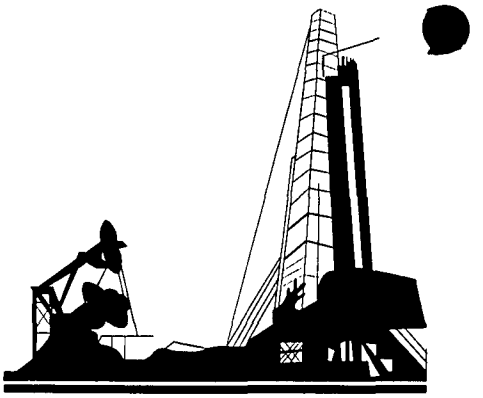
NM1 - 8

GENERAL CORRESPONDENCE

YEAR(S):

~~2001-1996~~



TRANSMITTAL COVER SHEET

OIL CONSERVATION DIVISION
1220 S. ST. FRANCIS DRIVE
SANTA FE, NM 87505
(505) 476-3440
(505)476-3462 (Fax)

PLEASE DELIVER THIS FAX:

TO: Darlene Schmits 505-774-9116

FROM: Martyne Kieling 505-476-3488

DATE: ~~5-8-01~~ 5-9-01

PAGES: 1 of 5

SUBJECT: Revised, Closure Cost Estimate

IF YOU HAVE TROUBLE RECEIVING THIS FAX, PLEASE CALL THE OFFICE NUMBER ABOVE.

OCD Environmental Bureau Closure Cost Estimate
For
TnT Environmental, Inc.,
80 acre landfarm, 3 evaporation ponds, 9 tanks, 7 steal pits
May 8, 2001

Quarterly Analytical Analysis for one year on twelve (12), five (5) acre cells

State Contract Laboratory Prices per analysis:

BTEX	$ 40.00 x 4 quarters x 12 cells	=	$1,920.00
TPH	$ 50.00 x 4 quarters x 12 cells	=	$2,400.00
Metals	$200.00 x 1 years x 12 cells	=	$2,400.00
			$6,720.00 Analytical

Quarterly Sampling Time and Labor for 12 Cells

Labor $55.00/hour
Sample 30 min per cell
Travel 6 hour
Delivery & Paperwork 2 hour

Total Time= (30min/cell x 12 cells) + 6 hours + 2 hours = 18.5 hours

18.5 hours x $55.00/hour = $1,018.00/sampling event

$1,018.00/sampling event x 4 quarters = **$ 4,072.00 Labor**

Disking/Tilling for one Year Every Two Weeks for 60 acres
Price and Time Quotes from Equipment Operators and Landfarm Operators:

Small Tractor and Operator $30.00 /hour
5 acres per hour = 12 min per acre

60 acres x 12 min x 26 weeks = 312 hours

312 hours x $30.00/hour = **$ 9,360.00 Disking/Tilling**

Water for Bioremediation

Price Quotes from Equipment Operators

Water Truck $120.00/load

$120.00/load x 12 loads x 6 Events in one Year = **$8,640.00 Water**

Leave Berms in place to control erosion. Level Landfarm = $0.00 Level Landfarm

---

Revegetation for 80 Acres

Equipment an labor cost
Tractor and seed drill $30.00/hour @ 15 min/acre for 80 acres = $600.00

Materials Cost
Native Seed mix $10.00/lb @ 5 lb/acre for 80 acres = $4,000.00

$600.00 + $4,000.00 = **$4,600.00 Revegetation**

Evaporation pit closure taken from the TnT bid proposal Dated 7/12/00
Leaving the Pit structures in place

Natural Gas Bill	$22,500
Labor	$10,000
Chemical	$60,000
Clean liners and leave in place for future use	$ 0.
Misc.	$ 4,500.
	$97,000 Total Pit closure

Tank and steal pit removal at the pond and the landfarm
9 tanks & 7 steal pits

Job Foreman/Coordinator: 5 days @ $250 per day	$1250.00
BS/W Disposal:2500 bbl @ $2.75/bbl (place in landfarm)	$0.00
Vacuum Trucks:2500 bbl hauling 15 mi. = 20 loads @ $110	$2200.00
Tank Cleaning :Jet truck, Vacuum Truck	$1980.00
Jet water:250 bbl fresh water	$ 50.00
Jet water disposal:250 bbl @$2.75/bbl (place in pond)	$ 0.00
Removal of tanks and residual equipment: Roustabout crew/truck $60 hr x 35 hr	$2100.00
Operator tandem winch/trailer$85 hr x 35 hr	$3000.00
Dirt work/reclamation:$65 hr x 2-8 hour days	$1040.00
Reseed location:	$1000.00
	$12,620.00

Confirmatory Soil Samples

16 confirmatory samples taken beneath tanks and steal pits.
State Contract Laboratory Prices per analysis:

BTEX	$ 40.00	* 16 samples	=	$ 640.00
TPH	$ 50.00	* 16 samples	=	$ 800.00
Metals	$200.00	* 16 samples	=	$3,2000.00
				$4,640.00 Analytical

Confirmatory Soil Sampling Time and Labor for 6 samples

Labor 2 personnel $55.00/hour
Sample 30 min per sample
Travel 6 hour
Delivery & Paperwork 2 hours

Total Time = (30 min/sample * 16 samples) + 6 hour + 2 hours = 16 hours

16 hours * $55.00/hour * 2 persons = **$1,760.00 Sampling Event**

Total Closure Cost for TNT Environmental, Inc.

$ 149,412.00	**Subtotal**
$ 8,404.00	**NMGRT .05625**
$ 157,816.00	**Total Financial Assurance**

Existing Commercial Facilities financial assurance may be no less than $25,000 no more than $250,000.

New schedule in for financial assurance in new Permit??

1. Financial assurance in the amount of **$157,816** in the form of a surety or cash bond or a letter of credit, which is approved by the Division, is required from T-n-T Environmental, Inc. for the commercial surface waste management facility.

   By August 6, 1999 T-n-T Environmental, Inc. must submit 25% of the financial assurance in the amount of **$39,454.**

   By August 6, 2000 T-n-T Environmental, Inc. must submit 50% of the financial assurance in the amount of **$78,908.**

   By August 6, 2001 T-n-T Environmental, Inc. must submit 75% of the financial assurance in the amount of **$118,362.**

   By August 6, 2002 T-n-T Environmental, Inc. must submit 100% of the financial assurance in the amount of **$157,816.**

Schmitz Enterprises
HCR 74 Box 113
Lindrith N.M. 87029
Phone # (505) 774-6504
Fax # (505) 774-9116

Craig Pager
324-7100
Tonylee Pager 324-7

FAX COVER SHEET

Date 5/7/01

4 Pages were sent (including the cover page.)

Sent by Darlene Schmitz - T-N-T Environmental

Attention : MarTyne Kieling - OCD.

Fax # 476-3462

Notes : Please note this was sent 7/18/00.

Please Confirm receipt. Thanks

Darlene

T-n-T CONSTRUCTION, INC.
HCR 74, Box 115
Lindrith, N M 87029

Date 7/18/00

Send to:

Attn:

ENCLOSED IS A RE-BID FOR CLOSURE OF EVAPORATION FACILITY AND LAND FARM FACILITY.
ALSO ENCLOSED IS PROPOSAL FOR BONDING PAYMENTS THAT WE HOPE YOU WILL FIND SUFFICIENT.

Sincerely;

T-n-T Construction, Inc. Agent

STEVENSON EXCAVATION

HCR 74 BOX 80
LINDRITH, NEW MEXICO 87029
(505) 774-6694

INVOICE

Nº 00074

TO: T-N-T Enviromental inc.
HCR 74 BOX 113
Lindrith,NM 87029

DATE: 7/12/00

REQUESTED BY: Tony l Schmitz

DATE:	WORK ORDER NO.	DESCRIPTION OF WORK	AMOUNT
		this bid is to close three evaperation	
		ponds &land farm.	
		time frame for total closure is 1.5 years.	
		POND	
		Natural Gas Bill	22,500.00
		Labor	10,000.00
		Chemical	60,000.00
		Cover Liners w/Dirt	2,100.00
		Misc.	4,500.00
		LAND FARM	
		Testing to clear soils	700.00
		Plowing	5,500.00
		TOTAL=	105,300.00

Schmitz Construction

Hcr 74 Box 113,,
Lindrith N.M. 87029
Phone (505) 774-6504
Fax (505) 774-9116

Date July 3, 00

Send To: OCD

The Proposed pay-out on CD account would be as follows.

Total CD account $105,500.00

Term: 3 year

5/9/00	$60,000.00	payed
8/15/00	$3,500.00	
11/15/00	$3,500.00	
2/15/01	$3,500.00	
5/15/01	$3,500.00	
8/15/01	$3,500.00	
11/15/01	$3,500.00	
2/15/02	$3,500.00	
5/15/02	$3,500.00	
8/15/02	$3,500.00	
11/15/02	$3,500.00	
2/15/03	$3,500.00	
5/15/03	$3,500.00	
8/15/03	$3,500.00	Last deposit on CD for a total of $105,500.00.

We would like you to consider this proposal for Bonding the Evaporation pit & Land Farm. It is something we can work with.

If you would like we can have the CD holder send you a quarterly statement to verify that we are fulfilling our obligation.

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

May 1, 2001

Ms. Darlene Schmitz
T-n-T Environmental, Inc.
HCR 74 P.O. Box 115
Lyndrith, New Mexico 87029

RE: Financial Assurance
Permit NM-01-0008

Dear Ms. Schmitz:

After speaking with you today I went through your file again carefully. I found what appears to be a second correspondence that was signed on July 24, 2000 (enclosed originals). You will note several pencil marks through both parts of the form these were made by our attorney. As you can see there were some problems with our form and how the form was filled out. As I recall this caused us to revamp our forms. Enclosed you will find the current OCD form for a Cash Bond. Please use this one when you see your bank representative.

Prior to mailing the original please have your bank representative call and fax me the form to make sure it is filled out correctly. If we can do this while you are present at the bank we may be able to avoid any further trips for you all the way into Farmington. Please use the enclosed 3 page cash bond form dated 12/00.

Again I apologize for the confusion that these forms have caused for all parties involved. Please note our new address on the letterhead and my new phone number 505-476-3488 the new fax number is 505-476-3462.

Sincerely

Martyne Kieling
Environmental Geologist

Enclosure: Original Cash Bond and Assignment of Cash Collateral and new forms

T-n-T Enviromental

AUG 1 1

Oil Conservation Division
2040 South Pacheco Street
Santa Fe, NM 87505

August 6, 2000

This letter is in response to the permit deficiencies Notice of Violation sent to us by Martyne J. Kieling.

1. Plants were cleared and tires moved on 7-12-2000.

4. In the process of working on treatment zone monitoring results.

6. In the process of working on an updated facility map, completion date 11-30-2000. In the process of working on berms around tanks completion date 11-30-2000.

7. Valve catchments and buried sump containers was emptied and cleaned on 7-20-2000. And continue to be monitored on a daily basis.

9. We are continuing to try to find a solution to what you are calling overspray and have none as of this moment.

10. A one and a half foot free board marker will be installed by 11-30-2000.

11. We are working on a record keeping book on pond sludge thickness and have a measure of each pond by 11-30-2000.

12. We will send an annual report of leak detection systems by July 6 of each year.

13. Some drums and buckets were removed from facility and the rest will be stored in a plastic container and labeled by 11-30-2000.

14. The saddle tank you refered to is no longer at the facility.

15. Tanks will be numbered and labeled by 11-30-2000.

16. Open top tanks and pits are netted.

17. We are working on a record keeping book for daily inspections completion 11-30-2000.

T-n-T Enviromental
HCR 74 Box 113
Lindrith, NM 87029

Sincerely,

Tony Lee Schmitz

T-n-T CONSTRUCTION, INC.
HCR 74, Box 115
Lindrith, N M 87029

Date 7/18/00

Send to: O.C.D
2040 S. PACHECO
SANTA FE. N.M. 87505

Attn: MARTYNE KIELING

RECEIVED
JUL 20 2000
Environmental Bureau
Oil Conservation Division

ENCLOSED IS A RE-BID FOR CLOSURE OF EVAPORATION FACILITY AND LAND FARM FACILITY.
ALSO ENCLOSED IS PROPOSAL FOR BONDING PAYMENTS THAT WE HOPE YOU WILL FIND SUFFICIENT.

Sincerely;

T-n-T Construction, Inc. Agent

STEVENSON EXCAVATION

HCR 74 BOX 80
LINDRITH, NEW MEXICO 87029
(505) 774-6694

INVOICE

Nº 00074

RECEIVED
JUL 20 2000
Environmental Bureau
Oil Conservation Division

TO: T-N-T Enviromental inc.
HCR 74 BOX 113
Lindrith,NM 87029

DATE: 7/12/00

REQUESTED BY: Tony l Schmitz

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		TOTAL=	105,300.00

Schmitz Construction

Hcr 74 Box 113
Lindrith N.M. 87029
Phone (505) 774-6504
Fax (505) 774-9116

RECEIVED

JUL 20 2000

Environmental Bureau
Oil Conservation Division

Date July 3, 00

Send To: OCD

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If you would like we can have the CD holder send you a quarterly statement to verify that we are fulfilling our obligation.

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

April 24, 2000

Dain Rauscher Inc.
Attn: Jerry Robbins
Suite 100
6200 Uptown Blvd. NE
Albuquerque, NM 87110-4160

Re: Darlene Schmitz
TNT Environmental

Dear Mr. Robbins:

Following our phone conversation this morning, I again reviewed Dain Rauscher Inc.'s proposed agreement among Dain Rausher Inc., its client, Ms. Darlene Schmitz, and the Oil Conservation Division ("OCD") regarding financial assurance to bring TNT Environmental into compliance with the OCD rules. Even though OCD has its own specific form for cash bonds for waste management facilities, at some time over the past year, Dain Rauscher Inc.'s proposed its form. I explained to you the following problems with Dain Rauscher Inc.'s form:

1. Paragraph 3 authorizes the Client to trade securities in the account. This is unacceptable as the account could change from an acceptable security, *e.g.* a certificate of deposit, to an unacceptable security without notice to or approval by OCD.
2. Paragraph 4.1 requires OCD to agree that the market value of the account could fall below the amount of the client's obligation to the OCD. OCD cannot agree to this, as the rules require a specific amount of financial assurance.
3. Paragraph 6.5 requires OCD to indemnify and hold harmless Dain Rausher Inc. OCD is prohibited from indemnifying or holding harmless private entities.

Although I am relatively new to the TNT Environmental issue, I believe the difficulties arise from Dain Rausher Inc.'s attempt to accommodate its client's objectives with its standard investment form. I have advised Ms. Schmitz that it would be much less complicated to use the OCD cash bond for waste management facilities funded by federally insured certificates of deposits. This choice may not provide maximum investment return to Ms. Schmitz, but that is not the purpose of the financial assurance. The purpose of the financial assurance is to assure that the State of New Mexico does not become liable for commercial facilities such as that operated as TNT Environmental.

I appreciate your efforts to help conclude this matter, but it appears it will not be possible to craft an agreement that will be acceptable to Dain Rauscher, Inc. and comply with the law OCD must follow.

Best regards,

Marilyn S. Hebert
Attorney

c: Ms. Darlene Schmitz, TNT Environmental

STATE OF NEW MEXICO
ENERGY MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

X Telephone ____ Personal Time 9:15 Left message Partial Identity. 1:31 Date 3-21-00

Originating Party: Martyne Kieling

Other Parties: Darlene Schmitz
Tony Lee Schmitz
(Voice Mail message.

Subject Bond

In attorney Hands to be looked into.

Discussion

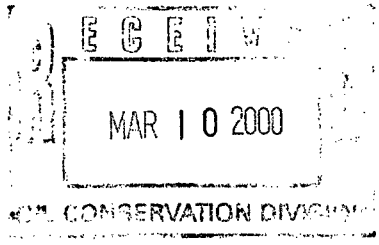
Conclusions or Agreements

Distribution

Signed Martyne J. Kieling

March 8, 2000

T-n-T Environmental, Inc.
HCR 74, Box 113
Lindrith, NM 87029



Oil Conservation Division
Attn: Martyne Kieling
2040 S. Pacheco
Santa Fe, NM 87505

Dear Ms. Kieling:

Enclosed please find Certificate of Amendment with the State Corporation Commission of name change from T-n-T Construction, Inc. to T-n-T Environmental, Inc.

Please enter this in the T-n-T file.

Thank you.

Darlene Schmitz

Darlene Schmitz, Sec. Tres.
T-n-T Environmental, Inc.

cc: OCD, Aztec

Do Name Chge on permit

went to Lai Desk

STATE OF NEW MEXICO

OFFICE OF

THE STATE CORPORATION COMMISSION

CERTIFICATE OF AMENDMENT

OF

T-N-T ENVIRONMENTAL, INC.

3158490

The State Corporation Commission certifies that duplicate originals of the Articles of Amendment attached hereto, duly signed and verified pursuant to the provisions of the BUSINESS CORPORATION ACT (53-11-1 to 53-18-12 NMSA 1978) have been received by it and are found to conform to law.

Accordingly, by virtue of the authority vested in it by law, the State Corporation Commission issues this Certificate of Amendment and attaches hereto a duplicate original of the Articles of Amendment.

Dated: FEBRUARY 4, 1998

In Testimony Whereof, the State Corporation Commission of the State of New Mexico has caused this certificate to be signed by its Chairman and the Seal of said Commission to be affixed at the City of Santa Fe

Chairman

Director

3158490

ARTICLES OF AMENDMENT TO THE ARTICLES OF INCORPORATION OF T-N-T CONSTRUCTION, INC.

Pursuant to the provisions of Section 53-13-4 of the New Mexico Statutes Annotated, the undersigned corporation adopts the following Articles of Amendment to its Articles of Incorporation:

FIRST: The name of the corporation is **T-N-T CONSTRUCTION, INC.**

SECOND: The following amendment of the Articles of Incorporation was adopted by resolution of the Board of Directors of the corporation on the 5th day of December, 1997, in the manner prescribed by the New Mexico Business Corporation Act:

ARTICLE I shall be amended in its entirety to read as follows:

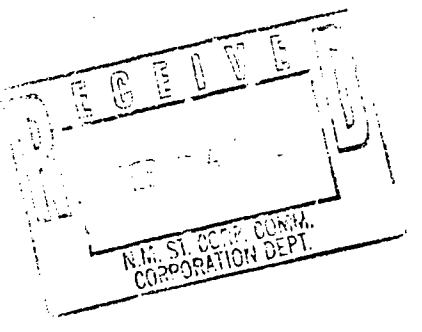
"The name of this corporation shall be **T-N-T ENVIRONMENTAL, INC.**"

THIRD: One Thousand Five Hundred (1500) shares of the stock of the corporation have been issued as of the date of the execution of these Articles of Amendment.

FOURTH: The designation and number of outstanding shares of each class entitled to vote thereon as a class were as follows: 1500.

FIFTH: The number of shares of each class entitled to vote thereon as a class voting for and against such amendment, respectively, was: 1500.

SIXTH: The manner, if not set forth in such amendment, in which any exchange, reclassification, or cancellation of issued shares provided for in the amendment shall be effected, is as follows: No change.



SEVENTH: The manner in which such amendment effects a change in the amount of stated capital, and the amount of stated capital as changed by such amendment are as follows: No change.

DATED: 11/1/98

T-N-T CONSTRUCTION, INC.

By: _____
President

ATTEST:

Darlene Schmitz
Secretary

Under penalty of perjury, the undersigned declares that the foregoing document was executed by the corporation, through its duly authorized officers, and that the statements contained therein are true and correct to the best of my knowledge.

Darlene Schmitz
Secretary

STATE OF NEW MEXICO
ENERGY MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

✓ Telephone ____ Personal Time 11:00 Date 3-8-00

Originating Party: Martyne Kieling (OCD)

Other Parties: Darlene Schmitz (505) 774 6504

Subject: Permit and Bond New

Discussion: Tnt will Need to Send letter Mentioning Company Name Change to TNT Environment Inc... OCD must then Reissue Permit under New Name.

Bond is Still at Schmitz Lenwer For Reviews. Need to get That In and Approved

Conclusions or Agreements: Darlene will Call Attorney and Call me Back with Some time Frame.

Distribution

Signed Marlyn.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

☒ Telephone ☐ Personal	Time	Date
	9:00 Left message	10-6-99

Originating Party	Other Parties
Martyne Kieling	(505) 774 6504 Tony Lee Schmitz

Subject: Aug 6 $62,500 825 Bond Due

Discussion
(1) NOV
(2) Compliance order Stop operations & Begin Closure

Conclusions or Agreements

Distribution

Signed

TnT const

CHECKLIST FOR RULE 711 PERMIT APPLICATION COMPLETENESS

1. ✓ FACILITY TYPE Produced Water Evaporation & LandFarm (Drilling Mods)
2. ✓ OPERATOR NAME, ADDRESS, CONTACT PERSON AND PHONE#
3. ✓ LEGAL LOCATION
4. ✓ MODIFICATION OR NEW FACILITY Repermitting
5. ✓ NAME AND ADDRESS OF THE FACILITY SITE LANDOWNER
6. ✓ NAME AND ADDRESS OF ALL LANDOWNERS OF RECORD WITHIN ONE MILE OF FACILITY SITE.
7. X NOTIFICATION OF ALL LANDOWNERS OF RECORD WITHIN ONE MILE OF FACILITY SITE RETURN RECEIPT SUBMITTED
8. X PUBLIC NOTICE IN TWO NEWSPAPERS ORIGINAL AFFIDAVIT OF PUBLICATION SUBMITTED.
9. ✓ FACILITY DESCRIPTION WITH DIAGRAMS INDICATING ALL PERTINENT FEATURES (FENCES, BERM, ROADS, PITS, DIKES, TANKS, MONITORING WELLS ....)
10. ✓ CONSTRUCTION INSTILLATION DESIGNS FOR PITS, PONDS, LEAK-DETECTION SYSTEMS, AERATION SYSTEMS, ENHANCED EVAPORATION SYSTEMS, WASTE TREATING SYSTEMS, SOLIDIFICATION SYSTEMS, SECURITY SYSTEMS, AND LANDFARM FACILITIES.
11. ✓ GEOLOGICAL/HYDROLOGICAL EVIDENCE THAT FACILITY WILL NOT IMPACT GROUNDWATER. DEPTH TO AND QUALITY OF GROUNDWATER INCLUDED.
12. ✓ CONTINGENCY PLAN FOR REPORTING AND CLEAN-UP OF SPILLS OR RELEASES.
13. ✓ H2S CONTINGENCY PLAN
14. ✓ ROUTINE INSPECTION AND MAINTENANCE PLAN TO ENSURE PERMIT COMPLIANCE
15. ✓ CLOSURE PLAN
16. ✓ CLOSURE COST ESTIMATE 250,000
17. BONDING AMOUNT $187,500 # TYPE DATE APPROVED
18. ANY OTHER INFORMATION AS NECESSARY TO DEMONSTRATE COMPLIANCE WITH ANY OTHER OCD RULES REGULATIONS AND ORDERS.

19. ✓ CERTIFICATION SIGNATURE AND DATE ON PERMIT

10/26/99

T-n-T Environmental, Inc.

HCR 74, Box 115
Lindrith, N M 87029

Oil Conservation Division
2040 S. Pacheco
Santa Fe, N M 87505

Attn: Martyne Kieling

RE: Permit for Renewal T-n-T Disposal / Cash Bond

The bond for the Permit Renewal has been put on hold by the OCD because the attorney for the OCD, Rand Carroll has never gotten with Jerry Robbins with Dain Rauscher, Inc. to finalize the legal wording for a cash bond from my personal accounts at Dain Rauscher. Mr. Robbins has most of the paper work completed and is just waiting for Mr. Carroll to contact him. When they come to an agreement the permit renewal will be completed.

Sincerely;

Darlene Schmitz

Darlene Schmitz, Sec. Tres.
T-n-T Environmental, Inc.

cc: Denny Foust, Aztec OCD
Rand Carroll, Attn. OCD

Kieling, Martyne

From: Kieling, Martyne
Sent: Wednesday, October 27, 1999 2:52 PM
To: Carroll, Rand
Subject: TNT BONDING

Rand,

Hope you had a great vacation
Welcome back to the OCD world!!

This is just a message to back up a voice mail that I left for you while you were out.

Please Call Jerry Robbins with Dain Rouster at 1-800-944-6698. He is doing the Financial Assurance for TnT (Tony Lee and Darlene Schmitz 774-6504) one of our surface waste mangament facilities. It is my understanding he has all the paperwork ready to go for a type of cash collateral deposit (in the amount of $62,500 one quarter of the $250,000 but has some questions that ONLY YOU can answer .... thanks Martyne

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-137
Originated 8/8/95
Revised 6/25/97

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to appropriate
District Office

APPLICATION FOR WASTE MANAGEMENT FACILITY

(Refer to the OCD Guidelines for assistance in completing the application)

RECEIVED
OCT 20 1997
Environmental Bureau
Oil Conservation Division

[X] Commercial [ ] Centralized

1. Type: [ ] Evaporation [ ] Injection [ ] Other
   [X] Solids/Landfarm [ ] Treating Plant
2. Operator: T-n-T Construction, Inc.
   Address: HCR 74-Box 113 Lindrith, New Mexico 87029
   Contact Person: Tony Schmitz Phone: 505-774-6504 Cell 320 2737 Pager 324 7132
3. Location: SW/4 SE 4and SE/4 SW/4 Section 5 Township 25N Range 3W
   Submit large scale topographic map showing exact location
4. Is this a modification of an existing facility? [ ] Yes [X] No
5. Attach the name and address of the landowner of the facility site and landowners of record within one mile of the site.
6. Attach description of the facility with a diagram indicating location of fences, pits, dikes, and tanks on the facility.
7. Attach designs prepared in accordance with Division guidelines for the construction/installation of the following: pits or ponds, leak-detection systems, aerations systems, enhanced evaporation (spray) systems, waste treating systems, security systems, and landfarm facilities.
8. Attach a contingency plan for reporting and clean-up for spills or releases.
9. Attach a routine inspection and maintenance plan to ensure permit compliance.
10. Attach a closure plan.
11. NA Attach geological/hydrological evidence demonstrating that disposal of oil field wastes will not adversely impact groundwater. Depth to and quality of ground water must be included.
12. NA Attach proof that the notice requirements of OCD Rule 711 have been met.
13. Attach a contingency plan in the event of a release of H_2S.
14. Attach such other information as necessary to demonstrate compliance with any other OCD rules, regulations and orders.
15. CERTIFICATION

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Tony L. Schmitz Title: President

Signature: Tony L. Schmitz Date: Oct.13, 1997

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-137
Originated 8/8/95
Revised 6/25/97

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to appropriate
District Office

APPLICATION FOR WASTE MANAGEMENT FACILITY

(Refer to the OCD Guidelines for assistance in completing the application)

[x] Commercial [ ] Centralized

1. Type: [x] Evaporation [ ] Injection [ ] Other _____
   [ ] Solids/Landfarm [ ] Treating Plant
2. Operator: T-n-T Construction, Inc.
   Address: HCR 74-Box 113 Lindrith, New Mexico 87029
   Contact Person: Tony Schmitz Phone: 505-774-6504
3. Location: NE /4 SE /4 Section 7 Township 25N Range 3W
   Submit large scale topographic map showing exact location
4. Is this a modification of an existing facility? [ ] Yes [x] No
5. Attach the name and address of the landowner of the facility site and landowners of record within one mile of the site.
6. Attach description of the facility with a diagram indicating location of fences, pits, dikes, and tanks on the facility.
7. Attach designs prepared in accordance with Division guidelines for the construction/installation of the following: pits or ponds, leak-detection systems, aerations systems, enhanced evaporation (spray) systems, waste treating systems, security systems, and landfarm facilities.
8. Attach a contingency plan for reporting and clean-up for spills or releases.
9. Attach a routine inspection and maintenance plan to ensure permit compliance.
10. Attach a closure plan.

NA 11. Attach geological/hydrological evidence demonstrating that disposal of oil field wastes will not adversely impact groundwater. Depth to and quality of ground water must be included.

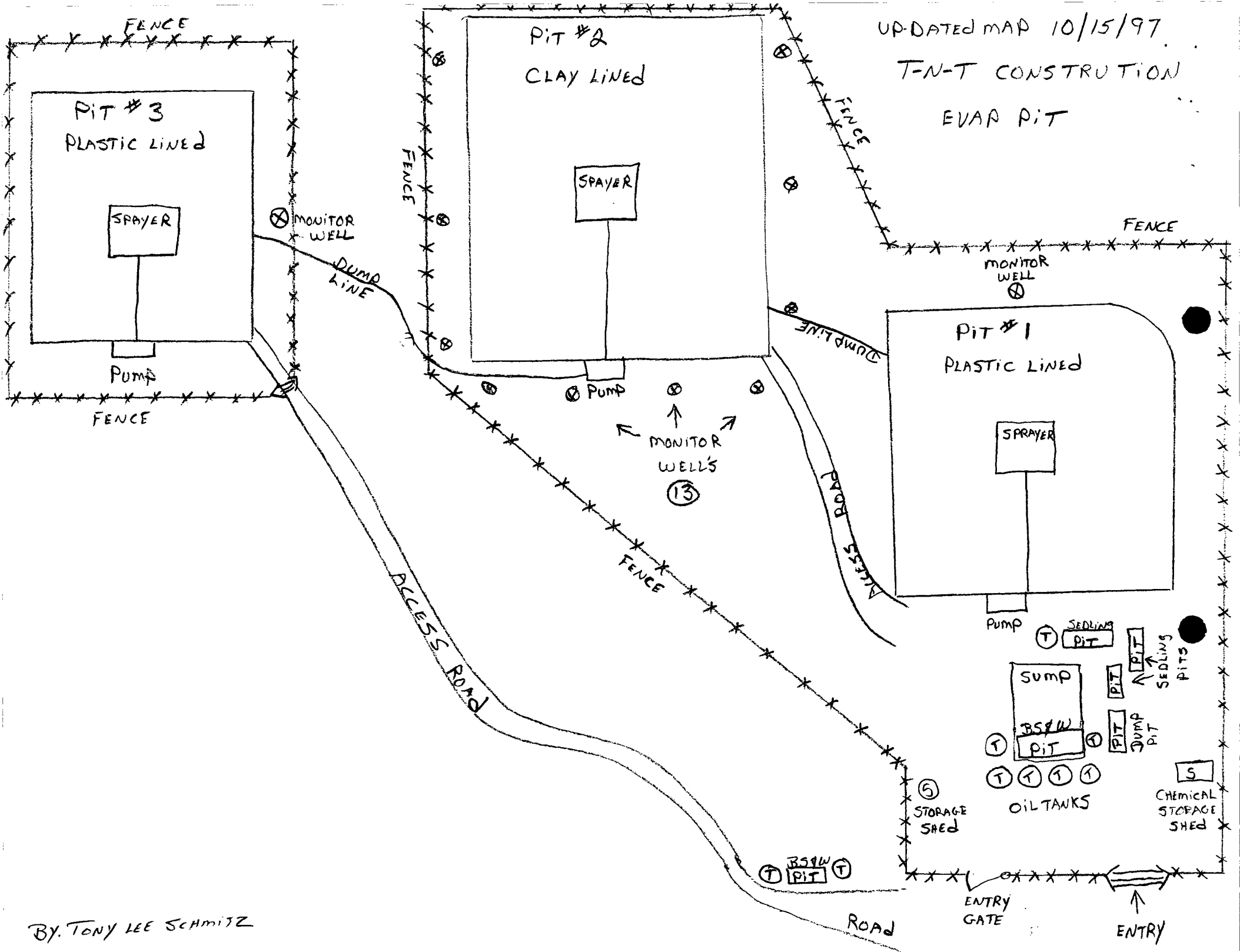
NA 12. Attach proof that the notice requirements of OCD Rule 711 have been met.

13. Attach a contingency plan in the event of a release of H_2S.
14. Attach such other information as necessary to demonstrate compliance with any other OCD rules, regulations and orders.
15. CERTIFICATION

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Tony L. Schmitz Title: President

Signature: Tony L. Schmitz Date: Oct. 13, 1997


UP-DATED MAP 10/15/97
T-N-T CONSTRUTION
EVAP PIT
PIT #2
CLAY LINED
SPRAYER
PIT #3
PLASTIC LINED
SPRAYER
PIT #1
PLASTIC LINED
SPRAYER
FENCE
FENCE
FENCE
FENCE
FENCE
MONITOR WELL
MONITOR WELL
DUMP LINE
DUMP LINE
PUMP
PUMP
PUMP
MONITOR WELLS
13
ACCESS ROAD
ACCESS ROAD
ACCESS ROAD
SEDLING PIT
PIT
PIT
PIT
SEDLING PITS
sump
BS&W
PIT
DUMP PIT
OIL TANKS
STORAGE SHED
CHEMICAL STORAGE SHED
BS&W
PIT
ENTRY GATE
ENTRY
BY. TONY LEE SCHMITZ

October 9,1997

N.M. Energy, Minerals And Natural Resources Depart.
ATTN: Martyne J. Kieling
Oil Conservation Division
2040 S. Pacheco St.
Santa Fe, N.M. 87505

RE: Rule 711 Waste Management facility, Evaporation Pond and Landfarm Inspection (NM-01-0008) T-n-T Construction,Inc.
Evaporation Pond Location NE/4 SE/4 of Section 7, Township 25 North, Range 3 West, NMPM, Rio Arriba County, New Mexico
Landfarm Location SW/4 SE/4 and SE/4 SW/4 of Section 5, Township 25 North, Range 3 West, NMPM, Rio Arriba County, New Mexico.

Dear Ms. Kieling:

Enclosed is Form C-137 Applications for waste management facility, one for the Evaporation Pond and one for the Landfarm. New bonding is in the process but hasn't been approved as of this date.

We would like to correct your statement that T-n-T is a Treating Plant, T-n-T is a Rule 711 Waste Management Facility.

Response to attachment 1- Inspector report dated June 9,1997.

1. Pond Freeboard: Freeboard markers surveyed in for Pond #3 September 15, 1997 with reflective tape. Pond #1 & 2 surveyed in October 10, 1997. Pond #1 has had the water level lowered.

2. Pond Levee: No response necessary.

3. Leak Detection System: 6 inches of pipe have been added to the leak detection monitor well and cover added at Pond #1. A schedule of inspection set up for twice a month.

4. Sludge Build-up: 2 inches of sludge was measured by guage line and pole at the dump line where most sludge is concentrated.

5. Security: No response necessary.

6. Signs: No response necessary.

7. Drum Storage: All drums containing materials other than fresh water will be stored on a portable metal tray to contain leakage.

8. Process Area: Metal drip pans will be installed at compressor sites.

9. Above Ground Tanks: All berms will be designed to contain a volume of one-third more than the total of the largest tank or of all interconnected tanks.

10. Open Top Tanks and Pits: Expanded metal will be added to top of any tanks exceeding 200 sq. ft. to protect migratory birds. Evaporation Ponds will be kept free of oil.

11. Above Ground Saddle Tanks: No response necessary.

12. Tank Labeling: All tanks, drums and containers has labels or placards to identify contents and emergency information.

