

**USE OF DREDGED MATERIALS
FOR THE
CONSTRUCTION OF ROADWAY EMBANKMENTS**

**VOLUME II OF V
APPENDICES A-B**

PREPARED BY:

**SADAT ASSOCIATES, INC.
PRINCETON, NEW JERSEY**

ON BEHALF OF:

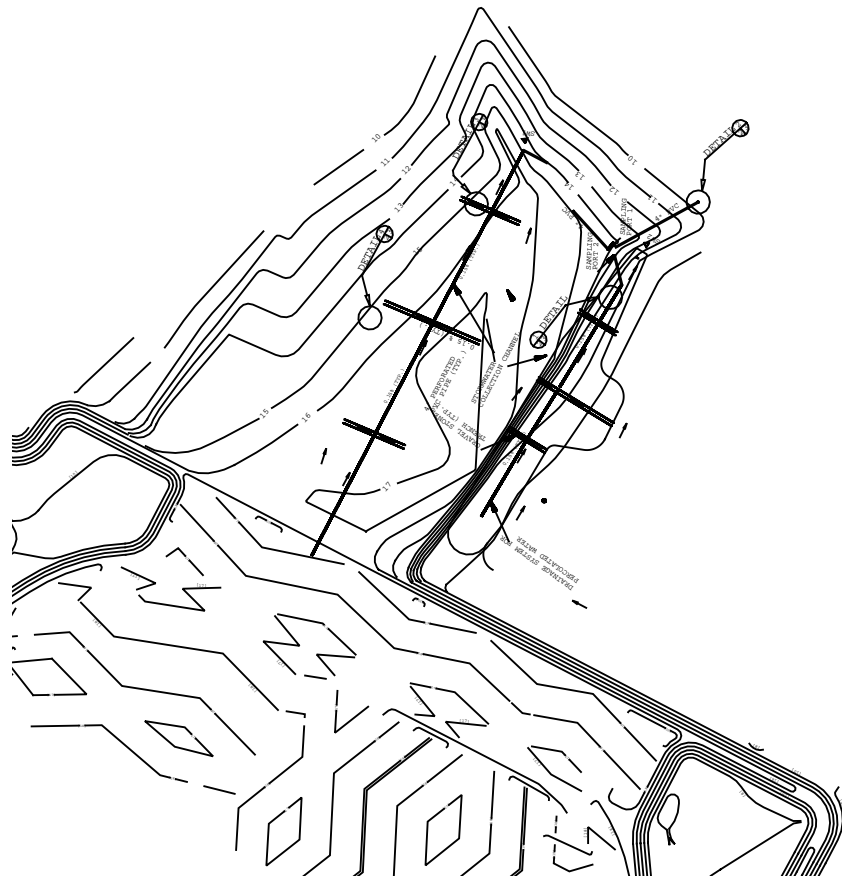
**OENJ CORPORATION, INC.
BAYONNE, NEW JERSEY**

SUBMITTED TO:

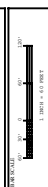
**NEW JERSEY MARITIME RESOURCES
NEW JERSEY DEPARTMENT OF TRANSPORTATION
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
NEW JERSEY PORT AUTHORITY OF NEW YORK AND NEW JERSEY
NEW JERSEY TRANSIT**

DECEMBER 2001

DATE: 08/15/2011



- LEGEND**
- EXISTING CURB
 - PROPOSED CONCRETE CURB
 - EXISTING TRANSITION AREA
 - PROPOSED TRANSITION AREA
 - EXISTING DRIVEWAY
 - PROPOSED DRIVEWAY
 - EXISTING SIDEWALK
 - PROPOSED SIDEWALK
 - EXISTING CONC. DRIVE
 - PROPOSED CONC. DRIVE
 - EXISTING CONC. DRIVE
 - PROPOSED CONC. DRIVE



NO.	DESCRIPTION	DATE	BY	CHKD.
1	ISSUED FOR PERMIT	08/15/2011	AS	AS
2	REVISED	08/15/2011	AS	AS
3	REVISED	08/15/2011	AS	AS
4	REVISED	08/15/2011	AS	AS
5	REVISED	08/15/2011	AS	AS
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 Email: info@sadat.com

OENU REDEVELOPMENT SITE
 ELIZABETH LN

FINAL SYSTEM CONFIGURATION

DATE	08/15/2011
BY	AS
CHKD.	AS
SCALE	AS
PROJECT NO.	AS
SHEET NO.	5
TOTAL SHEETS	AS

PERFORATED WATER

EXISTING

BRIDGE

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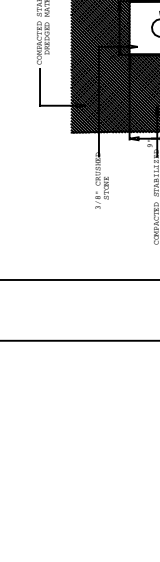
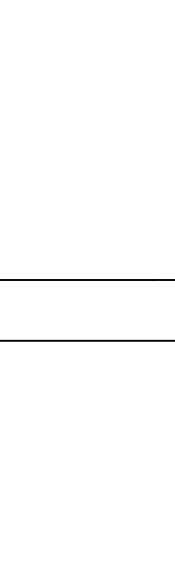
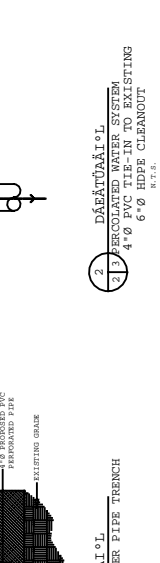
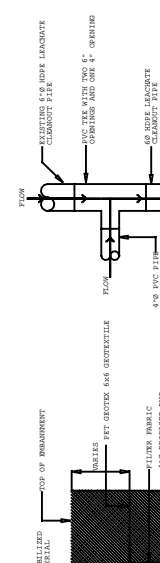
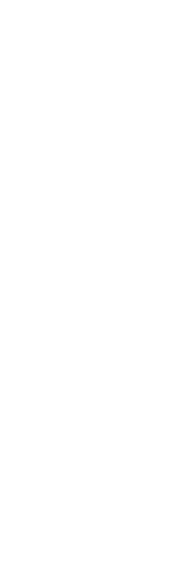
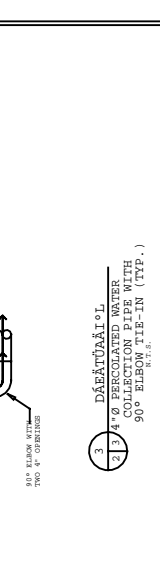
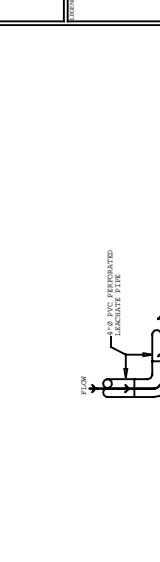
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1 DĀĒĀTŪĀĪ 0 L
1 PERFORATED WATER PIPE TRENCH
N.T.S.

2 DĀĒĀTŪĀĪ 0 L
2 PERFORATED WATER SYSTEM
4\"/>

3 DĀĒĀTŪĀĪ 0 L
3 6\"/>

4 DĀĒĀTŪĀĪ 0 L
4 HORIZONTAL TRENCH (TYPICAL)
N.T.S.

5 DĀĒĀTŪĀĪ 0 L
5 PERFORATED WATER GRAVEL
STONE TRENCH
N.T.S.

6 DĀĒĀTŪĀĪ 0 L
6 HORIZONTAL INCLINOMETER
TRENCH (TYPICAL)
N.T.S.

7 DĀĒĀTŪĀĪ 0 L
7 CHANNEL OUTSIDE EMBANKMENT
N.T.S.

8 DĀĒĀTŪĀĪ 0 L
8 PERFORATED WATER PIPE TRENCH
N.T.S.

9 DĀĒĀTŪĀĪ 0 L
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44 DĀĒĀTŪĀĪ 0 L
44 4\"/>



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 Phone: (907) 562-1111
 Fax: (907) 562-1112

PROJECT: OENJ REDEVELOPMENT SITE
 LOCATION: ELIZABETH LN

DESIGNER: FINALS SYSTEM CONSULTATION
 CONSTRUCTION DETAILS

DATE	BY	REVISION
01/11/2006	AK	ISSUE FOR PERMITS
02/01/2006	AK	ISSUE FOR PERMITS
02/01/2006	AK	ISSUE FOR PERMITS
02/01/2006	AK	ISSUE FOR PERMITS

