Ketone	-¦100	BDL_	BDL	יועם !	
}	i	.1	.	.i	_i

MDL = Minimum Detectable Level

BDL = Below Detection Level

ALL UNITS IN PPB UNLESS NOTED.



STEPHEN J. FRANCO Laboratory Director PHONE m 203/634 • 3731

140 GRACEY AVENUE - MERIDEN, CT 106450

Lab No.: 108-101-13 PO, No.: VFL C2260

Date :Oct. 17, 1988

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(Sample Matrix= Solid)

EPA METHOD 602/8020

	MDL	22	23	24	25
Benzene	50_	BDL	BDL	BDL	BDL_
Toluene	50_	BDL	BDL	BDL_	BDL
Ethyl Benzene	50_		BDL	BDL	BDL
P & M Xylene	50_	BDL	60.0	BDL	BDL
O- Xylene	50	BDL	BDL	BDL	BDL
	50	BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	50_	BDL	BDL	BDL	BDL
1,3-Dichlorobenzene	50	BDL	BDL	BDI	BUL
1,2-Dichlorobenzene	· i -	1	BDL	BDL_	BDL_
Methyl Ethyl Ketone	100		1	BDL	BDL
Mothyl Iso Butyl Ketone	_\100 \	BDL_	BDL_	i	
	_	1	.1	. '	i

MDL = Minimum Detectable Level

BDL = Below Detection Level

ALL UNITS IN PPB UNLESS NOTED.



STEPHEN J. FRANCO
Laboratory Director
PHONE ~ 203/634•3731

140 GRACEY AVENUE ~ MERIDEN, CT · · 06450

Lab No.: 108-101-13

PO'No. : VFL C2260

Date : Oct. 17, 1988

rage . 7

(Sample Matrix= Solid)

EPA	METHOD	602/802	<u>0</u>
-----	--------	---------	----------

EFA (IBIoz	MDL	26+	27+	28	29	; ;
Bcnzene	  50_	BDL	BDL_	BDL	BDL_	
Toluene	50_	BDL	114.0	BDL	anr	(74)
Ethyl Benzene	50_	BDL	68.0	BDL_	BDL	(18)
P & M Xylene	50_	BDL	237.0	63.0	69.0	
O- Xylene	! !50_	BDL	696.0	BDL_	207.0	(656, 157)
1,4-Dichlorobenzene	50_	BDL_	BDL	BDL	BDL_	, !
1,3-Dichlorobenzene	50_	BDL_	BDL	- BDL_	BDL_	
1,2-Dichlorobenzene	- ¦50_	BDL_	BDL_	BDL_	BDL_	
·	100	BDL	BDL_	BDL_	BDL_	
Methyl Ethyl Ketone	100	1	BDL_	BDL_	BDL	1 1 1
Methyl Iso Butyl Ketone	_   100			\ _\		
	_1	_				· •

+ Unknown Hydrocarbon mix present

MDL = Minimum Detectable Level

BDL = Below Detection Level

ALL UNITS IN PPB UNLESS NOTED.

Jerm. Hedvalue by stake - 101ppm



STEPHEN J. FRANCO
Laboratory Director
PHONE -- 203/634\*3731

140 GRACEY AVENUE . MERIDEN, CT . 06450

Lab No.: 108-101-13 Job. No: VFL C2260

Date :Oct. 17, 1988

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EPA METHOD 602/8020

	MDL	30			\$ \$
Benzene	50	BDL		- -	
Toluene	50_	BDI		_ -	
Ethyl Benzene	. 50_	BDL			-
P & M Xylenc	50_	BDL		_ -	
O- Xylene	_ 50_	BDL			 \ <u></u>
1,4-Dichlorobonzene	_ 50_	BDL	ļ	<u></u>  -	-
1,3-Dichlorobenzene	_ 50_	BDL			-
1,2-Dichlorobenzene	_ 50_	BDL	-	Ì-	 
Methyl Ethyl Ketone	_ 100	BDL	-	-	 -
Methyl Iso Butyl Ketone_	_ 100	BDL_	-	-	-
	_		_	١-	_ i

MDL = Minimum Detectable Level
ALL UNITS IN PPB UNLESS NOTED.

BDL = Below Detection Level

(Sample Matrix = Solid)



STEPHEN J. FRANCO
Laboratory Director
PHONE - 203/634-3731

140 GRACEY AVENUE - MERIDEN, CT · 06450

Lab No.: 128-278-19

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BPA METHOD 602/8020					
BITT	MDL '	30A	31	32	33
	50	BDL	BDL_	BDL_	BDL
Benzene			64.0	BDL	63.0 (24,14),1
Toluene	50_	74.0			i
Ethri Bongono	โรก_่	RNI.	BDI.	ומא	BDL (1.07.3/a
	:50	_153.0	86.0	BDL	135.0 (103,36
P & M Xylene	-	132.0	į	_58.0	301.0 82,11,12
O- Xylene	50_	132.0			BDL
1,4-Dichlorobenzene	50_	BDL	BDL_	BDL_	
·	} ! 50	BDL	BDL	BDL	BDL_
1,3-Dichlorobenzene			BDL	BDL	BDL
1,2-Dichlorobenzene	-¦ <sup>50</sup> -	BDL_	1	<u> </u>	nnr *
Methyl Ethyl Ketone	_ 100	BDL_	BDL_	BDL_	BDL_
	100	BDL _	BDL_	BDL_	BDL_
Methyl Iso Butyl Ketone	-:100	!	!	•	
	_!	_!	_ !	_i	-1

MDL = Minimum Detectable Level ALL UNITS IN PPB UNLESS NOTED. .

Lab No.: 128-278-19

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## BPA METHOD 602/8020

BPA HELHOD COST	MDL	34	35	36	37
7	50	BDL	BDL	BDL_	BDL
Benzene	50_	BDL_	BDL	BDL	BDL
TolueneEthyl Benzene	50_	BDL_	BDL	BDL_	BDL
P & M Xylene	50_	BDL	BDL	BDL	BDL_
O- Xylene	50_	119.0	BDL_	BDL	81.0 (69,,31
1,4-Dichlorobenzene	; ;50	BDL	BDL	BDI.	BDL
1,3-Dichlorobenzene	_ _;50_	BDL_	BDL_	BDL_	BDL_
1,2-Dichlorobenzene	; _;50_	BDL_	BDL_	BDL_	BDL
Methyl Ethyl Ketone	100	BDL	BDL_	BDL	BDL
Methyl Iso Butyl Ketone	- : :100	BDL_	BDL_	BDL_	BDL
Mechai Iso Back modern			·	.i	
	!	.i		_'	. 1

MDL = Minimum Detectable Level.

ALL UNITS IN PPB UNLESS NOTED.

Lab No.:128-278-19

PO No. :C2260 Date :12-27-88

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#### EPA METHOD 602/8020

	MDL .	38	39	40	41
Benzene	50_:	BDL	BDL	BDL ·	BDL
Toluene	50_	BDL	BDL	BDL	BDL
Ethyl Benzene	50_	BDL	BDL	BDL	BDL
P & M Xylene	50_	BDL	BDL	BDL	BDL
O- Xylene	50_	BDL	BDL	BDL_	BDL
1,4-Dichlorobenzene	50_	BDL	- BDL	BDL_	BDL_
1,3-Dichlorobenzene	! :50_	BDL	BDL	BDL_	BDL
1,2-Dichlorobenzene	¦ : 50_	BDL_	BDL_	BDL	BDL_
Mathyl Ethyl Ketens	1100	DDL	DDL_	DDLL	ถกฅ
Methyl Iso Butyl Ketone	:   100	BDL_	BDL_	BDL	BDL_

MDL = Minimum Detectable Level .

ALL UNITS IN PPB UNLESS NOTED. .

Lab No.: 128-278-19

PO No. :C2260 Date :12-27-88

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## BPA METHOD 602/8020

BPA HETHOD USER	MDL	42	43	44	45	,
Benzene	50_	BDL	BDL	BDL	BDL	 
Toluene	50_	BDL	BDL	BDL	BDL	
	50_	BDL	BDL	BDL_	BDL_	
P & M Xylene	; ;50_;	BDL	BDL	BDL	BDL	
O- Xylene	50_	BDL	BDL	BDL_	BDL	. !
1,4-Dichlorobenzene	50_	BDL	BDL	BDL	BDL	- !
1,3-Dichlorobenzene	50_	BDL	BDL	BDL_	BDL	-!
1,2-Dichlorobenzene	: 50	BDL	BDL_	BDL_	BDL_	_:
·	100	BDL	BDL_	BDL_	BDL_	i -1
Methyl Ethyl Ketone	-	BDL_	BDL	BDL_	BDL	_; _;
Methyl Iso Butyl Ketone	_				1	_;
	_ i	.11				-

MDL = Minimum Detectable Level .

ALL UNITS IN PPB UNLESS NOTED. .

Lab No.: 128-278-19

PO No. :C2260

Date :12-27-88

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## EPA METHOD 602/8020

MIN (IDE.)	MDL	46	47	48	•
Benzene	50_	BDL	BDL	BDL	
	50_	BDL	BDL_	BDL	
Ethyl Benzene	50 <u>-</u>	BDL	BDL	BDL	
P & M Xylene	50_	BDL	BDL	BDL	
O- Xylene	; ;50_	BDL_	BDL	BDL	·
1,4-Dichlorobenzene	50_	BDL_	BDL	BDL	
1,3-Dichlorobenzene	: :50_	BDL	BDL	BDL	
1,2-Dichlorobenzene	; ;50_	BDL_	BDL_	BDL	
Methyl Ethyl Ketone	100	BDL_	BDL_	BDL_	
Methyl Iso Butyl Ketone	: :100	BDL_	BDL_	BDL	<u> </u>
1100117 1 110 00 - 7		i i	! !	1	.i

MDL = Minimum Detectable Level ALL UNITS IN PPB UNLESS NOTED.