13. Below Grade Tanks/Sumps: There is no below grade sump at the evaporation ponds. Landfarm has plastic under all tanks.

14. Underground Process/Wastewater Lines: All underground process/ wastewater lines will have a water column test run every 5 years. The water column test will consist of a 7 foot standing pipe on the high end of flow pipe, with low end plugged and it must hold water for 1 hour.

15. Housekeeping: No response necessary.

16. Trash and hazardous material: No response necessary.

17. Spill reporting: As per form C141 & Rule 116, spills over 5 BBL will be reported to OCD, Aztec office (2 copies) within 15 working days. Spills over 25 BBL will be reported by telephone to OCD, Aztec office as soon as it is contained.

18. Berming: No response necessary.

19. Soil spreading, disking and lift thickness: No response necessary.

20. Free liquids: There are no free liquids or soils at the landfarm, however drilling mud can be accepted on a case by case basis.

21. Application for permit under Rule 711: Attached.

(a) Names and addresses of Officers of T-n-T Construction, Inc.
Tony Leland Schmitz, President HCR 74-Box 114, Lindrith, NM 87029
Tony Schmitz, Vice-President HCR 74-Box 115, Lindrith, NM 87029
Darlene Schmitz, Sec. Tres. HCR 74-Box 115, Lindrith, NM 87029
Craig Schmitz, Member HCR 74-Box 111, Lindrith, NM 87029

(b) Plat and topographic map is already on file with OCD.

(c) Names and addresses of surface owners within 1 mile is already on file with OCD.

(d) Description of facility has been upgraded and attached.

(e) Plan for management of approved wastes is already on file with OCD.

(f) Contingency plan for reporting cleanup of spills is already on file with the OCD.

(g) Routine inspection and maintenance plan to ensure permit compliance is already on file with the OCD.

(h) Hydrogen Sulfide (H2S) prevention and contingency plan is already on file with the OCD.

(i) Closure plan including a cost estimate is attached.

(j) Geological/hydrological is on file with the OCD.

(k) Certification by an authorized representative of T-n-T Construction, Inc. attached.

STEVENSON EXCAVATION

HCR 74 BOX 80
LINDRITH, NEW MEXICO 87029
(505) 774-6694

INVOICE

Nº 00025

TO: T-N-T Construction Inc.
HCR 74 Box 113
Lindrith, N. M. 87029

DATE: May 8-97

REQUESTED BY: .....

DATE:	WORK ORDER NO.	DESCRIPTION OF WORK	AMOUNT
		Bid Description: The Closure of 2 ponds & Removal of All Equipment from site. We are estimating A total time frame for Closure to be 2½ years.	
		2 years Evaporation	
		Natural Gas Bill	30,000.00
		Labor	160,000.00
		Chemical	80,000.00
		Misc. Maintence material	15,000.00
		Labor to fold in liner, Salvage tank, pump, pipe ect.	4500.00
		Dirt work to push in dikes & Slopes	10,000.00
		Reseed	2,000.00
		Sub total	201,500.00
		5.625% TAX	11,334.38
Thank	you	TOTAL	212,834.38
Steve	Stevenson		

STEVENSON EXCAVATION

HCR 74 BOX 80
LINDRITH, NEW MEXICO 87029
(505) 774-6694

INVOICE

Nº 00027

TO: T-n-T Construction Inc.
HCR 74 Box 113
Lindrith, N.M. 87029

DATE: May 8-97

REQUESTED BY: .....

DATE:	WORK ORDER NO.	DESCRIPTION OF WORK	AMOUNT
		Bid Description: The Closure of T-n-T Land Farm	
		Testing to clear soils	9,000.00
		Cost to salvage tank & other materials	1,500.00
		Dirt work to push in dikes	5,000.00
		Cost to reseed	1,500.00
		Subtotal	$ 17,000.00
		5.625% TAX	$ 956.25
Thank You		TOTAL	$ 17,956.25
Steve	Stevenson		

FAX SHEET

This fax comes from the
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505
(505) 827-7133

Please Deliver To: Darlene Schmitz
TnT construction (505) 774-9116

Date: 10-31-97

From: Marilyne Kieling

Message: Here is the Sorety list Hope it helps!
After talking to Roger A. we suggest
that if you wish to talk to some one
in the business For advice Please call
Philip Nobis of Tierra.

Happy Halloween Marilyn

If you have any problems receiving this fax, please call the telephone number above.

Surety	Number bonds by this Surety
Daniels Insurance Inc. P.O. Box 1258 300 N. Linam Hobbs, NM 88241 (505) 393-5191	1
Continental Casualty Company 999 18th Street, Suite 2800 Denver, Colorado 80202	1
Continental Casualty Company CNA Plaza Chicago, Illinois 60685	1
Underwriter Indemnity Company 8 Greenway Plaza, Suite 400 Houston, TX 77046 (713) 961-0285	4
International Fidelity Insurance Company 24 Commerce St. Newark, NJ 07102	1
International Fidelity Insurance Company 4155 E. Jewell Avenue Suite 103 Denver, CO 80222	1
United Pacific Insurance Company P.O. Box 1258 Hobbs, NM 88241	1
United Pacific Insurance Company P.O. Box 53910 Lubbock, TX 79453	1
Reliance United Pacific Surety Managers Suite 400 3033 South Parker Road Aurora, CO 80014 (303) 752-3030	1
Reliance Insurance Company 2323 Bryan Street Suite 2424 Dallas, TX 75201	1
Insurance Company of North America 10860 Gold Ctr Dr. Rancho Cordova, CA 95670	1
Redland Insurance Company City place II 185 Asylum Hartford, Ct	1

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

MEMORANDUM

TO: TNT FILE

FROM: WILLIAM OLSON, Geologist
Oil Conservation Division

DATE: APRIL 20, 1990

SUBJECT: SUMMARY OF CONTINGENCY MEASURES FOR TNT PIT LEAKS

---

1. Contingency Measures for Leaks (7-14-86 TNT Application)

   "If a leak should be detected, the pond and monitor wells will be the containment vessels. No further deliveries will be accepted. Artificial means will be employed to expedite the evaporation process. Due to the geologic nature of the site, downward percolation is less probable than horizontal migration. This being the case, the monitor wells will serve as the conduit to remove the contaminating water."

2. The January 19, 1987 OCD approval of the evaporation pit was conditional on monthly checks of the monitor wells, sample analyses and a corrective action proposal will be submitted to OCD if produced water fluids are present.

3. The March 3, 1988 OCD letter on the Facility Expansion Application for TNT requires 1) quarterly reports on water levels and conductivity from monitor wells due to the presence of fluids in current monitor wells; 2) if a determination of the fluid origin by OCD finds that fluids are from the pit, TNT will "cease acceptance of disposal fluids until the source of fluids in the monitor wells is determined" and "submit proposals and timetables for removing the source, determining the extent and degree of contamination, and for mitigating contamination." These requirements were restated on OCD's June 20, 1988 letter to TNT.

4. A October 24, 1988 OCD letter to TNT (re. Application for Enlargement at Surface Disposal Facility) states "The OCD must be notified immediately if fluid is discovered in any of the monitor wells surrounding the proposed pond."

5. In the November 4, 1988 letter from TNT to OCD, TNT agrees that "The OCD shall be notified immediately if fluid is discovered in any of the monitor wells surrounding the proposed pond."

TNT Construction, Inc.
HCR 74 Box 115
Lindrith, NM 87029

November 8, 1997

Roger Anderson
New Mexico Oil Conservation Division
Environmental Bureau
2040 South Pacheco Street
Santa Fe, NM 87505

RE: AS BUILT report for the **Expansion of an Exixting Surface Disposal Facility**, Rio Arriba, Co. New Mexico.

Dear Mr. Anderson:

The attached AS BUILT report for Expansion of an Existing Commercial Surface Waste Disposal Facility is submitted for OCD review and approval. The facility is an AS BUILT expansion of an existing commercial facilities located in the E½, Sec. 7, T25N, R3W in Rio Arriba County. The expansion is designed in accordance with applicable New Mexico Oil and Gas Conservation Division (OCD) Guidelines, Design and Construction permits as well as OCD Rule 711.

The AS BUILT expansion will be used as an overflow storage facility for waste water coming from ponds completed by TNT in the late 1980's to the east.

Should the OCD have further questions regarding the attached application please contact:

Tony L. Schmitz
or
Craig Schmitz
TNT Construction, Inc.
HCR-74 Box 115
Lindrith, NM 87029
505-774-6663
505-774-6504

Sincerely,

Tony L. Schmitz, President
TNT Construction, Inc.
HCR-74 Box 115
Lindrith, NM 87029
(505) 774-6663
(505) 774-6504

Copies: Aztec OCD-1
Santa Fe OCD-2
TNT-3
FWR-1

TNT Construction, Inc.

HRC 74 - Box 115
Lindrith, NM 87029

RECEIVED

NOV 24 1997

Environmental Bureau
Oil Conservation Division

AS BUILT REPORT

on the

EXPANSION

of an

Existing Surface Waste Disposal Facility

in

NE1/4, SE1/4, Sec. 7, T25N, R3W
Rio Arriba County, New Mexico

November 10, 1997

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APPENDIX

Figure 1, Index Map, Land Ownership
Figure 2, Location of *AS BUILT* Pond
Figure 2a, Cross-Section *AS BUILT* to Existing Pond
Figure 3, X-Section Water Transfer Detail
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Hoffman Certified Mail Receipt
Western Technologies, Inc Report
Liner Specifications from Falcon Environment

AS BUILT REPORT
FOR A SURFACE WASTE DISPOSAL FACILITY

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87501

Commercial Facility

I. *TYPE OF OPERATION*

The purpose of the facility is the disposal of produced water from local oil and gas operations by evaporation in open ponds. TNT Construction, Inc. (TNT) presently operates a commercial surface waste disposal facility at the permit location. Disposed water is trucked to the location and unloaded into above ground tanks with the oil collected and stored for future treating and sale. The produced water is then stored in an evaporative pond permitted in 1987, overflow from the 1987 pond goes to a second pond permitted in 1990, and overflow from 1990 pond will go to a third ***AS BUILT*** pond as presented in this report. An aeration and evaporation system will be utilized on the third (***AS BUILT***) pond, similar to the systems in use on the two existing ponds.

II. *OPERATOR*

A. The owner of the ***AS BUILT*** facility is:
TNT Construction, Inc.
HCR 74 - Box 115
Lindrith, NM 87029

B. Contact Person:
Tony L. Schmitz, (505) 774-6663 or 774-6551
Craig Schmitz (505) 774-6663 or 774-6551

III. *LOCATION*

The ***AS BUILT*** waste disposal pond is located in NE1/4, SE1/4, Section 7, Township 25 North, Range 3 West, NMPM, in Rio Arriba County, New Mexico, as shown on Index Map, see **Figure 1**. **Figure 1** is a portion of the Schmitz Ranch

Quadrangle, a 7.5 minute Series Topographic sheet. The facility is located to the west of existing evaporative ponds presently operated by TNT. The ***AS BUILT*** disposal pond has been constructed in accordance with the expansion plan submitted and approved by the OCD in May, 1994.

An ***AS BUILT*** completion letter certified by a registered professional engineer (Western Technologies) and attached testing information conducted during construction can be found in the **Appendix.**

IV. ***IS THIS AN EXPANSION OF AN EXISTING FACILITY?***

Yes. This is an ***AS BUILT*** disposal pond at an existing facility.

V. ***ATTACH THE NAME AND ADDRESS OF THE LAND OWNER OF THE DISPOSAL FACILITY SITE AND LAND OWNERS OF RECORD WITHIN 1/2 (ONE-HALF) MILE OF THE SITE.***

A. The ***AS BUILT*** waste disposal pond is located on private land owned by:

TNT Construction, Inc. (a NM Corporation)
Tony Lee Schmitz, President
HCR 74 - Box 115
Lindrith NM 87029
(505) 774-6663
(505) 774-6551

B. There is only one other landowner of record within one-half mile of the site in Section 7, a John C. Huffman, see **Figure 1**. in **Appendix.** A letter and proof of notification (certified letter with return receipt) to John C. Huffman describing the ***AS BUILT*** operation by TNT is attached, see Appendix.

VI. ***ATTACH DESCRIPTION OF THE FACILITY WITH A DIAGRAM INDICATING LOCATION OF FENCES, PITS, DIKES, AND TANKS ON THE FACILITY.***

A. The only disposed/produced water from oil/gas wells in the area. No other fluids or solids will be disposed of at the site.

B. A description of the ***AS BUILT*** facility diagramming the location of perimeter fencing, waste pond location and physical dimensions, can be found on **Figure 2** in

the Appendix of this report and the ***AS BUILT*** survey map, **PLATE I** in rear pocket of this report.

VII. *ATTACH DETAILED ENGINEERING DESIGNS WITH DIAGRAMS PREPARED IN ACCORDANCE WITH DIVISION GUIDE LINES FOR THE CONSTRUCTION INSTALLATION OF THE FOLLOWING: POND, LEAK DETECTION SYSTEM, AERATION SYSTEM, ENHANCED EVAPORATION (SPRAY) SYSTEM, WASTE TREATMENT SYSTEM, AND SECURITY SYSTEM.*

A. POND GENERAL INFORMATION

1. The ***AS BUILT*** lined evaporative pit will be used as an overflow for disposed/produced water having already entered the main evaporative ponds to the east **(Figure 2 and Plate I).** Disposed water will be pumped from the existing storage/evaporation pond (PIT 2) to the ***AS BUILT*** pond trough a three (3) inch HDPVC pipe, as shown on **Figure 2A.**

2. Attached are engineering design specifications and diagrams for the ***AS BUILT*** evaporation pond, including the leak detection system. In addition there are diagrams of the aeration and spray system. No materials or effluents other than produced/disposed water will be discharged into the ***AS BUILT*** pond.

3. The ***AS BUILT*** disposal pond has the following dimensions:

AREA (ft^2)	VOLUME (bbls)	DEPTH (ft)	SLOPE*
84,000	110,000	10	3:1 min.

* 3+:1 minimum horizontal to vertical slope on inside and 4+:1 on outside slopes.

4. The ***AS BUILT*** pit is constructed partially in cut and fill. The dikes are built of tightly compacted shale/clay which exhibits a permeability coefficient of 3.8 X 10^8 centimeters/second or about .04 feet per year, based on Western Technologies report dated 5/2/88 as prepared for TNT, (attached). The subsurface consists primarily of clay and weathered sandy clay. The freeboard for the levees/berms are one and one-half feet (1.5'), the depth of the pond is ten feet (10'), and the maximum height of water would be eight one-half feet (8.5'), **Figure 3**. The top of the embankment -berm is twelve feet (12') wide to

accommodate equipment, etc. and has a 3:1 slope on the outside and a 2:1 minimum slope on the inside. The ***AS BUILT*** waste disposal pond is not located along any water course, lake bed, sink-hole or other geological depression.

B. Pond Design and Construction

1. The ponds is out of any water courses. The natural evaporative capacity for the ***AS BUILT*** pond is estimated at 175 BWPD, based on a net evaporation rate of 48 inches/year and a 90,000 ft^2 of surface area. The holding capacity of the ***AS BUILT*** pond is approximately 110,000 barrels of water. Sprayers are to be installed to assist in the evaporative process. Depending upon the amount of daily use and efficiency of the sprayers an additional 800+ BWPD may be evaporated. Sprayers will be used on warm days only during the winter months. Potential pond volumes are unknown and subject to market conditions.

2. Wave calculations for a pond with a fetch of 300 feet or less can only be estimated. The ponds presently in use to the east and operated by TNT have yet to see waves over three to five (3"-5") inches in height. Sustained winds necessary to produce waves on a fetch of less than 300 feet are not common in the general area. With rainfall estimated at an annual rate of less than 10 inches for the area a one and one-half foot (1.5') freeboard should be more than adequate to contain the produced water under any environmental conditions. Liner markings or a device of some sort will be installed to accurately measure freeboard.

3. The inside slopes of the ***AS BUILT*** pond are **3:1** or greater and the outside slopes **6:1** or greater, **(horizontal to vertical)**, see **Plate I, a survey map of the facility.**

4. The width of the top of the berm (levee) is at least 12 feet, see **Plate I.**

C. Synthetic lined ponds and Preparation of pond bed for installation of liners

1. All loose surface soils, vegetation, roots and debris were striped from the pond and embankment areas to a distance of five feet (5') beyond the perimeter of the new construction. Removal extend one foot (1') below the existing grade or one foot (1') below the bottom of the embankment, which ever is deeper.

The soil was stockpiled and used to revegetate areas where clay is striped for use in the construction of the embankments.

2. Clean and widen depressions, washes, swales, etc. for level working areas or eliminate potential erosion of the perimeter area of the embankments.

3. No material was placed which is frozen or where the in place material is frozen, since construction took place during the summer months.

4. Proof-roll the exposed subgrade in the embankment and pond areas to densify materials which may have been loosened during the stripping and excavation process. Proof-rolling may be accomplished by a sheep's foot roller in lifts not exceeding nine inches (9") or by a minimum of two (2) passes of a loaded scraper or equivalent.

5. All soft areas or deep soil horizons were removed and replaced with compacted soil. Lift thicknesses were six to nine inches (6"-9") maximum. All fill material was compacted to at least 95% of the maximum dry density of the clays utilized (ASTM 698). Material used in construction was not allowed to dry between layers or stages of embankment construction. When drying occurred, dry material was reconditioned to proper water content using produced or brine water prior to placing subsequent lifts. All surfaces covered by liners are smooth so as not to damage the them. The bed of the pond and inside grade of the levee are smooth, compacted, free of holes, rocks, stumps, clods, and any other debris which may rupture the liner.

6. The synthetic material used to line the evaporative pits will be impermeable, flexible, and resistant to potential environmental hazards. See attached information (Appendix) on the chemical resistance and other tested properties of the GSE 40mil HDPE liner used to line the ***AS BUILT*** produced waste water pond.

7. The HDPE liner is forty (40) mil. thick with good resistance to tears and punctures.

8. The primary liner is made of a forty (40) mil HDPE and was laid out and seamed together as shown in **Figure 3a.** The secondary liner is also Forty (40) mil HDPE and was installed as shown in **Figure 3b.** A 10 oz. Geotextile liner was installed between the primary and secondary liners as part of the leak detection system, see **Figure 3c.** Specification sheets for the HDPE liner are

attached, see back of **Appendix**. The liner is basically resistant to sunlight, hydrocarbons, fungus, algae, bacteria and salt water. Each liner was laid in the pond by rolls and then seamed together. Additional information on construction details can be found in the appendix and is discussed later in this report.

9. ***AS BUILT*** diagrams showing seam patch locations and roll layout of the primary, secondary and geotextile liners are shown in **Figures 3a, 3b and 3c.** Extrusion and wedge weld details used in the installation of the liners are shown in **Figure 3d**. **Figures 3a, 3b and 3c** are ***AS BUILT*** diagrams provided by Falcon Environmental lining Systems.

D. Aeration System

1. The ***AS BUILT*** pond is equipped with an aeration system**, see Figure 4.** The aeration system was placed in the pond bottom and consist of a network of perforated one inch (1") and two inch (2") PVC or pipe**.** The system is able to circulate either a liquid or gaseous (air) medium. The system consist of a two inch (2") trunk line and one inch (1") laterals every fifty feet (50') The laterals will be perforated with 1/32 inch holes on ten foot (10') centers. The system is anchored to the bottom with sand tubes, or elevated off the pond floor using a comparable system which will not harm the primary liner. The liquid will be pumped by splitting the sprayer pump and introducing the liquid through a venture type hopper. Air will be supplied to the system by an air compressor of adequate size; the make/model is unknown at this time. The hydrostatic pressure at 8 feet of water is estimated at less than 4.75 psi

E. Leak Detection System

1. The leak detection system has been installed between the primary and secondary liner. The appropriate OCD office was notified at least 24 hours before scheduled installation of the primary and secondary liners to afford a Division representative (Denny Foust) to inspect the leak detection system as it is installed, see **Figure 5.**

2. The system will consist of a network of one inch (1") perforated PVC pipe laterals installed between the primary and secondary liners, see **Figure 6.** The one inch (1") laterals are on a 2% slope, spaced at forty feet (40') or less a part and drain into a two inch (2") PVC trunk line. The two inch (2") pipe will be located on a 1% slope and will drain to a covered sump outside of the berm/embankment, see also **Plate I**. The sump will consist of corrosion proof

twelve inch (12") PVC pipe and assessories, see sump diagram on **Figure 7**. The network of lateral one inch (1') PVC pipe is of sufficient density so that no point on the pond bottom is more than twenty feet (20') from a one inch (1") lateral, see **Figure 5.** A ten (10) oz. geotextile fabric was installed between the secondary and primary liners to allow transport of the fluids to the lateral drainage pipes. The slope of all drainage lines and pond bed is about six inches (6") per fifty feet (50'), a 1% grade.

F. Trench, Anchors, Boots and Vents

1. A narrow anchor trench was excavated on the top of the levee the entire perimeter of the pond for the purpose of anchoring the flexible HDPE liners. This trench was located a minimum of two feet (2') from the slope peak and is a minimum of twelve inches (12") deep, see **Figure 6 and 6a.**

2. The 40mil HDPE liners rest smoothly on the pond bed and the inner face of the levees, and is of sufficient size to extend down to the bottom of the anchor trench and come back out a minimum of two inches (2") from the trench on the side furthest from the pond, see **Figure 6a.** Significant folds have been placed at each corner of the pond to allow for the contraction and expansion of the liners due to temperature - climatic variations.

3. Venting of gas that may accumulate beneath the liner from either organic material or natural gas is not considered a problem in the area. The soil horizon was entirely removed and natural gas bearing formations in the area are at a considerable depth. The water table, based on area water wells is at a depth of over 300-900 feet. Shale-clay beds underlying the area have very low permeability's, see Western Technologies report in **Appendix** and should contain fluids at the surface. If vents are required by the OCD, two gas vents will be installed on each side of the pond. The vents will be located approximately nine inches 9" down from the berm break, see **Figure 7a**.

4. Anchors of used casing or weighted PVC pipe will be placed over the liner in the anchor trench and the trenches back-filled.

5. A **ten (10) oz. geotextile** layer was installed between the secondary and primary HDPE liners in such a manner that the risk of tearing the liner is minimized see **Figure 6a.**

6. Should the HDPE liner used for the primary liner is found not to be sun-resistance, at least one inch (1") of sand or other suitable material shall be spread uniformly to cover the liner over the floor of the pit. Gravel or other wave-resistant material with sufficient angle of repose to remain in place shall be used to cover the sloping inner wall of the levee. Any gravel or sand layers used to protect the primary liner from the sun shall extend to the anchor trench. A liner boot was used for any pipe that penetrates the primary and/or secondary liner, see **Figure 8**.

7. At any point of discharge into the ***AS BUILT*** pond, no fluid force shall be directed toward the liner. Discharge into the ***AS BUILT*** pond from the existing ponds to the east shall not be directly onto the HDPE liner. To prevent abrasion or wear to the liner from the discharge pipe, embankment splash guards have been installed, see Figure 3 or 8.

8. Appropriate rip-rap will be installed to prevent damage to the exposed liner, as necessary during future operations..

9. A positive drainage system will be provided around the base (toe) of the outside slope of the embankment throughout the life of the ***AS BUILT*** pond.

G. Evaporation Sprayer System

1. The ***AS BUILT*** pond will be equipped with a **Evaporation Sprayer System.** The sprayer system will be similar to the sprayer system presently in use on the ponds to the east operated by TNT, see diagram on **Figure 9.** Sprayers will be located on all four sides of the pond at the top of the berm-embankment, see **Figure 9**. Water will be pumped into a four inch (4") PVC trunk line, which will feed water into several secondary three inch (3") PVC pipes. Flow into the three inch (3") PVC pipe is controlled by valves on all four sides of the impoundment. Water exits the PVC pipe through brass sprayers facing the interior of the pond. Spray nozzles are spaced on twelve foot (12') centers along the three
inch (3") PVC secondary pipe, see **Figure 9.** The pumps will be powered by a gas engine.

2. The sprayer system will be operated in such a manner as to keep the salt water spray contained within the impoundment.

H. Fences, Signs and Netting.

1. A three (3) strand barb wire fence has been constructed and will be maintained in good condition around the ***AS BUILT*** pond. Adequate space has been provided between the fence and levees for passage of maintenance vehicles. The fence is adequate enough to prevent livestock from entering the pond/facility area. No fences are located on the embankments, see **Plate I.**

2. Signs are already posted at the facility entrance identifying the operator of the facility, location and emergency numbers.

3. The facility is not hazardous to migratory birds. No migratory birds have been seen within the existing ponds to the east and TNT requests that an exception be granted by the OCD requiring netting.

VIII. *SPILL/LEAK PREVENTION AND REPORTING PROCEDURES*

A. Leak Prevention and Contingency Plan

1. The leak detection system will be the only means in which leaks can be detected. The sump will be inspected daily during fill up and weekly there after. TNT will keep records of such inspections, and kept on file at the facility for OCD inspection at any time.

2. If Fluids are found in the leak detection sump the following steps will be undertaken:

a. The OCD at Aztec and Santa Fe will be notified within 24 hours or one working day of the detection of fluid in the sump.

b. A sample of the fluid in the sump and the pond will be tested to determine the source.

c. Receiving fluids for disposal in the affected pond will cease immediately and fluids from the sump will be immediately and continuously pumped back into the affected pond.

d. Enhanced evaporation using the installed sprayer system will begin immediately providing the spray can be contained within the embankments in accordance with provisions of this application.

3. If a leak is determined to exist in the primary liner, TNT will undertake the following measures under the direction of the OCD:

a. Enhanced evaporation will continue, provided atmospheric conditions are such that the spray can be contained within the pond and the leak detection sump will be continually pumped and fluid recycled into the pond.

b. Some fluids will be removed from the affected pond and transferred to the existing two ponds to the east. The amount of transfer will depend on available space in the two existing ponds and the amount of fluids that need to be removed from the effected pond.

c. Sprayers at the existing ponds will be utilized at maximum capacity to make room for additional fluids from the leaking lined pond. The recycling of sump water, pumping water to existing ponds and enhanced evaporation at all three evaporative ponds would continue until such time as the sump dries out on the affected pond.

d. Fluid removal and evaporation will continue until the fluid level is below the location of the leak in the liner. This will indicate the level in the pond at which the leak is located.

4. The location and cause of the leak will be determined and repaired. The liners will be tested for leaks upon refilling the lined pond. If additional leaks are found, the pond will be redrained and evaporated below the leak level as determined by sump dry-out. Time of repair will be determined by evaporation rates and available storage space in existing ponds to the east. The leak detection system will be completely drained before resuming the introduction of fluids into the pond. TNT would also comply with any other measures required by the OCD to rectify the situation.

IX. *OPERATION AND MAINTENANCE*

A. Requirements For Receipt of Fluids.

1. Disposal at this ***AS BUILT*** facility will be in accordance with previously approved OCD regulations for TNT's present operations. An attendant is on

duty when disposed fluids arrive at the facility and the facility is secured when no attendant is present.

2. No produced water shall be received at the ***AS BUILT*** facility unless the transporter has a valid Form C-133 (Authorization to Move Produced Water) on file with the Division.

3. Only liquids that are non-hazardous by the U.S. Environmental Protection Agency under Resource Conservation Recovery Act (RCRA) Subtitle C exemption or by characteristic testing are being accepted at the facility. Only produced/disposed water is presently accepted at this facility.

4. All liquids accepted for disposal shall be tested for hydrogen sulfide concentrations. All liquids with measurable hydrogen sulfide concentrations shall either be treated immediately or not accepted at the facility.

5. TNT will keep and make available for inspection records for each calendar month on the source, location, volume, type of waste (produced water), date of disposal, and hauling company that disposes water at the existing facility. Records of H_2S measurements and treatment volumes shall be maintained in the same manner. Such records shall be maintained for a period of two (2) years from date of disposal.

6. TNT presently files C-117-A, C-118, and C-120-A as required by the OCD.

7. Fluids shall not be accepted if introduction of the fluid will cause the ***AS BUILT*** pond and the existing ponds to rise above their approved or authorized freeboard.

B. *AS BUILT* Pond Maintenance

1. Outside walls (berms/levees) and the positive drainage system around the ***AS BUILT*** lined pond will be inspected weekly for erosion or after a significant rainfall, and maintained in a prudent manner.

2. No oil shall be allowed in the ***AS BUILT*** pond.

C. General Operational Requirements

1. TNT operating personnel are trained in the operation, calibration, maintenance and safety requirements of all tested equipment used at the facility. TNT has been operating two (2) evaporation ponds for over ten (10) years at this facility.

2. At least 1000 gallons of a treatment chemical shall be stored on-site and shall not be retained for a period in excess of the manufacturer's stated shelf life. Expired chemicals may be disposed of in the pond.

3. Any accumulated sludge/oil etc. from the main facility skimmer pond is disposed of in accordance with the OCD.

4. If any of the required systems become inoperative, the OCD Aztec District Office will be notified immediately.

X. *CLOSURE PLAN*

A. When the facility is to be closed or this permitted pond closed, TNT shall provide for removal of all liquids and/or wastes, back-filling, grading and mounding of ponds, and clean up of any contamination of soils. Wastes shall be disposed of in accordance with rules and regulations and statutes in effect at the time of closure.

B. The OCD will be notified when operation of the facility is discontinued for a period in excess of six months or when the facility is to be dismantled.

XI. *SITE CHARACTERISTICS - FRESH WATER PROTECTION DEMONSTRATION*

A. *The following hydrologic/geologic information is required to be submitted with all applications.*

1. Hydrologic Features

a. The only significant stream in the area is Canon de Los Ojitos one half mile to the southeast and it is considered an intermittent stream. A topographic high separates the ***AS BUILT*** pond to the east. All water wells within one mile of the ***AS BUILT*** pond are shown on **Figure 1** and are owned or operated by either TNT or the Schmitz Ranch. These water wells are for domestic or stock use and penetrate aquifers at a depth of 300 to 900

feet. Ground water was not encountered in any of over 30 monitor or stratigraphic test wells drilled within 1500 feet from the east edge of the ***AS BUILT*** pond, see **Figure 10. Figure 10** shows only the monitor wells along the west side of waste disposal pond No. 2 (PIT-2) some 800 feet to the east of the ***AS BUILT*** pond location.

b. Cuttings from stratigraphic tests and monitor wells suggest that the near surface sandstone lenses are dry, oxidized and above any water table at the ***AS BUILT*** pond location. Sandstone outcrops in the area dip to the north/northeast at about 1 degree. If water were introduced into the sand lenses encountered in some of the stratigraphic and monitor wells drilled in the near area, the water would move by gravity to the lowest part of the sand lens and the down dip to the north/northeast. These sand lenses are considered to be encased in clay/shale and are discontinuous in nature.

c. A water sample cannot be obtained in the immediate area since no ground water has been encountered, therefore no analysis is available. Water wells in the general area that have encountered ground water at depths of 300-900 feet contain an estimated 500-1000 PPM TDS.

d. Stratigraphic test wells and monitor wells along the east side of the ***AS BUILT*** pond and the west side of an existing pond to the east, permitted in 1990, indicated that sand lenses in the area are 1-17 feet in thickness, 50-300 feet wide and 300 to 800 feet in length. Outcrops in the area support very small sand channels within a dominate non-marine clay/shale sequence. Sands are very fine to coarse-grained and were laid down in a fluvial environment.

2. Geologic Description of Pond Site

a. The San Jose Formation (Eocene Age) is the youngest Tertiary rock unit found within the San Juan Basin and occurs at the surface throughout a great portion of the basin and the general area of the ***AS BUILT*** site. This sequence consists of interbedded shale/claystone, sandstone and mudstone of continental origin with a maximum thickness of 2700 feet in the basin center and about 900-1000 feet in the study area. In the study area (pond site location) sporadic fluvial sandstone lenses outcrop within a dominate clay/shale mudstone environment consisting of illite, montmorillonite and bentonite.

b. The name and depth of the most shallow aquifer can only be estimated. It is thought to be the Cuba Mesa Member of the San Jose Formation, as described by Brimhall in 1973 publication of the Four Corners Geological Society occurring at a depth from 300-900 feet.

c. Correlation of sand and clay/shale horizons indicate that there are few, if any sands in the immediate area of the ***AS BUILT*** pond side. There are no prominent sand outcrops directly up-dip of the ***AS BUILT*** pond site. Monitor wells and stratigraphic wells within 100 feet of the ***AS BUILT*** pond site encountered little sand. The excavated base of the ***AS BUILT*** pond site should have 15 + feet of impermeable clay/shale at its base. Copies of the nearest driller's (geologic) logs, **Figures 10 & 11a, b, c, etc.,** illustrate the underlying stratigraphy.

3. Flood Protection

a. The facility is located east of a small intermittent stream which drains about 1/4 to 1/2 square mile of area. The site will be topographically higher than the drainage and all necessary dirt work (diversion ditches) will be performed along the west side of the ***AS BUILT*** pond to assure that during a worse case scenario the pond embankments will be protected, see **Figure 2**. A 1.5 foot freeboard should be sufficient to contain a worse case scenario of major precipitation, assuming the pond is at the 1 1/2 foot freeboard position when a major rainstorm occurs.

b. A positive drainage system will be provided around the base (toe) of the outside slope of the embankment throughout the life of the ***AS BUILT*** pond.

c. TNT will immediately notify the OCD of any flooding or washout which might occur which have affected or damaged the pond embankments. Any damage that might occur to the facility will be repaired immediately.

XII. *Proof of Notice*

A. There is only one other landowner of record within one-half mile of the site in Section 7, a John C. Huffman, see **Figure 1**. in Appendix. A letter and proof of notification (certified letter with return receipt) to John C. Huffman describing the ***AS BUILT*** operation by TNT is attached, see Appendix.

John C. Huffman 1520 Zuni Drive Farmington, NM 87401

XIII. *H_2S PREVENTION AND CONTINGENCY PLAN*

A. In order to prevent and control harmful concentrations of hydrogen sulfide (H_2S), the following procedures shall be followed.

1. Daily tests shall be conducted and records made and maintained of the pH in the pond, and if the pH falls below 7.0 remedial steps shall be taken immediately to raise the pH.

2. Weekly tests shall be conducted and records made and retained at the facility of the dissolved sulfide concentrations in the pond.

3. Tests shall be conducted, and records made and retained at the facility of such tests, to determine the dissolved oxygen levels in each pond.

a. If any tests show a dissolved residual oxygen level of less than 0.5 PPM, steps shall be undertaken to raise the oxygen level to at least 0.5 PPM, which measures may include adding bleach, potassium permanganate, or increase aeration.

B. In order to prevent any harm by hydrogen sulfide gas, tests of ambient H_2S levels shall be conducted, and records made and retained. Such tests shall be made at varying locations around the berm of the pond and shall be conducted twice a day. The wind speed and direction shall be recorded in conjunction with each test.

1. If an H_2S reading of 0.1 PPM or greater is obtained:

a. A second reading shall be take on the downwind berm within one hour.

b. The dissolved oxygen and dissolved sulfide levels of the pond shall be tested immediately and the need for immediate treatment determined.

c. Tests for H_2S levels shall be made at the fence line downwind from the problem pond.