SCALE: 3/8\"/>

DATE PLOTTED: 01/11/2006

PLotted by: AK

DATE PLOTTED: 01/11/2006

PLotted by: AK

DATE PLOTTED: 01/11/2006

PLotted by: AK

DATE PLOTTED: 01/11/2006

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DATE PLOTTED: 01/11/2006

PLotted by: AK

PROFILES				
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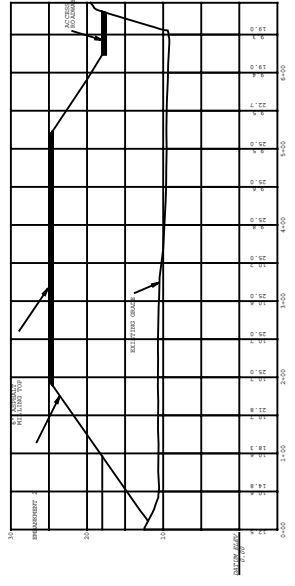


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 18 VILLAGE SQUARE, SUITE 200, WILLOW PARK, ONTARIO, CANADA
 (416) 490-8888 FAX: (416) 490-8889

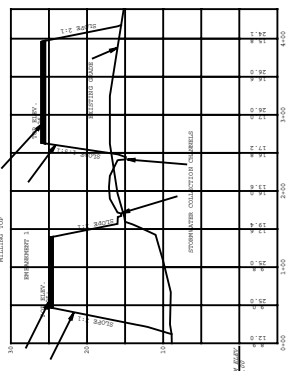
**OENI REDEVELOPMENT
 SITE
 ELIZABETH ST.**

**FINAL SYSTEM CONFIGURATION
 CROSS SECTIONS**

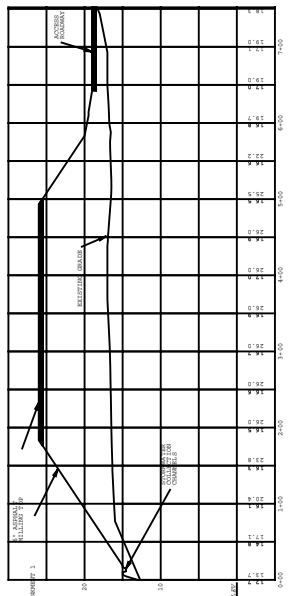
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2014	2014	2014	1:1	4
PROJECT NO.	14-001	14-001	14-001	14-001



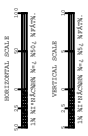
A
 SÁRCÁTÁIÁÓN
 1/4
 PROFILE A-A



B
 SÁRCÁTÁIÁÓN
 1/4
 PROFILE B-B



C
 SÁRCÁTÁIÁÓN
 1/4
 PROFILE C-C



APPENDIX B

Field Data During Construction

APPENDIX B-1

Daily Construction Reports

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 01

Date: February 16, 1999

Arrived at Site: 9:30 AM

WEATHER:

Clear
Bright
Temperature: 55°F

PERSONNEL ON SITE:

SAI: RMT, FJ

CONTRACTORS: NONE

OTHERS: NONE

EQUIPMENT: NONE

DESCRIPTION OF THE ACTIVITIES:

- \$ RMT and FJ went for site visit. The settlement placements need to be ordered. There were fewer settlement plates left on the site than expected. About 15 more settlement plates will be needed.

- \$ Dredged Material is stock piled on Embankment #1 and Embankment#2 (Northern Portion). Five survey stacks were located which read cut of 11-15 feet for proposed toe on northern side of Embankment#2. The existing height of stock piled dredged material on embankment#1 ranged between 8-10 ft. To meet the proposed embankment base elevation grade, there has to be a cut of at least four feet. FJ suggested that we raise the base elevation by four feet. This needs to be discussed with BA. Spoke with CPR on phone and advised her to have McCutcheon restack out the foot prints for Embankment #1 and #2.

- \$ Five stacks for six proposed settlement plates at embankment #1 were located. Probably one was knocked off during equipment movement.

- \$ Silt fence on waterfront side needs to be repaired and the silt fence on northern wetlands side needs to be installed. EE Cruz will be advised about this once they start working.

REMARKS

Signature:

Tharwani,
Engineer

Ramesh
Resident

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 02

Date: February 18, 1999

Arrived at Site: 7:30 AM

WEATHER: Heavy Rain
Temperature: 50°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: McCutchen Surveyor

OTHERS: NONE

EQUIPMENT: NONE

DESCRIPTION OF THE ACTIVITIES:

- \$ Due to heavy rains surveyors were unable to continue working. I was told that they will have to come again to complete the survey job. They need to restack the footprints for embankments.
- \$ BA on site for a site visit.
- \$ Aqua Survey, Inc-s representative on site to collect the dredged material sample for monthly analysis.

REMARKS

Signature:

Ramesh Tharwani,
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 03

Date: February 19, 1999

Arrived at Site: 7:30 AM

WEATHER: Very cold, clear
Temperature: 32°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: McCutchen Surveyor

OTHERS: NONE

EQUIPMENT: Dozer used for clearing the platform for embankment #2

DESCRIPTION OF THE ACTIVITIES:

\$ Surveyors finished the lay-out for embankments footprints.

\$ OENJ is using KMC to clear the platform for embankment#2. One operator is pushing away the garbage/dirt stockpiled inside the footprints of Embankment#2.

REMARKS

Signature:

Ramesh Tharwani,
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 04

Date: March 09, 1999

Arrived at Site: 10.30 AM

WEATHER: Very cold, clear
Temperature: 29°F

PERSONNEL ON SITE:

SAI: RMT, FJ

CONTRACTORS: EE Cruz

OTHERS: NONE

EQUIPMENT: Excavator, Dozer, Loader and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ EE Cruz started working on Embankment #2 platform sealing at elevation 11.0 ft, yesterday. By today they have completed the 2 of the platform. The northern toe has cut of an average of 5.0 ft and southern toe has fill of an average of 2.0 ft.
- \$ FJ briefed RMT about different aspects of the project and criteria to determine the degree of compaction.

REMARKS

Signature:

Ramesh Tharwani,
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 05

Date: March 10, 1999

Arrived at Site: 8:00 AM

WEATHER: Very cold, clear
Temperature: 29°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE Cruz

OTHERS: NONE

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ EE Cruz continue working on platform for Embankment#2. The northern toe is cut to meet the proposed grades. On northern side, opposite to the pumpstation, a 10 ft. section of forcemain is in the way of Embankment #2 proposed footprints. The forcemain section was cut. This forcemain is supposed to be connected to pumpstation.
- \$ BA on site for a site visit.

REMARKS

Signature:

Ramesh Tharwani,
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 06

Date: March 11, 1999

Arrived at Site: 8:00 AM

WEATHER: Windy and cold, Bright
Temperature: 33°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE Cruz

OTHERS: NONE

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ EE Cruz continue working on platform for Embankment#2.
- \$ The cut on northern side towards bay is in big stones. It is believed that the platform for embankment #2 was not built in consistent manner. At elevation 12, there are big pieces of stones and sometime trash is encountered. BA/CPR at SAI office informed about the site conditions.
- \$ FJ and Tom from Rutgers University on site to calibrate the instrument for stiffness test.

REMARKS

Signature:

Ramesh Tharwani,
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 07

Date: March 12, 1999

Arrived at Site: 8:30 AM

WEATHER: Windy and cold
Flurries in PM
Temperature: 30°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE Cruz

OTHERS: NONE

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

\$ EE Cruz continue working on platform for Embankment#2.

\$ Heavy cuts on the northern side of the Embankment #2 continues. The excavated material is stockpiled on bank sides for disposal/transporting to designated areas on Parcel G. The proposed platform is set to elevation 12.0 ft. above MSL to avoid any heavy cuts. It was discussed with BA and he approved this.

REMARKS

Signature:

Ramesh Tharwani,
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 08

Date: March 15, 1999

Arrived at Site: 7:30 AM

WEATHER: Rain and Snow
Temperature: 30°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: None

OTHERS: NONE

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

\$ Because of heavy rain and snow over the weekend (approximately 4"), the contractor did not show up. I called EE Cruz and was told that they will not be working for few days till the weather conditions improve and snow accumulated on Embankment is melted.

REMARKS

Signature:

Ramesh Tharwani,
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 09

Date: March 18, 1999

Arrived at Site: 10:00 AM

WEATHER: Clear and Bright
Temperature: 41°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: None

OTHERS: NONE

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

\$ No work is being performed by EE Cruz. RMT onsite to set up the field equipment for compaction tests in the field trailer and look into the field conditions. It does not look like that EE Cruz will be able to resume the work this week.