Lab No.: 103-101-13 PO No. : VFL C22-60

Date :Oct. 17, 1988

Page · 1

(Sample Matrix= Solid)

EPA METHOD 601/8010	IDL	18	19	20	21	:
EPA METHOD 601/8010		1	1	1		0
Chloromethaue	50	BDL	BDL!	BDL	BDL	
Bromome thane	50 :	BDL_	BDL	BDL,	BDL	
Vinylchloride	50	BDL_	BDL	BDL	BDL	
	50 1	BDL_	3DL	BDL_	BDI	•
	25	BDL_	BDL	BDL_	BDL	
MOTHVICHECHIOLIC	25	BDL	BDL	BDL	BDI	•
	25	BDL	BDL	BDL	BDL	1
I I - DI CH LOPO CHI TENC	25	EDL_	BDL	BDL	BDI	, ,
11-Dichiorde Chane	25	BDL	JGB	BDL_	BDL	;
112-11161110106 6113 2 611	25	BDL	RDL!	JQE	BDL_	<u> </u>
CHIOCOLOLUM	25_1	BDL	BDL_	BDL	BDI	ii_
	25	91.0	JCE	BDL	BDL_	1
111-1richiorde chanc	25	BDL	BDL_	BUL	BDL_	į
Carbontetrachioride	25_	BDL	BDL	BDL	BDL	į į
Bromod (Chilorome orient)	25	BDL	BDL	BDL_	BDL_	
12-Dichloropropane		BUL	טטנ	BDL	BDL	12
T13-Dichloropropylene	25	BDL	BDL_	88.0	BDL_	i i
Trichloroethylene	25	BDL	BDL	BDL_	ווממ [ד	. <u>!</u>
i Dibromoch Lorome chane	25	BDL	BDL	BDD	BDL.	
( ) 1) -   r   Ch   Ol Oe Chanc	25	BDL	BDL	BD1,	BDL_	
Lide 1 Vall Clinic Chrobs and a second	25	BDL	BDL	BDL_	BD1	
Z-Chlorethy1v1ny1con	25	BDL	BDL	BDL_	BDL_	• <u> </u>
Bromoform	25	BDL	BDL	BDL	BDL_	-l <del>/</del>
1122-Tetrachloroethane	: 25 : 25	29.0	·	BDL	BDL_	_{
Tetrachloroethylene	25_	BDL	BDL	BDL	BDL_	
Chlorobenzene	; 45_ ; 50	BDL	BDL	BDL	BDL	_1
Benzyl Chloride			BDL	BDL	BDL_	_ !
i nin/2-ahlorethoxy)methane_	150_	, , , , , , , , , , , , , , , , , , , ,	BDL	BDL	BDL_	_1
Bis(2-chloroisopropyl)ethe	120-	. 1	300	BDL	BUL_	_1 .
Bromobenzene	1 2 3	. 1	BDL	BDL	BDL,_	_\
chloracetaldehyde	;50_ ;25	BDL	BDL	BDL	BDL_	_
i 1-Chlorohexane	120.		BDL	BDL	BDL'	_
1-Chlorohexane	150_	_ '	BDL	BDL	BDL	_!
Chlorotoluene	160_		BDL	BDL	BDI	_
Dibromomethane	25	BDL_	-!BDL	BDL	BDL	
12-Dichlorobenzene	25	BDI.	3DL_	- BDL	BDL	_{_{1}}
13-Dichlorobenzene	25	BDL_	- BDL-	BDL	BDL	_;
14-Dichlorobenzene	125		- BDL	BDL		_
Trichloropropane	_	BDL_	_i	_1	م ۱۰۰۰ معمد است	
1 11 11 11 11 11 11 11 11 11 11 11 11 1				1	/IIMITTS= F	PR

WATUNDLE : inimum Detectable Level/BDL= Below Detection Level/UNITS= PPR connecticut testing aboratories inc. AIR ·

STEPHEN J. FRANCO Laboratory Director PHONE - 203/634 • 3731

140 GRACEY AVENUE - MERIDEN, CT .- 06450

ient: VFL

No.:108-101-13 No. : VFI, C22-60

:Oct. 17, 1988 Date

(Sample Matrix= Solid)

Dat	e .ooo					0.5	
Pas	3e · 2			0.0	24	25	
	•		22	23	- 1		
	NETHOD 601/8010	NDL	1	1	BDL	BIDL_	•
7770	A METHOD 601/8010	i i	BDL_i.	BDL_	BDL_	BDL_	
_		150_1_	-000!-	BDL_		BUL_	•
	loromethane	150_1_	_anL	BUL_	BDL_	BDL_	
		- 50_1_	_3DT	BDL_	BDI.	BDL_	
! B1	romome thane	50_1_	BDr_	BDL_	BDL_	BDL	
		25_1_	BDL_	BDL_	BDL_	BDL	
\$ C	hloroethane	- 25_1_	BDL		BDL_		<u>;</u>
i M	ethy!enechloride ethy!enechloride richlorofluoromethane	-123-1-	BDL_	BDL_	BDL_	BDL_	
} ~	richlorofluoromo	_ 25	BDL_	BDL_	BDI.	BDL	1
1 1	richlorof (not ome 1-Dichloroethylene	_   25_	BDI.	BDL_	BDI.	BDI.	4
1 1	1-Dichloroethane	125_1-		BDU_	- BDL_	BDL	i
		25_1-	BDL_	BDL_		-\BDI	_
; '	Chloroform	25_1_	BDL_	BDL_	BDL_	-!BDL_	_ \
<b>Š</b> (	Chloroform 12-Dichloroethane	- 25_1.	BDL_	BDL	BDL_	-!-BDI	_1
į	12-Dichlorouthane	- 25_1.	BDL_	-i-BDL_	BDL_	-I-BDL_	
ì	111-Trichloride	25	BDL_		BDL_	BDL_	
'n	111-Trichlordethan Carbontetrachloride Bromodichloromethane		BDL_	BDL_	BDL		1 /
}	groundichlorometra	25_	BIL	BDL	-!	I BULL	•
ļ	Bromodichlorome and 12-Dichloropropylene	25_	92.	WY TRUP.	-! BDI.	i Bun-	
3	12-Dichloropropylene	25_	BDL		BDI,	_ ւ ըրև_	一! ; ·
•	T13-Dichloropton	125_		BDL			!
	Trichlorocthy Tethane	25_	BDL_	$-!$ $ _{\rm ROU}$	יית מא	~ • MIIII	1
	Dibromochlorome thane 112-Trichloroethane		RDP	-!	יותם י		
(	112-Trichio	· ·		一,一BDI	, Bor	الاه الله	
;	Cis13-Dichloropropy 2 2-Chlorethylvinylether			-   - BU	ולולו ו		
	1				4.0	9.01 BD1	
	Bromoform		-1- <del></del> 00	01/ -3			
	1122-Tetrachloroedis	25.	وزوجت سب ا		4	a i But	
	1122-Tetrachlorocthylene	,	_1	1 _BD	14!	יעט יי	<u> </u>
	1 - 1 - MADELLAW	150				71 1 1	L
		hane 150	BD			ענו ו	١٠
	Benzyl Ollorethoxy) met	Nothe: 50	BD				إا
	Benzyl Chloride  Benzyl Chloride  Bis(2-chlorethoxy)met  and chloroisopropyl	125	BU	11	nt.   _B	DLBD	) l \
	Bis(2-0113"		0_1BI	) L [ [	ni. 1 _B	DLBI	Dli
	Bis(22000) Bromobenzene		5 - i BI		nt ! B	11) [	DL
	1 OCC   ILA		0_1B	31. •	יחו	3DL!	DI_
	Chloronexane Chloromethyl methyl	ether_i				7111. 1	BDLI
		12		r.r !	BDL_		
	Chlorotoluene	\?	00-1			m131	3DI
	Chlorotofuene Dibromomethane		40_1		BDD '	nn1.	BUL_
	Dibromomethancane	<del></del> 1	LV_!		BDI	BDL_	BDL
	12-Dichlorohenzene		25_1	101 1		_000	4.
	1 13-Dieniorobenzene		25 1	RDn,	<del>-</del>	1 /INTT	S= PPB
	13-Dichlorohenzene 14-Dichlorobenzene				atection !	PGAGT\ O"YY	=
	14-Dichloropropane		.al/BDL=	Beron D		Level/UNIT	
	i netect	aple re.	V @ 1 / 2				FOLNICO

WATERDLE Ninimum Detectable Level/BDL= Below Detection SOIL /

connecticut testing laboratories inc.

STEPHEN J. FRANCO Laboratory Director PHONE -- 203/634-3731

140 GRACEY AVENUE - MERIDEN, CT -- 06450

Lab No.: 108-101-13 PO No. :VFL C2260

:Oct. 17, 1988 ate

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(Sample Matrix= Solid)

EPA METHOD 601/8010	MDL	26	27	28	29	•		
	50 ;	BDL	BDL	BDL	EDT_			
Chiorome chang	50	BDL	BDL	BDL	BDL!			
Bromome thane	50 -		BDL	BDL	BDT			
Vinyichiotide		BDL	BDL	BDL	BUI			
Chlorocthane	50_	BDL	BDL	BDL	BDL_			
Nothylenechloride	25_	BDL	BDL	BUL	BUL			
Trichlorofluoromethane	25_		BDL :	BDL_	BDL	•		
11-Dichloroethylene	25_	BDL{	BDL	BD1.	BDL	•		
11-Dichloroethane	25_	BDL	BDL	BUL	BDL.			
T:2-Dichloroethylene	25_		BDL	BDL_	BDL			
Chloroform	25_	BDI	BDL	BDL	BUL			
12-Dichloroethane	25_	-BDL	BDL	BDL	BDL			
111-Trichloroethanc	25_	BDL	BDL	BDL	BDL_			
Carbontetrachloride	25_	BDL	BDL	BDL	BDL_	;		
Bromodichloromethane	25_		BDL_	BDL_	BDL	;		
12-Dichloropropane	25_	•	BDL	BDL	BUt	}		
i T13-Dichloropropylene	125_		80.0	(25.0		1		
Trichloroethylene	25_	BDL.	BDL	BUL	プ BDI	į) i		
pibromochloromethane	25	BDI	BDL	BDL_	BDL.	1		
112-Trichloroethane	25	BDL_	BDL	BDL'	BDL			
ciel3-Dichloropropylene	125_	BDL_	BDL_	BDI.	BD1.	1		
?-Chlorethylvinylether	125_	BDL_		BDI	BDL	Ì		
Bromoform	125_	BDL_	BDL	BDL	BOL			
1122-Tetrachloroethane	25		BDL	-	·	i		
Tetrachloroethylene	[   25_	1BDL	164.0	BDL	BDA	1)		
Chlorobenzene	[ 25]		BDL	BDL	BDL	Ť		
n Chloride	;50_	_!BD!	BDL_	BDI.	BDL	i		
i ni 12 ablarathaxy) methane	_{50_	BDL_	BDL_BDL_	BD1	BUL			
Bis(2-chloroisopropyl)ethe	= 100.		BDL	BDL	BDL	_1 .		
Rromobenzene	_120.	_	BDL	BDL	BDL_	- i i		
Chloracetaldehyde	150		BDL	BDL	BDL_	_1 ,		
	25		BDL	BDL	BDL	_11		
chloromethyl methyl ether	-150	BDL BDL	BDL	BDL	BUL_	_{-{		
Chlorotoluene	120	_ 1	BDL	BDL	BDL_	_1		
Dibromomethane	_ 25		297.0	·/	.BDL	_1		
12-Dichlorobenzene	_ 25		BINI	BUL_	BDI.	_;		
13-Dichlorobenzene	25	- BDL	BDL_	BDL	BDL	_1		
14-Dichlorobenzene	_ 25	_ BDL_	BDL	BDL	BDL	_		
i michloropropane	25							
WATERDLE Minimum Detectable 1	WATUMDLE Ninimum Detectable Level/BDL= Below Detection Level/UNITS= PFB							

SOIL AIR connecticut testing Taboratories inc.