2. If two consecutive H_2S readings of 0.1 PPM or greater are obtained:

a. The operator shall notify the OCD, Aztec office of the OCD immediately. There are no residences within one mile of the facility and only one residence within three (3) miles of the facility, the Schmitz Ranch (TNT).

b. TNT shall continue to monitor the facility and continue to lower the Hydrogen sulfide problem in the pond.

3. If H_2S readings of 10.0 PPM or greater are encountered, TNT will notify the OCD and the following public safety agencies if the OCD so dictates.

Rio Arriba County Fire Marshal at 588-7254
New Mexico State Police at 289-3443
Rio Arriba County Sheriff at 588-7271

a. No one lives within one-half mile of the facility.

XIV. Additional Information

A. The operator will notify the Division of any changes or additional information changes in conditions which may be relevant to this permit.

(XV. Certification, signatures, is on the next page)

XV. Certification

Note, this report was prepared by James W. Gurney, Geologist in Farmington, NM. Information was supplied by TNT Construction, Inc. personnel regarding the completion of the ***AS BUILT*** facility.

If the foregoing information contained within this application is acceptable to the New Mexico Oil Conservation Division (OCD), please notify TNT Construction, Inc. of its approval or of any additional terms and conditions necessary to obtain its approval of this ***AS BUILT*** waste disposal pond.

"I Tony L. Schmitz, certify that I am familiar with the information in this report, OCD Rules and Regulations regarding an evaporative pond expansion as submitted with this ***AS BUILT*** report and that such information is true, accurate and complete to the best of my knowledge."

Authorized Signature

11/20/97
Date

Tony L. Schmitz
Printed Name of Person Signing

President, TNT Construction, Inc.
Title

JWG/jwg
Copies: Aztec OCD District Office-2
Santa Fe OCD State Office-1
TNT Construction, Inc.-2

APPENDIX

FIGURES

THE REPRODUCTION OF

THE

FOLLOWING

DOCUMENT (S)

CANNOT BE IMPROVED

DUE TO

THE CONDITION OF

THE ORIGINAL

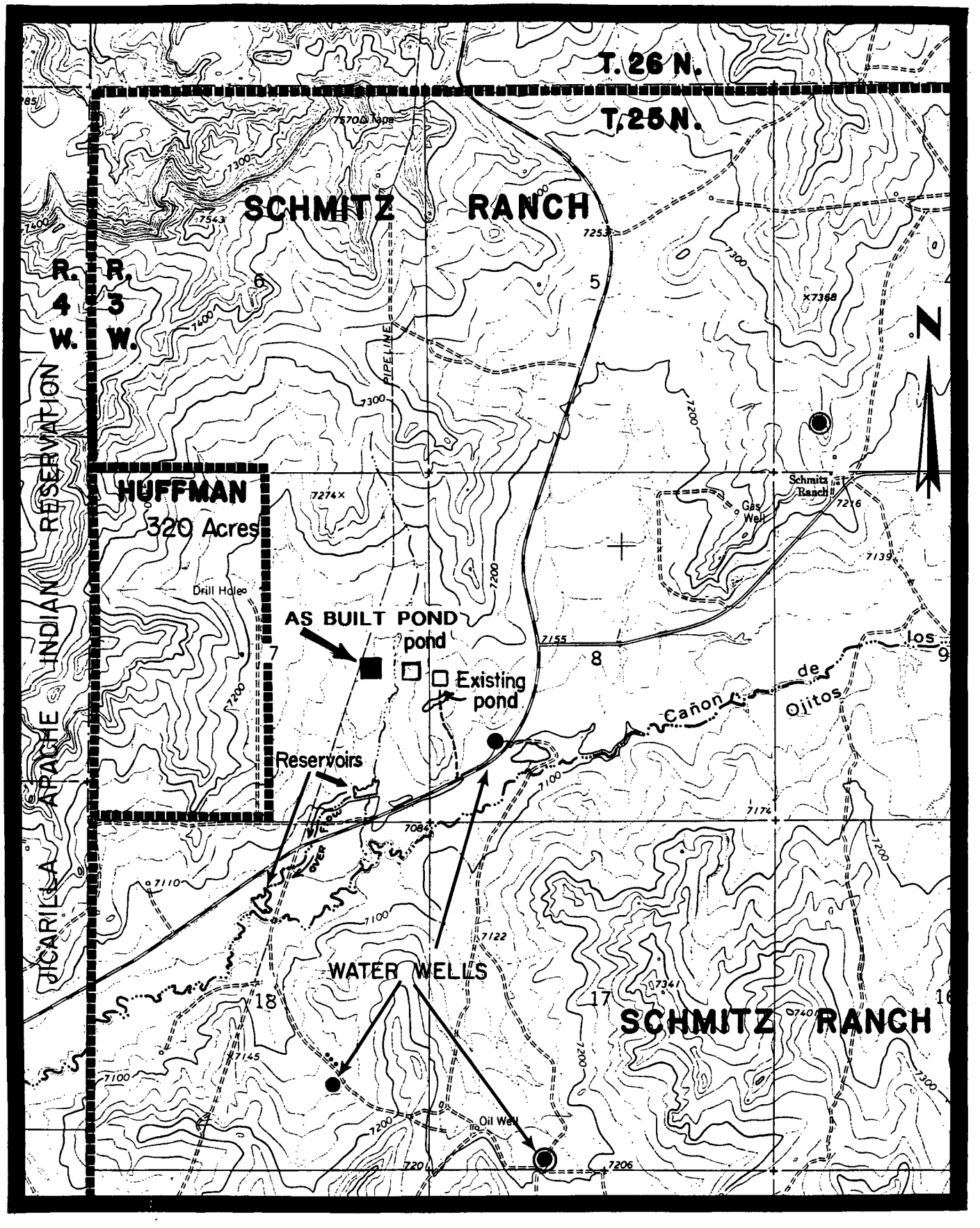


Figure 1. Index map showing location of AS BUILT pond, existing ponds, water wells, surface drainage, surface ownership and topography.

LOCATION OF AS BUILT WASTE DISPOSAL POND

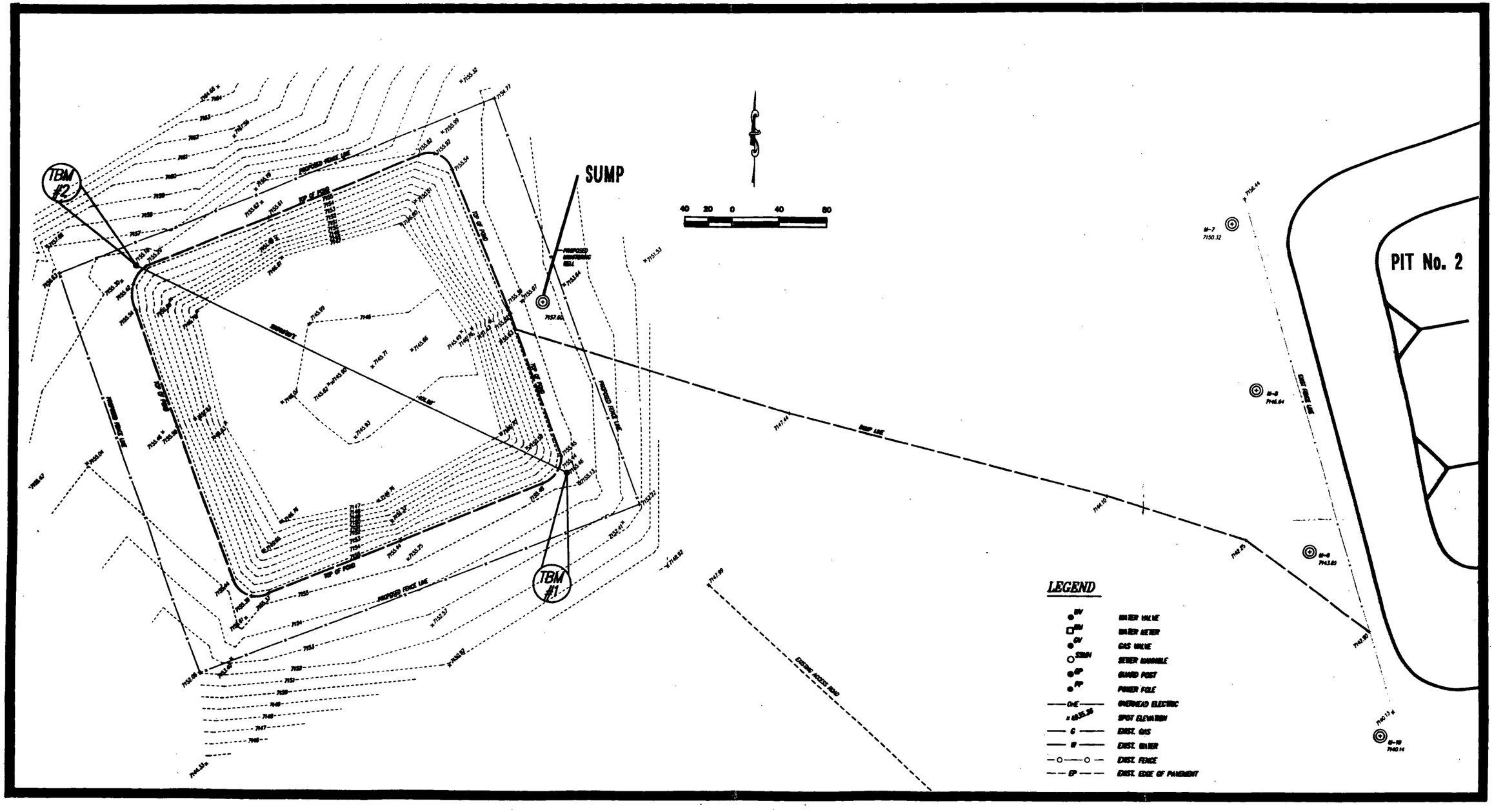


Figure 2. **A drawing showing the *AS BUILT* waste disposal pond and its location in respect to the existing pond to the east (PIT No. 2), as well as fences, the dump line from PIT No. 2 and the leak detection sump.**

FIGURE 2

GENERALIZED CROSS-SECTION OF AS BUILT POND SHOWING BASIC FEATURES AND DIMENTIONS, N.T.S.

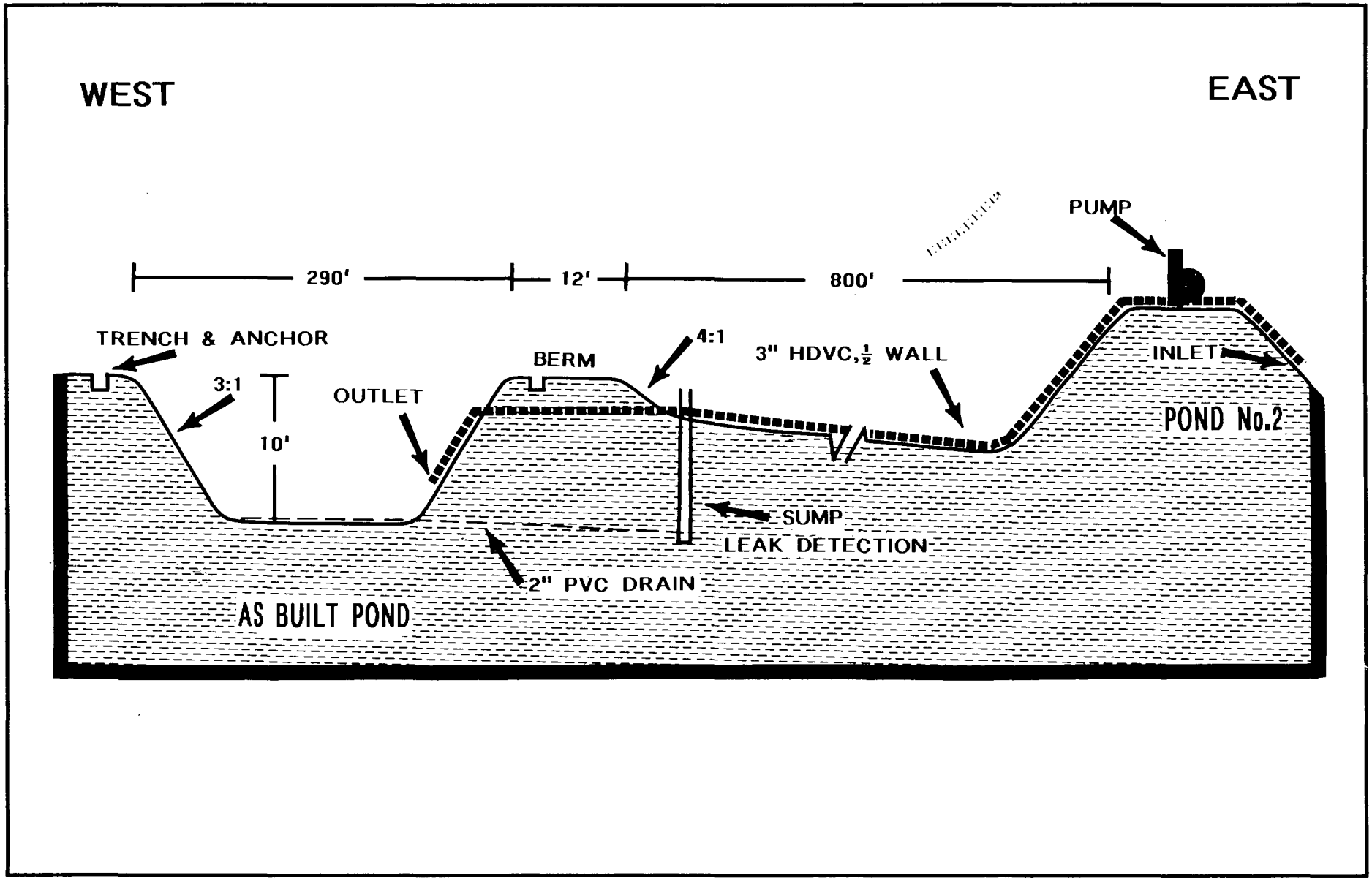


Figure 2a. Generalized cross-section showing some of the dimentions of the *AS BUILT* waste pond, details and transfer system of waste water from an existing waste pond (PIT No. 2) to the East some 800 feet.

X-SECTION OF WATER TRANSFER DETAILS, N.T.S.

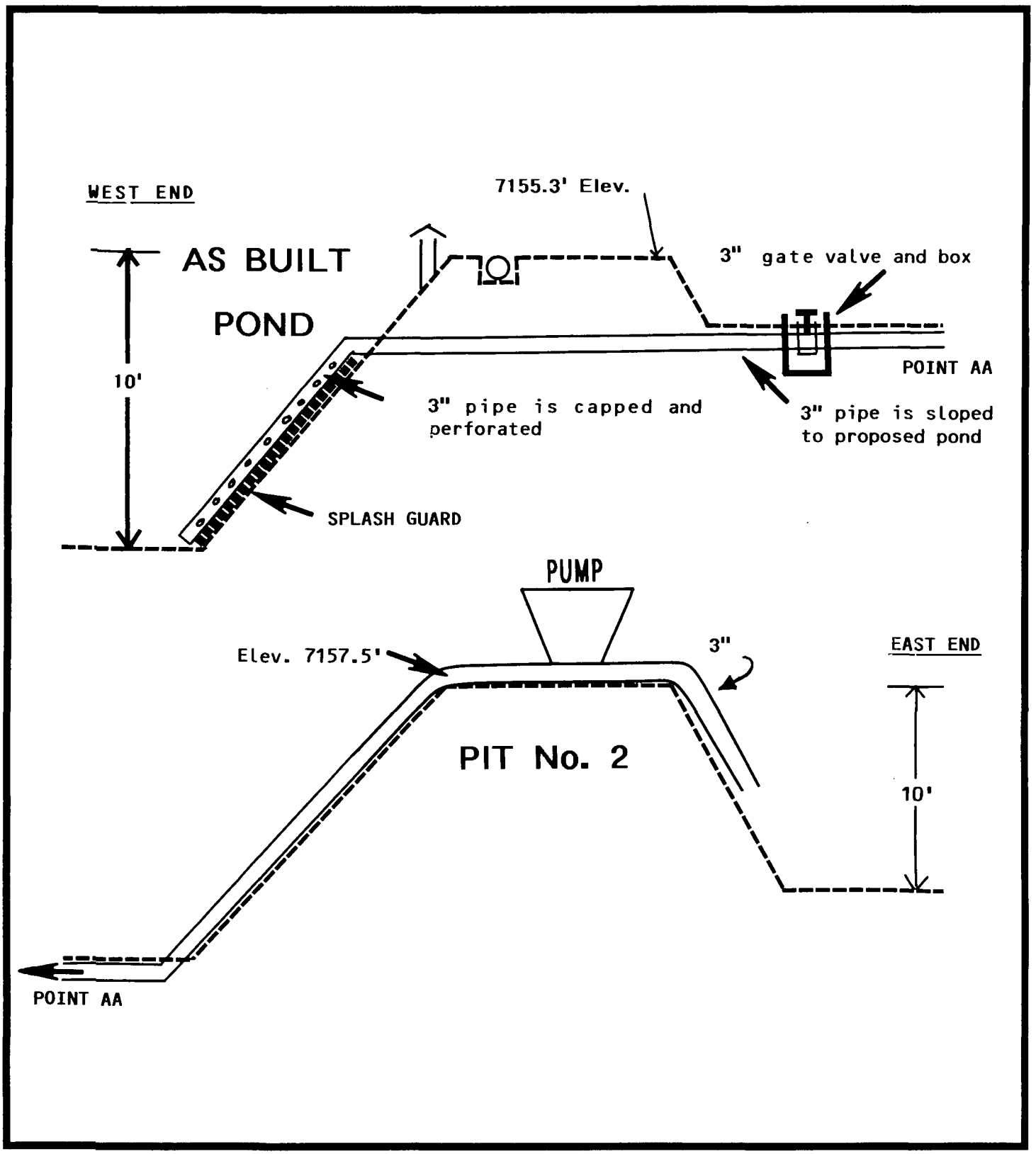
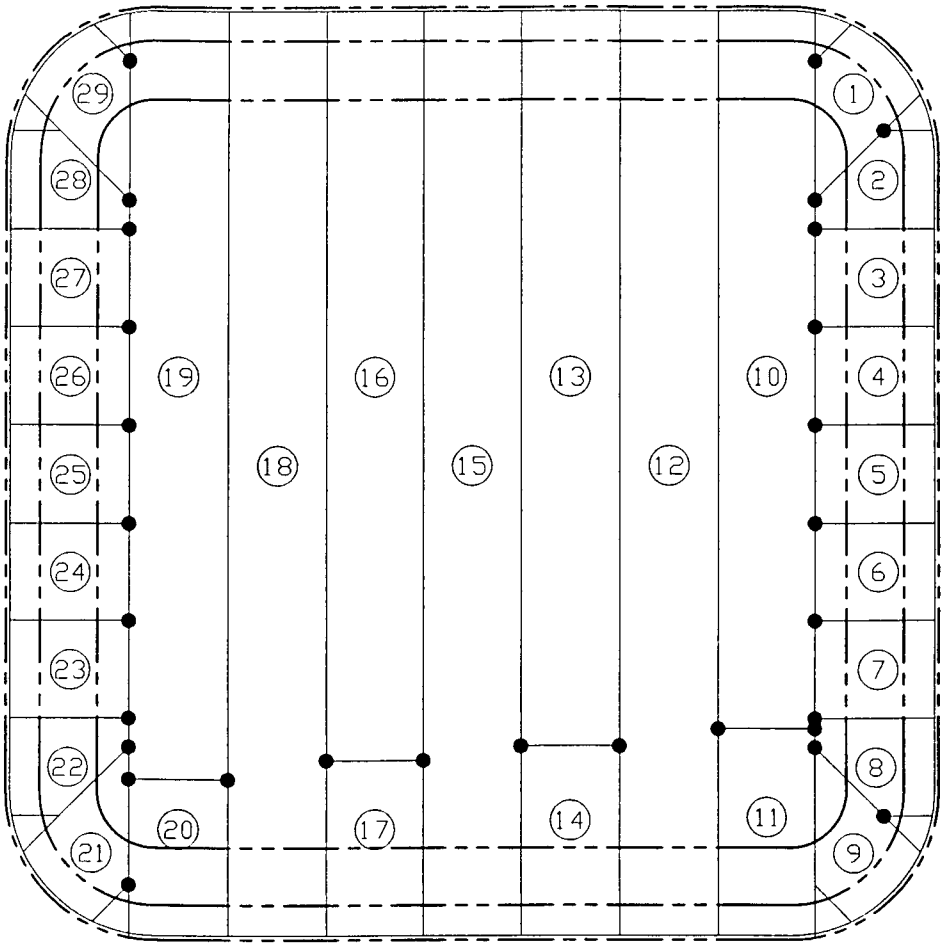


Figure 3. Cross-section showing the placement of the transfer/sump lines, gate valves, splash guard, the perforated discharge pipe to be used in the transfer of waste water from PIT No. 2 to the new *AS BUILT* pond. The distance between the *AS BUILT* pond and PIT No. 2 is about 800 feet.

AS BUILT 40 mil PRIMARY LINER, N.T.S.



34.5'x650'x40mil HD

AS BUILT 40mil HDPE

(Primary)

● SEAM PATCH

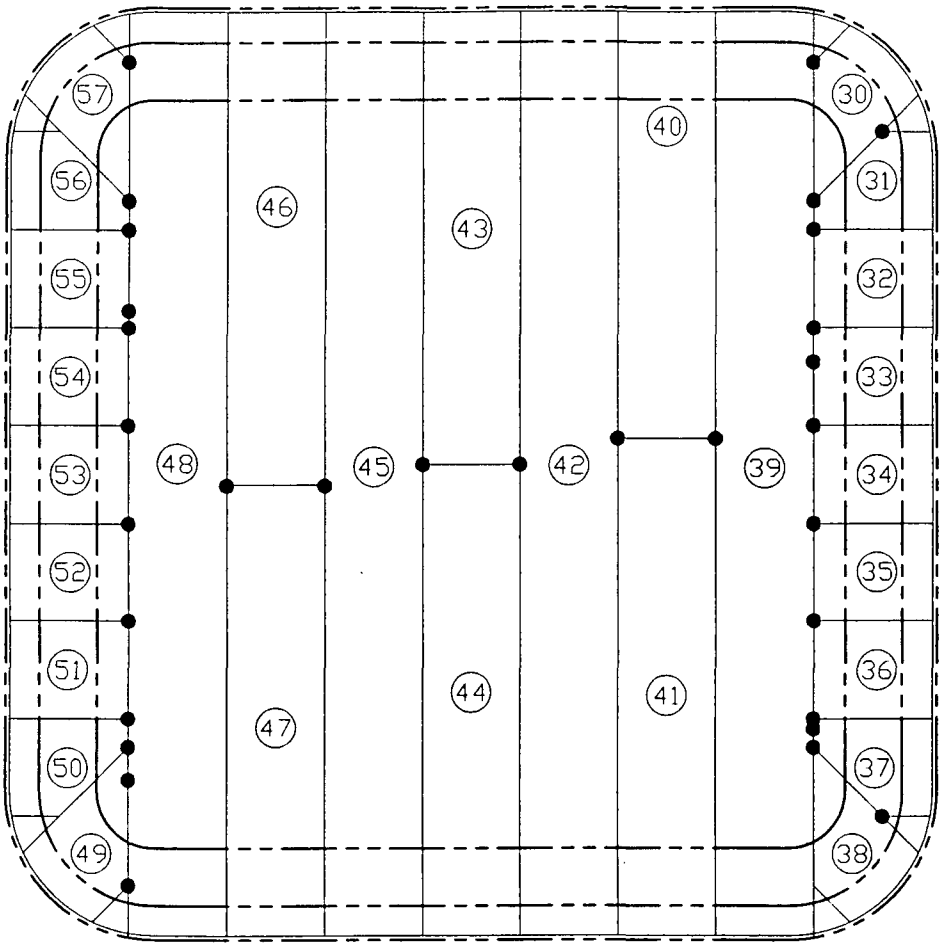
0 6 30 60'
SCALE : 1" = 60'

FALCON ENVIRONMENTAL LINING SYSTEMS, INC.
5200 Johnson Road, Odessa, Tx. 79760
(915) 366 2611 FAX - 366 2999

DRAWN BY: JASMIN	DRAWING TITLE: AS BUILT LINER LAYOUT	MATERIALS: 40 Mil HD GEOTEXTILE	
DATE: 10/23/97			
APPROVED BY:	PROJECT/LOCATION: SURFACE WASTE DISPOSAL FACILITY RIO ARRIBA COUNTY, NM	PROJECT NO.	DRAWING NO. 1/3
DATE:			
SCALE: As Shown			

Figure 3a. As built 40mil HDPE primary liner showing seam patch locations as installed by Falcon Environmental Lining Systems, Inc.

AS BUILT 40 mil SECONDARY LINER, N.T.S.

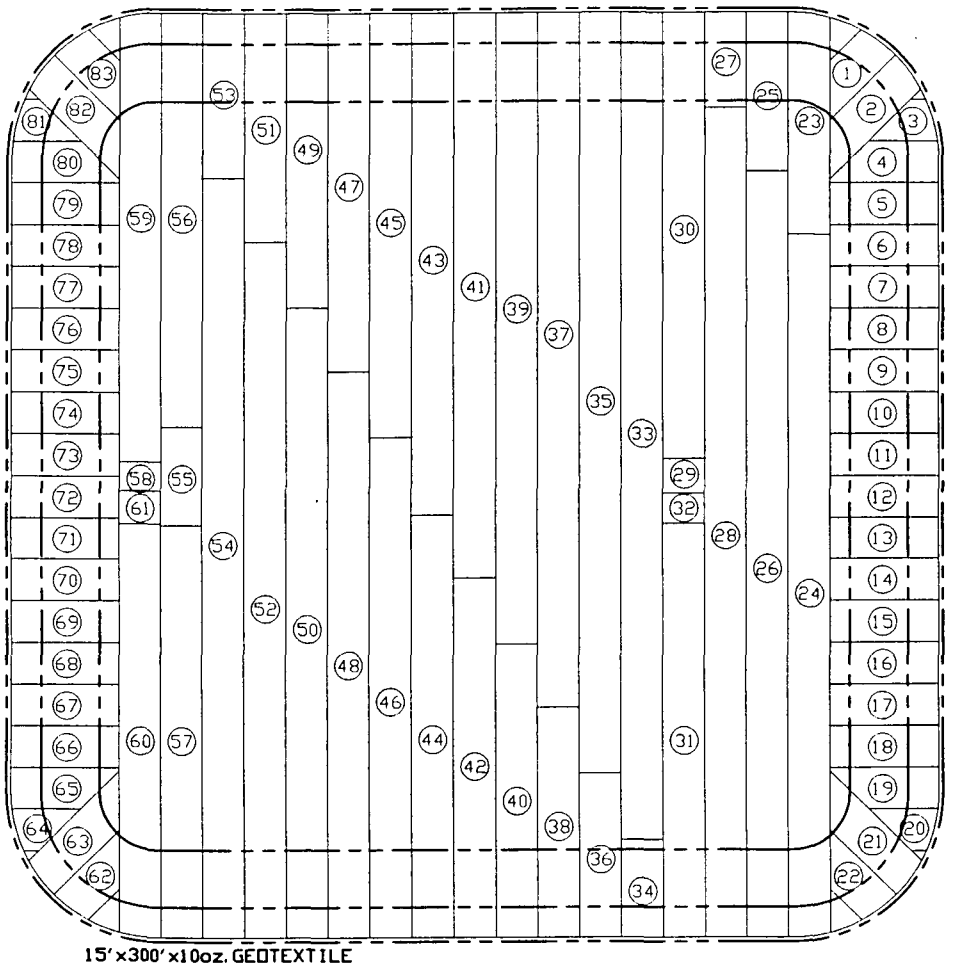


FALCON ENVIRONMENTAL LINING SYSTEMS, INC.
5200 Johnson Road, Odessa, Tx. 79760
(915) 366 2811 FAX - 366 2999

DRAWN BY: JASMIN	DRAWING TITLE	MATERIALS: 40 Mil HD GEOTEXTILE	
DATE : 10/23/97	AS BUILT LINER LAYOUT		
APPROVED BY :	PROJECT/LOCATION		
DATE :	SURFACE WASTE DISPOSAL FACILITY	PROJECT NO.	DRAWING NO. 2/3
SCALE : As Shown	RIO ARRIBA COUNTY, NM		

Figure 3b. As built 40mil HDPE secondary liner showing seam patch locations as installed by Falcon Environmental Lining Systems, Inc.

AS BUILT 10 OZ. GEOTEXTILE LINER, N.T.S.



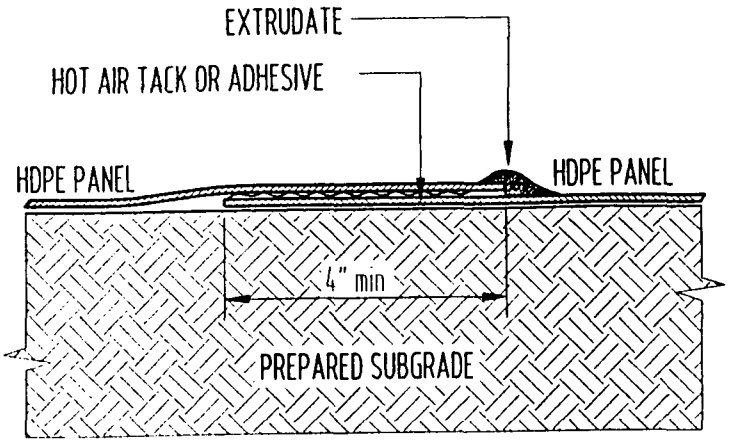
AS BUILT GEOTEXTILE LAYOUT

0 6 30 60'
SCALE : 1" = 60'

FALCON ENVIRONMENTAL LINING SYSTEMS, INC. 5200 Johnson Road, Odessa, Tx. 79760 (915) 366 2611 FAX - 366 2999	DRAWN BY: JASMIN DATE : 10/23/97 APPROVED BY : DATE : SCALE : As Shown	DRAWING TITLE AS BUILT LINER LAYOUT PROJECT/LOCATION SURFACE WASTE DISPOSAL FACILITY RIO ARRIBA COUNTY, NM	MATERIALS: 40 Mil HD GEOTEXTILE PROJECT NO. / DRAWING NO. 3/3

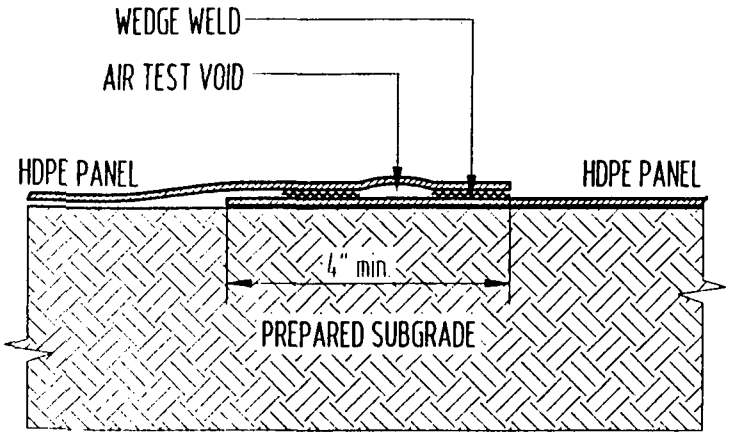
Figure 3c. As built 10 oz. Geotextile liner showing seam patch locations as installed by Falcon Environmental Lining Systems, Inc.

LINER WELD DETAIL, N.T.S.



EXTRUSION WELD DETAIL

not to scale



WEDGE WELD DETAIL

not to scale

Figure 3d. Liner weld detail (extrusion and wedge weld) as installed by Falcon Environmental Lining Systems, Inc.

AERATION SYSTEM DETAILS, N.T.S.