REMARKS

Signature:

Ramesh Tharwani,
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

REPORT # 10

Date: March 22, 1999

Arrived at Site: 9:00 AM

WEATHER: Cloudy (Rained yesterday)
Temperature: 51°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: None

OTHERS: Dr. Clifford Weisel, EOHSI (Rutgers)

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

\$ It has rained very heavy yesterday. Contractors are not working. Dr. Weisel from EOHSI, Rutgers on site for site visit to assess the air monitoring conditions. He suggested to dust collecting samplers, one upwind and the other downwind. He brought one sampler on site which was left in the office trailer.

REMARKS

Signature:

Ramesh Tharwani,
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 11

Date: March 29, 1999

Arrived at Site: 7:30 AM

WEATHER: Clear and Bright
Temperature: 51°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE-Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ As the weather is dry, the contractor is disking the first lift. There are some spots which are still wet.
- \$ Aqua Survey Inc. on site to collect the samples from Amended dredged material. They collected two samples from the dredged material stock piled at the site.
- \$ This first lift was treated as the platform. The new elevation of the platform is MSL 12.0ft.
- \$ EE Cruz was advised to install the silt fence on the perimeter of the Parcel G to protect the Northern wetlands and Newark Bay.
- \$ This lift will approved on the basis of visual inspection, as this is treated as the platform.

REMARKS

Signature:

Ramesh Tharwani,
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 12

Date: March 30, 1999

Arrived at Site: 8:00 AM

WEATHER: Clear and Bright, Very windy
Temperature: 52°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ Contractor is disking the first lift. It will be left open for sometime and it will be aerated and at the end of the day it will be rolled and compacted. There will not be any Troxler Density Guage tests. It will be approved on the basis of visual inspection.
- \$ The first lift approved. EE Cruz was advised to start the second lift tomorrow.
- \$ EE Cruz was advised to install the silt fence asap.

REMARKS

Signature:

Ramesh Tharwani,
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 13

Date: March 31, 1999

Arrived at Site: 7:30 AM

WEATHER: Sunny and very bright
Temperature: 60 °F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

\$ Contractor has started to construct the second lift. There are two operators, one truck driver and one labor. The dredged material is excavated from the area within the footprints of Embankment #1.

\$ The laser was used to control the lift heights.

REMARKS

Signature:

Ramesh Tharwani,
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 14

Date: April 01, 1999

Arrived at Site: 7:30 AM

WEATHER: Cloudy, Light
Rain
Temperature: 58 °F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE Cruz

OTHERS: McCutchen Surveyors

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ Contractor continue working on the construction of the second lift.
- \$ McCutcheon is laying out the new footprints for embankment # 1. McCutcheon is also laying out the footprints for Embankment #2 because they had removed the old stacks by mistake. SAI should not pay for their services for this work.
- \$ Contractor finished constructing the lift at EL. 13. It was sealed because it is expected to rain tonight.

REMARKS

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 15

Date: April 02, 1999

Arrived at Site: 7:30 AM

WEATHER: Cloudy
Temperature: 55 °F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE Cruz

OTHERS: Tom Benner (Rutgers University)

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

\$ Contractor is diskings the lift. Today is good day and it will be disked the entire day.

\$ EE Cruz was advised to install the silt fence

\$ Tom on site to discuss the installation of horizontal inclinometer

REMARKS

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 16

Date: April 05, 1999

Arrived at Site: 8:00 AM

WEATHER: Clear and Sunny
Temperature: 44 °F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

\$ Contractor is disking the lift. The lift has been left open to let it aerate for some time.

\$ EE Cruz was advised to install the silt fence.

REMARKS

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 17

Date: April 06, 1999

Arrived at Site: 7:15 AM

WEATHER: Clear and Sunny
Temperature: 62°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE Cruz

OTHERS: McCutcheon Surveyor

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ Contractor continued to disk the lift at EL. 13 and this will be done for the AM part of the day. Material still looks okay. EE Cruz insists that the material should be tested for compaction once it is rolled.
- \$ SAI conducted some test compaction tests on the portion which was rolled. Wet Density ranged between 99 - 110 PCF. Which looked okay.. No samples were taken for moisture content.
- \$ EE Cruz was permitted to go ahead and start installation the percolated water collection line and continue rolling the sides. EE Cruz will start the percolated water collection system installation tomorrow.
- \$ McCutcheon Surveyor laid out the percolated water collection system and Settlement Plates.

REMARKS

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 18

Date: April 07, 1999

Arrived at Site: 7:00 AM

WEATHER: Clear and Sunny
Temperature: 55°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ After discussing with BA and NDS, it was decided that percolated water collection system should be installed into next lift to meet the proposed pitch for the percolated water system and increase the buffer between horizontal inclinometer and percolated water collection pipe.
- \$ EE Cruz was advised to do so, but as EE Cruz was prepared to start the percolated water collection system in lift at Elevation 13, they were given permission to go ahead and start constructing the second lift based on the preliminary density guage results.
- \$ EE Cruz started constructing the new lift at EL. 14.
- \$ SAI tested 12 more locations for denisty and collected samples for moisture content.
- \$ The dredged material used for this lift is excavated from the footprints of Embankment #1.

REMARKS

REPORT # 19

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Date: April 08, 1999

Arrived at Site: 7:30 AM

WEATHER: Clear and windy
Temperature: 67°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ EE Cruz continues to construct the second lift at EL. 14.0.
- \$ EE Cruz informed me that the installation of Silt fence is not part of their project.
- \$ BA was informed about the silt fence installation and OENJ was advised to install the silt fence.
- \$ OENJ requests EE Cruz to install the silt fence.
- \$ The dredged material used for this lift is excavated from the footprints of Embankment #1. At approximately 10 feet below surface ground, the waste was encountered while excavating into dredge material stock pile. The excavation did not proceed beyond that point.
- \$ The construction of second lift completed.

REMARKS

REPORT # 20

Date: April 09, 1999

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Arrived at Site: 7:30 AM

WEATHER: Light Rain
Temperature: 53°F

PERSONNEL ON SITE:

SAI: RMT and AP

CONTRACTORS: EE Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ EE Cruz rolled the lift which was constructed yesterday. Because of rain, there will not be any construction work on the site.
- \$ EE Cruz is installing the pole for weather station. AP is coordinating this work. The weather station was mounted on the pole and it was calibrated with true north.
- \$ Concrete for the foundation came in very late. EE Cruz should not be paid for more than 2.5 hours for this job.

REMARKS

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 21

Date: April 12, 1999

Arrived at Site: 6:30 AM

WEATHER: Light Rain
Temperature: 40°F

PERSONNEL ON SITE:

SAI: RMT and AP

CONTRACTORS: EE Cruz

OTHERS: Dr. Clifford Weisel (EOHSI, RUTGERS)

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ EE Cruz is installing the silt fence around the perimeter of the project location.
- \$ The solar panel and data logger was installed on the pole.
- \$ Dr. Weisel on site to educate the people who will wear the badge for personal sampling. He discussed the proposed locations for the samplers.
- \$ Two dust collection samplers were test run. Generator is giving trouble. Electrician was called in to look into the problem. He confirmed that the noise coming from the generator is not a problem.

REMARKS

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 22

Date: April 13, 1999

Arrived at Site: 7:30 AM

WEATHER: Cold and Windy
Temperature: 40°F

PERSONNEL ON SITE:

SAI: RMT, MS, BA

CONTRACTORS: EE Cruz

OTHERS: Representatives from NJMT, NJDOT, PA, Stenvens (MS has the sign-in list for people's names and agencies)

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ EE Cruz is diskings the second lift at EL 14.0
- \$ Site visit by NJDOT, NJMT, Stenvens, and PA. BA explained them about the project progress and he answered the questions.
- \$ MS preparing the site visit report, which will be considered as part of this report.

REMARKS

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 23

Date: April 14, 1999

Arrived at Site: 6:30 AM

WEATHER: Clear and Windy
Temperature: 41°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: EE Cruz

OTHERS: EOHSI Rutgers (Dr. Weissel, Krishan Mohan), Tom Bennert (Civil Engg. Rutgers University)

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ EE Cruz is disking the second lift at EL 14.0
- \$ RMT and AP set up the generators and MET stations.
- \$ Two air samplers were set according to wind direction. One Upwind and the other Downwind.