STEPHEN J. FRANCO Laboratory Director

PHONE - 203/634-3731

140 GRACFY AVENUE - MERIDEN, CT - 06450

Lab No.: 108-101-13 PO No.: VFL C220-60

Date :Oct. 17, 1988

Page . 4

(Sample Matrix= Solid)

EPA METHOD 601/8010	MDL	30				
EFA HETHOD GOLF	1 1	-		į		
Chloromethane	150_1	BDL!	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	. !	-	
Bromome thane	150 1	BDL			_	
Vinylchloride	50	BDL_		.!	_	
Vinylenioride	50	BDL_		. !	_	
Chloroethane	25	BDL		-	_	
Trichlorof Luoromethane	25	BUL		_!	_ [	
11-Dichloroethylene	125	BDL		_ !	_	J
11-Dichloroethane	25	BDL_	A		-{	! <b>!</b>
T12-Dichloroethylene	25	BDL		_	!	
	25	BUL		_ !	_	! •
Chloroform	25	BDL		_	_	1
12-Dichlorocthane	25	BDT		_	[	1
111-Trichloroethane	25	BDI		_	[	1
Carbontetrachloride	25	BDL_		_ !		1
Bromodichloromethane	25	BDL	l 	_		1
12-Dichloropropane	25	HOL	l			i
T13-Dichloropropylene	25	( 25.0		!		1
Trichloroethylene	25	BOL		_		. 1
Dibromochloromethane	25	BDL		_	!	, [
112-Trichloroethane	-125-	BDL	1	1		-
Cist3-Dichloropropylone	25	BDL		!		- 1
2-Chlorethylvinylether	-125-	BDL	1			- !
n		BDD	1	1		- <u>i</u>
: 1122-Tetruchloroethane						- <u>i</u>
ralrachloroethylone	-147-			1		- <u>i</u>
chlorobenzene	-:50-			_ !		- <u>i</u>
l - i oblamida	100_	BDL	<del></del>	1		- <u> </u>
!a -l.l.amathovv)methane	-150-	_ '			!	- <u>!</u>
Ris(2-chloro1sopropy1)	10;50_ 25;			\		- <u> </u>
! Dwamahanzelle	$-\frac{120}{150}$	_			!	_!
Chloracetaldehyde	125			1		<u>-!</u>
i and anhayana						_!
chloromethyl methyl etne.	r_ 50	- BDL			l	_!
Chlorotolueno	( 1) (				!	_!
Dibromomethane	120				!	_!
12-nichlorobenzene	25					_!
i iz Dichlorobenzene	25					_!
14-Dichlorobenzene	120					!
Trichloropropane	25	BDL	1		-	
i ILIGHTOY Oby obmin		,			1 /INITEC - L	AGG

WATEMOLE Minimum Detectable Level/BDL= Below Detection Level/UNITS= PPB
SOIL
AIR
Laboratory Direction

WATEMOLE Minimum Detectable Level/BDL= Below Detection Level/UNITS= PPB
STEPHEN J. FRAN
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Laborat

Taboratories inc

STEPHEN J. FRANCO
Laboratory Director
PHONE = 203/634•3731

140 GRACEY AVENUE - MERIDEN, CT - 06450

Client: VFL Technology Corp. Lab No.: 128-278-19

PO No.: :C2260
Date :12-27-88
Page 1

TEN HATEOD 69	1/3919	MEDT.	ሰደሴ :	a1 ;	37 ;	33	
		50 :	BDL	BDL	BDL¦_	BDL_	
		50-	BDL	BDL	BDL	BDL	•
Bromomethane		50	BDL	BDL	BDL	BDL_	
Vinylchloride		50	BDL	BDL	BDL	BDL_	
Chloroethane		25	BDL	BDL	BDL	BDL_	:
Methylenechlori	~~	25	BDL	BDL	BDL_	BDL ·	
Trichlorefluoro	Mc 0110111	25	BDL	BDL	BDL	BDL	
11-Dichloroethy	~	25	BDL	BDL	BDL	BDL_	
11-Dichloroetha	ne	25	BDL	BDL	BDL	BDL	
T12-Dichloroeth	Arono	25	BDL	BDL	BDL	BDL	
-Chloroform		25_1	BDL	BDL	BDL	BDL	,
12-Dichloroetho	.na	25	39.0	BDL	BDL	BDL	•
111-Trichloroet	, , , , , , , , , , , , , , , , , , , ,	25	BDL	BDL	BDL	BDL	
Carbontetrachlo	/ L L C C			BDL	BDL	BDL	
Bromodichlorome		25_	BDL_	BDL	BDL	BDL	
12-Dichloroprop	, man — — — — — — — — — — — — — — — — — — —	25_	BDL	BDL	BDL	BDL	
T13-Dichloropro		25_	BDL		BDL	BDL	
Trichloroethyl	no	25_	34.0		BDL	BDL	ļ
Dibromochlorom		125_	BDL	BDL_		BDL	
112-Trichloroe	thane	125_	BDL_	BDL_	BDL	BDL	i
Cis13-Dichloro	propylene	:25_	BDL_	:BDL	BDL		i t
2-Chlorethylvi	nylether	25_	BDL_	BDL	BDL_	BDL	i 1
Bromoform		125_	BDL_	BDL_	BDL_	BDL.	<u>.</u>
1122-Tetrachlo	roethane	125_	BDL	BDL	BDL_	BDL	
Tetrachlorooth	vlene	25	125.0		BDL_	65.0	(.
. Chlorobenzene_		25	BDL	BDL	BDL_	BDL	100
Benzyl Chlorid	A	50	BDL	BDL_	BDL	BDL_	
Bis(2-chlorath	ovylmethane	50	BDL	BDL	BDL_	BDL_	, i
Bis(2-chlorois	opropyl)ethe	50	BDL	BDL	BDL_	· BDL_	,1
Bromobenzene_	opt opt 17 out	25	BDL	BDL	BDL_	BDL_	. [
Chloracetaldel	wde	50	BDL	BDL	BDL_	BDL_	.!
		25	BDL	BDL	BDL	BDL_	.!
1-Chlorohexane	athrel athor			BDL	BDL	BDL	- 1
Chloromethyl r		25		BDL	BDL	BDL	1
Chlorotoluene		-125	BDL	BDL	BDL	BDL	
Dibromomethan	3	125	BDL_	BDL	266.0	1,421.0	1
12-Dichlorober		-; 25. ; 25.		BDL	BDL	BDL	
13-Dichlorobe	nzene	_; 25. 25		BDL	BDL	8.6.0	- 0
14-Diohlorobo				BDL	BDL	BDL	-
Trichloroprop	ane	_;25	_i <sub>BD⊓</sub> _	_'	_II		- '

MDL= Minimum Detectable Level/BDL= Relow Detection Laval/INTT9- DDB

Lab No.: 128-278-19

PO No. :C2260 Date :12-27-88

Page 2

RPA MRTHOD 601/8010	MDL	34	35	36	37
MFA (IMIMOD GG-)		555	BDL	BDL	BDL
Chloromethane	50_	BDL_	BDL -	BDL -	BDL
Вгошоще слапе	50_	BDL_	BDL :	BDL	BDL
	50_	BDL_	BDL	BDL	BDL
	50_	BDL_	BDL	BDL	BDL
THE LILY LUIL COLLEGE AND A LOCAL COLLEGE	25_	BDL	BDL	BDL	BDL
Trichlorofluoromethane	25_	BDL_	BDL	BDL	BDL
11-DIGHTOIGE CHI J Come	25_	BDL_	BDL	BDL	BDL
1 - DICHIOLOG CHAIC	25_	BDL_	BDL	BDL	BDL
T12-Dichloroethylene	25_	BDL -	BDL	BDL	BDL
Chloroform	25_	BDL_	BDL	27.6	BDL
12-Dichiot de chane	25_	BDL_	BDL	BDL	BDL
111-Trichloroethane	125_	BDL_	BDL_:	BDL_	BDL
Carbontetrachloride	25_	BDL		BDL	BDL
Bromodichloromethane	125_	BDL_	BDL_	BDL :	BDL
12-Dichloropropane	_; 45	BDL_	BDL_	BDL :	BDL
T13-Dichloropropylene	_ 125_	BDL_	BDL_	יםתם!	יחמם
wrichloroethylene	: 2.5 : 2.5	RDI BDL	BDL	BDL	BDL
Dibromocnloromethane	25	BDL	BDL	BDL	BDL
112-Trichloroethane	_; 45_ ; 25	BDL BDL	BDL_	BDL	BDL
Cis13-Dichloropropylene	_ '	·	BDL	BDL	BDL
2-Chlorethylvinylether	_\25_	BDL_	BDL BDL	BDL	BDL
Bromoform	_: 25_	BDL_	BDL	BDP	BDL
1122-Tetrachloroethane	_;25_	BDL		26.0	
motrachlornethylene	; 43	43.0		BDL	BDL
Chlorobenzene	140	BDL_	BDL_	BDL	BDL
Benzyl Chioride	_,,,,,,,	BDL_	BDL_	BDL	BDL
Bis(2-chlorethoxy)methane	_ 50_	BDL_	BDL_	BDL BDL	BDL
Bis(2-chloroisopropyl)eth	e;ou_	BDL_	BDL_	BDL_BDL_	BDL
Bromobenzene	_;25_	-;¤nr	BDL_	BDL BDL	BDL
Chloracetaldehyde	_ 50_	·	BDL_	BDL	BDL
1-Chlorohexane	_   25_	BDL_	BDI.	BDL BDL	BDL
Chloromethyl methyl ether	_ 50	BDL_	BDL_	BDL	BDL
Chlorotoluene	_; 25.	BDL_	BDL_		BDL
Dibromomethane	_   25	BDL.	BDL_	BDL_	37.0
12-Dichlorobenzene	25	164.0		_;BDL	BDL
13-Dichlorobenzene	; 25		BDL_	-:BDL	BDL
14-Dichlorobenzene	;25		BDL_	BDL_	BDL
Trichloropropane	;25	_;BDL_	BDL_	BDL_	.11

MDL= Minimum Detectable Level/BDL= Below Detection Level/UNITS= PPB

CONNECTICUT TESTING LABORATORIES, INC. 140 Gracey Avenue / Meriden, CT 06450 (203)-634-3731