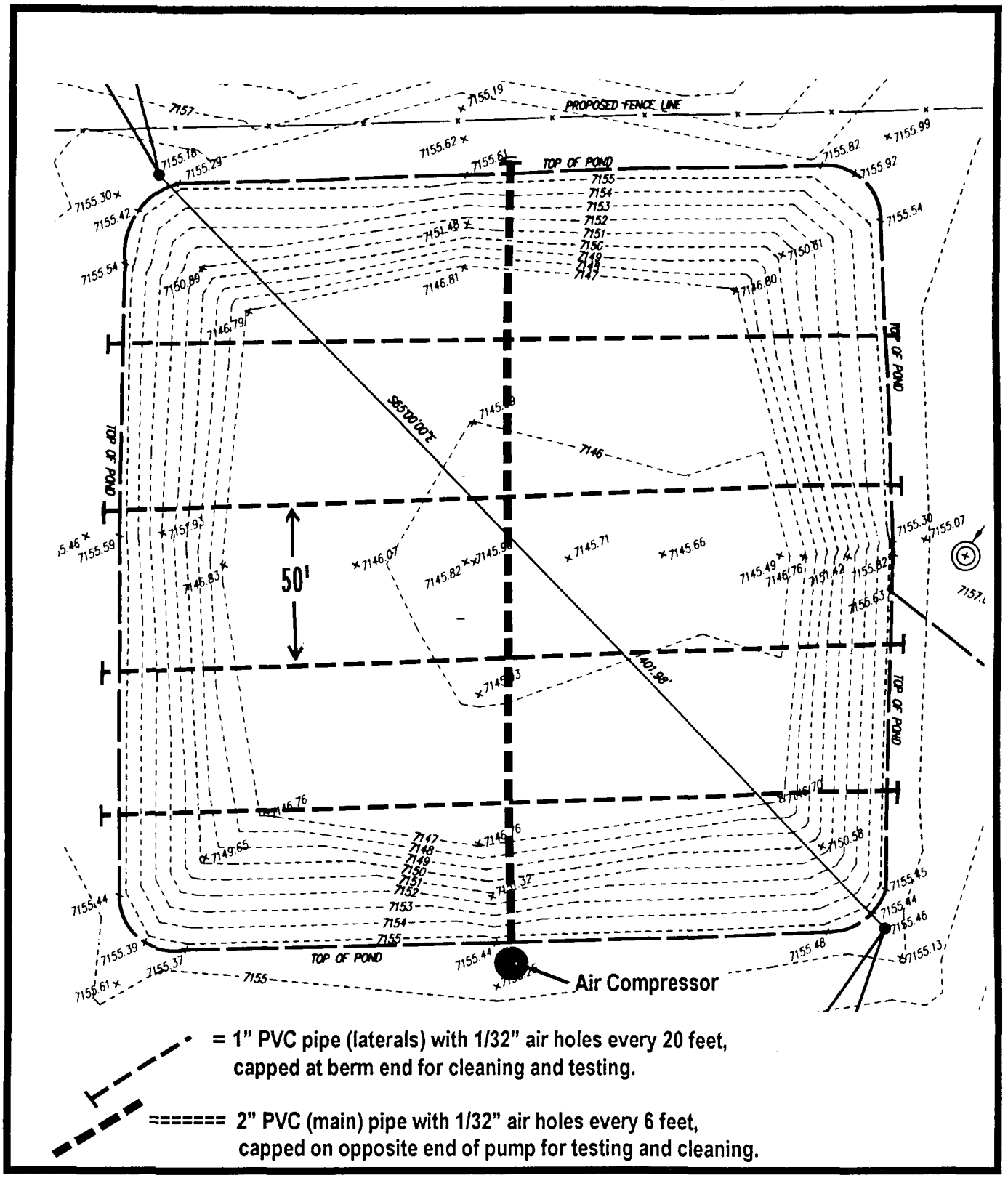
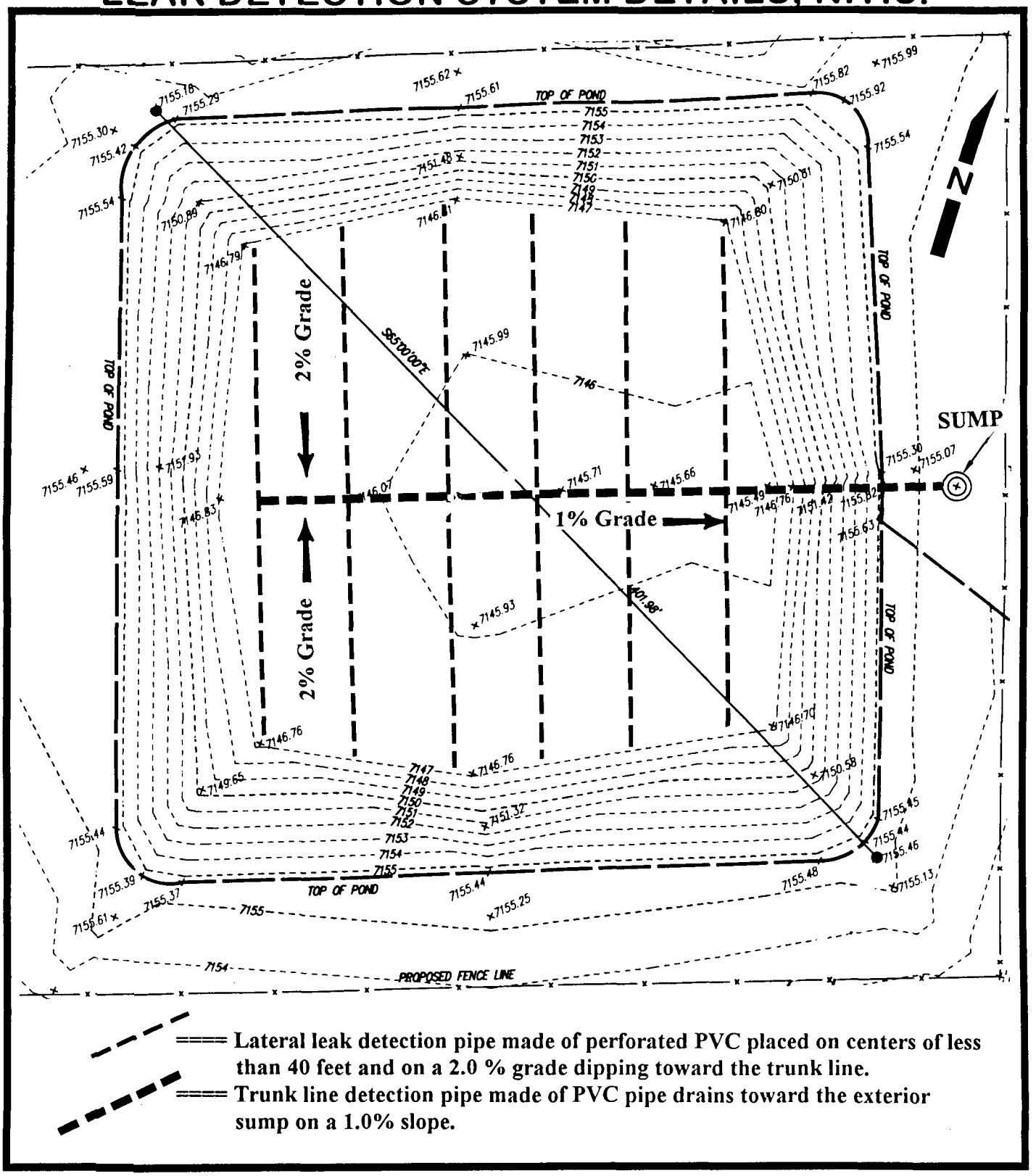


Figure 4. Aeration system showing the location and spacing of 1" laterals, 2" main pipe, slopes, perforations and air compressor.

LEAK DETECTION SYSTEM DETAILS, N.T.S.



==== Lateral leak detection pipe made of perforated PVC placed on centers of less than 40 feet and on a 2.0 % grade dipping toward the trunk line.

==== Trunk line detection pipe made of PVC pipe drains toward the exterior sump on a 1.0% slope.

Figure 5. The leak detection system consists of a series of 1" perforated PVC pipes (laterals) draining into a 2" PVC pipe (trunk line) which drains into a sump out side of the pond. The system is located between the primary and secondary HDPE liners. A geotextile fabric also located between the two HDPE liners acts as a conduit for any fluids leaking into detection system and to the lateral or trunk lines.

X-SECTION OF LINER DETAILS, N.T.S.

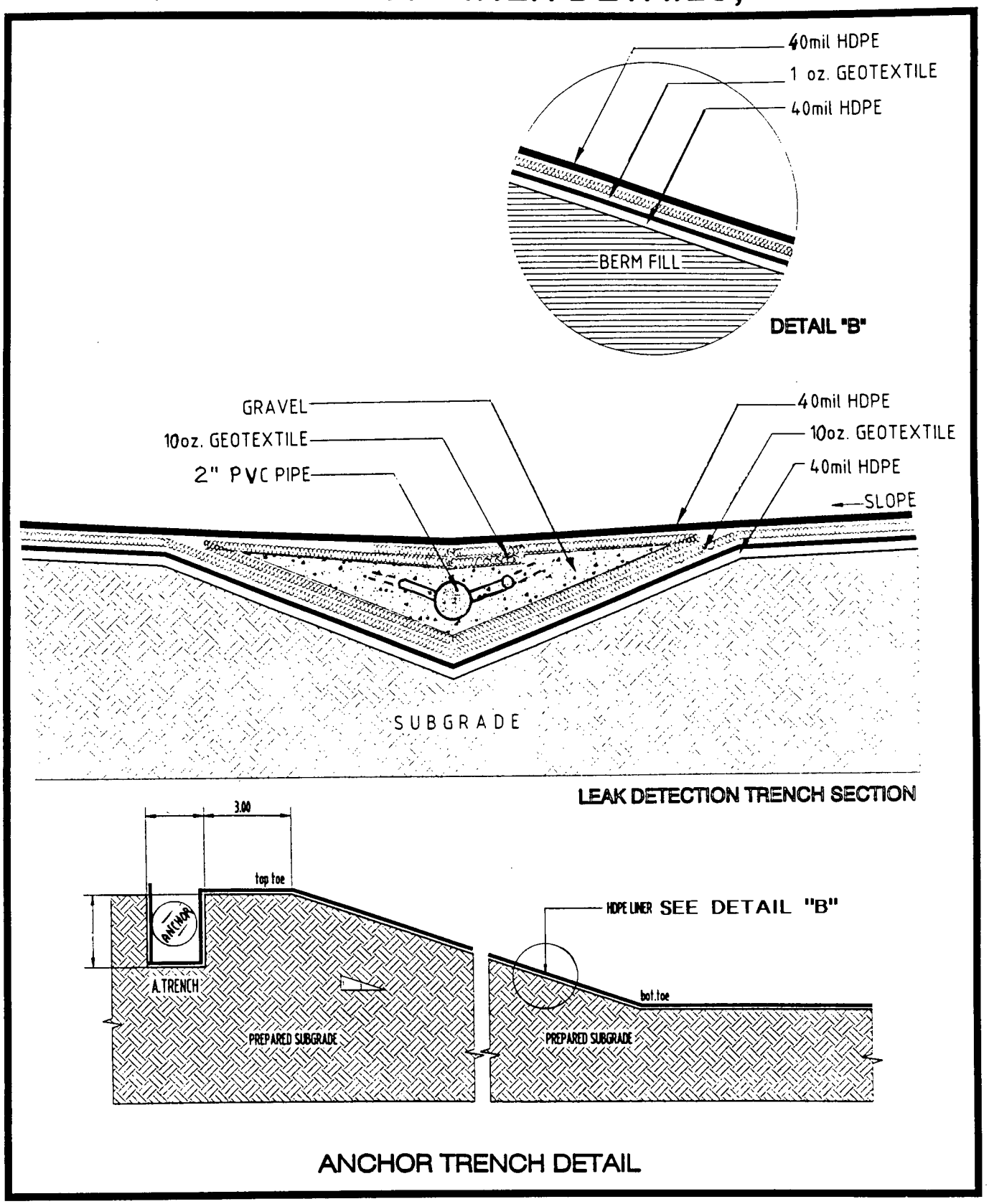


Figure 6. A Cross-Section of the pond and berm showing the 40 mil HDPE primary and secondary liners, 10 oz. geotextile liner, trench and achoring detail.

X-SECTION OF LINER DETAILS, N.T.S.

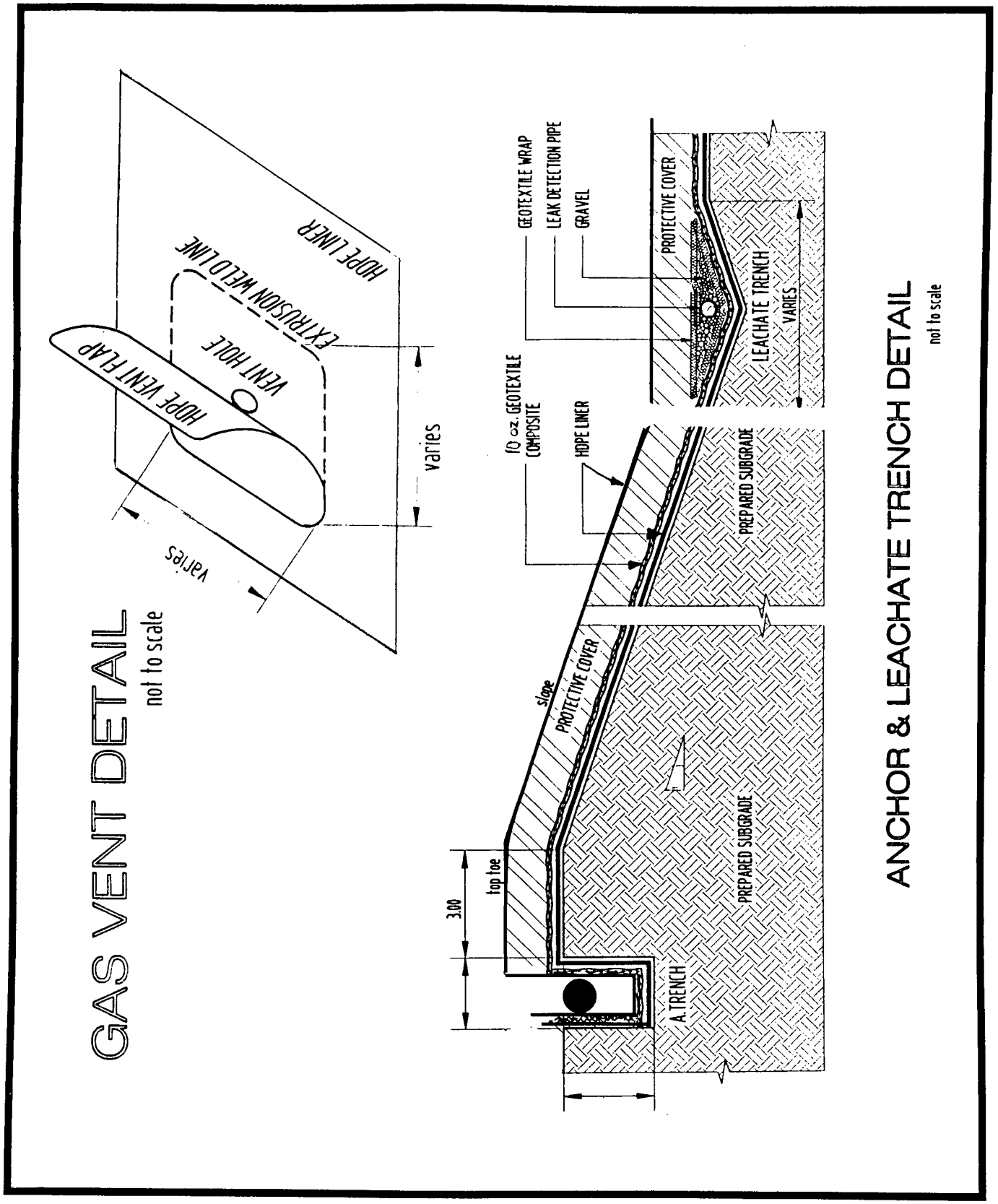


Figure 6a. A Cross-Section of the pond and berm showing the anchor/trench, berm, 3:1 berm slope, 2" PVC leak detection 'trunk' line and liner detail.

LEAK DETECTION SUMP DETAIL, N.T.S.

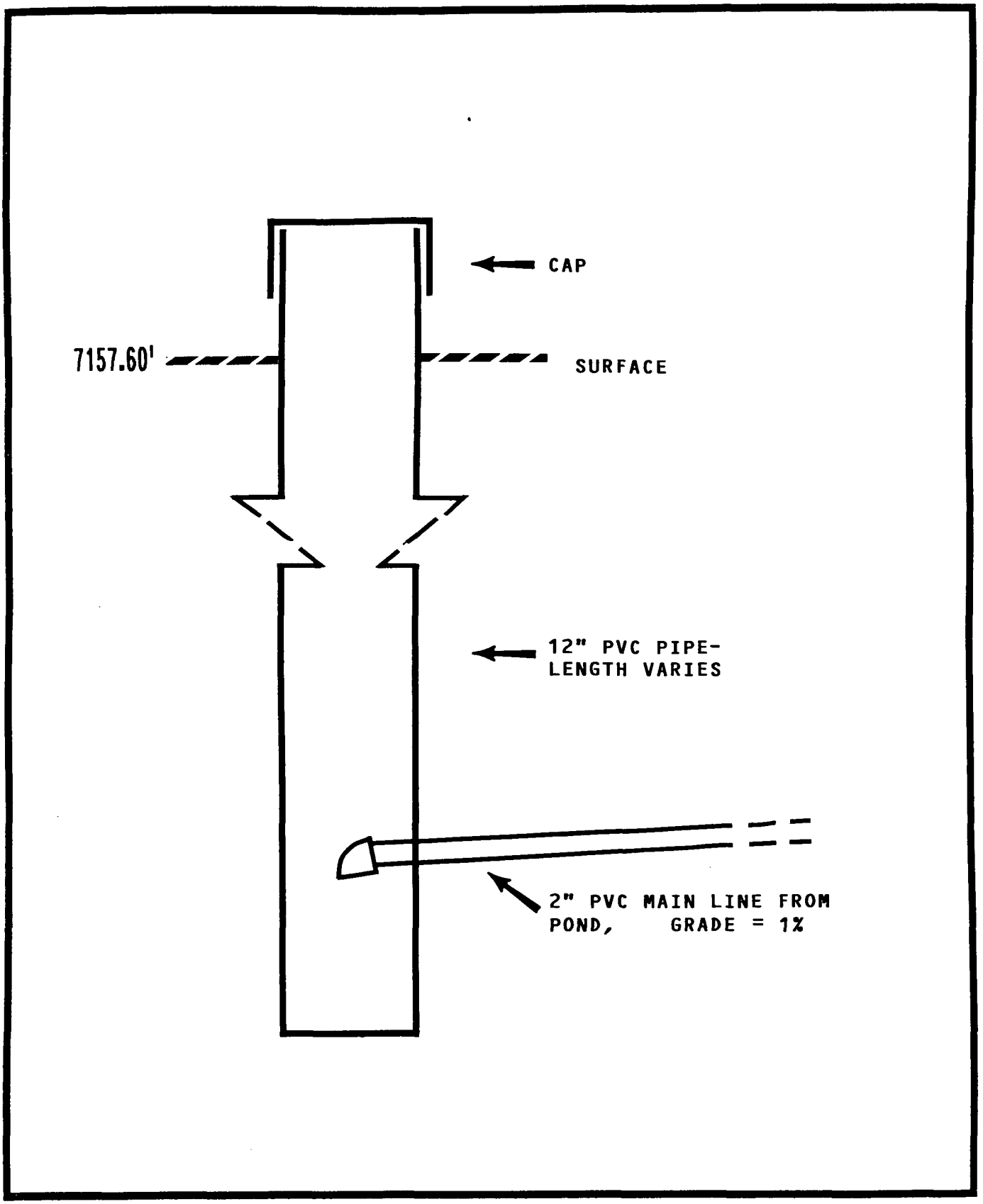
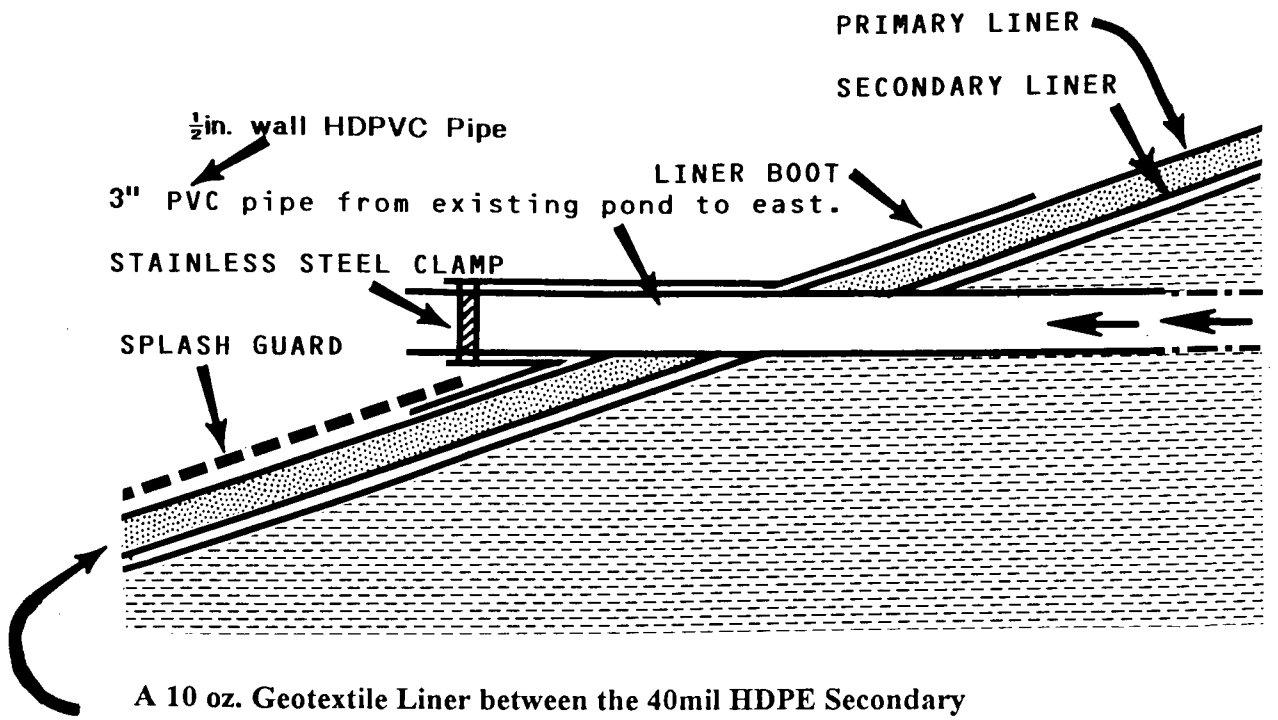
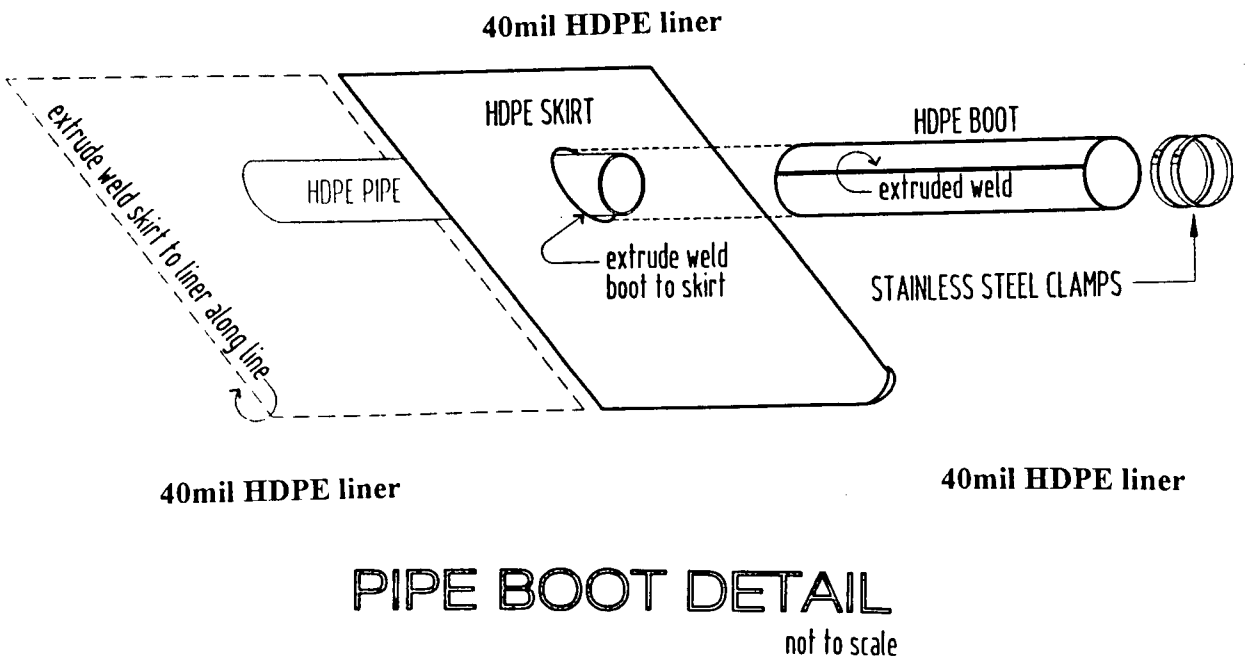


Figure 7. Sump detail showing cap, 12" sump pipe and 2" PVC inlet pipe coming from the leak detection system inside the waste pond, see location on Plate I.

LINER BOOT, SPLASH GUARD AND LINER DETAIL, N.T.S.



A 10 oz. Geotextile Liner between the 40mil HDPE Secondary and Primary Liners.

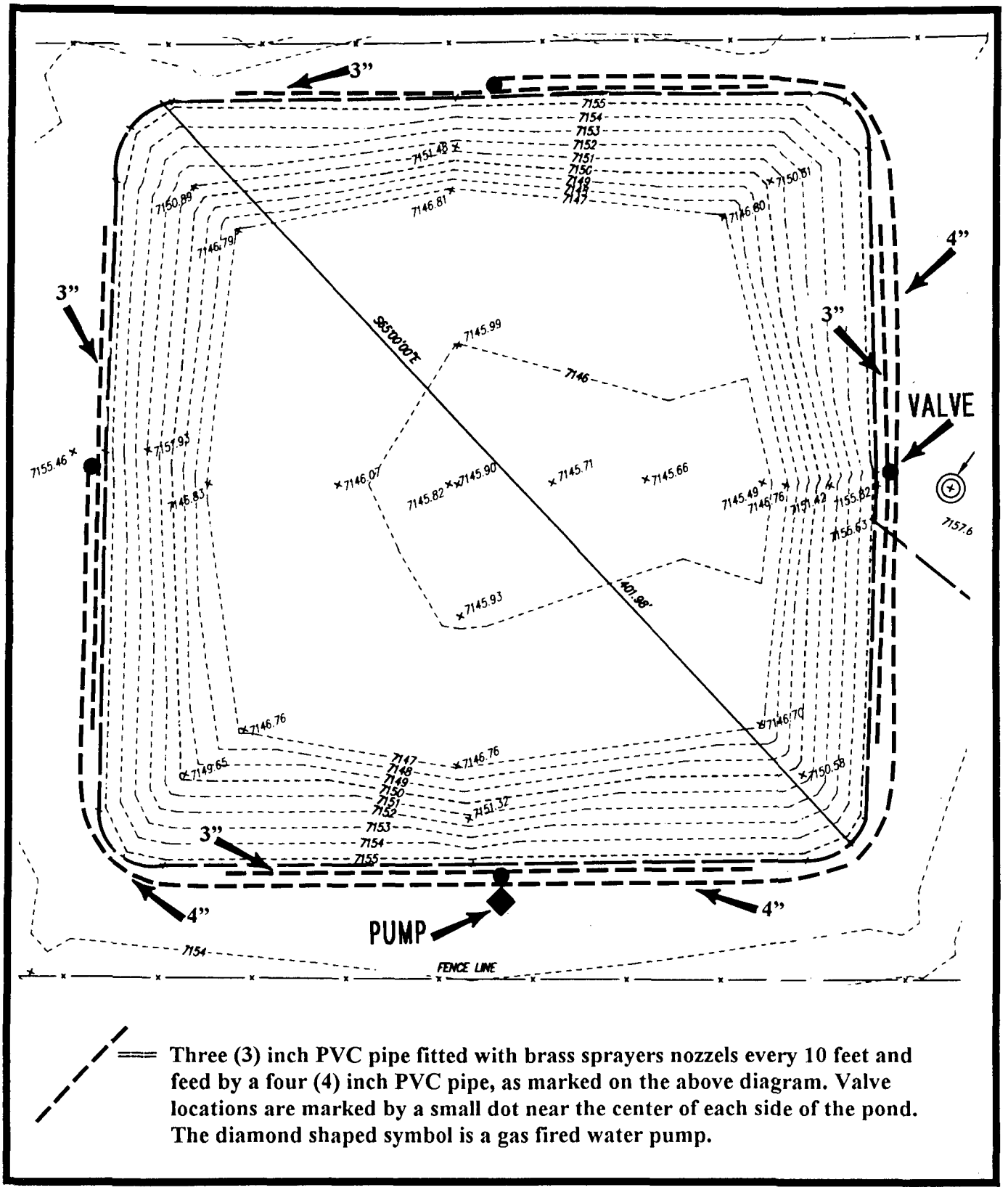


PIPE BOOT DETAIL

not to scale

Figure 8. Typical cross-section of liner boot placement, if needed for discharge line/pipe placement.

SPRAYER EVAPORATION SYSTEM DETAIL, N.T.S.



Three (3) inch PVC pipe fitted with brass sprayers nozzels every 10 feet and feed by a four (4) inch PVC pipe, as marked on the above diagram. Valve locations are marked by a small dot near the center of each side of the pond. The diamond shaped symbol is a gas fired water pump.

Figure 9. Sprayers to assist in the evaporation of waste water are located on all four sides of the pond and are feed by a four inch (4") PVC pipe. Pipe sizes, nozzel spacings, pump, intake pipe and valve locations are shown on the above illustration.

MONITOR WELLS AND STRATIGRAPIC TEST WELL LOCATIONS TO THE EAST OF THE *AS BUILT* POND, N.T.S.

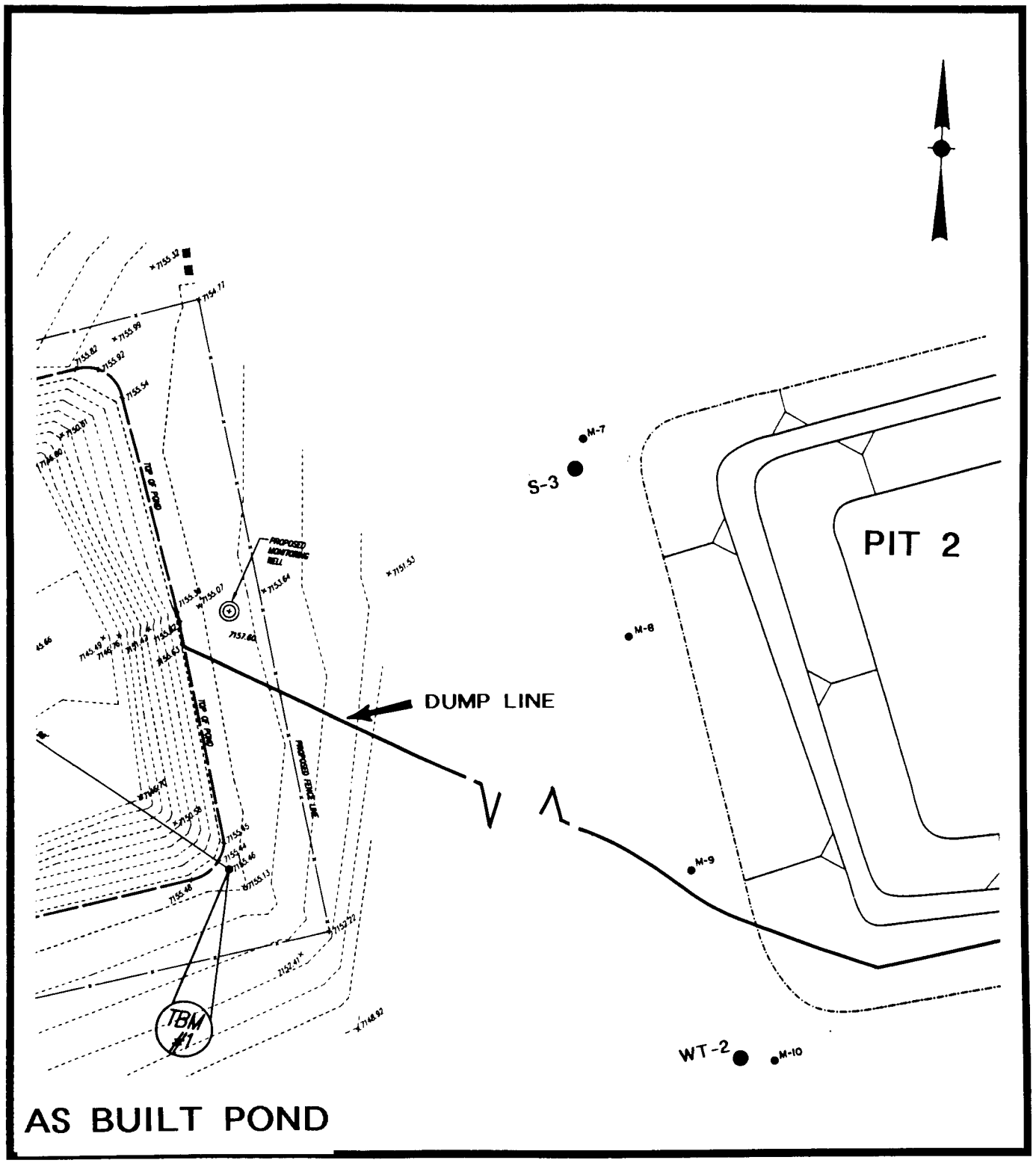


Figure 10. This drawing shows the location of four (4) monitor wells and two (2) stratigraphic test wells drilled several years ago along the west side of waste disposal pond (PIT No. 2) some 8oo feet (800') to the east of the *AS BUILT* pond..

DRILLERS LOG

Drill Hole No.: M-7

Date Completed: 8-23-89

Drill Hole Size: $6\frac{1}{2}$ in. OD

Elevation: 7150.4 ft.

DEPTH (FT)	DESCRIPTION
0 - 12	**Shale:** med brown, dark red brown.
12 - 14	**Sand:** light yel brown, very fine, angular sandstone, silty throughout, dry.
14 - 21	**Shale:** med gray, no light blue-gray siltstone in this hole.
21 - 26	**Shale:** light to med red-brown, silty top foot, with some thin siltstone interbeds, sandy.
26 - 30	**Shale:** light to med red-brown, silty top foot.
30 - 38	**Shale:** med red-brown, silty at base.
TD = 38	
	Note: No moisture in any sands, hard, light blue-gray siltstone **not** observed in this drill hole.
CASING	
0 - 26	4 inch heavy wall PVC pipe, perforated from 11-14 and 21-26 feet.

Figure 11a.

DRILLERS LOG

Drill Hole No.: M-8

Date Completed: 8-24-89

Drill Hole Size: $6\frac{1}{2}$ in. OD

Elevation: 7146.5 ft.

DEPTH (FT)	DESCRIPTION
0 - 17	**Shale:** med brown, dark red brown.
17 - 18	**Siltstone:** light red-brown, gray-brown.
18 - 20	**Shale:** med brown-tan, no light blue-gray siltstone in this hole.
20 - 25	**Shale:** med red-brown, silty top foot.
25 - 28	**Sand:** light to med yellow-brown or tan, very silty at top.
28 - 38	**Shale:** med red-brown, silty at base.
TD = 38	
	Note: No moisture in any sands, light blue-gray siltstone **not** observed in this drill hole.
CASING	
0 - 28	4 inch heavy wall PVC pipe, perforated from 17-20 and 24-28 feet.

Figure 11b.

DRILLERS LOG

Drill Hole No.: M-9

Date Completed: 8-24-89

Drill Hole Size: $6\frac{1}{2}$ in. OD

Elevation: 7143.9 ft.

DEPTH (FT)	DESCRIPTION
0 - 16	**Shale:** med brown, dark red brown,a few thin siltstone interbeds (3-6 inches).
16 - 32	**Sand:** light to med yellow-brown or tan, very silty at top to med coarse at base, fine-grained, angular. typical channel sand deposit.
32 - 40	**Shale:** med red-brown.
TD = 40	
	Note: No moisture in any sands, light blue-gray siltstone **not** observed in this drill hole.
CASING	
0 - 32	4 inch heavy wall PVC pipe, perforated from 16-32 feet.

Figure 11c.

DRILLERS LOG

Drill Hole No.: M-10

Date Completed: 8-24-89

Drill Hole Size: $6\frac{1}{2}$ in. OD

Elevation: 7140.9 ft.

DEPTH (FT)	DESCRIPTION
0 - 18	**Shale:** med brown, dark red brown,a few thin siltstone interbeds (3-6 inches)near base.
18 - 24	**Shale:** med brown-tan, dark red brown,a few thin siltstone and sand interbeds (3-6 inches)near base.
24 - 29	**Shale-Sand:** med brown-tan, dark red brown shale, sands are yellow brown, fine to coarse-grained, sand interbeds (3-6 inches)near base.
29 - 33	**Sand:** light to med yellow-brown or tan, coarse-grained at base, fine-grained, angular, typical channel sand.
33 - 39	**Shale:** med red-brown.
TD = 39	
	Note: No moisture in any sands, light blue-gray siltstone **not** observed in this drill hole.
CASING	
0 - 32	4 inch heavy wall PVC pipe, perforated from 23-33 feet.

Figure 11d.

DRILLERS LOG

Datum: Assumed elevation of NE corner of proposed pit is 60.3 feet.