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Page 2 of Report # 23 (April 14, 1999)

- \$ The generators were kept approximately 100 ft. away from samplers to avoid any disturbance.
- \$ Sampler #1 was turned on at 10:45 AM and Sampler #2 was turned on at 10:55 AM
- \$ Tom Bennert on site for compaction test
- \$ EE Cruz decided to disk the lift and leave it open for tonite. No compaction test performed.
- \$ Sampler #1 has some problems, not running. Dr. Weissel shuts off both the samplers at 1:45 PM.
- \$ Stormwater sample collected from the puddle within the footprints of Embankment and sent to the International Hydronics for analysis.

REMARKS

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 24
Date: April 15, 1999

Arrived at Site: 6:45 AM

WEATHER: Clear and Windy
Temperature: 55°F

PERSONNEL ON SITE:

SAI: RMT

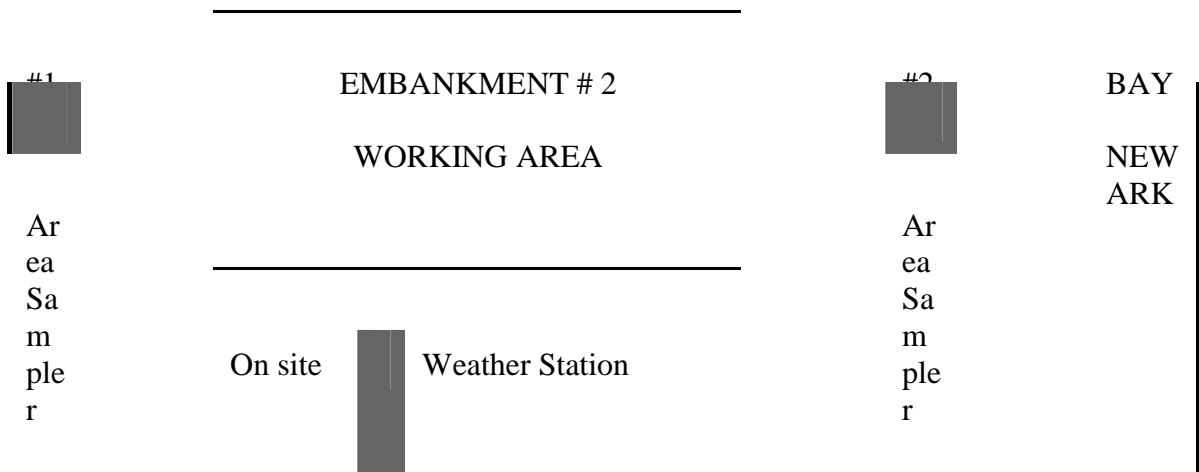
CONTRACTORS: EE Cruz

OTHERS: EOHSI Rutgers (Dr. Weissel, Shahnaz), Tom Bennert (Civil Engg. Rutgers University)

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ EE Cruz is rolling/compacting the second lift at EL 14.0
- \$ RMT set up the generators.
- \$ Two air samplers were set according to wind direction. One Upwind and the other Downwind.



Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Page 2 of Report # 24 (April 15, 1999)

- \$ The upwind generator (#1) quit around 9.00 AM. AP was informed and was requested to buy the new generator. Dr. Weissel is staying in the trailer to resume the samplers after the new generator is on site.
- \$ Tom Bennert (Rutgers) is on site to perform the stiffness test.
- \$ Troxler Test performed. Material looks too wet.
- \$ Soil samples were weighed and put in the oven at 140°F for 24 hours.

REMARKS

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 25
Date: April 16, 1999

Arrived at Site: 7:30 AM

WEATHER: Clear
Temperature: 51°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and air monitoring sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ EE Cruz was permitted to install the percolated water collection pipe even before the Troxler Test results. In case if the lift fails to meet the required compaction, EE Cruz will disk the lift and then roll it till it meets the required degree of compaction.
- \$ EE Cruz completed the installation of percolated water collection pipe.
- \$ EE Cruz opened the trench and placed 3 inch of sand for horizontal inclinometer installation. Tom Bennert from Rutgers will be installing the horizontal inclinometer tomorrow.

REPORT # 26

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Date: April 19, 1999

Arrived at Site: 6:50 AM

WEATHER: Clear and Bright
Temperature: 50°F

PERSONNEL ON SITE:

SAI: RMT, AP

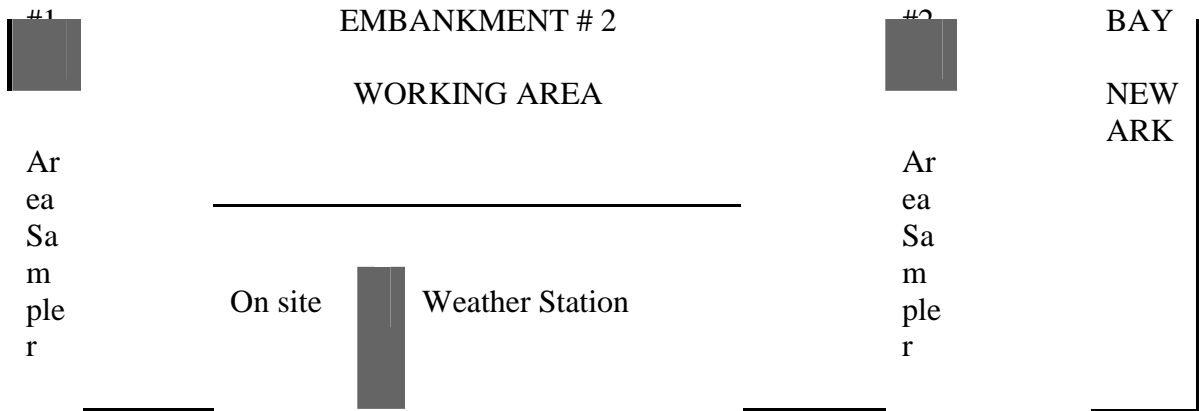
CONTRACTORS: EE Cruz

OTHERS: EOHSI Rutgers (Dr. Weissel, Krish Mohan)

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ The Troxler results show that the degree of compaction achieved does not meet the criteria. EE Cruz was advised to continue diskings the lift for more aeration and drying.
- \$ EE Cruz continues diskings and the lift was sealed at the end of the day.
- \$ Two air samplers were set according to wind direction. One Upwind and the other Downwind.



REPORT # 27

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Date: April 20, 1999

Arrived at Site: Did not go to the site

WEATHER: Heavy Rains
Temperature: 50°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

\$ It rained very heavy. RMT called EE Cruz and was told that no work will be performed today. RMT returned to the office.

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 28
Date: April 21, 1999

Arrived at Site: 6:45 AM
WEATHER: Clear and Bright
Temperature: 45°F

PERSONNEL ON SITE:

SAI: RMT, AP

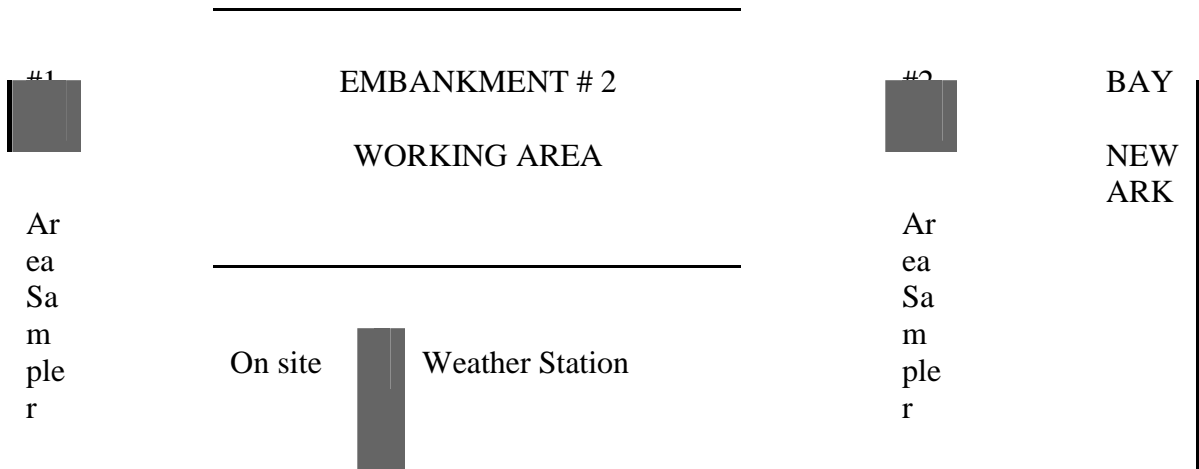
CONTRACTORS: EE Cruz

OTHERS: EOHSI Rutgers (Dr. Weissel, Krish Mohan)

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ EE Cruz continues to disk the second lift at EL. 14.0. The material is very wet from previous day rain.
- \$ EOHSI wants to start respirable area samplers today. They need to be run for 2 hour period.
- \$ EE Cruz will start disk the lift after lunch and EOHSI will sample the respirable during that time.
- \$ Two air samplers were set according to wind direction. One Upwind and the other Downwind.



Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Page 2 of Report # 28 (April 21, 1999)

- \$ EE Cruz is sealing the lift and RMT decides to take some Troxler Density tests to determine the degree of compaction achieved.
- \$ Twelve locations were tested for density and soil samples were taken for overnight oven dry to determine the moisture content.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 29

Date: April 22, 1999

Arrived at Site: 7:00 AM

WEATHER: Rain and Cloudy

Temperature: 45°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: EE Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ It is raining. EE Cruz decides not to open the lift. Conditions are too wet for work
- \$ RMT and AP back to the field trailer.
- \$ Trailer window broken and door unlocked. Two generators stolen.
- \$ Whiting Turner, KMC and Elizabeth Police informed about the incident.
- \$ Elizabeth Police on site and record the incident. Police report will be ready in two-three working days.
- \$ SAI office informed about the incident.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 30
Date: April 23, 1999

Arrived at Site: 6:50 AM
WEATHER: Bright and Clear, Rain in the
afternoon
Temperature: 55°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: EE Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ EE Cruz continues disking.
- \$ Dr. Weisel called us and told us that there will not be any air monitoring samples today.
- \$ Soil samples taken out from the oven and moisture content determined.
- \$ Moisture content has dropped significantly but it is still higher than 50 % as recommended by Rutgers.
- \$ BA (SAI) and Tom Bennert (Rutgers) were consulted on this issue. It was mutually agreed that this lift should be passed because the moisture content is not going to improve as it has been raining.
- \$ EE Cruz was informed about the decision.
- \$ Weather station datalogger has some problems. AP fixes the problem and download the data. We have lost two days weather data.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 31
Date: April 26, 1999

Arrived at Site: 7:00 AM
WEATHER: Bright and Clear
Temperature: 49°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: EE Cruz

OTHERS: Tom Bennert (Rutgers University)

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ EE Cruz is installing the percolated water laterals.
- \$ Tom on site to install the remaining sections of inclinometer casing.
- \$ EE Cruz backfilled the horizontal inclinometer trench with 4" Sand and the rest with dredged material.
- \$ EE Cruz finishes installing the percolated water laterals.
- \$ Geosynthetic fabric will be installed tomorrow. Tom from Rutgers requested to be on site to oversee the fabric installation.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 32

Date: April 27, 1999

Arrived at Site: 7:00 AM

WEATHER: Clear and Sunny, Windy

Temperature: 45°F

PERSONNEL ON SITE:

SAI: RMT, (AP on site around 10:30 AM to fix the weather station data logger)

CONTRACTORS: EE Cruz

OTHERS: Tom Bennert (Rutgers University), Aqua Survey, Inc.

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

\$ EE Cruz is rolling the lift before the installation of geosynthetic fabric.

\$ Geosynthetic fabric installation completed. The representative from the Synthetic Industry not available. Tom from Rutgers is taking the responsibility of overseeing the installation of the fabric.

\$ Aqua Survey on site to collect the monthly dredged material samples.

\$ Six settlement plates are installed on this lift.

\$ EE Cruz will start constructing the new lift tomorrow. To avoid any punctures in the fabric due to heavy equipment movement, it was decided that this lift will be 18".

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 33
Date: April 28, 1999

Arrived at Site: 6:50 AM
WEATHER: Clear and windy
Temperature: 55°F

PERSONNEL ON SITE:

SAI: RMT, AP

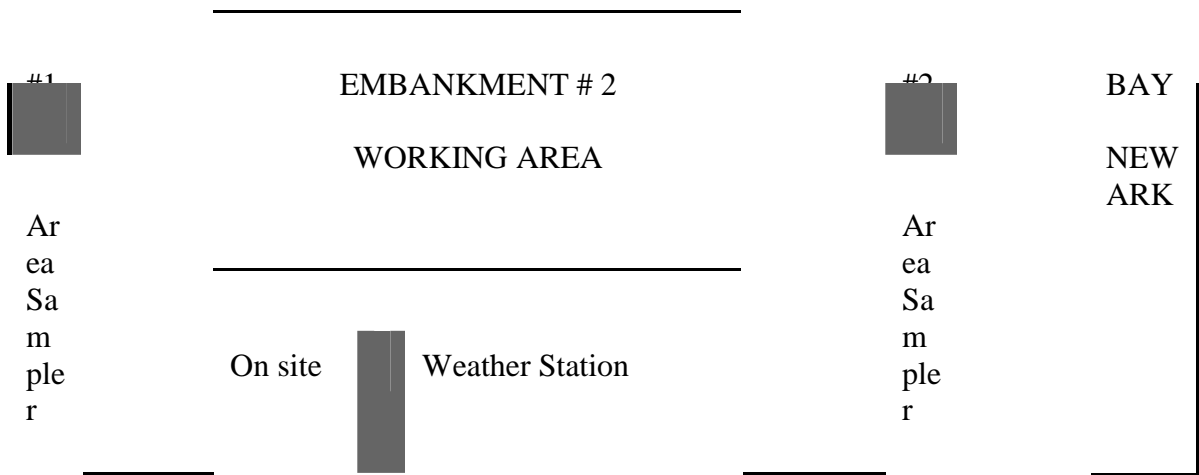
CONTRACTORS: EE Cruz

OTHERS: Tom Bennert (Rutgers University), EOSHI (Krish Mohan)

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ EE Cruz starts building the third lift at Elevation 15.5 ft. The dredged material is being excavated from the foot prints of Embankment 1. One labor and one foreman are at the site.
- \$ EOHSI is performing the two area samples.



Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Page 2 of Report # 33 (April 28, 1999)

- \$ Tom from Rutgers on site to record the initial readings for horizontal inclinometer. Because of equipment movement, he is unable to take the initial readings. He decides to postpone it till weekend.
- \$ Before lunch the dozer breaks down and no operation is in progress. Area samplers were turned off.
- \$ After lunch EE Cruz decides to stockpile the dredged material for the third lift and push it tomorrow when they have the new dozer.
- \$ Area samplers were turned on after lunch.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 34
Date: April 29, 1999

Arrived at Site: 6:50 AM
WEATHER: Clear, bright and sunny
Temperature: 60°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: EE Cruz

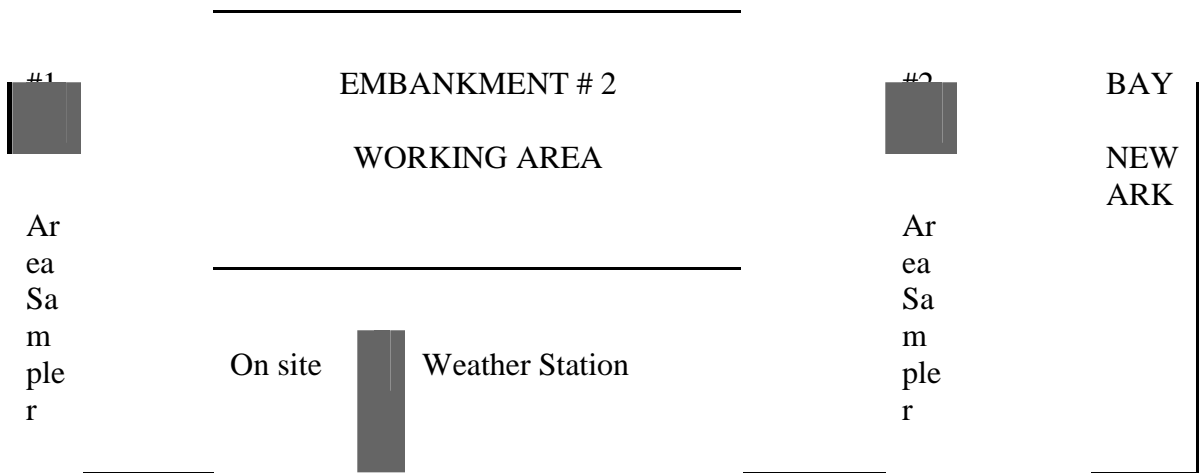
OTHERS: EOSHI, Rutgers (Shahnaz)

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

\$ EE Cruz brings the new dozer and continues to construct the third lift at EL. 15.5 ft.