Lab No.: 128-278-19

PO No :: C2260 Date :12-27-88

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1440			~		
RDA MRTHOD 601/8010	MDL	38	39	(40)	41
EPA METHOD 601/8010	1	ì		BDL	BDL
	\50_\;	BDL:	BDL_	BDL	BDL
Chloromethane	50	BDL	BDL_	BDL :	BDL
Bromomethane	-   50	BDL:	BDL_		BDL
Vinylchloride	50	BDL_	BDL_	BDL_	25.0
Chloroethane	25	BDL_	BDL_	BDL_	BDL
Methylenechloride	125	BDL	BDL_		BDL_
Trichlorofluoromethane	_; 25 -;	BDL	BDL_	BDL_	71.0
11-Dichloroethylene	25	BDL	BDL_	BDL_	1,027.0;
11-Dichloroethane	25	213.0	BDL_	BDL_	ant
T12-Dichloroethylene	105_	DDL	DDL_	BDL	76.0
Chlurofoim	125	29.0		BDL	BDL_
12-Dichloroethane	25	BDL_	BDL_	·	BDL_
111-Trichloroethane	25	BDL_	:BDL	BDL_	BDL
Carbontetrachloride	25	BDL_	:BDL	BDL_	BDL
Bromodichloromethane	- 25	BDL	BDL_	BDL_	BDL
12-Dichloropropane	25	and the same of th	BDL_	:BDL	719.0
T13-Dichloropropylene	25	175.0	BDL_	BDL_	·
maichloroethylene	- 25		プ_BDL_	BDL_	BDL
nibromochloromethane	25	_ '	BDL_	BDL_	BDL_
112 Trichloroethane	- 25	BDL	BDL	BDL_	BDL
Cial3-Dichloropropylene_	25	BDL	BDL	:BDL	BDL_
2-Chlorethylvinylether_	25		BDL	BDL_	BDL_
Promoform		_ '	BDL	BDL_	BDL
1122-Tetrachloroethane_	25	_ '	~ '	BDL	355.0
Tetrachloroethylene	25		BDL	BDL	BDL
Chlorobenzene	25		BDL	BDL	BDL
Chloride	;50		BDL	BDL	BDL_
- · /o - h l onothory (methal)	ne_;50		BDL	BDL	BDL
Bis(2-chloroisopropyl)e	CILC 100	BDL	BDL	BDL	BDL
Bromobenzene	1 4 4	''		BDL	BDL_
Chloracetaldehyde	150			BDL	BDL_
1 Chlorobexane	125			BDL	BDL
Chloromethyl methyl eth	er_ 50				BDL_
Chlorotoluene	, 4				BDL_
nibromomethane		5 BDL			50.0
12-Dichlorobenzene	·   2				BDL_
13-Dichlorobenzene	12				BDL_
14-Dichlorobenzene		5_1BDL			BDL
Trichloropropane	2	5_ BDI	BDL	—— i—— bbb.	
Tricutoropropana			1 Dotac	stion Leve	1/UNITS= PP

MDL= Minimum Detectable Level/BDL= Below Detection Level/UNITS= PPB

Lab No.: 128-278-19

PO No. :C2260 Date :12-27-88

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	MDL	42	43	$\widehat{(44)}$ .	45
EPA METHOD 601/8010	י נענין !	1	;		
. •	50	BDL	BDL	BDL	BDL_
Chloromethane	50	BDL	BDL;	BDL	BDL_
Bromomethane	50	BDL	BDL!	BDL	BDL_
Vinylchloride	50	BDL	BDL	BDL_	BDL_
Chloroethane	25	BDL	BDL	BDL_	BDL_
Methylenechloride	25	BDL	BDL_!	BDL	BDL_
Trichlorofluoromethane	25	BDL_	BDL_	BDL_	BDL_
11-Dichloroethylene	25_	BDL_	BDL:	BDL_	BDL_
11-Dichloroethane	25	BDL	BDL	BDL_	BDL_
T12-Dichloroethylene	25	BDL_	BDL_	BDL	BDL_
Chloroform	25_	BDL	BDL_	BDL_	BDL_
12-Dichloroethane	_ : 25	BDL	BDL_	BDL_	BDL_
111-Trichloroethane	_ 25_	BDL	BDL	BDL	BDL_
	125	BDL	BDL_	BDL	BDL_
Bromodichloromethane	-: 25 <sup>-</sup>	BDL_	BDL	BDL	BDL_
12-DichloropropaneT13-Dichloropropylene	125	BDL_	BDL_	BDL_	BDL_
T13-Dichioropropyrene	25	BDL	BDL_	BDL	BDL_
Trichloroethylene	25	BDL	BDL	BDL_	BDL_
Dibromochloromethane	25	BDL	BDL_	BDL_	BDL_
112-Trichloroethane	25	BDL	BDL_	:BDL	BDL_
Cis13-Dichloropropylene_	25	BDL	BDL	BDL	BDL_
2-Chlorethylvinylether	- 25		BDL	BDL_	BDL_
Bromoform	- 25		BDL	BDL	BDL_
1122-Tetrachloroethane	125			BDL	BDL_
Tetrachloroethylene	: 25		BDL	BDL	BDL_
Chlorobenzene	50		BDL	BDL_	BDL
Benzyl Chloride			BDL	BDL	BDL_
Bis(2-chlorethoxy)methan	e_;50	_ '	-ina	RDI	!RDI
Pin(?=ohlomoigopropul)at	25	BDL	BDL	BDL_	BDL_
Bromobenzene			BDL	BDL	BDL_
Chloracetaldehyde	25	The second second	BDL	BDL	BDL_
1-Chlorohexane		· '	BDL	BDL	BDL
Chloromethyl methyl ethe	2r_; 30	· ·	BDL	BDL	BDL_
Chlorotoluene	2	~ · · ·	BDL	BDL	BDL
Dibromomethane			BDL	BDL	BDL_
12-Dichlorobenzene	2		BDL_	BDL	BDL
13-Dichlorobenzene		~	-!BDL	BDL	BDL
14-Dichlorobenzene			- BDL	BDL	BDL_
Trichloropropane	i²	5_!BDL_		1 1	

MDL= Minimum Detectable Level/BDL= Below Detection Level/UNITS= PPB

Lab No.:128-278-19

PO No. :C2260 Date :12-27-88

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EPA METHOD 601/8010	MDL	(46)	47	48	!
RPA HATHOU	; ;		201	ויייייייייייייייייייייייייייייייייייייי	j
	150_1_	RNI <sub>1</sub>	BDI:	BDL	
nathana	:50_:/_	BDL	BDL_	BDL :	
Vinylchloride	:50_:_	BDL_	BDL_	BDL	
Chloroethane	150_1	BDL	BDL_	44.0	
y a lamachlaride	140_1	BDL	BDL_	BDL	
Trichlorofluoromethane	.: 25_:.	BDL	BDL	BDL_	
11-Dichloroethylene		BDL_	BDL_	BDL	
11-Dichloroethane	143_1	BDL	BDL_	50.0	·
T12-Dichloroethylene	140_1	BDL_	BDL_	BDL_	
al 1 Pamm	[ 25 ]	BDL_	BDL	117.0	
i.a ni blamaathana	_	BDL_	BDL_	BDL	!
111 TrichloroctABAR	_ 1 0 0 - 1	BDL_	BDL_	BDL	
Carbontetrachloride	1	BDL_	BDL_		
Bromodichloromethane	25_;	BDL_	BDL	BDL	
11 monana	_; 25_;		BDL_	BDL_	
T13-Dichloropropylene	25_	BDL	!BDL	BDL_	
[ [ ] - D T C L T C T C F I V	25_	BDL	:BDL	137.0	
Trichloroethylene	25_	BDL	BDL_	BDL_	
Dibromochloromethane	25	BDL	BDL	BDL	j
112-Trichloroethane		BDL	BDL_	BDL	·
Cis13-Dichloropropylene	- 25	BDL	BDL	BDL	
2-Chlorethylvinylether	-¦25-	BDL	BDL	BDL	l
Bromoform		BDL_	BDL	BDL	
1122-Tetrachloroethane	1 25-	BDL	87.0	111.0	!
Tetrachloroethylene	- 125 125	BDL	BDL		
Chlorobenzene	; 45_ ! 50		BDL		
Benzyl Chloride		BDL BDL	BDL	BDL	
Bis(2-chlorethoxy)methane	3_! 50_		BDL	BDL	
Bis(2-chloroisopropyl)eth	ne; 50_	BDL_	- BDL	BDL	!
Bromobenzene	120_	;DDU	BDL BDL	BDL	
Chloracetaldehyde	50_		BDL BDL	BDL	
1 Chlamaharane	125			BDL	-
Chloromethyl methyl ethe	r_;50	BDL_	BDL_	- BDL	
Chlorotoluene	; 45	_ii	BDL_	BDL BDL	-
Dibromomethane.	25	BDL_	_ BDL_		_ 1
12-Dichlorobenzene	; 25	BDL_	BDL	_!BDL_	
13-nichlorobenzene	; 25				_!
14 nimblemohenzene	; 25	BDL_			_ [
mai ablaranranane	125	BDL_	BDL_	;BDL_	_i
12-Dichlorobenzene 13-Dichlorobenzene 14-Dichlorobenzene Trichloropropane	\25 \25	BDL_		BDLBDL	

MDL= Minimum Detectable Level/BDL= Below Detection Level/UNITS= PPB

## APPENDIX 9 - TEST RESULTS

000613

SUBSTANCE LIST

7398 1 ni 6

Your sample ID See below Date submitted 12-04-37

EML sample ID 71204-AVC Date(s) analyzed 12-04 to Date(s) analyzed 12-04 to 12-23-87

\* \* \* ALL VALUES REPORTED IN ug/gm (wet weight) \* \* \*

20 wis GC-PID/HECD. MOTE: not detected (nd) = <0.05 ppm

Method 8010/8020 via GC-PID/HECD.	NOTE: no	t detected (r	1d) = (U.U5	b bur
Samole ID:		871204-2	871204-1	
Compound:	<0.05	<0.05	<0.05	
Benzene	<0.05	<0.05	<0.05	
Benzyl chloride	<0.05	<0.05	<0.05	
Bis (2-chloroethoxy)methane	<0.05	<0.05	<0.05	
Bis (2-chloroisopropyl)ether	<0.05	<0.05	<0.05	
Bromobenzene	<0.05	<0.05	<0.05	
Bromodichloromethane	<0.05	<0.05	<0.05	
Bromoform	<0.05	<0.05	<0.05	
Bromowethane	<0.05	<0.05	<0.05	
Carbon tetrachloride	<0.05	<0.05	<0.05	
Chloracetaldehyde	<0.05	<0.05	<0.05	
Chloral	<0.05	<0.05	<0.05	
Chlorobenzene	<0.05	<0.05	<0.05	
Chloroethane	<0.05	<0.05	<0.05	
Chloroforn	<0.05	70.05	<0.05	
1-Chlorohexane	(0/05)	40:03	<0.05	•
2-Chloroethyl vinyl ether	40.95	<0.05	<0.05	
Chloromethane	A50.05		<0.05	
Chloromethyl methyl ether	-c0.05	.030.85 <u>}</u>	<0.05	
Chlorotoluene	< 70.05	00.05		
Dibromochloromethane	70.05	50.05 F	<0.05	
Dibromowethane	100.05	\$ \$0.05 \$ \$0.05 \$ \$0.05 \$ \$0.05 \$ \$0.05	<0.05	
1.2-Dichlorobenzene	V0205	<0.0557	<0.05	
1.3-Dichlorobenzene	0.00	(0.43)	<0.05	
1.4-Dichlorobenzene	(0.06//	ATT KOLOS	<0.05	
Dichlorodifluoromethane	<0.05	(0.05	<0.05	
1.1-Dichloroethane	<0.05	<0.05	<0.05	
1.2-Dichloroethane	<0.05	<0.05	<0.05	
1.1-Dichloroethylene	<0.05	<0.05	<0.05	
trans-1,2-Dichloroethylene	<0.05	<0.05	<0.05	
Dichloromethane	<0.05	<0.05	<0.05	
1.2-Dichloropropane	<0.05	<0.05	<0.05	\
1.3-Dichloropropylene	<0.05	<0.05	<0.05	
Ethylbensens	<0.05	<0.05	<0.05	
1,1,1,2-Tetrachloroethane	<0.05	<0.05	<0.05	
1.1.2.2-Tetrachloroethane	0.07	0.25	0.10	
Tetrachloroethylene (PCE)	<0.05	<0.05	<0.05	
Tolvene	<0.05	<0.05	<0.05	!
1.1.1-Trichloroethane	<0.05	<0.05	<0.05	
1.1.2-Trichloroethane	<0.05	<0.05	<0.05	The mounty
Trichloroethylene (TCE)	<0.05	<0.05	<0.05	GT OFF HEALTH !
Trichlorotrifluoromethane	(0.05	<0.05	<0.05	CELLEGIAL CONTRACT
Trichloropropane	<0.05	<0.05	<0.05	MONTTONDING LABORATORY, DIG.
Vinyl chloride	<0.05	<0.05	<0.05	WALLACONA !
Xylanes	(0.05	<0.05	<0.05	
Dichloropropage	<0.05	<0.05	<0.05	
Dichloropropylene	<5.05	<5	<5	
Tetranitromethane	<del></del>	7,	<u></u>	= = =
	$\sim$	1200		