WELL NO. S-3
ELEVATION: 54.5 FEET
DATE COMPLETED: 7-5-88
LOCATION: 25 FEET WEST OF NW CORNER OF PROPOSED PIT.
No water encountered in well (AIR DRILLED).

Depth in Feet	Description
0-18	Claystone/Shale; verigated light-med. rdbn, silty at 7-8 feet.
18-24	Shale; verigated light-med. rdbn.
24-29	Shale, verigated light-med. rdbn, several hard (1"-3") siltstone stringers at 24-25 feet.
29-33	Shale/Siltstone; rdbn to tan, 29-30 feet 5% sand, angular, fine-grained.
33-40	Shale; med. rdbn, silty at 38 feet.
40-41	Siltstone; tan-med. rdbn.

Figure 11e.

WELL NO. WT-2
ELEVATION: 46 FEET
DATE OF COMPLETION: 3/30/88
LOCATION: 250 FEET WEST AND 25 FEET NORTH OF WELL NO. S-1.
No water encountered in the well (AIR DRILLED).

Depth in Feet	Description
0-25	Claystone; verigated rdbn, some thin sandy layers.

Figure 11f.

HUFFMAN LETTER OF NOTIFICATION

FAR WEST RESOURCES,INC.

P.O. BOX 1461 • FARMINGTON, NM 87499
(505) 325-8100

May 23, 1994

Certified Mail
Return Receipt Requested

John C. Huffman
1520 Zuni Drive
Farmington, NM 87401

Dear Mr. Huffman:

Rule 711, paragraph A.2 of the New Mexico Oil Conservation Division's Rules and Regulations, requires notification of all landowners of record within one-half mile of any proposed water disposal/evaporation site or the expansion/addition of an existing disposal/evaporation site. As the landowner of the W 1/2 of Section 7, T25N, R3W, T-N-T Construction is hereby notifying you of our plans.

Please be advised that T-N-T Construction, Inc. proposes to enlarge its existing disposal site by constructing an additional evaporative pit west of its existing facility in the E 1/2, Section 7, T25N, R3W, Rio Arriba County, New Mexico. Operation of this facility and the proposed evaporation pit will be by T-N-T Construction, Inc. (Tony L. Schmitz, President).

The proposed lined evaporation pond will be constructed in accordance with all applicable State of New Mexico Oil Conservation Division Rules and Regulations. The Oil Conservation Division (OCD) will review and approve all plans and specifications of the proposed expansion of the existing facility to insure protection of the environment

If you have any questions regarding the present operation or the proposed expansion please contact Tony L. Schmitz, T-N-T Construction HCR 74 - Box 115 Lindrith, NM 87029 (505) 774-6663 or 774-6551. You may also contact the NMOCD in Santa Fe, NM P.O. Box 2088, Santa Fe, NM 87504, (505)827-5800 regarding the regulatory process or general information.

Sincerely,

James W. Gurney

James W. Gurney
Geologist 325-8181 or 325-8100
for T-N-T Construction, Inc.
HCR 74 - Box 115
Lindrith, NM 87029

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

John C. Huffman
1520 Zuni Drive
Farmington, NM 87401

4a. Article Number
P 144 971 809

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
5-28-94

5. Signature (Addressee)

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 *U.S. GPO: 1992—323-402 DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

ENGINEERING CERTIFICATION.

Western Technologies Inc.
The Quality People
Since 1955

400 South Lorena Avenue
Farmington, New Mexico 87401
(505) 327-4966 • fax 327-5293

October 28, 1997

TNT Construction Inc.
HCR 74-Box 115
Lindrith, New Mexico 87029

Attn: Mr. Tony Lee Schmitz

Invoice No. 31270077

Re: Evaporation Pond
Lindrith, New Mexico

As you requested on July 1, 1997, we have completed the field density testing during construction and the observations of the pond following liner installation for the above referenced project. The purpose of our review was to assess compliance of pond construction with the design parameters.

The evaporation pond was constructed predominantly in a cut area, with the excavated soil placed around the outside of the pond. The south side of the pond required fill placement and the construction of a dike with a maximum height of 5 feet. The pond has two synthetic liners with a leak detection system located between the two liners.

The results of our observations are tabulated below:

FEATURE	AS-BUILT	DESIGN
Two liners	2	2 Minimum
Embankment top width, feet	12	12
Maximum height of embankment above existing ground surface, feet	5*	5
Maximum water depth, feet	8.5	10
Embankment upstream slope (horizontal:vertical)	3.5:1	2:1 (max.)
Embankment downstream slope (horizontal:vertical)	30:1	3:1 (max.)
Fill Compaction, ASTM D698	95% minimum **	Same

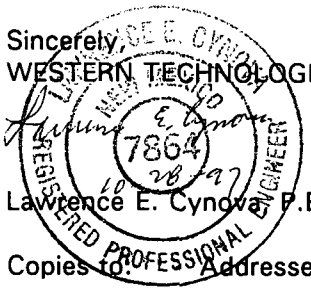
* The fill height of the dike located on the south side of the pond varied from 0 to 5 feet. WT made three trips to perform field density testing during construction of the dike. (See field density tests, enclosed.)

** The fill was compacted to a minimum of 95 percent of the maximum density as determined in accordance with ASTM D698.

The above results indicate that the earthwork for the pond was constructed in accordance with the specifications given in the project booklet "Expansion of an Existing Surface Waste Disposal Facility" dated January 31, 1995.

This completes our current services on this project. If you have any questions concerning this information, or require additional observation or testing services, please contact us. We look forward to working with you on future projects.

Sincerely,
WESTERN TECHNOLOGIES INC.



Lawrence E. Cynova P.E.

Copies to: Addressee (7)

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Farmington, New Mexico 87401
(505) 327-4966 • fax 327-5293

PHYSICAL PROPERTIES OF AGGREGATES

Client **TNT CONSTRUCTION, INC.**
ATTN: MR. TONY SCHMITZ
STAR ROUTE
LINDRITH, NM 87029

Date of Report **08-06-97**
Job No. **3147JF133**
Event / Invoice No. **31470256** Lab No. **07F133**
Authorized By **TONY SCHMITZ** Date **07-03-97**
Sampled By **SANDOVAL/WT** Date **07-03-97**
Submitted By **SANDOVAL/WT** Date **07-03-97**

Project **LINDRITH SEWAGE LAGOONS**
Contractor **TNT CONSTRUCTION INC**
Type / Use of Material **NATIVE MATERIAL**
Sample Source / Location **ON-SITE**
Reference:
Special Instructions:

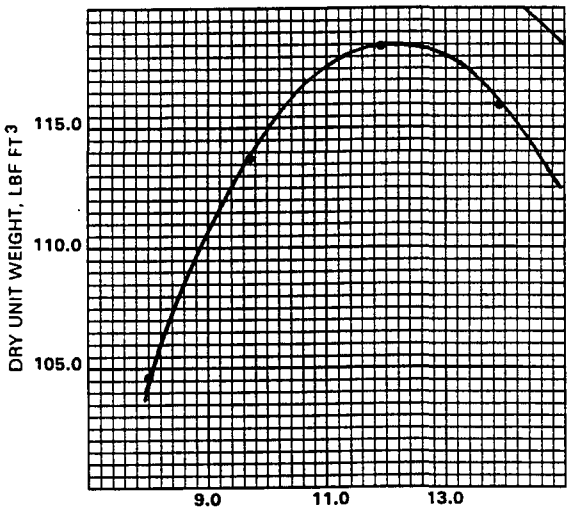
Location **LINDRITH, NM**
Arch. / Engr. **N/A**
Supplier / Source **TONY SCHMITZ DISPOSAL POND**
Source / Location Desig. By **CLIENT** Date **07-03-97**

TEST RESULTS

SIEVE ANALYSIS ☐ AST M C136 ☐ AASHTO T27

SIEVE SIZE	ACCUMULATIVE % PASSING	SPECIFICATION
FINER THAN NO. 200 ☐ ASTM C117 ☐ AASHTO T11		

LAB COMPACTION CHARACTERISTICS ☒ ASTM D698 ☐ AASHTO T99 ☐ ASTM D1557 ☐ AASHTO T180 METHOD **A**



SAMPLE PREPARATION: ☒ WET ☐ DRY
RAMMER USED:
☒ 2 IN. CIRCULAR FACE ☐ OTHER
☐ MECHANICAL ☒ MANUAL

PERCENT OVERSIZE IN TOTAL SAMPLE: **0.0**

ASSUMED SPECIFIC GRAVITY: **2.65**

MAXIMUM DENSITY, LBF / FT^3 → **118.5**

OPTIMUM MOISTURE CONTENT, % → **12.2**

LIQUID & PLASTIC PROPERTIES ☐ ASTM D4318 ☐ AASHTO T89 & T90

	RESULT	SPECIFICATION
LIQUID LIMIT		
PLASTIC LIMIT		
PLASTICITY INDEX		

SAMPLE AIR DRIED: ☐ YES ☐ NO
ESTIMATED % RETAINED ON NO. 40
METHOD ☐ A ☐ B

SOIL CLASSIFICATION
☐ ASTM D2487
☐ AASHTO M145
☐ ASTM D2488 VISUAL / MANUAL
GROUP SYMBOL
NAME

RESISTANCE TO DEGRADATION BY L.A. MACHINE		TEST RESULTS	SPECIFICATION
SMALL COARSE AGGREGATE ☐ ASTM C131 ☐ AASHTO T96 GRADING	100 REV., % LOSS → 500 REV., % LOSS →		
LARGE COARSE AGGREGATE ☐ ASTM C535 GRADING	200 REV., % LOSS → 1000 REV., % LOSS →		

Comments:

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FIELD FILE (1)

REVIEWED BY _____

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Farmington, New Mexico 87401
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PHYSICAL PROPERTIES OF AGGREGATES

Client **TNT CONSTRUCTION, INC.**
ATTN: MR. TONY SCHMITZ
STAR ROUTE
LINDRITH, NM 87029

Date of Report **08-06-97**
Job No. **3147JF133**
Event / Invoice No. **31470285** Lab No. **08F276**
Authorized By **TONY SCHMITZ** Date **08-04-97**
Sampled By **KUEBLER/WT** Date **08-04-97**
Submitted By **KUEBLER/WT** Date **08-04-97**

Project **LINDRITH SEWAGE LAGOONS**
Contractor **TNT CONSTRUCTION INC**
Type / Use of Material **SAND CLAY**
Sample Source / Location **POND BOTTOM**
Reference:
Special Instructions:

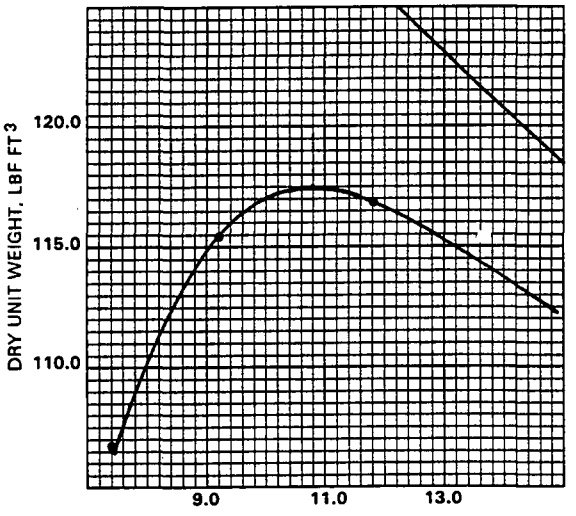
Location **LINDRITH, NM**
Arch. / Engr. **N/A**
Supplier / Source **NATIVE MATERIAL**
Source / Location Desig. By **CLIENT** Date **08-04-97**

TEST RESULTS

SIEVE ANALYSIS ☐ AST M C136 ☐ AASHTO T27

SIEVE SIZE	ACCUMULATIVE % PASSING	SPECIFICATION
FINER THAN NO. 200 ☐ ASTM C117 ☐ AASHTO T11		

LAB COMPACTION CHARACTERISTICS ☒ ASTM D698 ☐ AASHTO T99 ☐ ASTM D1557 ☐ AASHTO T180 METHOD **A**



SAMPLE PREPARATION: ☒ WET ☐ DRY
RAMMER USED:
☒ 2 IN. CIRCULAR FACE ☐ OTHER
☐ MECHANICAL ☒ MANUAL

PERCENT OVERSIZE IN TOTAL SAMPLE: **0.0**

ASSUMED SPECIFIC GRAVITY: **2.65**

MAXIMUM DENSITY, LBF / FT3 → **117.5**

OPTIMUM MOISTURE CONTENT, % → **10.8**

LIQUID & PLASTIC PROPERTIES ☐ ASTM D4318 ☐ AASHTO T89 & T90

	RESULT	SPECIFICATION
LIQUID LIMIT		
PLASTIC LIMIT		
PLASTICITY INDEX		

SAMPLE AIR DRIED: ☐ YES ☐ NO
ESTIMATED % RETAINED ON NO. 40
METHOD ☐ A ☐ B

SOIL CLASSIFICATION
☐ ASTM D2487
☐ AASHTO M145
☐ ASTM D2488 VISUAL / MANUAL
GROUP SYMBOL
NAME

RESISTANCE TO DEGRADATION BY L.A. MACHINE		TEST RESULTS	SPECIFICATION
SMALL COARSE AGGREGATE	100 REV., % LOSS →		
☐ ASTM C131 ☐ AASHTO T96 GRADING	500 REV., % LOSS →		
LARGE COARSE AGGREGATE	200 REV., % LOSS →		
☐ ASTM C535 GRADING	1000 REV., % LOSS →		

Comments:

Copies To: **CLIENT - (3)**
FIELD FILE (1)

REVIEWED BY _____

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Farmington, New Mexico 87401
(505) 327-4966 • fax 327-5293

SOIL / AGGREGATE FIELD UNIT WEIGHT TESTS (FIELD DENSITY)

Date of Report 08-06-97
Job No. 3147JF133 Page 1 of 1
Event/Invoice No. 31470256-01
Authorized By CLIENT Date 07-31-97
Tested By MCDANIEL/WT Date 07-31-97

Client TNT CONSTRUCTION, INC.
ATTN: MR. TONY SCHMITZ
STAR ROUTE
LINDRITH, NM 87029

Client TNT CONSTRUCTION, INC.
Project LINDRITH SEWAGE LAGOONS
Location LINDRITH, NM
Test Locations Designated By MCDANIEL/WT
Test Procedures In-Place Unit Weight : ASTM D2922 Moisture Content : ASTM D3017
Gauge : Make TROXLER Model 3430 Serial No. 756970 Standard Count: Unit Weight 3143 H_2O 602

TEST NO.	IN-PLACE CHARACTERISTICS				LAB CHARACTERISTICS			COMPACTION	REQUIREMENTS		
	Hole Volume cu. ft.	Moisture % of Dry Unit Weight	Dry Unit Weight lbf / cu. ft.	Oversize %	ID	Maximum Dry Unit Weight lbf / cu. ft.	Optimum Moisture %	% of Maximum Dry Unit Weight	Moisture %	Compaction %	CONFORMANCE INDICATED
1		14.3	113.1	0.0	1	118.5	12.2	95		95	YES
2		13.8	112.7	0.0	1	118.5	12.2	95		95	YES
3		13.9	116.9	0.0	1	118.5	12.2	99		95	YES
4		14.3	116.2	0.0	1	118.5	12.2	98		95	YES

TEST NO.	TEST LOCATION, HORIZONTAL	TEST LOCATION, VERTICAL		MATERIAL TESTED
		Approximate Fill Depth, ft.	Elevation *	
1	EAST BANK, SOUTHEAST CORNER, 30' NORTH	.8	97.0	EMBANKMENT FILL
2	EAST BANK, SOUTHEAST CORNER, 60' NORTH	.8	97.0	EMBANKMENT FILL
3	EAST BANK, SOUTHWEST CORNER, 40' EAST	.8	97.0	EMBANKMENT FILL
4	EAST BANK, SOUTHWEST CORNER, 40' NORTH	.8	97.0	EMBANKMENT FILL

LABORATORY DATA & COMPACTION CHARACTERISTICS

LAB ID.	EVENT/ INVOICE NO.	DESCRIPTION OF MATERIAL	SOURCE OF MATERIAL	OPTIMUM MOISTURE, %	MAXIMUM DRY UNIT WEIGHT, lbf / cu. ft.	TEST METHOD
1	31470256	UNKN	NATIVE MATERIAL	12.2	118.5	D698-A

Comments: * DATUM 100' = TOP OF LAGOONS

Distribution : CLIENT - (3)
FIELD FILE (1)

REVIEWED BY R. GRIFFITH
(SIGNED COPY ON FILE)

Western Technologies Inc.
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Farmington, New Mexico 87401
(505) 327-4966 • fax 327-5293

SOIL / AGGREGATE FIELD UNIT WEIGHT TESTS (FIELD DENSITY)

Date of Report 08-06-97
Job No. 3147JF133 Page 1 of 1
Event/Invoice No. 31470285-01
Authorized By CLIENT Date 08-04-97
Tested By KUEBLER/WT Date 08-04-97

Client TNT CONSTRUCTION, INC.
ATTN: MR. TONY SCHMITZ
STAR ROUTE
LINDRITH, NM 87029

Client TNT CONSTRUCTION, INC.
Project LINDRITH SEWAGE LAGOONS
Location LINDRITH, NM
Test Locations Designated By CLIENT
Test Procedures In-Place Unit Weight : ASTM D2922 Moisture Content : ASTM D3017
Gauge : Make TROXLER Model 3411 Serial No. 6698 Standard Count: Unit Weight 2234 H_2O 599

TEST NO.	IN-PLACE CHARACTERISTICS				LAB CHARACTERISTICS			COMPACTION	REQUIREMENTS		
	Hole Volume cu. ft.	Moisture % of Dry Unit Weight	Dry Unit Weight lbf / cu. ft.	Oversize %	ID	Maximum Dry Unit Weight lbf / cu. ft.	Optimum Moisture %	% of Maximum Dry Unit Weight	Moisture %	Compaction %	CONFORMANCE INDICATED
5		11.8	109.0	0.0	1	118.5	12.2	92		95	NO
6		15.1	113.6	0.0	1	118.5	12.2	96		95	YES
7		14.2	114.9	0.0	1	118.5	12.2	97		95	YES
8		15.0	113.4	0.0	1	118.5	12.2	96		95	YES
9		12.2	112.1	0.0	1	118.5	12.2	95		95	YES

TEST NO.	TEST LOCATION, HORIZONTAL	TEST LOCATION, VERTICAL		MATERIAL TESTED
		Approximate Fill Depth, ft.	Elevation *	
5	POND #3, SOUTHEAST CORNER, 20' NORTH	3.0	98.0	SUBGRADE
6	POND #3, NORTHEAST CORNER, 45' SOUTH	4.0	99.0	SUBGRADE
7	POND #3, SOUTHWEST CORNER, 75' EAST	4.5	99.5	SUBGRADE
8	POND #3, SOUTHWEST CORNER, 45' NORTH	4.0	99.0	SUBGRADE
9	RETEST #5	3.0	98.0	SUBGRADE

LABORATORY DATA & COMPACTION CHARACTERISTICS

LAB ID.	EVENT/ INVOICE NO.	DESCRIPTION OF MATERIAL	SOURCE OF MATERIAL	OPTIMUM MOISTURE,%	MAXIMUM DRY UNIT WEIGHT, lbf / cu. ft.	TEST METHOD
1	31470256	UNKN	NATIVE MATERIAL	12.2	118.5	D698-A

Comments: * DATUM 100' = TOP OF BERM

Distribution : CLIENT - (3)
FIELD FILE (1)

REVIEWED BY R. GRIFFITH
(SIGNED COPY ON FILE)

Western Technologies Inc.
The Quality People
Since 1955

400 South Lorena Avenue
Farmington, New Mexico 87401
(505) 327-4966 • fax 327-5293

SOIL / AGGREGATE FIELD UNIT WEIGHT TESTS (FIELD DENSITY)

Date of Report **08-07-97**
Job No. **3147JF133** Page 1 of 1
Event/Invoice No. **31470285-02**
Authorized By **CLIENT** Date **08-05-97**
Tested By **KUEBLER/WT** Date **08-05-97**

Client **TNT CONSTRUCTION, INC.**
ATTN: MR. TONY SCHMITZ
STAR ROUTE
LINDRITH, NM 87029

Client **TNT CONSTRUCTION, INC.**
Project **LINDRITH SEWAGE LAGOONS**
Location **LINDRITH, NM**
Test Locations Designated By **CLIENT**
Test Procedures In-Place Unit Weight : **ASTM D2922** Moisture Content : **ASTM D3017**
Gauge : Make **TROXLER** Model **3411** Serial No. **6698** Standard Count: Unit Weight **2226** H_2O **601**

TEST NO.	IN-PLACE CHARACTERISTICS				LAB CHARACTERISTICS			COMPACTION	REQUIREMENTS		
	Hole Volume cu. ft.	Moisture % of Dry Unit Weight	Dry Unit Weight lbf / cu. ft.	Oversize %	ID	Maximum Dry Unit Weight lbf / cu. ft.	Optimum Moisture %	% of Maximum Dry Unit Weight	Moisture %	Compaction %	CONFORMANCE INDICATED
10		8.4	111.8	0.0	2	117.5	10.8	95		95	YES
11		12.7	116.1	0.0	2	117.5	10.8	99		95	YES
12		11.2	112.5	0.0	2	117.5	10.8	96		95	YES
13		12.8	111.4	0.0	2	117.5	10.8	95		95	YES

TEST NO.	TEST LOCATION, HORIZONTAL	TEST LOCATION, VERTICAL		MATERIAL TESTED
		Approximate Fill Depth, ft.	Elevation *	
10	POND #3, SOUTHEAST CORNER, 30' NORTH	5.0	100.0	SUBGRADE
11	POND #3, NORTHEAST CORNER, 30' SOUTH	5.0	100.0	SUBGRADE
12	POND #3, SOUTHWEST CORNER, 20' EAST	5.0	100.0	SUBGRADE
13	POND #3, SOUTHWEST CORNER, 35' NORTH	5.0	100.0	SUBGRADE

LABORATORY DATA & COMPACTION CHARACTERISTICS

LAB ID.	EVENT/ INVOICE NO.	DESCRIPTION OF MATERIAL	SOURCE OF MATERIAL	OPTIMUM MOISTURE, %	MAXIMUM DRY UNIT WEIGHT, lbf / cu. ft.	TEST METHOD
2	31470285	SILTY SAND W/CLAY	POND BOTTOM	10.8	117.5	D698-A

Comments: * DATUM 100' = TOP OF BERM

Distribution : **CLIENT - (3)**
FIELD FILE (1)

REVIEWED BY R. GRIFFITH
(SIGNED COPY ON FILE)

LINER SPECIFICATIONS

Meduim	Concentration	Resistance at 20°C (68°F)	Resistance at 60°C (140°F)
Dioctylphthalate	100%	S	L
Dioxane	100%	S	S
E			
Ethanediol	100%	S	S
Ethanol	40%	S	L
Ethyl acetate	100%	S	U
Ethylene trichloride	100%	U	U
F			
Ferric chloride	sat. sol.	S	S
Ferric nitrate	sol.	S	S
Ferric sulfate	sat. sol.	S	S
Ferrous chloride	sat. sol.	S	S
Ferrous sulfate	sat. sol.	S	S
Fluorine, gaseous	100%	U	U
Fluorosilicic acid	40%	S	S
Formaldehyde	40%	S	S
Formic acid	50%	S	S
Formic acid	98-100%	S	S
Furfuryl alcohol	100%	S	L
G			
Gasoline	—	S	L
Glacial acetic acid	96%	S	L
Glucose	sat. sol.	S	S
Glycerine	100%	S	S
Glycol	sol.	S	S
H			
Heptane	100%	S	U
Hydrobromic acid	50%	S	S
Hydrobromic acid	100%	S	S
Hydrochloric acid	10%	S	S
Hydrochloric acid	35%	S	S
Hydrocyanic acid	10%	S	S
Hydrofluoric acid	4%	S	S
Hydrofluoric acid	60%	S	L
Hydrogen	100%	S	S
Hydrogen peroxide	30%	S	L
Hydrogen peroxide	90%	S	U
Hydrogen sulfide, gaseous	100%	S	S
L			
Lactic acid	100%	S	S
Lead acetate	sat. sol.	S	—
M			
Magnesium carbonate	sat. sol.	S	S
Magnesium chloride	sat. sol.	S	S
Magnesium hydroxide	sat. sol.	S	S
Magnesium nitrate	sat. sol.	S	S
Maleic acid	sat. sol.	S	S
Mercuric chloride	sat. sol.	S	S
Mercuric cyanide	sat. sol.	S	S
Mercuric nitrate	sol.	S	S
Mercury	100%	S	S
Methanol	100%	S	S
Methylene chloride	100%	L	—
Milk	—	S	S
Molasses	—	S	S
N			
Nickel chloride	sat. sol.	S	S
Nickel nitrate	sat. sol.	S	S
Nickel sulfate	sat. sol.	S	S
Nicotinic acid	dil. sol.	S	—
Nitric acid	25%	S	S
Nitric acid	50%	S	U
Nitric acid	75%	U	U
Nitric acid	100%	U	U
O			
Oils and Grease	—	S	L
Oleic acid	100%	S	L
Orthophosphoric acid	50%	S	S
Orthophosphoric acid	95%	S	L
Oxalic acid	sat. sol.	S	S
Oxygen	100%	S	L
Ozone	100%	L	U
P			
Petroleum (kerosene)	—	S	L
Phenol	sol.	S	S
Phosphorus trichloride	100%	S	L
Photographic developer	cust. conc.	S	S
Picric acid	sat. sol.	S	—
Potassium bicarbonate	sat. sol	S	S
Potassium bisulfide	sol.	S	S
Potassium bromate	sat. sol.	S	S
Potassium bromide	sat. sol.	S	S
Potassium carbonate	sat. sol.	S	S

Meduim	Concentration	Resistance at 20°C (68°F)	Resistance at 60°C (140°F)
Potassium chlorate	sat. sol.	S	S
Potassium chloride	sat. sol.	S	S
Potassium chromate	sat. sol.	S	S
Potassium cyanide	sol.	S	S
Potassium dichromate	sat. sol.	S	S
Potassium ferricyanide	sat. sol.	S	S
Potassium ferrocyanide	sat. sol.	S	S
Potassium fluoride	sat. sol.	S	S
Potassium hydroxide	10%	S	S
Potassium hydroxide	sol.	S	S
Potassium hypochlorite	sol.	S	L
Potassium nitrate	sat. sol.	S	S
Potassium orthophosphate	sat. sol.	S	S
Potassium perchlorate	sat. sol.	S	S
Potassium permanganate	20%	S	S
Potassium persulfate	sat. sol.	S	S
Potassium sulfate	sat. sol.	S	S
Potassium sulfite	sol.	S	S
Propionic acid	50%	S	S
Propionic acid	100%	S	L
Pyridine	100%	S	L
Q			
Quinol (Hydroquinone)	sat. sol.	S	S
S			
Salicylic acid	sat. sol.	S	S
Silver acetate	sat. sol.	S	S
Silver cyanide	sat. sol.	S	S
Silver nitrate	sat. sol.	S	S
Sodium benzoate	sat. sol.	S	S
Sodium bicarbonate	sat. sol.	S	S
Sodium biphosphate	sat. sol.	S	S
Sodium bisulfite	sol.	S	S
Sodium bromide	sat. sol.	S	S
Sodium carbonate	sat. sol.	S	S
Sodium chlorate	sat. sol.	S	S
Sodium chloride	sat. sol.	S	S
Sodium cyanide	sat. sol.	S	S
Sodium ferricyanide	sat. sol.	S	S
Sodium ferrocyanide	sat. sol.	S	S
Sodium fluoride	sat. sol.	S	S
Sodium hydroxide	40%	S	S
Sodium hydroxide	sat. sol.	S	S
Sodium hypochlorite	15% active chlorine	S	S
Sodium nitrate	sat. sol.	S	S
Sodium nitrite	sat. sol.	S	S
Sodium orthophosphate	sat. sol.	S	S
Sodium sulfate	sat. sol.	S	S
Sodium sulfide	sat. sol.	S	S
Sulfur dioxide, dry	100%	S	S
Sulfur trioxide	100%	U	U
Sulfuric acid	10%	S	S
Sulfuric acid	50%	S	S
Sulfuric acid	98%	S	U
Sulfuric acid	fuming	U	U
Sulfurous acid	30%	S	S
T			
Tannic acid	sol.	S	S
Tartaric acid	sol.	S	S
Thionyl chloride	100%	L	U
Toluene	100%	L	U
Triethylamine	sol.	S	L
U			
Urea	sol.	S	S
Urine	—	S	S
W			
Water	—	S	S
Wine vinegar	—	S	S
Wines and liquors	—	S	S
X			
Xylenes	100%	L	U
Y			
Yeast	sol.	S	S
Z			
Zinc carbonate	sat. sol.	S	S
Zinc chloride	sat. sol.	S	S
Zinc (II) chloride	sat. sol.	S	S
Zinc (IV) chloride	sat. sol.	S	S
Zinc oxide	sat. sol.	S	S
Zinc sulfate	sat. sol.	S	S

Specific immersion testing should be undertaken to ascertain the suitability of chemicals not listed above with reference to special requirements.

Chemical Resistance

Listed below are test results reported by a supplier of the high density polyethylene resin used to manufacture **GSE** liner. The high density polyethylene is resistant to the chemicals listed. The degree of chemical attack on any material is influenced by a number of variable factors and their interaction, including temperature, pressure, size of area under attack, exposure duration and the like. Where liner will be exposed to a mixture of chemicals, it is recommended that tests be performed for liner resistance to that chemical mixture. Therefore, these ratings are offered as a guide only.

Abbreviations

S = Satisfactory
L = Limited application possible
U = Unsatisfactory
— = Not tested

Concentration
sat. sol. = Saturated aqueous solution, prepared at 20°C (68°F)
sol. = aqueous solution with concentration above 10% but below saturation level
dil. sol. = diluted aqueous solution with concentration below 10%
cust. conc. = customary service concentration

Meduim	Concentration	Resistance at 20°C (68°F)	Resistance at 60°C (140°F)
A			
Acetic acid	100%	S	L
Acetic acid	10%	S	S
Acetic acid anhydride	100%	S	L
Acetone	100%	L	L
Adipic acid	sat. sol.	S	S
Allyl alcohol	96%	S	S
Aluminum chloride	sat. sol.	S	S
Aluminum fluoride	sat. sol.	S	S
Aluminum sulfate	sat. sol.	S	S
Alum	sol.	S	S
Ammonia, aqueous	dil. sol.	S	S
Ammonia, gaseous dry	100%	S	S
Ammonia, liquid	100%	S	S
Ammonium chloride	sat. sol.	S	S
Ammonium fluoride	sol.	S	S
Ammonium nitrate	sat. sol.	S	S
Ammonium sulfate	sat. sol.	S	S
Ammonium sulfide	sol.	S	S
Amyl acetate	100%	S	L
Amyl alcohol	100%	S	L
Aniline	100%	S	L
Antimony trichloride	90%	S	S
Arsenic acid	sat. sol.	S	S
Aqua regia	HCI-HNO33/1	U	U
B			
Barium carbonate	sat. sol.	S	S
Barium chloride	sat. sol.	S	S
Barium hydroxide	sat. sol	S	S
Barium sulfate	sat. sol	S	S
Barium sulfide	sol.	S	S
Benzaldehyde	100%	S	L
Benzene	—	L	L
Benzoic acid	sat. sol.	S	S
Beer	—	S	S
Borax (sodium tetraborate)	sat. sol.	S	S

Meduim	Concentration	Resistance at 20°C (68°F)	Resistance at 60°C (140°F)
Boric acid	sat. sol	S	S
Bromine, gaseous dry	100%	U	U
Bromine, liquid	100%	U	U
Butane, gaseous	100%	S	S
1-Butanol	100%	S	S
Butyric acid	100%	S	L
C			
Calcium carbonate	sat. sol.	S	S
Calcium chlorate	sat. sol.	S	S
Calcium chloride	sat. sol.	S	S
Calcium nitrate	sat. sol.	S	S
Calcium sulfate	sat. sol	S	S
Calcium sulfide	dil. sol.	L	L
Carbon dioxide, gaseous dry	100%	S	S
Carbon disulfide	100%	L	U
Carbon monoxide	100%	S	S
Chloracetic acid	sol.	S	S
Carbon tetrachloride	100%	L	U
Chlorine, aqueous solution	sat. sol.	L	U
Chlorine, gaseous dry	100%	L	U
Chloroform	100%	U	U
Chromic acid	20%	S	L
Chromic acid	50%	S	L
Citric acid	sat. sol.	S	S
Copper chloride	sat. sol.	S	S
Copper nitrate	sat. sol.	S	S
Copper sulfate	sat. sol.	S	S
Cresylic acid	sat. sol.	L	—
Cyclohexanol	100%	S	S
Cyclohexanone	100%	S	L
D			
Decahydronaphthalene	100%	S	L
Dextrine	sol.	S	S
Diethyl ether	100%	L	—

(CONTINUED ON OTHER SIDE)

(S) Satisfactory: *Liner material is resistant to the given reagent at the given concentration and temperature. No mechanical or chemical degradation is observed.*
(L) Limited Application Possible: *Liner material may reflect some attack. Factors such as concentration, pressure and temperature directly affect liner performance against the given media. Application, however, is possible under less severe conditions, e.g. lower concentration, secondary containment, additional liner protections, etc.*
(U) Unsatisfactory: ***Liner material is not resistant to the given reagent at the given concentration and temperature. Mechanical and/or chemical degradation is observed.***
(–) Not tested

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Moorebank, New South Wales
Australia 2170
61-2-9821-2977
FAX: 61-2-9821-3611

For environmental lining solutions...the world comes to GSE.™
A Gundle/SLT Environmental, Inc. Company

GSE HD™

HDPE Geomembrane

GSE HD is a high quality, high density polyethylene (HDPE) geomembrane produced from a specially formulated, proprietary virgin polyethylene resin. This polyethylene resin is designed specifically for flexible geomembrane applications. GSE HD contains approximately 97.5% polyethylene, 2.5% carbon black and trace amounts of antioxidants and heat stabilizers; no other additives, fillers or extenders are used. GSE HD has outstanding chemical resistance, mechanical properties, environmental stress crack resistance, dimensional stability and thermal aging characteristics. GSE HD has excellent resistance to UV radiation and is suitable for exposed conditions.