\$ EOHSI is performing the two area samples.



Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Page 2 of Report # 34 (April 29 1999)

\$ Because of the construction of the parking lot upward of Parcel G. The upwind air sampler has been moved toward north.

\$ New Dozer has problems. EE Cruz continues to haul and stock pile the material .

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 35
Date: April 30, 1999

Arrived at Site: 6:50 AM
WEATHER: Clear, bright and sunny
Temperature: 49°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: EE Cruz

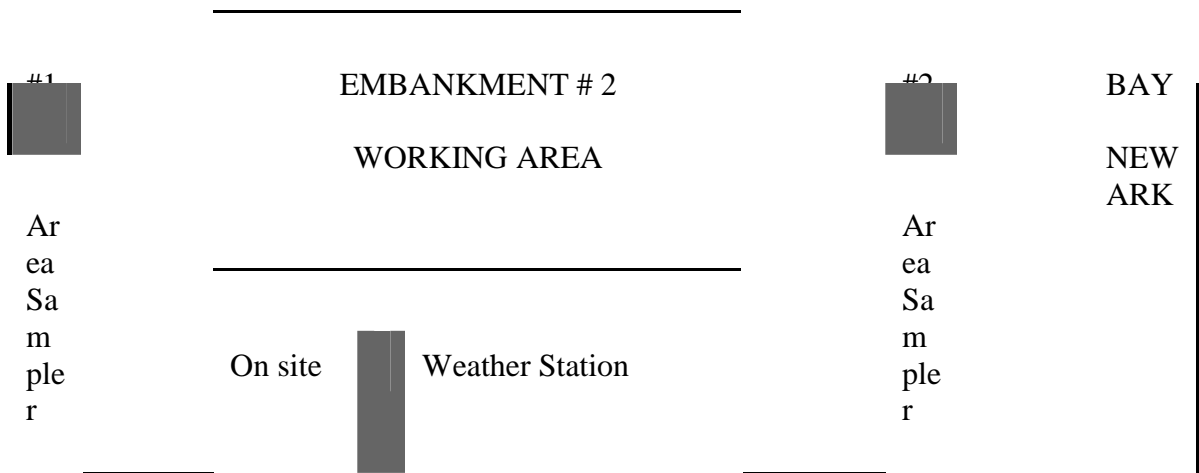
OTHERS: EOSHI, Rutgers (Dr. Weisel, Krish Mohan, and Shahnaz), McCutcheon Surveyors

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

\$ EE Cruz continues to build the third lift. One operator is on site. He is operating excavator to excavate the dredged material and sometime in the afternoon he will operate the dozer to push and spread the dredged material.

\$ Area samples are being collected.



Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Page 2 of Report # 35 (April 30, 1999)

- \$ EOSHI is starting personal sampling today.
- \$ Four personal sampler were used. (One operator, One Truck Driver, One Laborer and One Foreman)
- \$ EE Cruz finishes constructing the lift.
- \$ McCutcheon Surveyors on site to survey the five stacks points of interphase. EE Cruz has not performed any test pits this week as they were busy building the lift.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 36
Date: May 01, 1999

Arrived at Site: 6:50 AM
WEATHER: Cloudy and
light rain
Temperature:
49°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ EOHSI called to find out if any sampling will be performed. Since it was raining very heavy, it was decided that no air monitoring sampling will be performed today.

- \$ The site conditions are not too wet. E.E. Cruz decides to roll it before it rains again. E.E. Cruz finished rolling around 10:00 AM. Tom from Rutgers was contacted to let him know about the change in plans.

- \$ Tom (Rutgers) can not come to the site.

- \$ SAI decides to go ahead and perform the Troxler Density Test. The material does not seem to be too wet.

- \$ SAI finishes the Troxler test by lunch time.

- \$ E.E. Cruz advised to perform test pits within the footprints of Embankment #1 to determine the depth to waste/muck. Four of the six test pits were installed and the interface (garbage/muck) was encountered at higher elevation (MSL 16.0-17.0 ft.) than expected.

REMARKS:

Signature:

Ramesh

Resident

Tharwani

Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 37
Date: May 05, 1999

Arrived at Site: 6:50 AM
WEATHER: Heavy Rain
Temperature: 52°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz is not performing any operations today due to heavy rains.
- \$ Moisture Content determination was performed. The Dry Density results look acceptable. Third lift approved.
- \$ E.E. Cruz has decided not to work, since the site conditions are too wet.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 38
Date: May 06 1999

Arrived at Site: 6:50 AM

Weather: Cloudy in the morning, getting brighter in the after noon.

Temperature: 52°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: E.E. Cruz

OTHERS: EOHSI

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz starts constructing the fourth lift at El. 16.5 ft.
- \$ EOHSI on site. Wind speed is very very low. Wind direction is changing more frequently than expected. EOHSI decides to start air sampling but quit it after one hour or so.
- \$ Project Meeting at Bayonne. Geotechnical aspects of new proposed location of Embankment#1 were discussed. Installation of the Geosynthetic fabric on Embankment#1 discussed. FJ (OENJ) had concern that there has not been enough preloading of the embankment#1.
- \$ RMT and FJ (OENJ) in the afternoon visited the site again and observed that there has been atleast 8-10 ft. cut in the existing grades to meet the proposed grades, which suggested that atleast 8-10 of the dredged material has been placed within the footprints of Embankment#1. BA was informed about this observation.
- \$ E.E. Cruz has finished constructing 2/3 of the fourth lift and they are sealing it, as it is expected to rain tonite.
- \$ RMT/AP leave the site at 3:30 PM.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 39
Date: May 07, 1999

Arrived at Site: 6:50 AM
Weather: Cloudy and light rain
51°F

Temperature:

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz continues to construct the fourth lift.
- \$ FJ (OENJ), Tom Johnson and Tonny (E.E. Cruz) on site to look into the cuts for proposed Access road and Transition area.
- \$ E.E. Cruz reluctant to take responsibility for new task. FJ will discuss this with OENJ and get back to E.E. Cruz.
- \$ E.E. Cruz finishes constructing the lift and they are rolling it..
- \$ RMT leaves the site at 2:50 PM.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 40
Date: May 10, 1999

Arrived at Site: 6:50 AM
Weather: Clear and Bright
Temperature: 50°F

PERSONNEL ON SITE:

SAI: RMT/AP

CONTRACTORS: E.E. Cruz

OTHERS: EOHSI

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, Air Monitoring samplers

DESCRIPTION OF THE ACTIVITIES:

- \$ EOHSI is on site for Area and Personal Sampling.
- \$ E.E. Cruz is disking the fourth lift.
- \$ Two labor, one operator and AP (SAI) wearing the personal samplers.
- \$ E.E. Cruz installed the section of 4" forcemain at the Embankment#2 location.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

**REPORT # 41
Date: May 11, 1999**

**Arrived at Site: 7:00 AM
Weather: Clear and Bright
Temperature: 55°F**

PERSONNEL ON SITE:

SAI: RMT/AP

CONTRACTORS: E.E. Cruz

OTHERS: EOHSI

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, Air Monitoring samplers

DESCRIPTION OF THE ACTIVITIES:

- \$ EOHSI onsite, area sampling performed
- \$ E.E. Cruz is disking the top of the stockpile within the footprints of Embankment#1.
- \$ E.E. Cruz is rolling and compacting the fourth lift. The lift (Elevation 16.5) ready for the compaction test.
- \$ Tom/Stra (Rutgers University) on site to conduct the stiffness test in coordination with Troxler Tests. The test locations were selected on grid basis.
- \$ Troxler and Stiffness tests were performed by SAI and Rutgers, respectively. The visual inspection of the material show higher moisture content, and the roller has made grooves in the lift, an indication of low compaction/higher moisture content.
- \$ A total of seventeen locations were tested, soil samples were taken and put in the oven for soil moisture content determination.
- \$ Generator transporting back and forth from house to the site has created severe headaches and nose bleeding to onsite SAI Personnel. SAI office was notified about the problem.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 42
Date: May 12, 1999

Arrived at Site: 6:50 AM

Weather: Clear/Sunny
59°F

Temperature:

PERSONNEL ON SITE:

SAI: RMT/AP

CONTRACTORS: E.E. Cruz

OTHERS: EOHSI

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, Air Monitoring samplers

DESCRIPTION OF THE ACTIVITIES:

- \$ EOHSI on site for area sampling.
- \$ E.E. Cruz was asked to continue the diskings as the yesterday's troxler test showed low wet density and visual observation, higher moisture contents.
- \$ E.E. Cruz continues to disk the fourth lift at Embankment 2 and the dredged material within the foot prints of Embankment #1. The dredged material stockpiled within the footprints of Embankment 1 is disked to dry the material so that it can be used for constructing the lifts at Embankment #2.
- \$ E.E. Cruz is rolling and compacting the fourth lift at Elevation 16.5 ft. The lift is ready to be tested. Rutgers was contacted to coordinate the test.
- \$ Stra (Rutgers University) on site to perform the stiffness test.
- \$ The grid for second set of tests at this lift (Elevation 16.5 ft) was coarser than the first set of tests at the same locations.
- \$ The dredged material has dried up and looks to contain lower moisture contents. The density results are higher than the first set of tests.
- \$ E.E. Cruz was permitted to go ahead and start constructing the new lift.