WALLINGFORD, CT 05452 # (203) 294-0555 59 NORTH PLAINS INCUSTRIAL PARK

4 '88 14:21 FROM TEXTRON LYCOMING

#### PRPORT OF RESULTS

r sample ID <u>See below</u>	•		REPORT OF RESULTS						
	L	Date submitted	12-04-87						
sample ID 71204-AVC		Date(s) analyzed 12-04 to 12-23-87							
	ALL VALUES REP								
ALS & METALLOIDS	Method:	flame AAS or ES	unless noted with *						
Sample ID:	871204-1	871204-2	871204-3						
uninum									
enic									
rium	13,05	18.66	12.73						
dalua	7,293	1,593	6.36%						
lcium									
x. chrom.	6.03%	6,65%	1,333						
t. chrom.	0.783	1.013	0.75%						
pper			-1: -7:						
10									
on	3,63	5,39	3, 67						
ECULY	nd<0.0002	nd<0/0002	0.359 0.969						
gnesium		1,4	7						
nganese		F-1	200						
ckel	0.30%	1.363	3 .5 .0 .359						
tassium	0.99%	1/913	0.967						
lenium			20\0/						
lyer	20.34	22.9167							
odium	0.189	0.173	1/11/1/159						
N									
Inc									
HORGANICS/HON-HETALS	Method: v	various (EPA-app	proved)						
OD/COD									
hloride									
p. cond. (unhos)		106 28	18.75						
ranide	100.0 nd<0.5	106.25 nd<0.5	nd<0.5						
noride	84/02	114/0.5							
rdness									
magnia-V									
Itrate									
itrate itric									
itrile									
itrate itrile s G hosphate									
itrate itrile & G hosphate									
itrate itrile & G hosphate H									
itrate itrile & G hosphate H 38									
itrate itrile a G hosphate H GS	p420 \$	nd<0.5	nd<0.5						
itrate itrile & G hosphate H 38	nd<0.5	nd<0.5	nd<0.5						

SUITE A. • 59 NORTH PLAINS INDUSTRIAL PARK

• WALLINGFORD, CT 06492 3 (203) 284-0555

200.3649

FROM TEXTRON LYCOMING

800000

## REPORT OF RESULTS

Your sample ID See below Date submitted 12-04-87

EML sample ID 71204-AVC Date(s) analyzed 12-04 to 12-23-87

# METHOD \$25 GC/MS FRACTION-ACID COMPOUNDS (PHEMOLS)

\* \* \* ALL VALUES REPORTED IN ug/qm (ppm) \* \* \*

	Sample ID:	<u> </u>	<u> 171204-2</u>	871204-3
Compound				
2-Chlorophenol		nd<0.5	nd<0.5	nd<0.5
2,4-Dichloropheno	1	nd<0.5	nd<0.5	nd<0.5
2,4-Dimethylpheno		nd<0.5	nd<0.5	nd<0.5
4,6-Dinitro-o-cre		nd<1	nd<1	nd<1
2,4-Dinitropheno		1>ba	nd<1	. nd<1
2-Hitrophenol		nd<0.5	nd<0.5	nd<0.5
4-Mitrophenol		nd<0.5	nd<0.5	nd<0.5
p-Chloro-a-creso	1	nd<0.5	nd<0.5	nd<0.5
Pentachloropheno		nd<0.5	nd < 0.5	nd<0.5
Phenol	·	nd<0.5	ndia	nd<0.5
2,4,6-Trichlorop	henol	nd<0.5	nd (0, 5	nd<0.5
-		,	on the	
		,	WITE I	I.



Analyst

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SUITE A. • 59 NORTH PLAINS INDUSTRIAL PARK

### REPORT OF RESULTS

Date submitted 12-04-87 Your sample ID See below Date(s) analyzed 12-04 to 12-23-87 71204-AVC EML sample ID

# HETHOD 625: GC/HE PRACTION-BASE/WEUTRAL COMPOUNDS

\* \* \* ALL RESULTS REPORTED IN ug/gm (ppm) \* \* \*

Compound	<u>871204-1</u>	Compound	871204 1
		Diethylphthalate	nd<0.5
Acenaphthene	_nd<0.1	Dischulphthalate	nd<0.5
Acenaphthylene	nds0.1	Directhylohthalate	nd<0.5
Anthracene	nd<0.1	di-n-Butylphthalate	nd<0.5
Benzidine	<u>nass</u>	2.4-Dinitrotoluene	nd<0.5
Benzo(a)anthracene	nd<0.1	2.6-Dinitrotoluene	nd<0.5
Benzo(a) byrene	nd<0.1	di-n-Octvlohthalate	
Benzo(b)fluoranthene	nd<0.1	1.2-Diphenylhydrazine	nd<0.5
Benzo(ghi)perylene	nd<0.2	Pluoranthene	nd<0.1_
Bence/klflnoranthene	nd<0.1	Pluorene	nd<0.1_
Benzo(k) fluoranthene		Hexachlorobenzene	ndso.s
bis(2-Chloroethoxy)methane	nd<0.5	Rexachlorobutadiene	nd<0.5
bis(2-chloroethyl)ether		Hexachlorocyclopentadiene	nd < 0.5
bis(2-ethylhexyl)phthalate	nd<0.5	Hexachloroethane	nd<0.5
4-Bromophenylphenylether	nd<0.5	Indeno(1.2.3-cd)pyrene	nd<0.2
Butylbenzylphthalate		Isophorone	nd<0.5
2-Chloronaphthalene	nd<0.5		nd<0.1
4-Chlorophenylphenylather	nd<0.5	Kaphthalene	nd < 0.5
Chrysene	nasu	Witrobenzene	nd<5
Dibenzo(ah)anthracene	nd<0.2	n-Witrosodimethylamine	nd<5
1,2-Dichlorobenzene	nd<0.5	n-Witrosodi-n-pronylamine	nd<5
1.3-Dichlorobenzene	nd<0.5	n-Witrosodiphenylamine	
1.4-Dichlorobenzene	nd<0.5	Phenantistane	nd<0.1
3.3'-Dichlorobenzidine	nd<5	Pyren	<u>nd&lt;0.1</u>
bis(2-chloroisopropyl)eth		1.2. 4-Trichlorobenzane (1)	nd<0.5
DISTA-CHAVIOLISUM CONTENTS	A. Proposition of the last of	15 2 M W W 1-1	

NOTE: nd = not detected





SUITE A. . SO NORTH PLAINS INDUSTRIAL PARK . WELLINGFORD, CT 06492 3 (203) 284-0555

JAN 4 .88 14:22 FROM TEXTRON LYCOMING

#### REPORT OF RESULTS

Your sample ID <u>See below</u>

Date submitted <u>12-04-87</u>

EML sample ID <u>71204-AVC</u>

Date(s) analyzed <u>12-04 to 12-23-87</u>

HETHOD 625: GC/HS FRACTION-BASE/NEUTRAL COMPOUNDS

\* \* \* ALL RESULTS REPORTED IN ug/gm (ppm) \* \* \*

Compound	871204-2	Compound	871204-2
Acenaphthene	nd<0.1	Diethylphthalate	nd<0.5
Acenaphthylene	nd<0.1	Dimethylphthalate	nd<0.5
Anthracene	nd<0.1	di-n-Butylphthalate	nd<0.5
Benzidine	nd<5	2.4-Dinitrotoluene	
Benzo(a)anthracene	nd<0.1	2.6-Dinitrotoluene	nd<0.5
Benzo(a) pyrene	nd<0.1	di-n-Octylphthalate	nd<0.5
Benzo(b) fluoranthene	nd<0.1	1,2-Diphenylhydrazine	nd<0.5
Benzo(ghi)perylene	nd<0.2	Fluoranthene	nd<0.1
Benzo(k)fluoranthene	nd<0.1	Pluorene	nd<0.1
bis(2-Chloroethoxy)methans		Mexachlorobenzene	nq<0.5
his(2-chloroethyl)ether	nd<0.5	Hexachlorobutadiene	nd<0.5
bis(2-ethylhexyl)phthalate		Hexachlorocyclopentadiene	nd(0.5
4-Bromophenylphenylether	nd<0.5	Hexachlorgethane	nd<0.5
Butylbenzylobthalate	nd<0.5	Indeno(1,2,3-cd)pyrene	nd<0.2
2-Chloronaphthalene	nd<0.5	Izophozone	nd<0.5
4-Chlorophenylphenylether	nd<0.5	Naphthalene	nd<0.1
Chrysene	nd<0.1	Nitrobenzene	nd<0.5
Dibenzo(ah)anthracene	nd<0.2	n-Witrosodimethylamine	nd<5
1.2-Dichlorobenzene	nd<0.5	n-Nitrosodi-n-ordoviamine	nd < 5
1.3-Dichlorobenzene	nd<0.5	n-Mitrosod Pohenylamine	nd<5
1.4-Dichlorobenzene	nd<0.5	Phenanthrane	nd<0.1
3.3'-Dichlorobenzidine	nd <5	Pyrene K	nd<0.1
bis(2-chloroisopropyl)eths		1.2.4-richlorobenzen	nd<0.5