TESTED PROPERTY	TEST METHOD	MINIMUM VALUES				
Thickness, mils (mm)	ASTM D 751/1593/5199	27 (0.68)	36 (0.90)	54 (1.35)	72 (1.80)	90 (2.25)
Density, g/cm^3	ASTM D 792/1505	0.94	0.94	0.94	0.94	0.94
Tensile Properties (each direction)	ASTM D 638, Type IV					
Strength at Break, lb/in-width (N/mm)	Dumbell, 2 ipm	122 (21)	162 (28)	243 (43)	324 (57)	405 (71)
Strength at Yield, lb/in-width (N/mm)	Gauge lengths per	65 (11)	86 (15)	130 (23)	173 (30)	216 (38)
Elongation at Break, %	NSF Std. 54	560	560	560	560	560
Elongation at Yield, %		13	13	13	13	13
Tear Resistance, lb (N)	ASTM D 1004	22 (98)	30 (133)	45 (200)	60 (267)	75 (334)
Puncture Resistance, lb (N)	FTMS 101, Method 2065	39 (174)	52 (231)	80 (356)	105 (467)	130 (579)
Carbon Black Content, %	ASTM D 1603	2.0	2.0	2.0	2.0	2.0
Environmental Stress Crack Resistance, hr	ASTM D 1693, Cond. B	1500	1500	1500	1500	1500

REFERENCE PROPERTY	TEST METHOD	NOMINAL VALUES				
Thickness, mils (mm)	ASTM D 751/1593/5199	30 (0.75)	40 (1.0)	60 (1.5)	80 (2.0)	100 (2.5)
Roll Length (approximate), ft (m)		840 (256)	650 (198)	420 (128)	320 (97)	250 (76)
Low Temperature Brittleness, °F (°C)	ASTM D 746, Cond. B	<-107 (<-77)	<-107 (<-77)	<-107 (<-77)	<-107 (<-77)	<-107 (<-77)
Oxidative Induction Time, minutes	ASTM D 3895, 200 °C Pure O_2, 1 atm	100	100	100	100	100
Water Absorption, % wt. change	ASTM D 570	<0.01	<0.01	<0.01	<0.01	<0.01
Moisture Vapor Transmission, g/m^{2}day	ASTM E 96	<0.001	<0.001	<0.001	<0.001	<0.001
Carbon Black Dispersion	ASTM D 3015	A1,A2,B1	A1,A2,B1	A1,A2,B1	A1,A2,B1	A1,A2,B1
Dimensional Stability (each direction), %	ASTM D 1204, 100 °C, 1 hr	±2	±2	±2	±2	±2
Melt Flow Index, g/10 minutes	ASTM D 1238, Cond.190/2.16	≤1.0	≤1.0	≤1.0	≤1.0	≤1.0

GSE HD is available in 22.5 ft (6.86 m) and 34.5 ft (10.5 m) approximate roll widths. Approximate standard roll weights are 2,800 lb (1,270 kg) and 4,200 lb (1,900 kg) respectively. Other material thicknesses are available upon request.

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Sales/Installation Offices
Australia
Egypt
Singapore
United Kingdom

For environmental lining solutions...the world comes to GSE.®

A Gundle/SLT Environmental, Inc. Company

Distributed by:
FALCON ENVIRONMENTAL LINING SYSTEMS, INC.
5200 Johnson Road
Odessa, TX 79764
Bus: (915) 366-2611
1-800-842-0945
Fax: (915) 366-2999

GSE Lining Technology, Inc.

LETTER OF TRANSMITTAL

02
Bryan Brooks
Falcon Env Lining Systems
5200 Johnson Road P.O. Box 4306
Odessa TX 79760

DATE:	August 13, 1997
JOB NO:	DS5070
MR NO:	7182-01
JOB NAME:	TNT Construction
RE:	QC/QA Certificate

COPIES	DESCRIPTION
1	QC/QA Documentation as per Bill of Lading #57313

TRANSMIT VIA:

U.S. Mail

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

SIGNED : Tonya Switalski
DATE: August 13, 1997

Shipping Order - Packing

GSE® GSE Lining Technology, Inc.

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Order Form.

at HOUSTON, TEXAS

R 57313

From GSE LINING TECHNOLOGY, INC.

Received at Houston, Texas from GSE Lining Technology, Inc. the property described below, in apparent good order, except as noted (contents and condition of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word "Carrier" being understood throughout this Shipping Order as meaning the person or corporation in possession of the property) agrees to carry to the place of delivery at said destination. It is mutually agreed as to each Carrier of all or any of said property, over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service performed hereunder shall be subject to either: (a) if the Shipper noted herein is GSE Lining Technology, Inc., as indicated by the designation of the "Shipper" to be GSE Lining Technology, Inc., then the Shipper and Carrier are subject to the terms and conditions contained in the Contract for Truck Transportation existing between the parties, or (b) if the Shipper noted herein is not GSE Lining Technology, Inc., then GSE Lining Technology, Inc. is acting solely as the agent for the denoted Shipper, and thus every aspect of the service to be performed hereunder between the Shipper and the Carrier is subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading set forth (1) in Official, Southern, Western, and Illinois Freight Classifications in effect on the date hereof, if this is a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment. When acting in the capacity of an agent for a Shipper in placing the material in transit on behalf of a Shipper, GSE Lining Technology, Inc. accepts no liability for loss of or damage to containers, or any other consequences occurring during transportation, Carrier having agreed that the transportation arrangement was initiated by the Shipper and not by GSE Lining Technology, Inc.

Subject to the above terms and conditions as to which party is the Shipper, Shipper hereby certifies that he is familiar with the terms and conditions that govern the transportation of this shipment, and the said terms and conditions are hereby agreed and accepted for himself and his assigns.

External Ref. TNT CONSTRUCTION
BRYAN BROOKS

Consigned to Destination 40 MILES NW OF CUBA
CUBA

Date Shipped AUGUST 12, 1997

Customer P.O. # 4544

State NM

Comments from M.R.

FC 0191008 CONTACT: BRYAN BROOKS @ 915/366-2611
******PLS SEE ATTACHED MAP FOR DIRECTIONS*******

No Packages	Roll #	Length	Kind of Package, Description of Articles, Special Marks, and Exceptions	WEIGHT
1	07029320	650	040 HDPE 040 MIL,NOM,BLK,34.5'	4,502
2	07029325	650	040 HDPE 040 MIL,NOM,BLK,34.5'	4,454
3	07029329	650	040 HDPE 040 MIL,NOM,BLK,34.5'	4,438
4	07029330	650	040 HDPE 040 MIL,NOM,BLK,34.5'	4,470
5	07029331	650	040 HDPE 040 MIL,NOM,BLK,34.5'	4,478
6	07029338	650	040 HDPE 040 MIL,NOM,BLK,34.5'	4,548
7	07029370	650	040 HDPE 040 MIL,NOM,BLK,34.5'	4,534
8	07029371	650	040 HDPE 040 MIL,NOM,BLK,34.5	4,510
9	07029372	650	040 HDPE 040 MIL,NOM,BLK,34.5'	4,510
10	07029373	650	040 HDPE 040 MIL,NOM,BLK,34.5'	4,510

Internal Ref.

Material Req. # 7182-01

Job # DS5070

Shippers # 057317

Bus/Market Seg. Code 0101

Terms: Prepaid/Collect
PREPAID

Load Verification
SIGNED

X

Truck/Container # (63,161)

Seal #

Total Square Ft.	224,250	Total Weight	44,954	FAL010079

Carrier Ref. ETA: 08-15-97

CARRIER NAME: RUEL SMITH

CARRIER SIGNATURE:

DATE: 8.12.97

Truckers P.O. # 87124489

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____

Sign Here For Shipper

Shipper: VAL

Address: 19103 GUNDLE ROAD
HOUSTON, TX 77073

Sign Here For Agent Of Shipper

Agent for Shipper: _____

(GSE LINING TECHNOLOGY, INC.
APPROVED AGENT FOR SHIPPER)

LAB.

Agent must sign, detach and retain a copy of this Shipping Order.

GSE®

Quality Control Certificate

RAILCAR : PSPX6378
MATERIAL : HDPE 040 MIL
BATCH # : 070197
ROLL # : 07029320

MANF. DATE : 07/01/1997
PROJECT NAME : FALCON/T-N-T CONSTR
MR NUMBER : 7182-01 PROJECT # : DS5070
LOCATION : ODESSA TX 001

TEST PARAMETER	TESTING FREQUENCY	TYPICAL SPECIFICATIONS	TEST RESULTS	ASTM METHOD
Minimum Thickness (mil)	EVERY ROLL	36.0 min	37.0	D 751 NSF Mod.
Carbon Black (%)	5TH ROLL	2.0 to 3.0	2.4	D 1603
Carbon Black Dispersion	5TH ROLL	A-1/A-2/B-1	A-2	D 3015
Density (g/cc)	5TH ROLL	0.940 min	0.945	D 1505 (Meth.A)
Tensile Properties:				
Yield Strength (ppi)	EVERY ROLL	86	99	
Break Strength (ppi)	EVERY ROLL	162	196	D 638 Type IV
Elongation @ Yield	EVERY ROLL	13	17	
Break Elongation (%)	EVERY ROLL	560	632	NSF 54 mod.
Puncture Resistance (lb)	EVERY ROLL	52	74	FTMS 101, Meth. 2065
Tear Resistance (lb)	EVERY ROLL	30	39	D 1004
Dimensional Stability (%)	EVERY ROLL	-2.00 to 2.00	-0.10	D 1204 (1 hr, 100C)
ESCR (hrs)	EVERY ROLL	1500 min	Pending	D 1693 NSF MOD.

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RAILCAR : PSPX6378
MATERIAL : HDPE 040 MIL
BATCH # : 070297
ROLL # : 07029325

MANF. DATE : 07/02/1997
PROJECT NAME : FALCON/T-N-T CONSTR
MR NUMBER : 7182-01 PROJECT # : DS5070
LOCATION : ODESSA TX 001

TEST PARAMETER	TESTING FREQUENCY	TYPICAL SPECIFICATIONS	TEST RESULTS	ASTM METHOD
Minimum Thickness (mil)	EVERY ROLL	36.0 min	37.0	D 751 NSF Mod.
Carbon Black (%)	5TH ROLL	2.0 to 3.0	2.4	D 1603
Carbon Black Dispersion	5TH ROLL	A-1/A-2/B-1	A-2	D 3015
Density (g/cc)	5TH ROLL	0.940 min	0.945	D 1505 (Meth.A)
Tensile Properties:				
Yield Strength (ppi)	EVERY ROLL	86	108	
Break Strength (ppi)	EVERY ROLL	162	202	D 638 Type IV
Elongation @ Yield	EVERY ROLL	13	18	
Break Elongation (%)	EVERY ROLL	560	639	NSF 54 mod.
Puncture Resistance (lb)	EVERY ROLL	52	91	FTMS 101, Meth. 2065
Tear Resistance (lb)	EVERY ROLL	30	38	D 1004
Dimensional Stability (%)	EVERY ROLL	-2.00 to 2.00	-0.25	D 1204 (1 hr, 100C)
ESCR (hrs)	EVERY ROLL	1500 min	Pending	D 1693 NSF MOD.

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RAILCAR : PSPX6378
MATERIAL : HDPE 040 MIL
BATCH # : 070297
ROLL # : 07029329

MANF. DATE : 07/02/1997
PROJECT NAME : FALCON/T-N-T CONSTR
MR NUMBER : 7182-01 PROJECT # : DS5070
LOCATION : ODESSA TX 001

TEST PARAMETER	TESTING FREQUENCY	TYPICAL SPECIFICATIONS	TEST RESULTS	ASTM METHOD
Minimum Thickness (mil)	EVERY ROLL	36.0 min	37.0	D 751 NSF Mod.
Carbon Black (%)	5TH ROLL	2.0 to 3.0	2.4	D 1603
Carbon Black Dispersion	5TH ROLL	A-1/A-2/B-1	A-2	D 3015
Density (g/cc)	5TH ROLL	0.940 min	0.945	D 1505 (Meth.A)
Tensile Properties:				
Yield Strength (ppi)	EVERY ROLL	86	103	
Break Strength (ppi)	EVERY ROLL	162	196	D 638 Type IV
Elongation @ Yield	EVERY ROLL	13	15	
Break Elongation (%)	EVERY ROLL	560	624	NSF 54 mod.
Puncture Resistance (lb)	EVERY ROLL	52	92	FTMS 101, Meth. 2065
Tear Resistance (lb)	EVERY ROLL	30	36	D 1004
Dimensional Stability (%)	EVERY ROLL	-2.00 to 2.00	-0.28	D 1204 (1 hr, 100C)
ESCR (hrs)	EVERY ROLL	1500 min	Pending	D 1693 NSF MOD.

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RAILCAR : PSPX6379
MATERIAL : HDPE 040 MIL
BATCH # : 070297
ROLL # : 07029330

MANF. DATE : 07/02/1997
PROJECT NAME : FALCON/T-N-T CONSTR
MR NUMBER : 7182-01 PROJECT # : DS5070
LOCATION : ODESSA TX 001

TEST PARAMETER	TESTING FREQUENCY	TYPICAL SPECIFICATIONS	TEST RESULTS	ASTM METHOD
Minimum Thickness (mil)	EVERY ROLL	36.0 min	37.0	D 751 NSF Mod.
Carbon Black (%)	5TH ROLL	2.0 to 3.0	2.4	D 1603
Carbon Black Dispersion	5TH ROLL	A-1/A-2/B-1	A-2	D 3015
Density (g/cc)	5TH ROLL	0.940 min	0.945	D 1505 (Meth.A)
Tensile Properties:				
Yield Strength (ppi)	EVERY ROLL	86	105	
Break Strength (ppi)	EVERY ROLL	162	194	D 638 Type IV
Elongation @ Yield	EVERY ROLL	13	16	
Break Elongation (%)	EVERY ROLL	560	605	NSF 54 mod.
Puncture Resistance (lb)	EVERY ROLL	52	98	FTMS 101, Meth. 2065
Tear Resistance (lb)	EVERY ROLL	30	40	D 1004
Dimensional Stability (%)	EVERY ROLL	-2.00 to 2.00	-0.08	D 1204 (1 hr, 100C)
ESCR (hrs)	EVERY ROLL	1500 min	Pending	D 1693 NSF MOD.

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RAILCAR : PSPX6379
MATERIAL : HDPE 040 MIL
BATCH # : 070297
ROLL # : 07029331

MANF. DATE : 07/02/1997
PROJECT NAME : FALCON/T-N-T CONSTR
MR NUMBER : 7182-01 PROJECT # : DS5070
LOCATION : ODESSA TX 001

TEST PARAMETER	TESTING FREQUENCY	TYPICAL SPECIFICATIONS	TEST RESULTS	ASTM METHOD
Minimum Thickness (mil)	EVERY ROLL	36.0 min	38.0	D 751 NSF Mod.
Carbon Black (%)	5TH ROLL	2.0 to 3.0	2.4	D 1603
Carbon Black Dispersion	5TH ROLL	A-1/A-2/B-1	A-2	D 3015
Density (g/cc)	5TH ROLL	0.940 min	0.945	D 1505 (Meth.A)
Tensile Properties:				
Yield Strength (ppi)	EVERY ROLL	86	100	
Break Strength (ppi)	EVERY ROLL	162	198	D 638 Type IV
Elongation @ Yield	EVERY ROLL	13	16	
Break Elongation (%)	EVERY ROLL	560	623	NSF 54 mod.
Puncture Resistance (lb)	EVERY ROLL	52	88	FTMS 101, Meth. 2065
Tear Resistance (lb)	EVERY ROLL	30	40	D 1004
Dimensional Stability (%)	EVERY ROLL	-2.00 to 2.00	-0.10	D 1204 (1 hr, 100C)
ESCR (hrs)	EVERY ROLL	1500 min	Pending	D 1693 NSF MOD.

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RAILCAR : PSPX6379
MATERIAL : HDPE 040 MIL
BATCH # : 070397
ROLL # : 07029338

MANF. DATE : 07/03/1997
PROJECT NAME : FALCON/T-N-T CONSTR
MR NUMBER : 7182-01 PROJECT # : DS5070
LOCATION : ODESSA TX 001

TEST PARAMETER	TESTING FREQUENCY	TYPICAL SPECIFICATIONS	TEST RESULTS	ASTM METHOD
Minimum Thickness (mil)	EVERY ROLL	36.0 min	38.0	D 751 NSF Mod.
Carbon Black (%)	5TH ROLL	2.0 to 3.0	2.4	D 1603
Carbon Black Dispersion	5TH ROLL	A-1/A-2/B-1	A-2	D 3015
Density (g/cc)	5TH ROLL	0.940 min	0.945	D 1505 (Meth.A)
Tensile Properties:				
Yield Strength (ppi)	EVERY ROLL	86	116	
Break Strength (ppi)	EVERY ROLL	162	221	D 638 Type IV
Elongation @ Yield	EVERY ROLL	13	16	
Break Elongation (%)	EVERY ROLL	560	670	NSF 54 mod.
Puncture Resistance (lb)	EVERY ROLL	52	99	FTMS 101, Meth. 2065
Tear Resistance (lb)	EVERY ROLL	30	38	D 1004
Dimensional Stability (%)	EVERY ROLL	-2.00 to 2.00	-0.30	D 1204 (1 hr, 100C)
ESCR (hrs)	EVERY ROLL	1500 min	Pending	D 1693 NSF MOD.

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RAILCAR : ACFX64942
MATERIAL : HDPE 040 MIL
BATCH # : 070597
ROLL # : 07029370

MANF. DATE : 07/05/1997
PROJECT NAME : FALCON/T-N-T CONSTR
MR NUMBER : 7182-01 PROJECT # : DS5070
LOCATION : ODESSA TX 001

TEST PARAMETER	TESTING FREQUENCY	TYPICAL SPECIFICATIONS	TEST RESULTS	ASTM METHOD
Minimum Thickness (mil)	EVERY ROLL	36.0 min	39.0	D 751 NSF Mod.
Carbon Black (%)	5TH ROLL	2.0 to 3.0	2.6	D 1603
Carbon Black Dispersion	5TH ROLL	A-1/A-2/B-1	A-2	D 3015
Density (g/cc)	5TH ROLL	0.940 min	0.945	D 1505 (Meth.A)
Tensile Properties:				
Yield Strength (ppi)	EVERY ROLL	86	113	
Break Strength (ppi)	EVERY ROLL	162	202	D 638 Type IV
Elongation @ Yield	EVERY ROLL	13	16	
Break Elongation (%)	EVERY ROLL	560	627	NSF 54 mod.
Puncture Resistance (lb)	EVERY ROLL	52	78	FTMS 101, Meth. 2065
Tear Resistance (lb)	EVERY ROLL	30	36	D 1004
Dimensional Stability (%)	EVERY ROLL	-2.00 to 2.00	-0.30	D 1204 (1 hr, 100C)
ESCR (hrs)	EVERY ROLL	1500 min	Pending	D 1693 NSF MOD.

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RAILCAR : ACFX64942
MATERIAL : HDPE 040 MIL
BATCH # : 070597
ROLL # : 07029371

MANF. DATE : 07/05/1997
PROJECT NAME : FALCON/T-N-T CONSTR
MR NUMBER : 7182-01 PROJECT # : DS5070
LOCATION : ODESSA TX 001

TEST PARAMETER	TESTING FREQUENCY	TYPICAL SPECIFICATIONS	TEST RESULTS	ASTM METHOD
Minimum Thickness (mil)	EVERY ROLL	36.0 min	38.0	D 751 NSF Mod.
Carbon Black (%)	5TH ROLL	2.0 to 3.0	2.6	D 1603
Carbon Black Dispersion	5TH ROLL	A-1/A-2/B-1	A-2	D 3015
Density (g/cc)	5TH ROLL	0.940 min	0.945	D 1505 (Meth.A)
Tensile Properties:				
Yield Strength (ppi)	EVERY ROLL	86	115	
Break Strength (ppi)	EVERY ROLL	162	217	D 638 Type IV
Elongation @ Yield	EVERY ROLL	13	15	
Break Elongation (%)	EVERY ROLL	560	670	NSF 54 mod.
Puncture Resistance (lb)	EVERY ROLL	52	68	FTMS 101, Meth. 2065
Tear Resistance (lb)	EVERY ROLL	30	37	D 1004
Dimensional Stability (%)	EVERY ROLL	-2.00 to 2.00	-0.20	D 1204 (1 hr, 100C)
ESCR (hrs)	EVERY ROLL	1500 min	Pending	D 1693 NSF MOD.

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RAILCAR : ACFX64942
MATERIAL : HDPE 040 MIL
BATCH # : 070697
ROLL # : 07029372

MANF. DATE : 07/06/1997
PROJECT NAME : FALCON/T-N-T CONSTR
MR NUMBER : 7182-01 PROJECT # : DS5070
LOCATION : ODESSA TX 001

TEST PARAMETER	TESTING FREQUENCY	TYPICAL SPECIFICATIONS	TEST RESULTS	ASTM METHOD
Minimum Thickness (mil)	EVERY ROLL	36.0 min	37.0	D 751 NSF Mod.
Carbon Black (%)	5TH ROLL	2.0 to 3.0	2.6	D 1603
Carbon Black Dispersion	5TH ROLL	A-1/A-2/B-1	A-2	D 3015
Density (g/cc)	5TH ROLL	0.940 min	0.945	D 1505 (Meth.A)
Tensile Properties:				
Yield Strength (ppi)	EVERY ROLL	86	98	
Break Strength (ppi)	EVERY ROLL	162	192	D 638 Type IV
Elongation @ Yield	EVERY ROLL	13	19	
Break Elongation (%)	EVERY ROLL	560	647	NSF 54 mod.
Puncture Resistance (lb)	EVERY ROLL	52	88	FTMS 101, Meth. 2065
Tear Resistance (lb)	EVERY ROLL	30	38	D 1004
Dimensional Stability (%)	EVERY ROLL	-2.00 to 2.00	-0.35	D 1204 (1 hr, 100C)
ESCR (hrs)	EVERY ROLL	1500 min	Pending	D 1693 NSF MOD.

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RAILCAR : ACFX64942
MATERIAL : HDPE 040 MIL
BATCH # : 070697
ROLL # : 07029373

MANF. DATE : 07/06/1997
PROJECT NAME : FALCON/T-N-T CONSTR
MR NUMBER : 7182-01 PROJECT # : DS5070
LOCATION : ODESSA TX 001

TEST PARAMETER	TESTING FREQUENCY	TYPICAL SPECIFICATIONS	TEST RESULTS	ASTM METHOD
Minimum Thickness (mil)	EVERY ROLL	36.0 min	38.0	D 751 NSF Mod.
Carbon Black (%)	5TH ROLL	2.0 to 3.0	2.6	D 1603
Carbon Black Dispersion	5TH ROLL	A-1/A-2/B-1	A-2	D 3015
Density (g/cc)	5TH ROLL	0.940 min	0.945	D 1505 (Meth.A)
Tensile Properties:				
Yield Strength (ppi)	EVERY ROLL	86	105	
Break Strength (ppi)	EVERY ROLL	162	203	D 638 Type IV
Elongation @ Yield	EVERY ROLL	13	15	
Break Elongation (%)	EVERY ROLL	560	659	NSF 54 mod.
Puncture Resistance (lb)	EVERY ROLL	52	91	FTMS 101, Meth. 2065
Tear Resistance (lb)	EVERY ROLL	30	38	D 1004
Dimensional Stability (%)	EVERY ROLL	-2.00 to 2.00	-0.35	D 1204 (1 hr, 100C)
ESCR (hrs)	EVERY ROLL	1500 min	Pending	D 1693 NSF MOD.

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PHILLIPS CHEMICAL COMPANY
A DIVISION OF PHILLIPS PETROLEUM COMPANY
BOX 792 • PHONE: 713 475-3666
PASADENA, TEXAS 77501-0792

PHILLIPS PLASTICS RESINS
Houston Chemical Complex

June 24, 1997

JHV# 12324-97

FAX: 281-230-8640

GSE Lining Technology, Inc.
19103 Gundle Road
Houston, TX 77073

Rick Schaefer

This letter will certify that the Marlex* resin shown below, as supplied by Phillips Chemical Company, conforms to our manufacturing specification.

Type:	HHM TR-400GS
Lot Number:	7170569
P.O. Number:	VERBAL
Date Shipped:	06/23/97
Package:	ACFX 64942
Quantity:	183500 LBS.
Melt Index, ASTM D1238:	.080 G/10 MIN
HLMI Flow Rate,ASTM D1238:	11.3 G/10 MIN
Density, ASTM D1505:	.938 G/CC
HLMI/MI Ratio:	141.
Production Date:	05/07/97
ESCR, F/50, Cond. B:	1500 HOURS **
Brittleness Temperature:	<-70 C **
Color:	153.750

J. H. Vaden
Quality Assurance Manager

For COA questions call Sharon Robinette, 713-475-3625

* Reg. U.S. Pat. Off.
** Nominal Value (not tested on each lot)

cc: QA-File-RC

WESTERN TECHNOLOGIES REPORT

WESTERN TECHNOLOGIES REPORT

GEOTECHNICAL SERVICES FOR:

Evaporation Pond
Lindrith, New Mexico
WT No. 3121K072

Laurence E Lyman

9-3-91

Submitted to:

TNT Construction, Inc.
Star Route
Lindrith, New Mexico 87029

Attention: Mr. Craig Schmitz

Invoice No. 31210129

September 3, 1991

WESTERN TECHNOLOGIES INC.
The Quality People

ARIZONA

Phoenix
P.O. Box 21387 85036
3737 East Broadway Road
Phoenix, Arizona 85040
(602) 437-3737

Mesa
952 East Baseline Road, No. 104
Mesa, Arizona 85204
(602) 926-2113

Sun City
17200 North Dysart Road, No. 13
P.O. Box 2431
Sun City, Arizona 85372
(602) 975-2154

Flagstaff
2400 East Huntington Drive
Flagstaff, Arizona 86004
(602) 774-8708

Lakeside
Route 1, Box 1030
Lakeside, Arizona 85929
(602) 368-5568

Tucson
3480 South Dodge Boulevard
Tucson, Arizona 85713
(602) 748-2262

Sierra Vista
1827 South Paseo San Luis
Sierra Vista, Arizona 85635
(602) 458-0364

Laughlin / Bullhead City
1610 Riverview Drive, No. 5
Bullhead City, Arizona 86442
(602) 758-8378

CALIFORNIA

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1001 Galaxy Way, No. 107
Concord, California 94520
(415) 689-9378

Riverside
16801 Van Buren Boulevard, Suite A
Riverside, California 92504
(714) 780-7482

COLORADO

Golden
13949 West Colfax Avenue, No. 140
Golden, Colorado 80401
(303) 233-2991

NEVADA

Las Vegas
3611 West Tompkins Avenue
Las Vegas, Nevada 89103
(702) 798-8050

Environmental Services
4085 Nevso Drive, Suite G
Las Vegas, Nevada 89103
(702) 252-0580

NEW MEXICO

Albuquerque
8305 Washington Place, N.E.
Albuquerque, New Mexico 87113
(505) 823-4488

Farmington
400 South Lorena Avenue
Farmington, New Mexico 87401
(505) 327-4966

WESTERN TECHNOLOGIES INC.

400 South Lorena Avenue
Farmington, New Mexico 87401
(505) 327-4966 • fax 327-5293

TNT Construction, Inc.
Star Route
Lindrith, New Mexico 87029

September 3, 1991

Attn: Mr. Craig Schmitz

Re: Evaporation Pond
Lindrith, New Mexico

Job No. 3121K072
Inv. No. 31210129

Our geotechnical engineering report for the existing evaporation pond is attached. The work was performed in accordance with our proposal of July 16, 1991.

Soils at the site generally consisted of sandy clay with low to moderate load bearing capabilities. The surface soils are underlain by sandstone with moderate to high load bearing capabilities. The sandy clays were used for construction of an existing evaporation pond which uses a synthetic liner to minimize infiltration of water into the sandstone.

We are prepared to review your plans and specifications for consistency with the recommendations, and to provide the construction observation and testing recommended.

Sincerely,
WESTERN TECHNOLOGIES INC.
Geotechnical Engineering Services

Lawrence E. Cynova

Lawrence E. Cynova, P.E.

9-3-91

Copies to: Addressee (3)
Bob Stannard (1)

/cb

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Geotechnical Engineering Evaluation
Evaporation Pond
Lindrith, New Mexico

INTRODUCTION

This report contains the results of our geotechnical engineering evaluation of the existing Evaporation Pond which is located northwest of Lindrith, New Mexico. The purpose of these services is to provide results of field and laboratory testing, to evaluate the existing pond dikes, and to provide engineering recommendations for the pond liners.

PROPOSED CONSTRUCTION

The evaporation pond will have primary and secondary synthetic liners with a fabric or geonet located between the liners to transmit water to the leak detection system.

SITE CONDITIONS

At the time of our exploration, the pond was empty except for several inches of rain water in the bottom. This water was in the process of being pumped out at the time of exploration. The pond has bottom plan dimensions of 175 by 180 feet. The pond has top of dike dimensions of 300 by 320 feet, the top of dike width is approximately 10 to 15 feet. The pond has a storage capacity of 13.5 acre feet of water. The maximum height of the dike is 14 feet. The maximum depth of the water in the pond will be approximately 10 feet. Another evaporation pond which is in operation is located approximately 500 feet northwest of this pond.

SCOPE OF SERVICES

Three borings were drilled to depths of 18 to 26 feet at the locations shown on the site plan. During exploration, subsoils were visually examined and sampled at selected intervals.

The following tests were performed on selected soil samples:

- o Water content
- o Dry density

The following tests were taken from our previous soils report dated May 2, 1988, Job No. 3128J024 for the nearby pond:

- o Shear strength
- o Gradation
- o Plasticity Index
- o Permeability
- o ASTM D698 proctor

Test results were used in the evaluation of this pond and earthwork recommendations.

Western Technologies Inc. performed the services described in this report to develop engineering information for the purposes defined in the "Introduction." We did not intend to uncover nor identify any contaminated subsurface materials that may contain hazardous or flammable substances. Identification of such substances requires specialized exploration techniques and analyses which were not used in this investigation.

INTERPRETATION OF SUBSURFACE CONDITIONS

Subsurface Exploration: Three test borings were drilled on top of the dikes. As presented on Logs of Borings, surface fill soils to depths of 5 to 6 feet in all test borings were found to be sandy clay of firm to stiff consistency and low to medium plasticity. The near surface soils to depths of 15 to 26 feet in all test borings consisted of sandy clay of stiff consistency and low to medium plasticity. The materials underlying the near surface soils in test borings 1 and 3 and extending to the full depth of exploration consisted of sandstone.

Groundwater levels were checked at the completion of the field exploration, no water was encountered. A more accurate evaluation of groundwater conditions would require installing and monitoring piezometers over an extended time period.

Geology: The proposed water evaporation pond is to be located in unconsolidated surficial clay material derived from the local topography. This material was deposited as alluvium washed down from the surrounding foothills and probably originated as a shale from the San Jose Formation. This formation is Eocene in age and is described as a buff, fine to coarse grained arkosic sandstone, conglomeratic sandstone and interbedded gray and red shale which makes up a large percentage of the San Juan Basin. In the northern part of the basin, this formation contains some volcanic debris, including andesite pebbles, but the proportion of volcanic debris and sandstone decreases southward.

ANALYSIS PROCEDURES

General: We understand that the evaporation pond will store water throughout the year. The pond will be filled with water

from oil and gas production. The water will be evaporated by spraying the water into the air. Observations indicate that all the soils exposed on the dikes are probably clay, although sandstone may exist near the bottom of the pond even though it was not observed due to the ponded rainwater. It is understood that a synthetic flexible membrane liner will be used for both primary and secondary liners. The west dike and the east dike, which are the highest dikes, were chosen for stability analysis.

Material Properties: The on-site clay materials exhibit properties of low to moderate cohesion and low to moderate angles of internal friction in both compacted and undisturbed conditions. These materials are underlain by sandstone at a moderate depth. The sandstone materials are much stronger in the undisturbed state than the embankment fill or native clay. Based upon our observations, the results of laboratory testing, and our experience with similar materials, the following material properties were used for analysis of the embankment and foundation soils:

Compacted Clay
Dry unit weight - 112 pcf
Angle of internal friction - 12^{o}
Cohesion - 300 pcf

Undisturbed Clay
Dry unit weight - 110 pcf
Angle of internal friction - 16^{o}
Cohesion - 600 psf

Assumed conservative sandstone foundation material properties are as follows:

Sandstone
Dry unit weight - 140 pcf
Angle of internal friction - 30°
Cohesion - 2500 psf

Slope Stability Analysis: The static stability of the highest embankment slopes were analyzed using strength parameters obtained from laboratory and field testing. A computer program (SB-SLOPE Program developed by Digital Research Inc.) using simplified Bishop's analysis was utilized for analysis of both the upstream and downstream slopes for the indicated embankment configurations.

The following table presents the results of the analysis:

EAST DIKE

Condition	Slope	Factor of Safety
Steady state seepage	Downstream	
Static	3.4:1	3.2
Rapid drawdown	Upstream	
Static	5.5:1	4.8

WEST DIKE

Condition	Slope	Factor of Safety
Steady state seepage	Downstream	
Static	4.2:1	8.3
Rapid drawdown	Upstream	
Static	6.8:1	6.9

A minimum factor of safety of 1.5 is recommended for both the steady state and rapid drawdown conditions in the Design of Dams, by the New Mexico State Engineer's Office.

After reviewing the Deformation Analyses - Embankment Dams section of the "Procedure on Design Criteria and Safety of Dams", considerations, we believe that seismic analysis is not necessary. This is due to the fact that the embankment and foundation materials are not subject to liquification. The dikes are densely compacted, the slopes will be 3 horizontal to 1 vertical or flatter and the static factor of safety is greater than 1.5 in all cases.

The pond will have primary and secondary liners consisting of synthetic flexible membrane materials with a fabric geonet located between the liners. If a rip occurs in a seam or a hole develops in the liner, the low permeability of the clay would require a considerable period of time for the water to seep far beyond the pond. It is understood the pond will be equipped with a leak detection system located between the two liners.

DISCUSSION AND RECOMMENDATIONS:

General: We anticipate that the existing clay soils will be compacted below the secondary liner. The in-place densities obtained during exploration indicate that the fill was originally compacted to a density higher than 95 percent of maximum density. The pond liner may be satisfactorily supported upon prepared subgrade. If subsoil conditions other than those identified during the field explorations are encountered during construction or should design plans change, this firm should be contacted for supplemental review and recommendations.

The following general conclusions and recommendations are presented:

1. Native and fill soils below levels of surface soil disturbance are generally of moderate densities and will afford support for the anticipated liners. Stable conditions should be verified at the time of construction by proof rolling with a heavily loaded dump truck or scraper.

2. Excavation of the design pond base should be possible with conventional earthmoving equipment, unless sandstone is encountered, then large equipment or blasting may be required.

Synthetic Liner: Several types of synthetic liner systems, which include reinforced PVC or other plastic membranes placed on a prepared subgrade, may be used. Plastic liners vary from 10 to 120 mills in thickness with varying chemical compositions. If construction or maintenance traffic is anticipated within the liner area, a soil blanket may be used above and below the membrane for protection. In addition, a protective soil cover on the membrane may be required due to high winds experienced during storms or spring weather or should the pond be empty. Prior to placement of the bottom liner, the subgrade should be prepared as recommended in "Site Preparation and Earthwork." The protective soil cover placed below the membrane, requirements for a subdrain system and the maximum slope on which the liner is placed should meet the requirements of the liner manufacturer. It is understood there will be a leak detection system between the two liners.

Site Preparation and Earthwork: The following procedure is recommended for site preparation and earthwork for the bottom liner portions of the evaporation pond.