REPORT # 43

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Date: May 13, 1999

Arrived at Site: 6:50 AM

Weather: Cloudy, started drizzling in the PM

Temperature: 55°F

PERSONNEL ON SITE:

SAI: RMT/AP

CONTRACTORS: E.E. Cruz

OTHERS: EOHSI

EQUIPMENT: Excavator, Dozer, Loader, Disking blade, trucks and Roller, Air Monitoring samplers

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz has started constructing the fifth lift at elevation 17.5 MSL.
- \$ EOHSI is on site. The downwind pump pressure reading dropped yesterday from 2.00 (AM readings) to 0.5 (PM readings). EOHSI determined the pressure readings today on downwind pump. It seems to be fine. It looks like that there was some leak yesterday.
- \$ EOHSI performing areas sampling today. Today is the last day for air monitoring during this phase. The second round of air monitoring testing will start during the construction of Embankment #1. Expected sometime in early June.
- \$ EOHSI has taken the area sample filters to send to the analytical laboratory for analyses.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 44
Date: May 14, 1999

Arrived at Site: 7:00 AM
Weather: Sunny
Temperature: 61°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade, trucks and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz continues to construct the fifth lift at Embankment #2.
- \$ The dredged material used for this lift is much drier than what we have been using in past.
- \$ E.E. Cruz installed some test pits within the footprints of Embankment #1 to determine the depth to waste. At most of the locations, the waste is at least 2.5 feet higher than expected.
- \$ FJ (OENJ) on site to see the test pits. We agreed that with an average cut of 2.5 ft. into waste to meet the proposed base elevations for Embankment #1 will result in an excavation of approximate 7,000 cubic yards. He was going to discuss this with PA (OENJ) and may propose to raise the base elevation of Embankment #1 by 2.00 ft. to avoid the excavation and disposal.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 45
Date: May 17, 1999

Arrived at Site: 7:00 AM
Weather: Sunny
Temperature: 61°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade, trucks and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz diskings the fifth lift. The material over the weekend has dried up good.
- \$ E.E. Cruz rolling and compacting the fifth disk.
- \$ SAI and Rutgers conducted compaction tests. The lift seems very good.
- \$ E.E. Cruz was permitted to start constructing the new lift.
- \$ Soil samples were put in the oven for overnight cooking
- \$ McCutcheon on site to survey the settlement plates elevations. They were requested to shoot the elevation every second week.
- \$ FJ from OENJ informed me that the proposed platform for the embankment 1 has been raised by two feet. This decision was made by the OENJ to avoid any excavations into waste. To meet the old proposed platform elevation for embankment 1, the estimated cut into waste at most of the locations ranged between 2 to 3 feet, totaling 7,000 cubic yards of waste material excavation and disposal. MS (SAI) was requested to revise the plans incorporating the proposed changes.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 46
Date: May 18, 1999

Arrived at Site: 7:00 AM
Weather: Cloudy and light rain in the PM.
Temperature: 59°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade, trucks and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz starts constructing the sixth lift.
- \$ The dredged material from dry stock piles on top is being used for the construction. This material is much dryer than what we had been using before. This will expedite our construction and compaction of the lift.
- \$ The construction was not completed. It started raining. E.E. Cruz is sealing the lift.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 47
Date: May 19, 1999

Arrived at Site: 7:00 AM
Weather: Cloudy, bright afterwards and rain in the PM
Temperature: 59°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade, trucks and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz is constructing the remaining portion of the lift.
- \$ The portion of the lift which was completed, is being disked.
- \$ It started raining around 2:00 PM.
- \$ The entire lift is sealed.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 48
Date: May 20, 1999

Arrived at Site: 7:00 AM
Weather: Clear and sunny
Temperature: 76°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade, trucks and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ There are some water puddles on the top of the lift. E.E. Cruz will start disking sometime in the afternoon.

- \$ E.E. Cruz starts disking the sixth lift. They continue disking for two hours and decided to leave it open for the night.

- \$ One labor is handpicking the debris from the dredged material.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 49
Date: May 21, 1999

Arrived at Site: 7:00 AM
Weather: Clear and sunny
Temperature: 76°F, gets warmer in the PM.

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade, trucks and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz continues to disk the sixth lift and leave it open.
- \$ E.E. Cruz informed me that they want to roll this lift after the lunch and requested for compaction test. Though the material has been drying but it still looks too wet.
- \$ SAI informed rutgers for the density test. Stra (Rutgers) on site at 3:00 PM. The lift is not ready yet.
- \$ E.E. Cruz starts rolling and compacting the disk. SAI and Rutgers start the density tests. The grid was made coarser than previous grid to take more representative samples. A total of 19 location were tested and soil samples were taken for oven dry.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 50
Date: May 24 1999

Arrived at Site: 7:00 AM
Weather: Cloudy, wet from weekend rains
Temperature: 69°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade, trucks and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz was informed that moisture content results from Friday tests were higher than 50%, therefore, this lift needs to be disked and dried before it is ready for retesting.
- \$ E.E. Cruz is not planning to do anything today. It is expected to rain this afternoon.
- \$ E.E. Cruz will open the disk whenever it is sunny.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 51
Date: May 25, 1999

Arrived at Site: 7:00 AM
Weather: Clear and sunny
Temperature: 69°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade, trucks and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz continues to disk the sixth lift.
- \$ E.E. Cruz wants to leave the lift open to let it dry and aerate overnight
- \$ E.E. Cruz is working on the pump station, they do not plan to do anything regarding the dredged material activities.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 52
Date: May 26, 1999

Arrived at Site: 7:30 AM
Weather: Clear and Sunny
Temperature: 67°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade, trucks and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz has cleared the foot prints for access roadway. Waiting for McCutchen to layout the new footprints for the access roadway and embankment#1.
- \$ The site conditions are wet from the weekend rain.
- \$ E.E. Cruz plans to disk the sixth lift today, as it has failed to meet the compaction criteria when tested on Friday, May 21, 1999.
- \$ Download the weather station data.
- \$ E.E. Cruz starts diskings the sixth lift before lunch.

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

**Page 2 of Report 52
May 26, 1999**

- \$ McCutcheon on site to layout the new grades for the embankment #1. This embankment was raised by 2.0 ft. to avoid major cuts in the existing waste at elevations between 15 ft. and 17.0 ft.

- \$ The weather forecast calls for rain tonight.

- \$ E.E. Cruz decides to seal the lift before the end of the day.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 53
Date: May 27, 1999

Arrived at Site: 7:00 AM

Weather: Bright and sunny

Temperature: 75°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade, trucks and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ AP onsite to help RMT and take care of the weather station/data logger. Apparently after the regrading in the pump station area, the data logger box and solar panel are very close to the ground (4" above the ground). A new pole extension was installed and data logger and solar panel were raised by 5.0 ft. to avoid any damage by equipment movement.
- \$ E.E. Cruz had sealed the sixth lift yesterday.
- \$ SAI coordinated with Rutgers to come onsite to conduct the compaction test. Rutgers expected at 10:00 AM.
- \$ Stra (Rutgers) could not come to the site onsite because of his vehicle break down.
- \$ SAI goes ahead and conducts the troxler test. A total of 22 locations were tested. The number of the test location was increased because of higher variations in test results in the same proximity locations.