NOTE: nd = not detected

Analyst





SUITE A. • 59 NORTH PLAINS INDUSTRIAL PARK

WALLINGFORD, CT 06492 9 (203) 284-0555

#### REPORT OF RESULTS

Your sample ID See below Date submitted 12-04-87

EML sample ID 71204-AVC Date(s) analyzed 12-04 to 12-23-87

METHOD 625: GC/MS FRACTION-BASE/NEUTRAL COMPOUNDS

 $\pm$   $\pm$  ALL RESULTS REPORTED IN ug/gm (ppm)  $\pm$   $\pm$ 

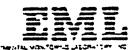
Compound	871204-3	Compound	871204-3
Acenaphthene	nd<0.1	Diethylphthalate	nd<0.5
Acenaphthylene	nd<0.1	Dimethylohthalate	nd<0.5
	nd<0.1	di-n-Butylohthalate	nd<0.5
Anthracene	nd<5	2,4-Dinitrotoluene	nd<0.5
Benzidine Benzo(a)anthracene	nd<0.1	2,6-Dinitrotoluene	nd<0.5
Benzo(a) Dyrene	nd<0.1	di-n-Octylphthalate	nd<0.5
Benzo(b)fluoranthene	nd<0.1	1.2-Diphenylhydrazine	nd<0.5
Benzo(ghi)perylene	nd<0.2	Pluoranthene	nd<0.1
Benzo(k)fluoranthene	nd<0.1	Fluorene	nd<0.1
ble/2. Chleroethous methane		Hexachlorobenzene	nd<0.5
bis(2-Chloroethoxy)methane	nd<0.5	Hexachlorobutadiene	nd<0.5
bis(2-chloroethyllether		Hexachlorocyclopentadiene	nd<0.5
bis(2-ethylhexyl)phthalate		Hexachloroethane	nd<0.5
4-Bromophenylphenylether	nd<0.5	Indeno(1,2,3-cd)pyrene	nd<0.2
Butylbenzylohthalate	nd<0.5		nd<0.5
2-Chloronaphthalene	nd<0.5	Isophorone	nd<0.1
4-Chlorophenylphenylether	nd<0.5	Naphthalene	
Chrysene	nd<0.1	Nitrobenzene	nd<0.5
Dibenzo(ah)anthracene	nd<0.2	n-Witrosodimethylamine	nd<5
1,2-Dichlorobenzene	nd<0.5	n-Mitrosodi-n-propylamine	nd<5
1,3-Dichlorobenzene	nd<0.5	n-Mitrosodiphenylamine	nd <5
1.4-Dichlorobenzene	nd<0.5	Phenanthrene	nd<0.1_
3,3'-Dichlorobenzidine	nd<5	Pyrene C	nd < 0.1
bis(2-chloroisopropyl)eths		1.2.4-Trichtorobenzene	nd<0.5

NOTE: nd = not detected

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Analyst





SUITE A. 6 59 NORTH PLAINS INDUSTRIAL PARK

WALLINGFORD, CT 06492 • (203) 284-0555

#### SYNTHETIC LINER MEMBRANE WARRANTY

### SCHLEGEL LINING TECHNOLOGY, INC.



#### WARRANTY AND LIABILITY LIMITATION

#### Warranty

Schlegel Lining Technology, Inc. ("Schlegel") warrants to the Customer that the SCHLEGEL® sheet lining system sold and Installed by Schlegel for the Project will conform to the attached Physical Properties Specifications at the time-of sale and will, as installed, be free from defects at the time of completion of installation and for one (1) year thereafter.

#### Remedy If Schlegel Breaches the Warranty

If the Customer notifies Schlegel during the Warranty period (or within thirty (30) days thereafter) of a problem which it feels gives rise to a claim under this Warranty, Schlegel will investigate the problem jointly with the Customer. If the Customer's claim is covered by this Warranty, Schlegel will, at its expense, repair or replace (at its option, in the exercise of its best technical judgement) the defective materials and/or installation work. If the problem is not covered by this Warranty, the Customer will be responsible for Schlegel's inspection expenses and the expenses of any repair or replacement which Schlegel and the Customer agree to carry out.

#### Conditions of This Warranty

This Warranty and Schlegel's obligations under it are subject to the following conditions:

- That the Customer notifies Schlegel promptly of the discovery of any problem which it feels gives rise to a claim under this Warranty;
- That the Customer provides Schlegel, without charge, with full and free access to the Warranty claim area (clean and dry and with fill and overburden removed if necessary) in order to enable Schlegel to inspect the same and, if appropriate, make a proper repair or replacement;
- · That the lining system has been used at all times exclusively for the purpose for which it was originally intended and designed and in accordance with the normal uses and service conditions specified in the contract or the applicable Project specifications:
- That no repair to the lining system (other than emergency repairs required to protect people or property) has been made or attempted by other than Schlegel's authorized personnel unless Schlegel has given its prior written consent;
- That the Customer has used reasonable care in the management, operation and safeguarding of the lining system;
- That the Customer has paid Schlegel all amounts due under the contract; and
- That the lining system has been properly anchored to prevent wind damage.

#### Damages Excluded

This Warranty does not apply to materials or components not manufactured by Schlegel or to claims arising from: neglect, alterations by the Customer or others, subsurface conditions, faults, sinkholes, subsidence, abnormal design, structural defects of subgrade or uverburden, abuse by equipment, machinery, people or animals, exposure of the sheet to harmful chemicals or alleration in the agreed or specified uses or service conditions, fire, flood, earthquake, hail, windstorm, explosion, tornado or other abnormal weather conditions, accidents, vandalism or Acts of God.

In the event Schlegel fails to complete a proper repair or replacement within a reasonable time after good faith attempts pursuant to its obligations above, the Customer will be entitled to a refund of that portion of the total contract price which relates to the nonconforming or defective materials or installation work as the case may be.

#### Exclusion of Other Liabilities

This Warranty is exclusive. ALL OTHER WARRANTIES, INCLUDING WARRANTIES OF MERCHANTIBILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, EXPRESS OR IMPLIED BY WORDS, AFFIRMATIONS OR OTHERWISE, ARE DISCLAIMED. (Samples, test results, statements in advertisements or catalogs, etc., are descriptive only and are not to be considered warrantles.) Schlegel's obligations of repair, replacement or credit as set forth above are also exclusive and in lieu of all other obligations or liabilities (and constitute the Customer's exclusive remedy) with respect to the quality, condition or performance of SCHLEGEL\* sheet.

Schlegel will not be liable for any indirect, special, incidental or consequential loss or damage, including, but not limited to. luss of service or contents, cost of plant or other facilities, damage to or loss of other property or equipment, loss of profits or revenues, costs of capital, costs of purchased or replacement goods or claims of third parties.

Schleget's liability for all damages, penalties, indemnifications, liabilities, costs and expenses incurred as a result of any failure by Schlegel to meet its obligations to the Customer under the contract or at law, is limited to the total contract price.

These provisions supersede and govern all other provisions of the contract between the Customer and Schlegel regarding the purchase, sale, installation and performance of SCHLEGEL" sheet.

· Schleget Lining Technology, Inc.

Innuant 10H4

GUNDLINE HD is a high quality formulation of High Density Polyethylene containing approximately 97.5% polymer and 2.5% of carbon black, anti-oxidants and heat stabilizers. The product was designed specifically for exposed conditions. It contains no additives or fillers which can leach out and cause detenoration over time.

### GUNDLINE HD SPECIFICATIONS

		20 mH (0.5 mm)	30 mK (0.75 mm)	40 mH (1.0 mm)	90 mH (1.5 mm)	80 mll (2.0 mm)	100 mH (2.5 mm)
Density (g/cc) (Minimum)	ASTM D1505	0.94	0.94	0.94	0.94	0.94	0 94
Welt Flow Index	ASTM D 1236	0.3	0.3	0.3	0.3	0.3	0.3
g/10 min.)	Condition E (190°C, 2.16 kg.)						
Vinimum Tensile Properties	ASTM D638 Type IV						
Each direction)	Dumb-bell at 2 ipm.						
1. Tensile Strength at Break		80	120	160	240	320	400
(Pounds/inch width)		50	70	95	140	190	240
2. Teneile Strength at Yield		30	,,		174		
(Pounds/inch width)	•	700	700	700	700	700	700
Elongation at Break (Percent)     Elongation at Yield (Percent)		13	13	13	13	13	13
5. Modulus of Elesticity	ASTM D882	110,000	110,000	110,000	110,000	110,000	110,000
(Pounds/square inch)	7311110000	,	,	.,.,.		,	
Tear Resistance Initiation (lbs Min.)	ASTM D1004 Die C	15	22	30	45	60	75
Low Temperature/ Brittleness	ASTM D746 Procedure B	-112°F	-112°F	-112°F	-112°F	-112°F	-112°F
Dimensional Stability	ASTM D1204	±2	±2	±2	±2	±2	±2·
(Each direction, % change max.)	212°F 1 hr.						
Volatile Loss (Max. %)	ASTM D1203 Method A	0.1	0.1	0.1	0.1	0.1	0.1
Resistance to Soil Buriel	ASTM D3083 using			-			
(Maximum percent change	ASTM D638 Type IV						
in onginal value)	Dumb-bell at 2 ipm.				_	_	_
Tensile Strength at Break and Yield	% Change	±5	±5	±5	±5	±5	±5
Elongation at Break and Yield	% Change	± 10	± 10	±10	±10	± 10	±10
Ozone Resistance	ASTM D1149 7 days	No	No	No	No	No	No
	100 pphm, 104°F	cracks					
	Magnification	7 x	7 ×	7 ×	7 ×	7 x	7 ×
Environmental Strees Crack	ASTM D1693	1500	1500	1500	1500	1500	1500
(Minimum hours)	Condition C (100°C)						
Puncture Resistance (Pounds)	FTMS 1018 Method 2031	85	135	175	270	350	440
Water Absorption (Max. % Wt. change)	ASTM D570	0.1	0.1	0.1	0.1	0.1	0.1
Hydrostatic Resistance	ASTM D751 Method A	180	240	315	490	650	810
(Pounds/square inch)	Procedure I						
Coefficient of Linear Thermal Expansion (× 10" m, 10") Nominal	ASTM D696	1.2	1.2	1.2	1.2	1.2	1.2
Moisture Vapor Transmission (g/m² · day)	ASTM E96	0.06	0.05	0.04	0.03	0.02	0.01
Thermal Stability	ASTM D3895	2000	2000	2000	2000	2000	2000
Oxidative Induction Time (OIT)	130°C, 800 pei O <sub>2</sub>						

#### **Fabric Properties**

Fabric Property 500X	Unit	Test Method	Typical Values <sup>(1)</sup>
Resistance to Installation Damage			
Grab Tensile Strength	lb	ASTM D-1682-64	200
Grab Tensile Elongation	%	ASTM D-1682-64	30 (max)
Burst Strength	psi	ASTM D-3786-80a <sup>(2)</sup>	400
Trapezoid Tear Strength	lb	ASTM D-1117-80	115
Puncture Resistance	lb	ASTM D-3787-80 <sup>-3</sup>	85

Fabric Property 600X	Unit	Test Method	Typical Values <sup>(1)</sup>
Resistance to Installation Damage			
Grab Tensile Strength	lb	ASTM D-1682-64	300
Grab Tensile Elongation	%	ASTM D-1682-64	35 (max)
Burst Strength	psi	ASTM D-3786-80a <sup>(2)</sup>	>600
Trapezoid Tear Strength	lb	ASTM D-1117-80	120
Puncture Resistance	lb	ASTM D-3787-80®	130

<sup>&</sup>lt;sup>1</sup>The values listed are average values. Contact the Mirafi Technical Department for minimum certifiable values.



To the best of our knowledge, the information contained herein is accurate. However, Mirak Inc cannot assume any liability whatsoever for the accuracy or completeness thereof. Final determination of the suitability of any information or material for the use contemplated, of its manner of use, and whether the suggested use infringes any patents is the sole responsibility of the user.