1. Strip all loose surface soils, vegetation, roots and debris from the pond and liner area to a horizontal distance of 5 feet beyond the perimeter of the new construction.

2. Clean and widen depressions, swales, etc., to form level working areas to accomodate compaction equipment and liner placement.

3. No material should be placed which is frozen or where the in-place material is frozen.

4. Proof-roll the exposed subgrade in the embankment and pond liner areas with a heavy piece of construction equipment to densify materials which may have been loosened during the stripping and excavation process.

   Proof-rolling may be accomplished by a minimum of 2 passes of a heavily loaded scraper, dump truck or equivalent. All soft areas should be removed and replaced with compacted fill.

5. Place and compact all fill in the bottom or the sides of the pond in horizontal lifts to the finished grade levels. Lift thicknesses should be compatible with compaction equipment used to achieve the required uniform densities.

6. All subgrade preparation, liner fill placement and compaction should be accomplished under observation and testing to assess compliance with project specifications.

All material under the liner should be compacted to at least 95% of the maximum dry density as determined by ASTM: D-698 methods or the manufacturer's compaction specifications, if higher, and at a water content of 1 percent below optimum to 3 percent above optimum.

Drainage: Positive drainage should be provided around the proposed pond during construction and maintained throughout the life of the proposed development.
Borrow excavation, surface stripping, subgrade preparation, and liner preparation and placement should be accomplished under the observation and testing directed by a soils engineer to assess compliance with recommendations.

Corrosion: We recommend a Type II portland cement be used for all concrete on and below grade.

CLOSURE

Our conclusions and recommendation are predicated on observation and testing of the earthwork and foundation preparations directed by a geotechnical engineer. It would be logical for Western Technologies to provide these services since we are most qualified to determine consistency of field conditions with those data used in our analyses.

Deviations from our recommendations by the plans, written specifications, or field applications shall relieve us of responsibility unless our written concurrence with such deviations has been obtained.

DEFINITION OF TERMINOLOGY

ALLOWABLE SOIL BEARING CAPACITY ALLOWABLE FOUNDATION PRESSURE	The recommended maximum contact stress developed at the interface of the foundation element and the supporting material.
BACKFILL	A specified material placed and compacted in a confined area.
BASE COURSE	A layer of specified material placed on a subgrade or subbase.
BASE COURSE GRADE	Top of base course.
BENCH	A horizontal surface in a sloped deposit.
CAISSON	A concrete foundation element cast in a circular excavation which may have an enlarged base. Sometimes referred to as a cast-in-place pier.
CONCRETE SLABS-ON-GRADE	A concrete surface layer cast directly upon a base, subbase or subgrade.
CRUSHED ROCK BASE COURSE	A base course composed of crushed rock of a specified gradation.
DIFFERENTIAL SETTLEMENT	Unequal settlement between or within foundation elements of a structure.
ENGINEERED FILL	Specified material placed and compacted to specified density and/or moisture conditions under observation of a representative of a soil engineer.
EXISTING FILL	Materials deposited through the action of man prior to exploration of the site.
EXISTING GRADE	The ground surface at the time of field exploration.
EXPANSIVE POTENTIAL	The potential of a soil to expand (increase in volume) due to the absorption of moisture.
FILL	Materials deposited by the action of man.
FINISHED GRADE	The final grade created as a part of the project.
GRAVEL BASE COURSE	A base course composed of naturally occurring gravel with a specified gradation.
HEAVE	Upward movement.
NATIVE GRADE	The naturally occurring ground surface.
NATIVE SOIL	Naturally occurring on-site soil.
ROCK	A natural aggregate of mineral grains connected by strong and permanent cohesive forces. Usually requires drilling, wedging, blasting or other methods of extraordinary force for excavation.
SAND AND GRAVEL BASE	A base course of sand and gravel of a specified gradation.
SAND BASE COURSE	A base course composed primarily of sand of a specified gradation.
SCARIFY	To mechanically loosen soil or break down existing soil structure.
SETTLEMENT	Downward movement.
SOIL	Any unconsolidated material composed of discrete solid particles, derived from the physical and/or chemical disintegration of vegetable or mineral matter, which can be separated by gentle mechanical means such as agitation in water.
STRIP	To remove from present location.
SUBBASE	A layer of specified material placed to form a layer between the subgrade and base course.
SUBBASE GRADE	Top of subbase.
SUBGRADE	Prepared native soil surface.

METHOD OF SOIL CLASSIFICATION
(ASTM D 2487)

COARSE-GRAINED SOILS

LESS THAN 50% FINES*

GROUP SYMBOLS	DESCRIPTION	MAJOR DIVISIONS
GW	WELL-GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LESS THAN 5% FINES	GRAVELS More than half of coarse fraction is larger than No. 4 sieve size
GP	POORLY-GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LESS THAN 5% FINES	
GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES, MORE THAN 12% FINES	
GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES, MORE THAN 12% FINES	
SW	WELL-GRADED SANDS OR GRAVELLY SANDS, LESS THAN 5% FINES	SANDS More than half of coarse fraction is smaller than No. 4 sieve size
SP	POORLY-GRADED SANDS OR GRAVELLY SANDS, LESS THAN 5% FINES	
SM	SILTY SANDS, SAND-SILT MIXTURES, MORE THAN 12% FINES	
SC	CLAYEY SANDS, SAND-CLAY MIXTURES, MORE THAN 12% FINES	

NOTE:
Coarse-grained soils receive dual symbols if they contain 5 to 12% fines (e.g. SW-SM, GP-GC, etc.)

FINE-GRAINED SOILS

MORE THAN 50% FINES*

GROUP SYMBOLS	DESCRIPTION	MAJOR DIVISIONS
ML	INORGANIC SILTS, VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS	SILTS AND CLAYS Liquid limit less than 50
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
OL	ORGANIC SILTS OR ORGANIC SILTY-CLAYS OF LOW PLASTICITY	
MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDS OR SILTS, ELASTIC SILTS	SILTS AND CLAYS Liquid limit more than 50
CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY	
PT	PEAT, MUCK, AND OTHER HIGHLY ORGANIC SOILS	HIGHLY ORGANIC SOILS

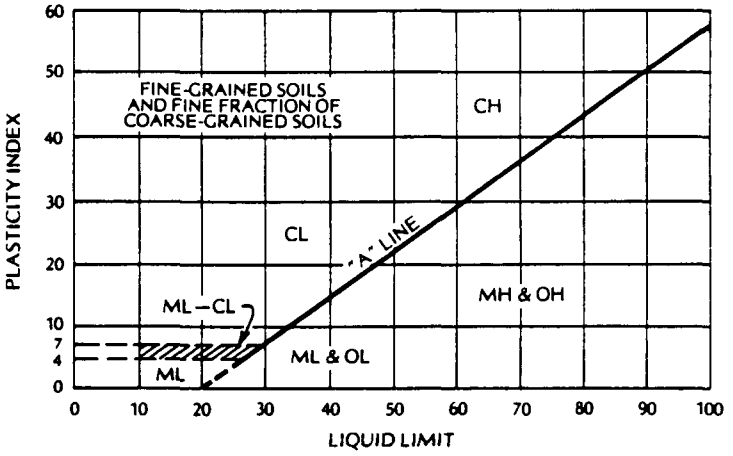
NOTE:
Fine-grained soils receive dual symbols if their limits plot in the hatched zone on the Plasticity Chart (ML-CL)

SOIL SIZES

COMPONENT	SIZE RANGE
BOULDERS	ABOVE 12 in.
COBBLES	3 in. to 12 in.
GRAVEL	No. 4 to 3 in.
Coarse	¾ in. to 3 in.
Fine	No. 4 to ¾ in.
SAND	No. 200 to No 4
Coarse	No. 10 to No. 4
Medium	No. 40 to No. 10
Fine	No. 200 to No. 40
*FINES (Silt or Clay)	BELOW No. 200

NOTE:
Only sizes smaller than three inches are used to classify soils.

PLASTICITY CHART



BORING LOG NOTES

The number shown in "LOG OF BORING NO." refers to the approximate location of the same number indicated on the "Site Plan" as positioned in the field by pacing from property lines and/or existing features.

"ELEVATION" refers to ground surface elevation at the boring location relative to the indicated "DATUM" established by interpolation from contours on the "Site Plan".

"TYPE/SIZE BORING" refers to the exploratory equipment used in the boring where HSA = hollow-stem auger.

"N" in "Blows/Foot" refers to the number of blows of a 140-pound weight, dropped 30 inches, required to advance a two-inch-outside-diameter split-barrel sampler a distance of 1 foot, Standard Penetration Test (ASTM D1586). Refusal to penetration is defined as more than 100 blows per foot.

"R" in "Blows/Foot" refers to the number of blows of a 140-pound weight, dropped 30 inches, required to advance a 2.42-inch-inside-diameter ring sampler a distance of 1 foot. Refusal to penetration is considered more than 50 blows per foot.

"Sample Type" refers to the form of sample recovery, in which N = Split-barrel sample and R = Ring sample.

"Dry Density, pcf" refers to the laboratory-determined dry density in pounds per cubic foot.

"Water Content, %" refers to the laboratory-determined moisture content in percent (ASTM D2216).

"Unified Classification" refers to the soil type as defined by "Method of Soil Classification". The soils were classified visually in the field and, where appropriate, classifications were modified by visual examination of samples in the laboratory and/or by appropriate tests.

These notes and boring logs are intended for use in conjunction with the purposes of our services defined in the text. Boring log data should not be construed as part of the construction plans nor as defining construction conditions.

Boring logs depict our interpretations of subsurface conditions at the locations and on the date(s) noted. Variations in subsurface conditions and soil characteristics may occur between borings. Groundwater levels may fluctuate due to seasonal variations and other factors.

In general, terms and symbols on the boring logs conform with "Standard Definitions of Terms and Symbols Relating to Soil and Rock Mechanics" (ASTM D653).

LOG OF BORING NO. 1

Project Evaporation Pond — Job No. 3121K072

Elevation 7154' — Datum Project Contour Drawing

Type/Size Boring 7" Auger — Rig Type CME-55

Groundwater Conditions No groundwater encountered on 07/24/91 — Date 07/24/91

Depth, feet	Blows, Foot C	Blows, Foot N/R	Sample Type	Dry Density pcf	Water Content, %	Unified Classification	Description
0					PL	CL	FILL 0 to 5.5 feet. SANDY CLAY; red to brown, firm to stiff. Trace of small gravel.
					<PL		
		28	R	115	14.3		
		11	N				
5							
					SL-PL	CL	SANDY CLAY; red to brown, stiff. Trace of coarse grained sand. Moisture content increases from 16 to 19 feet. Firm to stiff 16 to 19 feet.
		48	R	120	12.0		
		18	N				
10							
		16	N				
15							
					PL		
		34	R	109	17.6		
20					<PL		
		50/2"	N		SLT. DAMP to DAMP		SANDSTONE; gray, moderately hard. Light cementation.
25							
							Stopped at 25 feet.
30							

LOG OF BORING NO. 2

Project Evaporation Pond — Job No. 3121K072

Elevation 7154' — Datum Project Contour Drawing

Type/Size Boring 7" Auger — Rig Type CME-55

Groundwater Conditions No groundwater encountered on 07/24/91 — Date 07/24/91

Depth, feet	Blows/Foot C	Blows/Foot N/R	Sample Type	Dry Density pcf	Water Content, %	Unified Classification	Description
					PL	CL	FILL 0 to 6 feet. SANDY CLAY; red to brown, firm to stiff. Trace of gravel.
			G				
		20	R	114	16.1		
5			N				
					PL	CL	SANDY CLAY; red to brown, stiff.
		33	R	110	18.1		
10		12	N				
15		50/5"	N				
		50/4"	N				
20							
		50/4"	N				
25							
30							Auger refusal at 26 feet.

LOG OF BORING NO. 3

Project Evaporation Pond — Job No. 3121K072

Elevation 7154' — Datum Project Contour Drawing

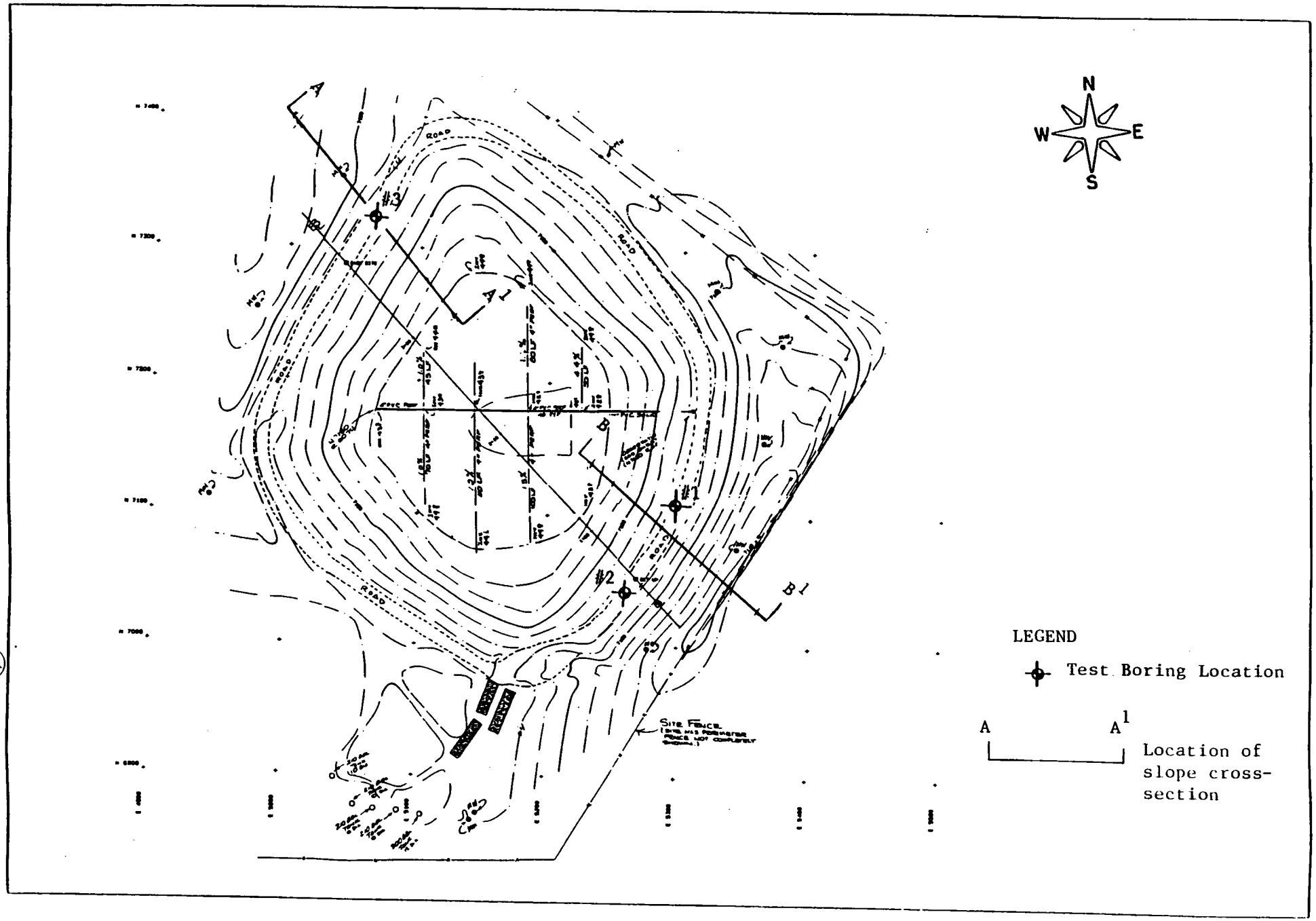
Type/Size Boring 7" Auger — Rig Type CME-55

Groundwater Conditions No groundwater encountered on 07/24/91 — Date 07/24/91

Depth, feet	Blows/Foot C	Blows/Foot N/R	Sample Type	Dry Density pcf	Water Content, %	Unified Classification	Description
					PL	CL	FILL 0 to 5 feet. SANDY CLAY; red to brown, firm to stiff.
					<PL		
		22	R	113	15.8		
5		13	N				
					<PL	CL	SANDY CLAY; red to brown, stiff.
		50/8"	R	123	9.2		
		50/3"	N				
10							
		68	N				
15							
					SLT. DAMP		SANDSTONE; gray to tan, moderately hard. Light cementation.
		50/3"	N				
20							Auger refusal at 18 feet.
25							
30							

Prepared By J.M. Boyd Date 08/28/91 Job No. 3121K072

Checked By _____ Date _____ Client TNT Construction

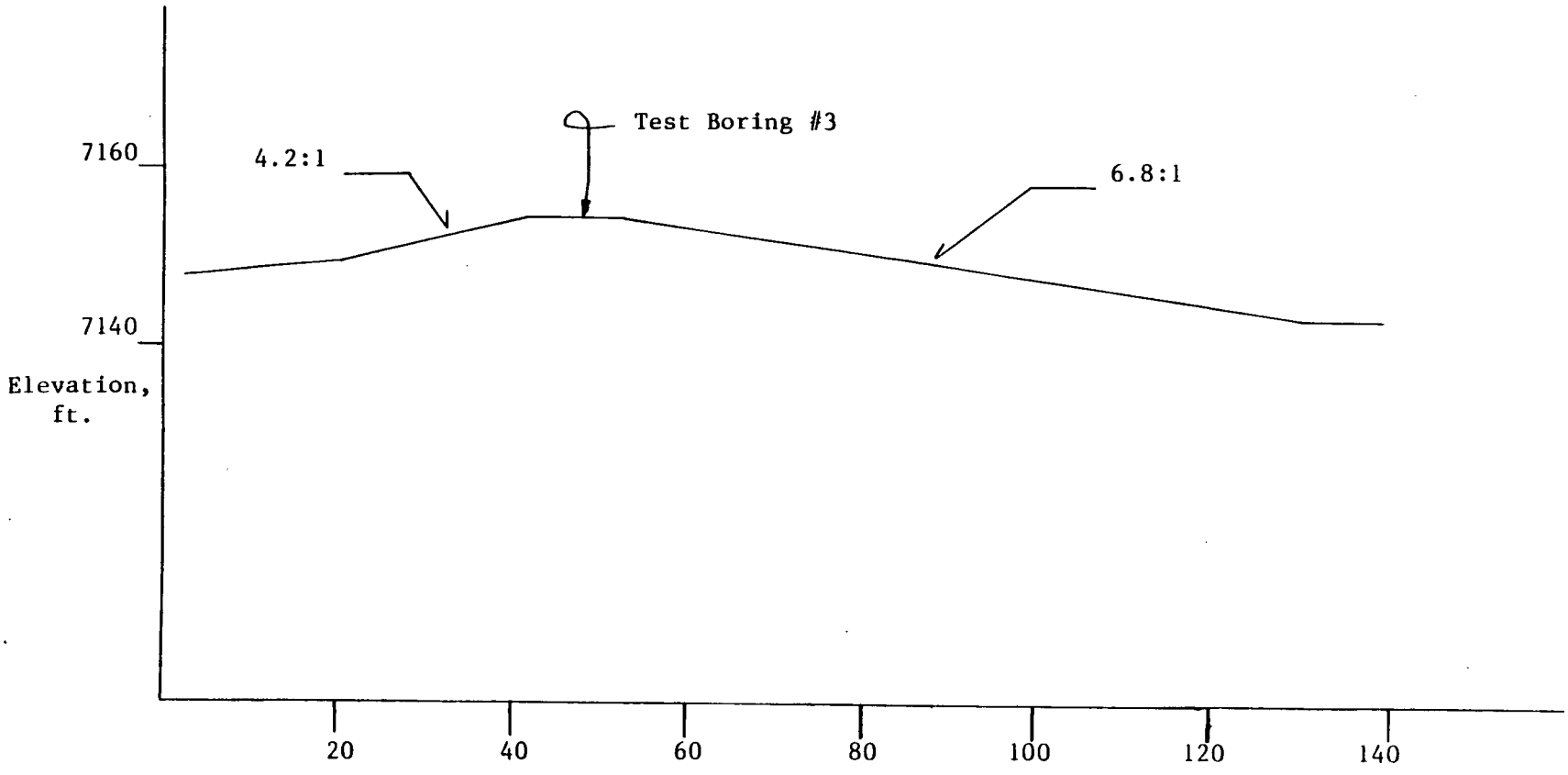


Prepared By J.M. Boyd Date 08/28/91 Job No. 3121K072

Checked By _____ Date _____ Client TNT Construction

Evaporation Pond - Slope Cross-Section

WEST DIKE - SECTION A

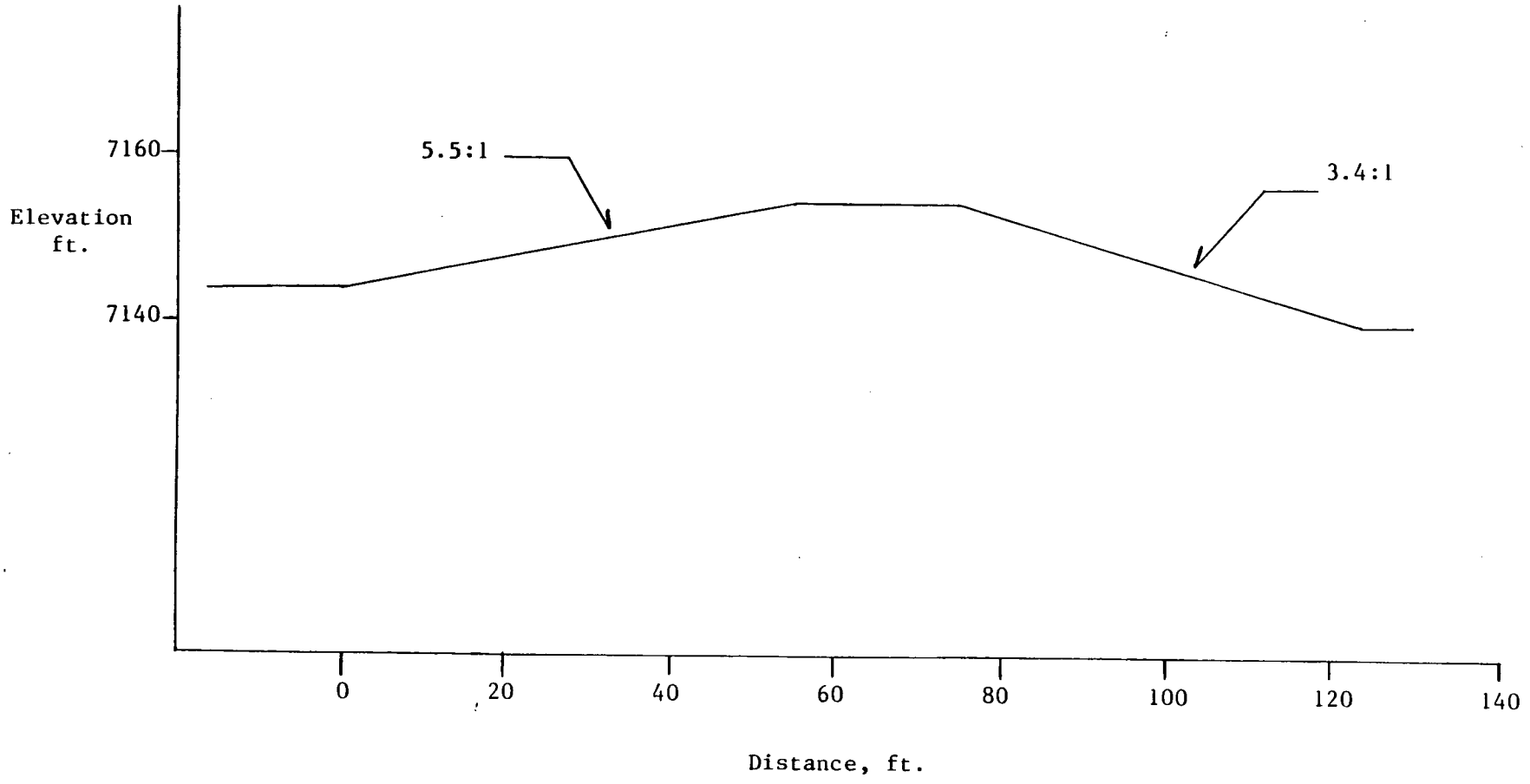


Prepared By J.M. Boyd Date 08/28/91 Job No. 3121K072

Checked By _____ Date _____ Client TNT Construction

Evaporation Pond - Slope Cross Section

EAST DIKE - SECTION B



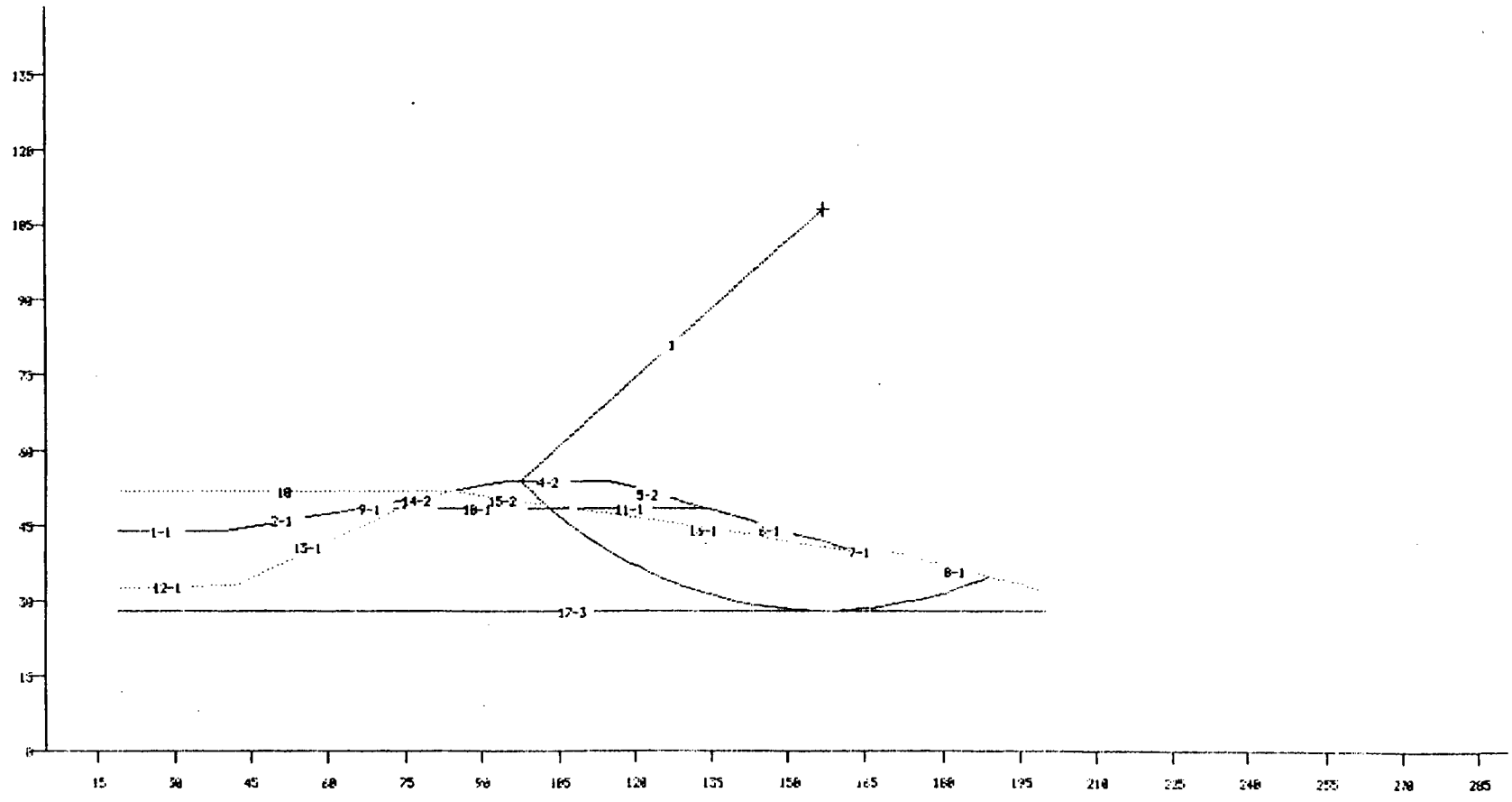
SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: EVAPORATION POND: EAST DIKE, HOLE IN LINER, STEADY STATE FLOW
LOCATION: LINDRITH, NEW MEXICO
FILE: TNTES1
PARTIAL SLOPE CROSS SECTION

SOIL*	DENSITY	COHESION	PHI
1	110.0	600.0	16.0
2	112.0	300.0	12.0
3	140.0	2500.0	30.0

CIRCLE	X	Y	RADIUS	FS
1	157.0	108.0	80.0	3.18



* Number after hyphen('-') is Soil Type

Western Technologies Inc. - Phoenix, AZ

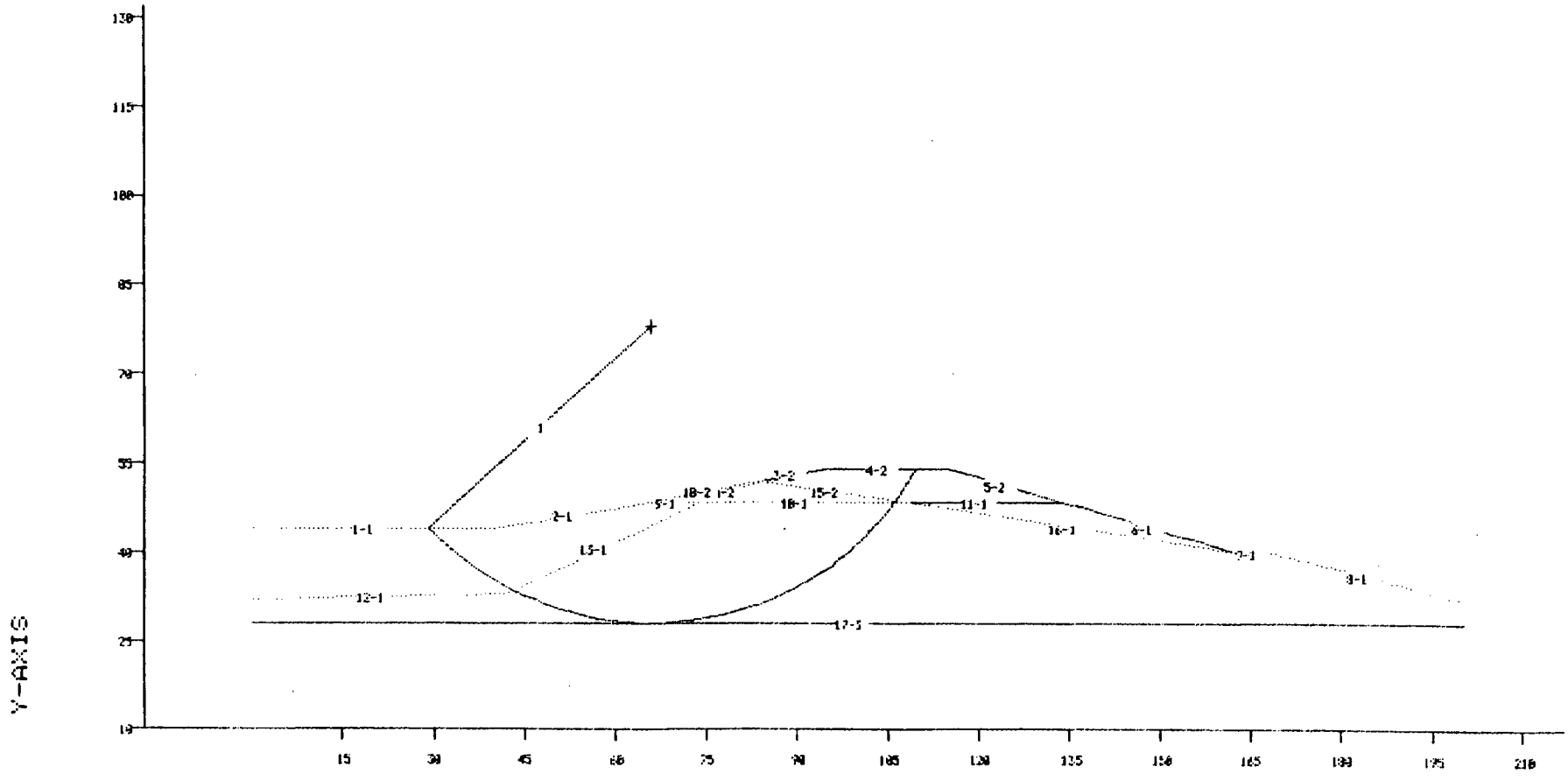
SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: EVAPORATION POND: EAST DIKE, RAPID DRAWDOWN
LOCATION: LINDRITH, NEW MEXICO
FILE: TNTERD1
COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	66.0	78.0	50.0	4.78

SOIL*	DENSITY	COHESION	PHI
1	110.0	600.0	16.0
2	112.0	300.0	12.0
3	140.0	2500.0	30.0



* Number after hyphen('-') is Soil Type

Western Technologies Inc. - Phoenix, AZ

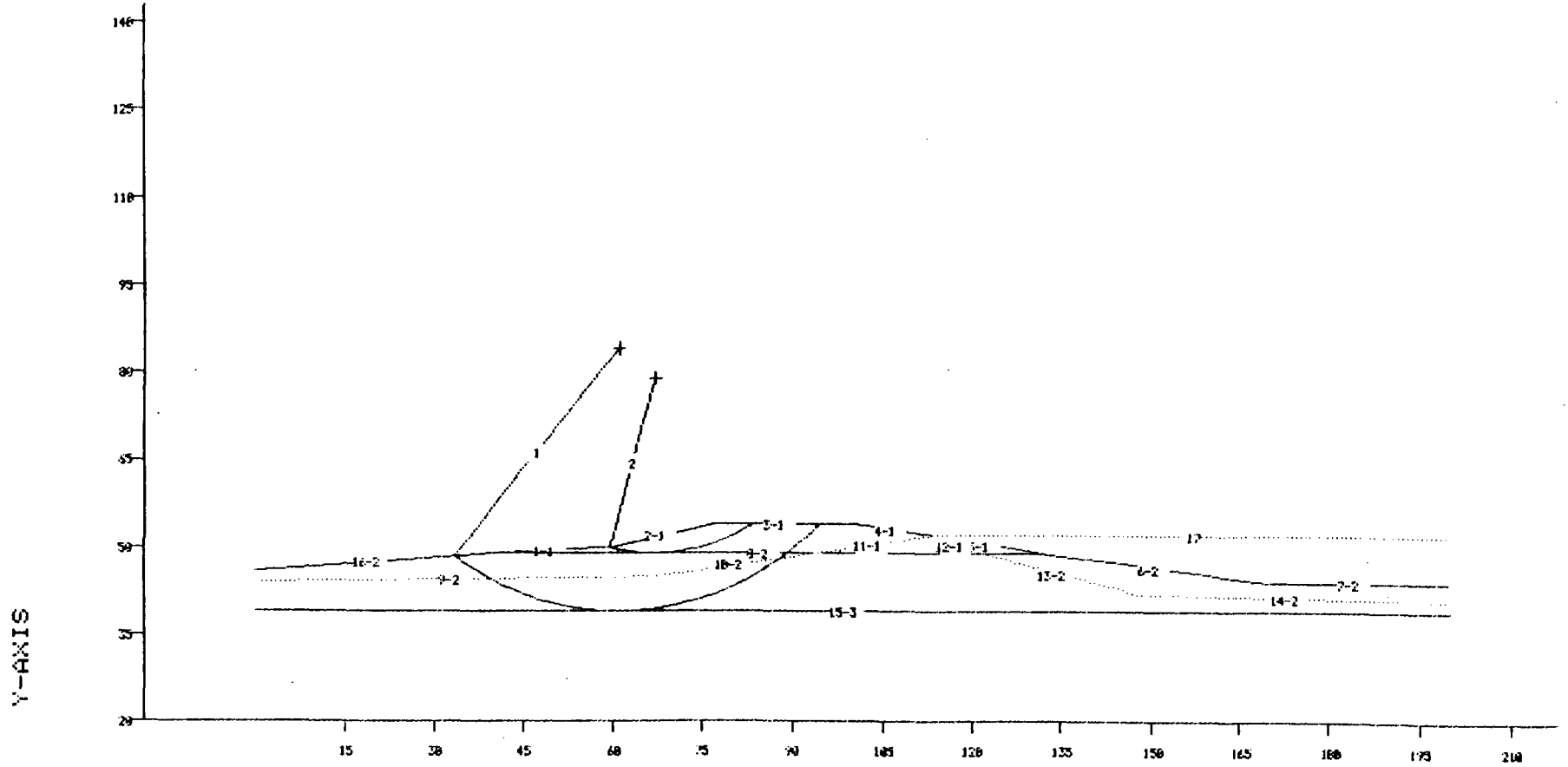
SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: EVAPORATION POND: WEST DIKE, HOLE IN LINER, STEADY STATE
LOCATION: LINDRITH, NEW MEXICO
FILE: TNTWS1
COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	61.0	84.0	45.0	9.40
2	67.0	79.0	30.0	8.31