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2MP-3 4-85

<sup>&</sup>lt;sup>2</sup>Diaphragm Bursting Tester

<sup>\*</sup>Tension Testing Machine with ring clamp, steel ball replaced with a %-inch diameter solid steel cylinder (with hemispherical tip) centered within the ring clamp.

MINOR DEPARTURES FROM APPROVED CLOSURE PLAN

#### MINOR DEPARTURES FROM CLOSURE PLAN

Two changes were made to the closure plan. A catch basin was left in place to aid in the drainage of Closure Area 2 and insitu stabilization was used in Closure Area 2 to allow construction of the cap. Information pertaining to these minor changes is included in Section J.

Because of a re-evaluation of the actual elevations of the site and the drainage patterns around Closure Area 2, a catch basin was left in place on the north side of the Closure Area. This catch basin was discharges in the same location as the original drainage pattern from the closure plan area and thus was deemed to have no adverse affect upon human health or the environment and did not require a modification to the closure plan.

As documented in a letter from VFL Technology to Textron Lycoming dated October 27, 1988, due to poor subsurface conditions below elevation 2 in Lagoons 2, 3, and 4, the closure cap as designed by Metcalf & Eddy could not be installed. The material on-site did not have the structural strength to support the cap structure. In order to construct the designed cap for Closure Area 2, an in-situ stabilization of the subsurface of Closure Area 2 was performed using cement and/or cement kiln dust up to a 15% mix ratio. In the letter from VFL, it was stated they felt there would be no requirement to modify the closure plan since the work was performed on the subsurface (below the closure base elevation). The letter from VFL Technology Corp. is included in Section J along with a copy of the letter sent to Mr. George Dews documenting the change.

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### VFL TECHNOLOGY CORPORATION

42 LLOYD AVENUE • MALVERN, PENNSYLVANIA 19355 • (215) 296-2233 • FAX (215) 296-9545

October 27, 1988

Textron Lycoming 550 Main Street Stratford, CT 06497-2452

Attn:

Ms. Donna Ashford Plant Engineering

Subj:

TL P.O. No. H236208 VFL Project No. C-2260

Lagoon 2-4 Subsurface Conditions

Dear Donna:

In follow-up to our telephone conversations, VFL Technology has closely evaluated the subsurface conditions at lagoons 2, 3, & 4 in consideration of our experiences to date in the equalization basins. Basically, the closure of lagoons 2, 3, & 4 as designed by Netcalf and Eddy can not be installed as specified because of subsurface conditions below elevation 2. Material existing below this elevation can not support the closure structure. Relaxation of compaction requirement could permit installation, if acceptable.

Our previous suggestion and subsequent agreement to place rock below elevation 2 to bridge non-bearing areas as we did for the equalization basin has clearly been shown to require large quantities of imported stone in what was agreed to be the area of least concern. It will also ultimately result in additional material to be excavated and hauled to Stablex.

Presently, it appears that in lagoon 2, poor subsurface conditions persist to elevation 0 to -1. In lagoons 3 and 4 (4 in particular) this poor material may exist to elevation -4. In VFL's estimation there may be 3,000-5,000 cubic yards of additional non-bearing materials that could require removal to install the specified closure which has been submitted and approved by CT D.E.P. The excavation, hauling, disposal and replacement soil for this condition could mean \$1,000,000 of additional costs to TL.

Continuation of stone placement and subsequent removal and disposal of displaced material below elevation 2 is clearly more cost effective. Again, in VFL's estimation, the extra work required here would be the addition of approximately 2,000 c.y.

of stone and the removal of 800-1200 c.y. of displaced soil/sludge mixture. Coupled with the similar substitution of 1 ft. of stone for bankrun material (EL 2 to 3), VFL believes the closure can be completed as designed and approved. Including of \$300-400,000 to TL.

It is our belief that both of these options are probably beyond the current funding limits of the project and could result in serious consequences to Textron Lycoming. Therefore, VFL Technology believes that it is in your best interests to further investigate alternate approaches, if any, which could circumvent this situation. After extensive internal discussions for the past several days, VFL believes that a cost-effective solution exists.

VFL Technology proposes in-situ stabilization of the subsurface below elevation 2. Utilizing cement and/or cement kiln dust up to a 15% mix ratio (wet weight basis), VFL would stabilize the sludge, soil, peat mixture existing into a structural base. Then as done on the equalization basin, stone would be substituted for the initial foot of the closure (for groundwater control) and the design closure installed. This insitu stabilization offers several advantages:

#### A) COST

In-situ stabilization of the material eliminates costly hauling and disposal charges.

#### B) TIME

In-situ stabilization would add approximately two-three weeks to the project schedule. Other alternatives could add from three to six weeks based on truck availability constraints.

### C) PROVEN TECHNOLOGY

In-situ stabilization has been utilized extensively and VFL Technology is an acknowledged expert in the field.

# D) NO REQUIREMENT TO MODIFY CLOSURE PLAN

Since the work will be on the subsurface below the closure base elevation there is no expected need for state review and approvals.

Ms. Donna Ashford Page 3 October 27, 1988

#### E) ENVIRONMENTAL SAFETY

The in-situ stabilization of residual sludge below elevation 2 would reduce further groundwater contamination through the fixation of waste products.

The in-situ stabilization of the subsurface soils would be accomplish utilizing heavy construction equipment to add and mix additives to the existing soils. Our estimated cost for this work is \$100,000. Work would be performed on a lump sum basis and would include appropriate warranties. This approach presents a proven technological approach that offers a 75% to 90% savings over more traditional applications.

Recognizing the urgency of this situation, VFL requests that a meeting be set for Tuesday, November 1, 1988 with all appropriate TL personnel to effect a prompt decision. Without this decision, VFL Technology will be unable to pursue completion of its contract as it presently exists.

Please advise if any additional technical information is required for our meeting next week.

yery truly yours

James P. Hopkins, P.E.

Vice President Project Management

#### JPH/al

cc: E. Duggan, TL

J. Fleming, TL

L. Ruggiano, VFL

A. Gentile, VFL

R. Patton, VFL

J. Landis, VFL

J. Tropea, VFL

E. Poulson, VFL

### TEXTRON Lycoming

Stratford Division
Textron Lycoming /
Subsidiary of Textron Inc.

550 Main Street Stratford, CT 06497 203/385-2000

3 November 1988

George Dews Ct. DEP Hazardous Mat'ls. Mgmt. 165 Capitol Avenue Hartford, CT 06106

Dear Mr. Dews:

As I had indicated in our telephone conversation it appears that in the surface impoundments poor sub-surface conditions exist at elevations 0 to -1 (and more? - possibly -4 in lagoons 3 & 4).

The material existing below this elevation cannot support the closure structure. Since any change in the closure plan is being avoided if possible, relaxation of the compaction requirement is being avoided. It is felt by the contractor, VFL, that placing rock below the elevation 2 to bridge the non-bearing areas will not be satisfactory or work.

Consequently VFL based on past experience partially proposes in-situ stabilization of the sub-surface below elevation 2. Utilizing cement and/or cement kiln dust up to a 15% mix ratio (net weight basis) VFL will stabilize the mixture below elevation 2 existing into a structural base. Then stone would be substituted for the initial foot of closure for groundwater control and the designed closure installed as in the approved plan. This in-situ stabilization offers the following:

- 1.  $\frac{\text{Cost}}{\text{In-situ}}$  stabilization of the material eliminates the cost and uncertainty of trying to find a firm structure.
- 2. Time
  In-situ stabilization would add approximately two three weeks
  to the project schedule. Other alternatives could add from
  three to six weeks to begin seeking a stable base.
- 3. <u>Proven Technology</u>
  In-situ stabilization has been used extensively and VFL Technology is an acknowledged expert in the field.

- No requirement to modify the closure plan since the work will 4. be on the sub-surface below the closure base elevation there is no expected need for plan change.
- 5. Environmental Safety The in-situ stabilization below elevation 2 would reduce further groundwater contamination possibility through the fixation.

in-situ stabilization of the sub-surface materials will accomplished utilizing heavy construction equipment to add and mix additives to the existing soils.

If you have any questions please do not hesitate to contact me.

Very truly yours,

TEXTRON LYCOMING

hn Fleming, Su**0**v. Environmental Compliance

R. Ledger, US EPA Region I

J. Hopkins, VFL

D. Ashford, T.L.

D. Carpenter, T. L.

P. Bonitatebus T.L.



### VFL TECHNOLOGY CORPORATION

42 LLOYD AVENUE • MALVERN, PENNSYLVANIA 19355 • (215) 296-2233

November 15, 1988

Textron Lycoming 550 Main Street Stratford, CT 06497-2452

Attn:

Ms. Donna Ashford

Plant Engineering

Subj:

TL P.O. No. H236208 VFL Project No. C-2260

Stabilization Work

#### Dear Donna:

Textron Lycoming's Corporate Purchasing Department has directed VFL Technology to submit to Textron Lycoming Plant Engineering design mix information. This design mix information is for the in-situ stabilization of Lagoons 2, 3, and 4 subsurface conditions. Purchasing has directed that VFL obtain your review and approval for contract records. Enclosed are two copies of this information. Please return one signed copy to either our home or field office. Your cooperation and support is appreciated.

James P. Hopkins, P.E.

Vi/ce President Project Management

JPH/al

Enclosure

cc: E. Duggan, TL J. Landis, VFL

L. Ruggiano, VFL

# TEXTRON LYCOMING - STRATFORD, CONNECTICUT SUBGRADE STABILIZATION

Based upon the following test samples:

P-1	Average Composite Conditions	51%	Solids
P-2	Worst Case Composite	25%	Solids

			STRENGTH	(TSF)
15% Ceme	ent (2	Days)	<u>P-1</u> 4.5	<u>2−2</u> .75
15% Ceme	ent (3	Days)	-	1.5
15% Ceme	ent (7	Days)	_	4.5

Based upon this testing, 15% cement minimum is to be required. Cement ratio may be increased for P-2 type material if necessary for improved cure/accessibility. Actual design decisions by field personnel.

Submitted

Omes P. HOPKINS

VFL TECHNOLOGY CORPORATION

Accepted \_\_\_\_\_\_TEXTRON LYCOMING

# TEXTRON LYCOMING - STRATFORD, CONNECTICUT SUBGRADE STABILIZATION

Based upon the following test samples:

P-1	Average Composite Conditions	51%	Solids
P-2	Worst Case Composite	26%	Solids

				STRENGTH	(TSF)
15%	Cement	(2	Days)	<u>P-1</u> 4.5	$\frac{P-2}{.75}$
15%	Cement	(3	Days)	-	1.5
15%	Cement	(7	Days)	-	4.5

Based upon this testing, 15% cement minimum is to be required. Cement ratio may be increased for P-2 type material if necessary for improved cure/accessibility. Actual design decisions by field personnel.

JAMES P. HOPKINS
VFL TECHNOLOGY CORPORATION

Accepted

TEXTRON LYCOMING



#### VFL TECHNOLOGY CORPORATION

42 LLOYD AVENUE • MALVERN, PENNSYLVANIA 19355 • (215) 296-2233

October 11, 1988

Ms. Donna Ashford
Plant Engineering
Textron Lycoming
550 Main Street
Stratford, CT 06497-2452

Subject: Textron Lycoming

Purchase Order No. H236208

VFL Project No. C2260

Dear Donna:

Attached are the washed sieve analyses of fill material for the referenced project. Please excuse the delay in forwarding.

Very truly yours,

dames P. Hopkins, P.E.

Vice President Project Management

JPH/tg

cc: Mr. J. R. Landis/VFL

Attachments (2)

# Materials Testing, Inc.

100 RATON DRIVE CHAPMAN ROAD MILFORD, CONNECTICUT 06460 MARLBOROUGH, CONNECTICUT 06424 (203) 878-2765 (203) 295-0330

VFL Technology Corp. Station Square 3 Suite 206 Paoli, Pa. 19302 DATE 8-16-88

REPORT NO. S-1000

CLIENT

IENI\_\_\_\_

Surface Impoundment Closure

Project #fY 32/01B

PROJECT Stratford Army Engine Plant

SUBJECT

WASHED SIEVE ANALYSIS

MATERIAL:

BANK RUN GRAVEL

SOURCE:

BUTTERWORTH CONSTRUCTION-ACCESS & SPERRY ROAD- STRATFORD,

SAMPLED BY MATERIALS TESTING, INC., ON 8-10-88

SIEVE SIZE	PERCENT PASSING	SPECIFICATION
3"	100	100
2"	100	
1½"	86.3	
1"	86.3	
3/4"	81.9	
1/2"	77.0	
3/8"	75.3	
1/4"	73.4	
#10	66.5	
#20	56.0	
#40	37.1	
#100	17.6	1
#200	7.0	0-10

THE ABOVE TEST RESULT MEETS THE REQUIRED GRADING.

MATERIALS TESTING, INC.

FRANK A. SOUCY

2cc client

lcc Butterworth Construction

# MATERIALS TESTING, INC.

100 RATON DRIVE CHAPMAN ROAD

MILFORD, CONNECTICUT 06460 MARLBOROUGH, CONNECTICUT 06424 (203) 878-2765 (203) 295-0330

	VFL Techno		DATE	8-	-19-88	
	Station Sq Suite 206 Paoli, Pa				S-1001	
CLIENT						
PROJECT	Surface Impoundment Closure Project #FY 82/01B Stratford Army Engine Plant					,
SUBJECT	WASHED SIE	VE ANALYSIS				
~	MATERIAL: SOURCE:	FINE AGGREGATE (SAND) O & G INDUSTRIES - SHELTON S SAMPLED BY MATERIALS TESTING BOSWICK AVENUE - BRIDGEPORT,	, INC.,	ON 8	8-18-88 FROM	1.

SIEVE SIZE	PERCENT PASSING	ASTMC-33
3/8"	100	100
# 4	97.0	95-100
#8	92.1	80-100
#16	80.3	50-85
#30	52.9	25-60
#50	21.0	10-30
#100	5.8	2-10

THE ABOVE TEST RESULT MEETS THE REQUIRED GRADING.

MATERIALS TESTING, INC.

FRANK A. SOUCY

2cc client
lcc Butterworth Construction



STATE OF CONNECTICUT vs. AVCO LYCOMING DIVISION

Ciclede (2) weeks the faces IN THE MATTER OF AN ORDER TO AVCO LYCOMING DIVISION TO ABATE POLLUTION

ORDER

Having found that Avco Lycoming Division, located at 550 South Main: Street in Stratford, Connecticut is in violation of Connecticut's Hazardous Waste management Regulations and is maintaining a facility or condition which stan reasonably be expected to create a source of pollution to the waters of the State of Connecticut, under the provisions of Chapter 446k of the Connecticut General Statutes as amended, the Commissioner of Environmental Protection acting under Sections 22a-6, 22a-432, and 22a-449 of the General Statutes, hereby orders Avco Lycoming Division to take such action as is necessary to:

- Bring all waste handling procedures and facilities into compliance with the State's Hazardous Waste Management Regulations.
- Effect the removal and proper disposal of all hazardous, toxic, and other industrial waste now stored on-site in a manner approved by the Commissioner of Environmental Protection.

Avco Lycoming Division is further ordered to accomplish the above described program, except as may be revised by the Commissioner of Environmental Protection, in accordance with the following schedule:

- A. On or before November 30, 1984, verify to the Commissioner of Environmental Protection that a qualified consultant has been retained, or demonstrate that in-house expertise exists, to perform the necessary studies, excavation, repackaging, and disposal of waste required under Directives 1 and 2.
- B. On or before January 31, 1985, submit to the Commissioner of Environmental Protection for review and approval, a detailed report providing an inventory (identify and quantify) and hazardous waste determination for all wastes stored on-site, and an implementation schedule to be executed by a licensed chemical waste disposal firm for the removal and proper disposal of all hazardous substances in accordance with Directive 2.

On or before March 31, 1985; verify to the Commissioner of Environmental Protection that all hazardous wastes have been removed and properly disposed of in accordance with the plan approved under Step B.

Dave Carpenter ?

> cc: Pete Pet assaul

3/3:/85

- D. On or before January 31, 1985, submit to the Commissioner of Environmental Protection a report which details the remedial measures necessary to achieve compliance with all applicable hazardous waste regulations including: a contingency plan, personnel training records, an inspection schedule and log, waste analysis plan, operating records, container management, revised closure plan, and a detailed description of hazardous waste management procedures to be implemented pursuant to Directive 1.
- E. On or before March 31, 1985, verify to the Commissioner of Environmental Protection that the remedial measures approved in compliance with Step D have been implemented.

Entered as an Order of the Commissioner of Environmental Protection the 22nd day of \_\_\_\_\_ October , 1984.

Stanley J. Pac Commissioner

Order No. HM-215 City of Stratford

Sent Certified Mail
Return Receipt Requested





#### APPROVAL

Michael P. Nosenzo Environmental Engineer AVCO Lycoming Division 550 South Main Street Stratford, Connecticut 06497

Re:

Order No. HM-215

Dear Mr. Nosenzo:

The correspondence dated N/27/84, 1/30/85 and 3/25/85, prepared by Industrial Pollution Control and submitted by AVCO Lycoming Division, has been reviewed by the Department of Environmental Protection.

These reports comply with DEP Order No. HM-215, to AVCO Lycoming Division, fulfilling the requirements of Steps A and B of the Order.

These reports are hereby approved in accordance with Sections 22a-432, 22a-449 and 22a-6 of the Connecticut General Statutes, as amended.

This approval does not relieve the facility of the obligation to obtain any other authorization, as may be required by other provisions of the Connecticut General Statutes, or regulations of Connecticut State agencies.

Sincerely

Stephen W. Hitchcock

Director

Hazardous Materials Management Unit

SWH:MAF:pmg

cc:

W. Hirschfield, I, Esquire





APPROVAL



Michael P. Nosenzo Environmental Engineer AVCO Lycoming Division 559 South Main Street Stratford, Connecticut 06497

Re: Order No. HM-215

Dear Mr. Nosenzo:

The report dated April 1, 1985, prepared by Industrial Pollution Control and submitted by AVCO Lycoming Division, has been reviewed by the Department of Environmental Protection.

This report complies with DEP Order No. HM-215, to AVCO Lycoming Division, fulfilling the requirements of Steps C and D of the Order.

This report is hereby approved in accordance with Sections 22a-432, 22a-449 and 22a-6 of the Connecticut General Statutes, as amended.

This approval does not relieve the facility of the obligation to obtain any other authorization as may be required by other provisions of the Connecticut General Statutes, or regulations of Connecticut State Agencies.

Sincerely

Stephen W. Hitchcock

Director

Hazardous Materials Management Unit

SWH: MAG: pmg

cc:

W. Hirshfield, I, Esquire





July 3, 1985

#### APPROVAL

John Flemming, Chief Environmental Engineering AVCO Lycoming Division 559 South Main Street Stratford, Connecticut 06497

Re: Crder HM-215

Dear Mr. Flemming:

The letter you submitted has been reviewed by the Department of Environmental Protection.

This report complies with Department of Environmental Protection, Hazardous Materials Management Unit's Order No. HM-215 to AVCO Lycoming Division, entered on October 22, 1984, fulfilling the requirements of Step E of the Order.

The report is hereby approved in accordance with Sections 22a-449, 22a-432 and 22a-6 of the Connecticut General Statutes, as amended.

This APPROVAL does not relieve the facility of the obligation to obtain any other authorizations as may be required by other provisions of the Connecticut General Statutes, or regulations of Connecticut State agencies.

Very truly yours,

Stephen W. Hitchcock

Director

Hazardous Materials Management Unit

- SWH:MAF:pmg

.cc:

Michael P. Nosenzo W. Hirshfield, Esquire





October 8, 1985

-- Mr. John Flemming
- Environmental Compliance
AVCO Lycoming Division
559 South Main Street
- Stratford, Connecticut 06497

Dear Mr. Flemming:

Enclosed please find, as you requested, a copy of the July 2, and July 5, 1985 inspection report for AVCO. If you have any questions concerning this report we may discuss them at the meeting we have scheduled for October 18, 1985 at 10:00.

Do not hesitate to call me if you require any additional information.

Sincerely,

Mark A, Franson

Sanitary Engineer

Hazardous Waste Management Section

MAF:kls

Enclosure

Phone: 566-8843





#### LETTER OF COMPLIANCE

February 18, 1986

John Meyers
Vice President and General Manager
AVCO Lycoming Division
550 South Main Street
Stratford, CT 06497

RE: ORDER NO. HM-215

Dear Mr. Meyers:

On January 6, 1986, a compliance inspection of AVCO Lycoming Division, located at 550 South Main Street in Stratford, Connecticut, was conducted by the staff of the Department of Environmental Protection, Hazardous Materials Management Unit. As a result of documents submitted to this office, the Department has verified that compliance with Order No. HM-215 and Connecticut's Hazardous Waste Management Regulations has been achieved.

This letter, therefore, is to acknowledge full compliance with the Commissioner of Environmental Protection's Order No. HM-215 entered on the 22nd day of October, 1984.

Sincerely,

Stanley J. Pac Commissioner

SJP:MAF: jab

AVCO
Kenneth N. Tedford

Assistant Attorney General



### VFL TECHNOLOGY CORPORATION

42 LLOYD AVENUE • MALVERN, PA 19355 • (215) 296-2233 • FAX (215) 296-9545

March 7, 1990

Ms. Donna Ashford Textron Lycoming Division 550 South Main Street Stratford, Ct 06497

Subject: Textron Lycoming Contract No. H236288

VFL Project No. C-2260

Dear Ms. Ashford:

In accordance with the requirements of the contract documents, VFL Technology Corporation (VFL), hereby certifies that all work performed on the above referenced project was carried out in accordance with the contract documents and with all federal, state and local regulations.

VFL appreciates the opportunity to have worked for Textron Lycoming on this project and looks forward to future opportunities.

Sincerely,

Copie

AFJ/pls