SOIL*	DENSITY	COHESION	PHI
1	112.0	300.0	12.0
2	110.0	600.0	16.0
3	140.0	2500.0	30.0



* Number after hyphen('-') is Soil Type

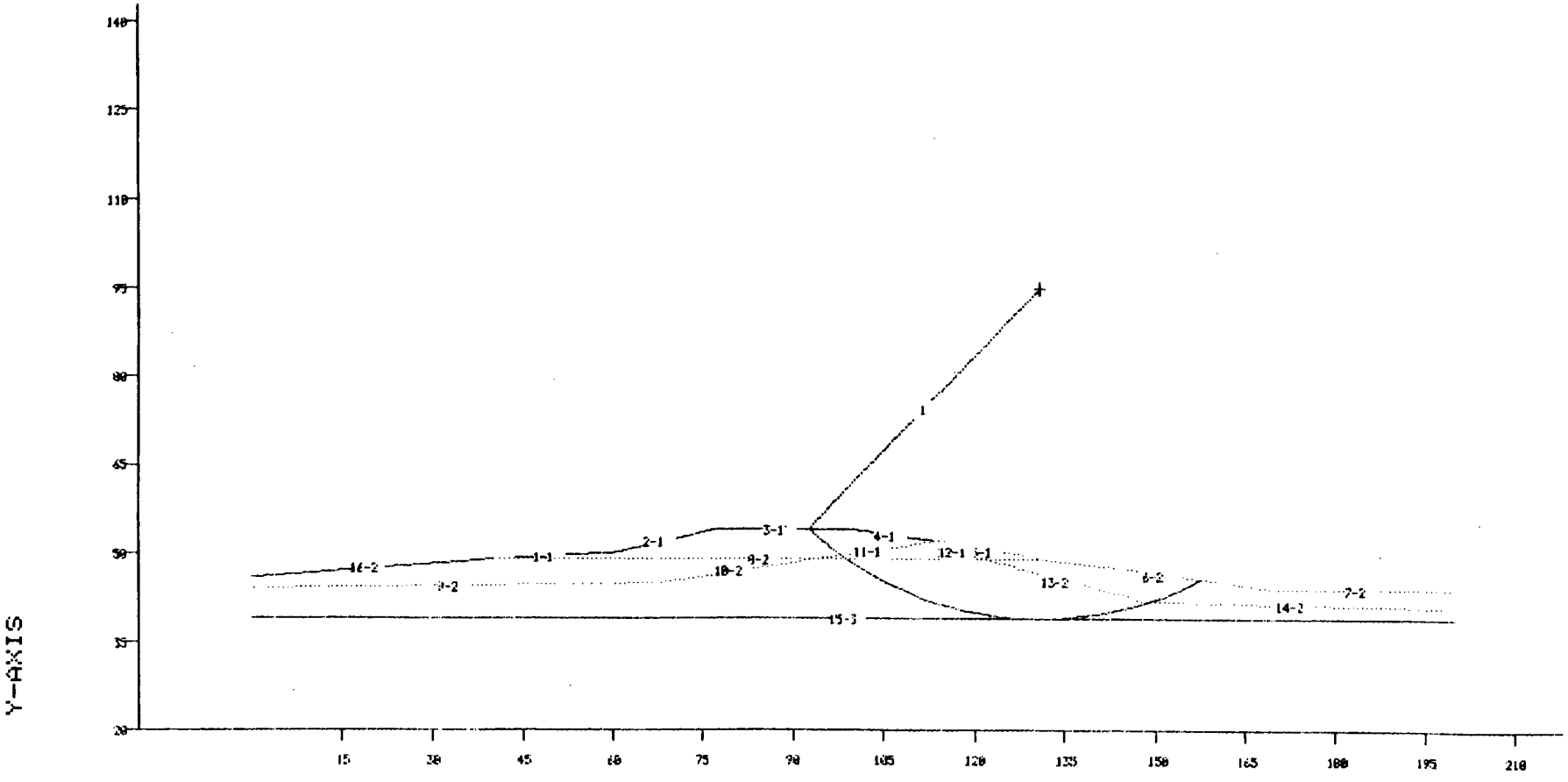
SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: EVAPORATION POND: WEST DIKE, RAPID DRAWDOWN
LOCATION: LINDRITH, NEW MEXICO
FILE: TNTWRD1
COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	131.0	95.0	56.0	6.93

SOIL*	DENSITY	COHESION	PHI
1	112.0	300.0	12.0
2	110.0	600.0	16.0
3	140.0	2500.0	30.0



* Number after hyphen('-') is Soil Type

Western Technologies Inc. - Phoenix, AZ

PHILLIPS CHEMICAL COMPANY
A DIVISION OF PHILLIPS PETROLEUM COMPANY
BOX 792 • PHONE: 713 475-3666
PASADENA, TEXAS 77501-0792

PHILLIPS PLASTICS RESINS
Houston Chemical Complex

May 01, 1997

JHV# 8638-97

FAX: 713-230-8640

GSE Lining Technology, Inc.
19103 Gundle Road
Houston, TX 77073

Rick Schaefer

This letter will certify that the Marlex* resin shown below, as supplied by Phillips Chemical Company, conforms to our manufacturing specification.

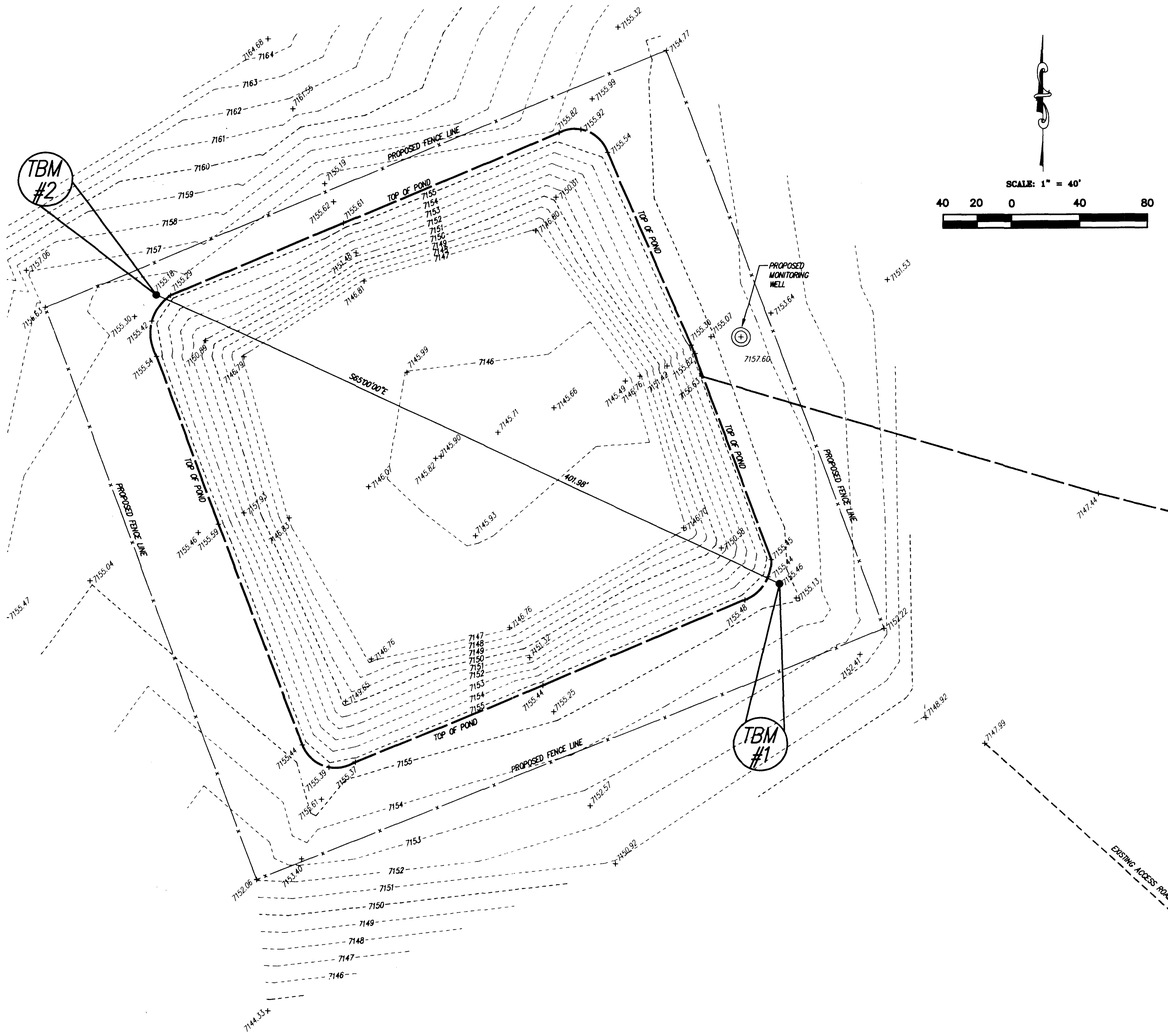
Type:	HHM TR-400GS
Lot Number:	7170316
P.O. Number:	VERBAL
Date Shipped:	04/30/97
Package:	PSPX 6378
Quantity:	182350 LBS.
Melt Index, ASTM D1238:	.090 G/10 MIN
HLMI Flow Rate,ASTM D1238:	10.5 G/10 MIN
Density, ASTM D1505:	.937 G/CC
HLMI/MI Ratio:	117. GM/10 MIN
Production Date:	03/12/97
ESCR, F/50, Cond. B:	1500 HOURS **
Brittleness Temperature:	<-70 C **
Color:	113.000

J. H. Vaden
Quality Assurance Manager

For COA questions call Sharon Robinette, 713-475-3625

* Reg. U.S. Pat. Off.
** Nominal Value (not tested on each lot)

cc: QA-File-RC



GENERAL NOTES

1. THE TOPOGRAPHY SHOWN IS BASED UPON A TOPOGRAPHIC SURVEY BY BASIN SURVEYING DATED OCTOBER 16, 1997.
2. VERTICAL CONTROL IS BASED ON ASSUMED ELEVATION 7155.46
   DESCRIPTION: SET 5/8 INCH REBAR WITH PLASTIC CAP MARKED 9673
3. HORIZONTAL CONTROL IS BASED ON ASSUMED COORDINATES. NORTH IS BASED UPON SURVEYED TBM #1 AND TBM #2.
4. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXACT LOCATION OF ALL EXISTING UNDERGROUND UTILITIES BEFORE COMMENCING ANY WORK. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR THE COST OF ANY AND ALL DAMAGES WHICH OCCUR AS A RESULT OF A FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ACTUAL SITE CONDITIONS PRIOR TO THE START OF ANY WORK. THERE IS NO WARRANTY OR GUARANTY ON THE COMPLETENESS OR CORRECTNESS OF THE EXISTING CONDITION INFORMATION GIVEN DUE TO ANY CHANGE OF CONDITIONS WHICH MAY HAVE OCCURRED AFTER THE DATE OF SURVEY. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF ANY WORK.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING NEW MEXICO ONE CALL SYSTEM, INC. AT 1-800-321-ALERT THREE (3) DAYS PRIOR TO THE START OF ANY EXCAVATION WORK. THE CONTRACTOR SHALL STAKE OUT ALL BASELINES OF CONSTRUCTION, THE LOCATION OF ALL NEW CONSTRUCTION AND VERIFY ALL SETBACKS, OFFSETS AND CLEARANCES PRIOR TO START OF ANY WORK.
7. THIS IS NOT A BOUNDARY SURVEY.

TBM's DESCRIPTION

TBM #1 ELEV: 7155.46

A 5/8" REBAR WITH PLASTIC CAP MARKED 9673.

TBM #2 ELEV: 7155.18

A 5/8" REBAR WITH PLASTIC CAP MARKED 9673.

LEGEND

WV	WATER VALVE
WM	WATER METER
GV	GAS VALVE
SSMH	SEWER MANHOLE
GP	GUARD POST
PP	POWER POLE
OHE	OVERHEAD ELECTRIC
x 4935.26	SPOT ELEVATION
G	EXIST. GAS
W	EXIST. WATER
	EXIST. FENCE
EP	EXIST. EDGE OF PAVEMENT

JOHN D. WAYNE
NEW MEXICO
9673
REGISTERED PROFESSIONAL LAND SURVEYOR

JOHN D. WAYNE
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 9673

10/11/97
DATE

REVISIONS

BY _____ DATE _____ DESCR. _____
BY _____ DATE _____ DESCR. _____
BY _____ DATE _____ DESCR. _____
BY _____ DATE _____ DESCR. _____
BY _____ DATE _____ DESCR. _____
BY _____ DATE _____ DESCR. _____
BY _____ DATE _____ DESCR. _____

DATE 10/20/97 DRAWN CJG
CHECKED JDW
SCALE 1" = 40' APPROVED JDW

BASIN SURVEYING, INC.
665 COUNTY ROAD 1191, P.O. BOX 6456
FARMINGTON, NEW MEXICO 87401 TELE: 505-334-1500

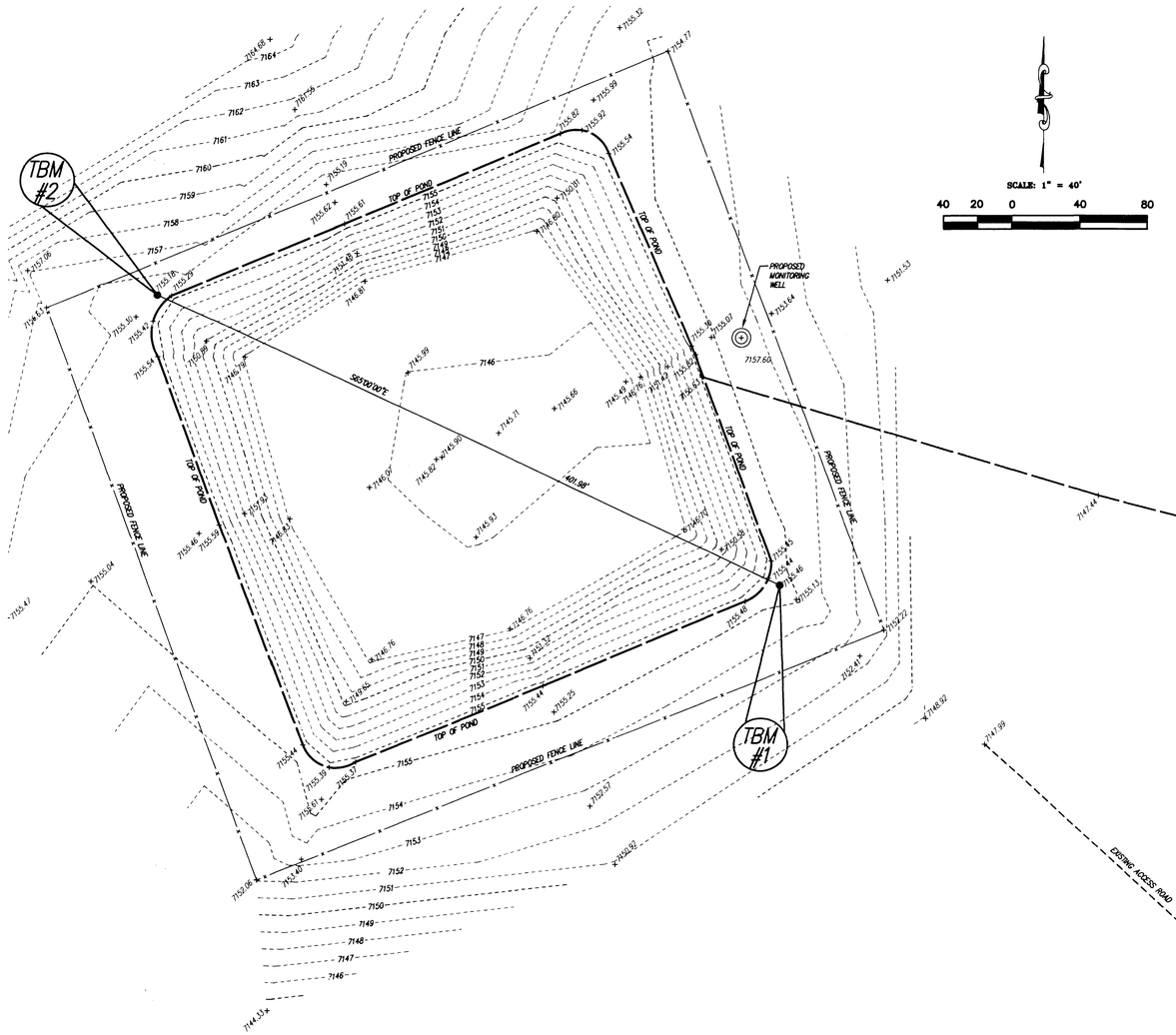
TNT CONSTRUCTION, INC.
PROPOSED POND #3
TOPOGRAPHIC MAP

RECEIVED
NOV 24 1997
Environmental Bureau
Oil Conservation Division

PLATE I.

SHEET 1 of 1 SHEETS

2117ATOP.DWG
10.20.97



SCALE: 1" = 40'

40 20 0 40 80

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A 5/8" REBAR WITH PLASTIC CAP MARKED 9673.

LEGEND

WV	WATER VALVE
WM	WATER METER
GV	GAS VALVE
SSMH	SEWER MANHOLE
GP	GUARD POST
PP	POWER POLE
OHE	OVERHEAD ELECTRIC
x 4935.26	SPOT ELEVATION
G	EXIST. GAS
W	EXIST. WATER
	EXIST. FENCE
EP	EXIST. EDGE OF PAVEMENT

JOHN D. WAYNE NEW MEXICO 9673 REGISTERED PROFESSIONAL LAND SURVEYOR

JOHN D. WAYNE
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 9673

10/11/97
DATE

REVISIONS

BY ____ DATE ____ DESCR. ____
BY ____ DATE ____ DESCR. ____
BY ____ DATE ____ DESCR. ____
BY ____ DATE ____ DESCR. ____
BY ____ DATE ____ DESCR. ____
BY ____ DATE ____ DESCR. ____
BY ____ DATE ____ DESCR. ____

DATE 10/20/97 DRAWN CJG
CHECKED JDW
SCALE 1" = 40' APPROVED JDW

BASIN SURVEYING, INC.
665 COUNTY ROAD 1191, P.O. BOX 6456
FARMINGTON, NEW MEXICO 87401 TELE: 505-334-1500

TNT CONSTRUCTION, INC.
PROPOSED POND #3
TOPOGRAPHIC MAP

RECEIVED
NOV 24 1997
Environmental Bureau
Oil Conservation Division

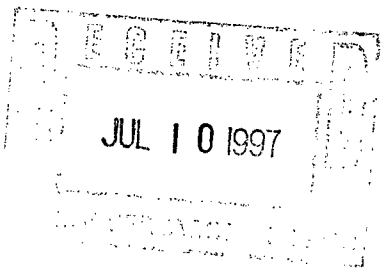
PLATE I.

SHEET 1 of 1 SHEETS

21174TOP.DWG
10.20.97

July 8, 1997

T-n-T Construction, Inc.
HCR 74, Box 113
Lindrith, NM 87029



Roger Anderson
2040 South Pacheco
Santa Fe, NM 87505

RE: Facility & Expansion Project
T-n-T Desposal Facility
Rio Arriba County New Mexico

Dear Roger:

We plan to start construction of the already approved facility expansion pit project on July 12, 1997. As per permit requirements and with the aid of Larry Sonova with Western Tech. of Farmington.

Sincerely,

Tony Lee Schmitz

T-n-T Agent
Tony Lee Schmitz

cc: OCD Aztec, Denny Foutz

7-25-97

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178 Fax (505)334-6170

GARY E. JOHNSON
GOVERNOR

JENNIFER A. SALISBURY
CABINET SECRETARY

May 1, 1997

Mr. Tony Schmitz
HCR 74, Box 115
Lindrith, NM 87029

RE: Use of Oilfield Waste Water for Road Dust Control

Dear Mr. Schmitz:

I have received your letter dated May 4, 1996, requesting authorization to use oilfield wastewater from T-N-T Disposal for dust control on your ranch. This letter is a copy of one the sent last year.

You may use this water as proposed with the following conditions:

1. The water will be applied so that no excess water runs off into roadside ditches or into any watercourse.

2. At the end of each day's activity, unused water will be stored in trucks or tanks so the water does not drip or drain onto the ground overnight. Alternatively, the water may be returned to the T-N-T facility, if no other material has been added to the water intentionally or accidently mixed with liquids that were previously contained in the truck or tank.

3. Dust control will be limited to the main road one mile on either side of the three residences on the ranch.

4. You will keep records of the dates water was applied to the roads, the volume of water applied, and the roads on which the water was applied.

This approval does not relieve you of liability should your operation result in actual pollution of surface waters, ground waters, or the environment that may be actionable under other laws and/or regulations. In addition, this approval does not relieve you of responsibility for compliance with other county, state, federal, or tribal laws and/or regulations.

Sincerely,

Frank T. Chavez
District Supervisor

FTC\sh

cc: Roger Anderson
T-N-T Disposal

MJK 5/5/97

T-n-T Construction, Inc.
HCR 74-Box 115
Lindrith, NM 87029
505-774-6663

8/28/96

Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87505

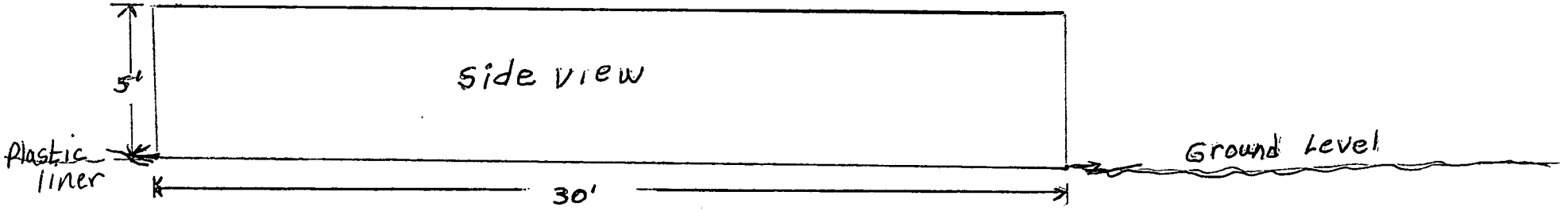
Attn: Roger Anderson:

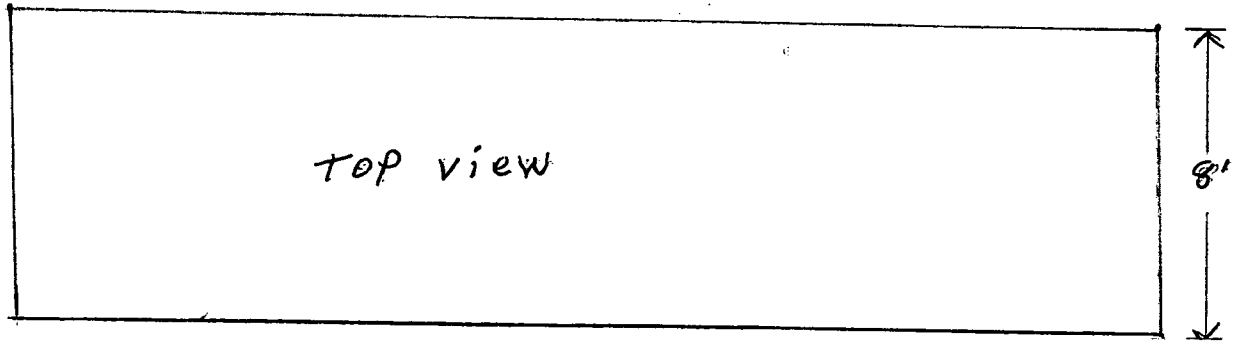
T-n-T Construction, Inc.'s soil remediation facility would like to receive permission to install a metal pit as a settling pit, it would not be used for mixing. It will have an impervious liner, such as the plastic that was used for lining the evaporation pit, under it and extending one foot on all sides for leak detection. See attached drawing.
Thank you for your time.

Tony Schmitz

Tony Schmitz, President
T-n-T Construction, Inc.

cc: OCD, Aztec


side view
5'
Plastic liner
Ground Level
30'


top view
8'

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

June 27, 1996

CERTIFIED MAIL
RETURN RECEIPT NO.P-176-013-156

Mr. Tony Schmitz
TNT Construction, Inc.
HCR 74, Box 115
Lyndrith, New Mexico 87029

RE: Approval of Steel Holding and Treating Trough
T-N-T Disposal Facility (Permit #NM-01-0008)
Rio Arriba County, New Mexico

Dear Mr. Schmitz:

The New Mexico Oil Conservation Division has received T-N-T Construction, Inc.'s (TNT) request dated April 23, 1996 for authorization to construct a steel holding and treating trough at the TNT Waste Management Facility. The trough will be used for the stabilization and absorption of liquids and sludges received by TNT for the purpose of landfarming.

Based upon the information provided TNT's request is hereby approved subject to the following conditions:

1. The containment will be constructed as specified in the above referenced proposal. Any deviation from the proposed design will have prior new Mexico Oil Conservation Division approval.

2. The trough and dirt ramps will be constructed above grade and set on impermeable liner.

3. The trough will be inspected, inside and outside, weekly and records of such inspections will be retained for 5 years from the date recorded and made available to the New Mexico Oil Conservation Division upon request.

4. The New Mexico Oil Conservation Division Santa Fe and Aztec Offices will be notified within 24 hours of discovery of a trough leak.

Pursuant to New Mexico Oil Conservation Division Rule 711 this is considered to be a minor modification of the existing Rule 711 permit, therefore, not subject to public notification.

Please be advised New Mexico Oil Conservation Division approval does not relieve TNT of liability should their operation result in pollution of surface water, ground water or the

environment. In addition, the approval does not relieve TNT of responsibility for compliance with federal, state and/or local regulations.

If you have any questions, please do not hesitate to call me at (505) 827-7153.

Sincerely,

Chris Eustice
Geologist

xc: New Mexico Oil Conservation Division Aztec Office

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

June 14, 1996

CERTIFIED MAIL
RETURN RECEIPT NO.P-269-269-398

Mr. Tony Schmitz
TNT Construction, Inc.
HCR 74, Box 115
Lyndrith, New Mexico 87029

RE: Use of Disposal Water
TNT Disposal Facility (Permit #NM-01-0008)
Rio Arriba County, New Mexico

Dear Mr. Schmitz:

The New Mexico Oil Conservation Division has received TNT Construction, Inc.'s (TNT) request dated April 1, 1996 for authorization to provide water for road construction, on U.S. Highway 537, from the TNT evaporation ponds located in the NE/4 SE/4, Section 7, Township 25 North, Range 3 West, NMPM, Rio Arriba County, New Mexico.

Based upon the information received your request is approved subject to the following conditions:

1. Water will be applied by truck directly onto the road surface in such quantities that no excess water will runoff into the roadside ditches or watercourses.

2. Excess water remaining at the end of the working day shall be stored in trucks or tanks such that water does not drip or drain to the ground surface overnight. Alternatively, such water may be returned to TNT's disposal pond.

Please be advised New Mexico Oil Conservation Division approval does not relieve TNT of liability should their operation result in pollution of surface water, ground water or the environment. In addition, the approval does not relieve TNT of responsibility for compliance with federal, state and/or local regulations.

If you have any questions, please do not hesitate to call me at (505) 827-7153.

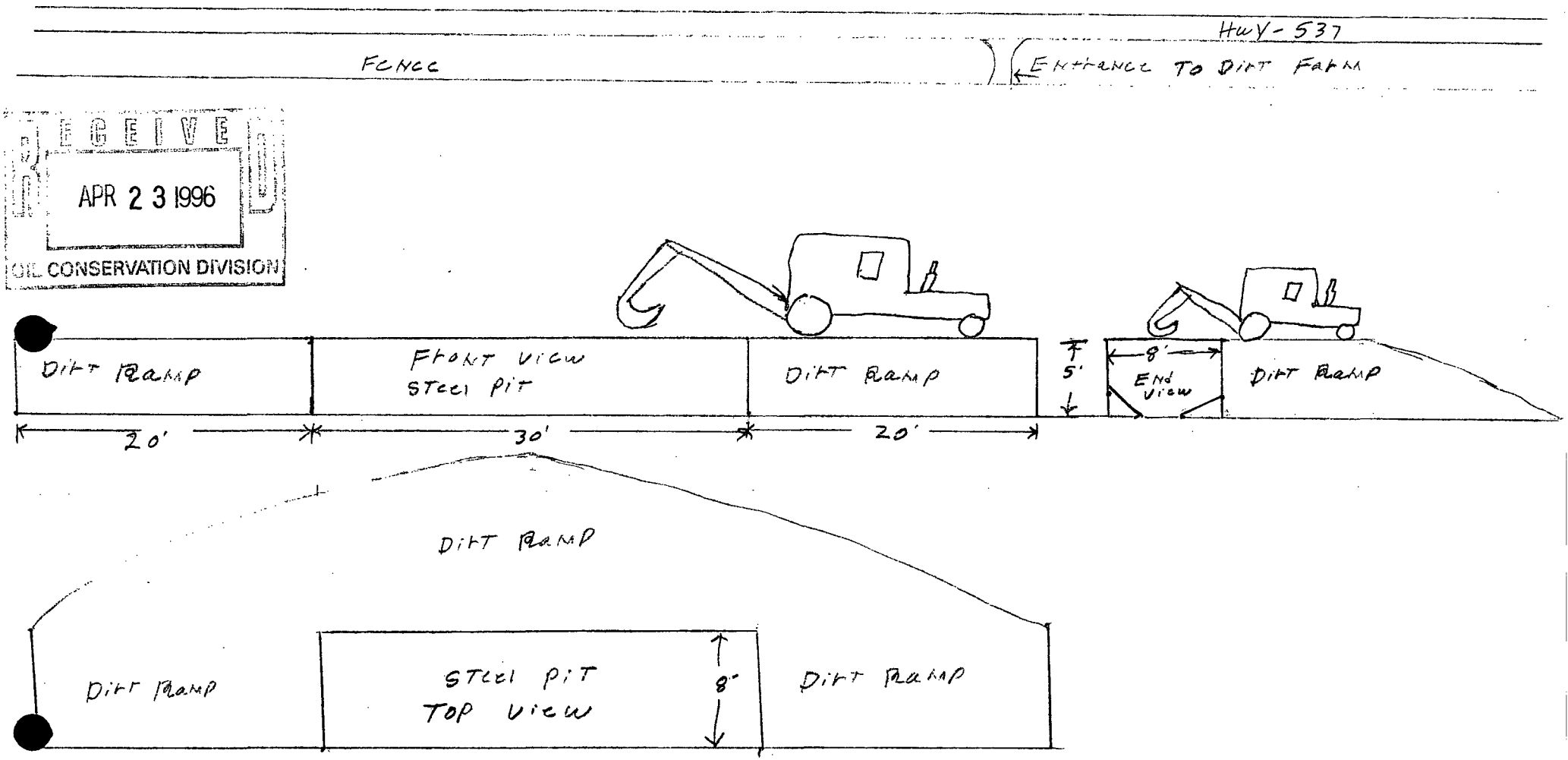
Sincerely,

Chris Eustice
Geologist

xc: OCD Aztec Office

T-N-T Construction, Inc.

April 19, 1996



Dear Cris Eustise:

I would like to have permission to install a steel pit to mix iron sulfide with dirt. The resulting mixture will be spread in cells in the dirt farm for remediation.

Sincerely

Tony Schmitz

T-N-T Construction, Inc. HCR 74 Box 115 - Lindrith, NM 87029

T-n-T Construction, Inc.
HCR 74-Box 115
Lindrith, NM 87029
505-774-6663

OIL CONSERVATION DIVISION
RECEIVED
'96 APR 1 AM 8 52

3/29/96

Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87505

Attn: Chris Eustise

I am writing to confirm our conversation on the telephone on 3/28/96. I received verbal approval to use T-n-T pit water for road construction on US Highway 537, approximately mile marker 34 for 4 miles of construction, by Apache Construction Co., Inc., P.O. Box 12312, Albuquerque, NM 87195.

1. They will apply the water in such a manner, no excess water will run off the road bed.
2. They will store any water left at the end of the day in such a manner that it will not leak or in any way run out of the trucks.

I would like to receive this approval in writing in order to have it in my files.

Thank you for your time.

Tony Schmitz, President
T-n-T Construction, Inc.

MEMORANDUM OF CONVERSATION

✓ TELEPHONE __ PERSONAL TIME 11⁰⁰ AM DATE 3/28/96

ORIGINATTING PARTY CHRIS EUSTICE

OTHER PARTIES MRS. DARLENE SCHMITZ
T&T Construction

DISCUSSION

MRS. SCHMITZ called the OCD to request authorization to provide produced water from T&T's facility to the highway department for road construction and/or maintanance. After consulting w/ RCA we decided to give T&T verbal approval. The same conditions provided in the 9/27/91 approval will apply. (Analogous request)

CONCLUSIONS Verbal Approval conditions:

a) water will be applied in a manner to prevent run-off.
b) Overnight storage of excess H_2O done prudently.
c) Verbal proposal & approval to be followed up in writing w/ copies to Aztec.

CHRIS EUSTICE CE Eustice

c: file
Denny Foust