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Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

May 27, 1999

- \$ The test locations are clearly marked so that Rutgers can come in the afternoon and conduct their tests on the same locations.
- \$ The wet densities of the test locations vary between 95.0 to 103 PCF.
- \$ BA on site at 2:30 PM.
- \$ Stra (Rutgers) on site at 2:30 PM. Stra starts the test but humbdle instrument broke down. Rutgers could not continue the test.
- \$ E.E. Cruz requested if they can start constructing the seventh lift tomorrow. Looking into the wet density results, it is not certain if the moisture content and dry density results will meet the established crieteria.
- \$ E.E. Cruz and SAI agree that if the sixth lift is disked couple of times today and left open overnight and rolled early morning tomorrow, then E.E. Cruz starts constructing the sixth lift.
- \$ E.E. Cruz starts disking the sixth lift.

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

**REPORT # 54
Date: May 28, 1999**

Arrived at Site: 6:40 AM
Weather: Bright and sunny
Temperature: 72°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade, trucks and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz started work early today (6:00 AM)

- \$ E.E. Cruz is compacting and rolling the sixth lift before they start constructing the new lift.

- \$ Two trucks, three operators (one on the dozer, one on hoe and the other one is disking the top of the stockpile within the footprints of embankment #1).

- \$ Two new settlement plates (no. 7 and no. 8) were installed at elevation 18.5.

- \$ E.E. Cruz starts constructing the seventh lift at elevation 19.5.

- \$ The material is brought from the dried dredged material from the stockpiles which were dried during last few weeks after disking the top of the stockpile within the footprints of embankment #1.

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

**Page 2 of Report 54
May 28, 1999**

- \$ During Task Force meeting on May 26, 1999, DOT had requested SAI to collect soil samples of the dredged material used for the lift construction and determine the moisture contents and create a log of the initial moisture content and amount of efforts (disking, aerating, drying and compacting) required to meet the criteria for lift approval.

- \$ RMT collects four samples (two from the stock pile, where the material is coming from to constructing the lift, and other two from the material recently hauled and pushed for the lift construction.

- \$ Two third of the lift is complete. The rest will be constructed on Tuesday.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

REPORT # 55

Date: June 01, 1999

Arrived at Site: 6:50 AM
WEATHER: Bright and
Sunny
Temperature: 81°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz continues to construct the 7th lift at Embankment #2. The portion of the lift which was constructed on Friday is dry. The temperature over last three days has been in upper to mid 80s, this has helped the material dry.
- \$ The samples of the dredged material used for the construction of the seventh lift were put in the oven for moisture content determination.
- \$ E.E. Cruz completes the construction of the seventh lift by lunch time and now they are diskings the entire lift.
- \$ E.E. Cruz starts constructing the southern portion of the access roadway. The proposed platform grades were cleared up by OENJ.
- \$ E.E. Cruz rolls the platform top before hauling the dredged material for the construction.
- \$ OENJ responsible for moving the stockpiles of the waste/dirt generated during cuts for the proposed grades of the access roadway. FJ (OENJ) contacted. I was told that OENJ is requesting E.E. Cruz to do the job.

Page 2 of Report #55

Signature:

Tharwani
Engineer

Ramesh
Resident

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

June 01, 1999

\$ E.E. Cruz is stockpiling the dry dredged material obtained from disking operations within the footprints of Embankment #1.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

REPORT # 56
Date: June 02, 1999

Arrived at Site: 6:50 AM
WEATHER: Bright and Sunny
Temperature:79°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: E.E. Cruz

OTHERS: Rutgers University

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

\$ E.E. Cruz is hauling the material from the stockpiles generated during cuts of the access roadway.

\$ E.E. Cruz continues to construct the southern section of the access roadway.

The results of the moisture content determination for the four soil samples collected from the dredged material used for the construction of the seventh lift.

Samples #	Gross Wet Wt. (gm)	Cont. Wt (gm)	Gross Dry Wt. (gm)	Net Wet Wt. (gm)	Net Dry Wt. (gm)	Moist. Content
1	602.5	189.6	443.9	412.9	254.3	62.37%
2	593.1	189.6	425.2	403.5	235.6	71.26%
3	589.2	193	406.7	396.2	213.7	85.40%
4	589.1	195.4	420	393.7	224.6	75.29%

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Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

June 02, 1999

- \$ E.E. Cruz is rolling the seventh lift, ready for compaction test. Rutgers was contacted. They will be coming at 3:30 PM.
- \$ Since it is expected to rain sometime this afternoon, SAI is starting the compaction test. Rutgers will come in the late afternoon and conduct the tests at the locations where SAI conducts the tests.
- \$ AP on site to help RMT with soil samples collection and moisture content determination.
- \$ A total of 20 locations were tested. The Western portion of the seventh lift which was completed yesterday is too wet. The Eastern portion is dry enough to pass the criteria.
- \$ Stra (Rutgers) on site at 5:45 PM to conduct the test. RMT and AP leave the site.

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

REPORT # 57
Date: June 03, 1999

Arrived at Site: 7:30 AM
WEATHER: Clear, getting cloudy
Temperature:82°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz is clearing up the footprints for the access roadway. Approximate cuts on southern portion of the access roadway are six to eight feet.
- \$ E.E. Cruz plans to disk the seventh lift before the end of the day and leave it open overnight.
- \$ RMT leaves the site early because E.E. Cruz plans to continue clearing the footprints for the access roadway for the rest of the day.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

REPORT # 58
Date: June 04, 1999

Arrived at Site: 7:30 AM
WEATHER: Clear, getting cloudy
Temperature:82°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz disked the seventh lift yesterday after I left. The material has dried up. E.E. Cruz plans to compact and seal the seventh lift before the end of the day. SAI plans to conduct the troxler test at locations which failed during the first test on this lift. Rutgers was informed about this.
- \$ E.E. Cruz is stripping of top two to three feet of the dredged material on the northern side of the ditch within the footprints of access roadway. The material beneath it is garbage which needs to be removed and transported to the southern side of the parcel G. E.E. Cruz and OENJ have to make such arrangements.
- \$ One operator is disked the dredged material within the footprints of embankment #1 and stockpiling the dry material to be used for the construction.
- \$ Weather station data downloaded.
- \$ E.E. Cruz is rolling and compacting the seventh lift. This lift has failed troxler test in the western portion because it was built three days after the eastern section was constructed.. The dry densities and moisture content results in the eastern sections were okay.

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

Page 2 of Report #58

June 04, 1999

\$ RMT decided to check the western portion of this lift for compaction criteria. The tests would be conducted on Monday.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

REPORT # 59
Date: June 07, 1999

Arrived at Site: 7:00 AM
WEATHER: Clear and Sunny
Temperature: 82°F (102°F in PM)

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz has started constructed the eighth lift at elevation 20.5 ft. The construction starts in the eastern portion of the embankment as this portion has passed the compaction criteria.
- \$ Two trucks are hauling the material. The material is left in piles as the operators are not on site to push the material.
- \$ SAI starts troxler test at seventh lift in western portion. Rutgers was informed on Friday about the decision. Have not heard from them. A total of eight samples were taken at the same locations where the previous tests have failed. The soil samples were collected for moisture content determination.
- \$ Two more samples from stabilized dredged material (one from the stockpile where the material is being hauled from and the other one from the piles stocked at the seventh lift for the construction of eighth lift) were taken. These samples are taken to determine the moisture content of the material before it is used for the construction as requested by DOT during Task Force meeting.

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

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June 07, 1999

- \$ Two operators onsite around 9:30 AM. The material left in piles for the construction of eighth lift is being pushed in one-foot lift.
- \$ One operator is pushing the dry material within the footprints of embankment #1. This material has been aerated and dried over past week.
- \$ Two trucks are having difficulty to haul the material. The dredged material at the access bridge which was built to facilitate the hauling, is too wet. Trucks have gotten stuck few times.
- \$ E.E. Cruz finished 2/3 portion of the lift. The rest will be constructed after the moisture content results are determined.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

REPORT # 60
Date: June 08, 1999

Arrived at Site: 7:00 AM
WEATHER: Clear and Sunny
Temperature: 82°F in AM & 104°F in

PM

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz is hauling the dredged material. The dredged material is relatively much drier as it has been aerated and dried over past several days. High temperatures have helped the material dry.
- \$ One laborer is handpicking any non-dredge materials (Wood, Glass, Stones, Cloth and Papers).
- \$ The moisture content was determined for the soil samples taken from the western portion of the seventh lift. The moisture content and dry density meet the criteria.
- \$ E. E. Cruz was permitted to start constructing the western portion of the eighth lift.
- \$ The moisture content for the stabilized dredged material samples was also determined.

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Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

June 08, 1999

Samples #	Gross Wet Wt. (gm)	Cont. Wt (gm)	Gross Dry Wt. (gm)	Net Wet Wt. (gm)	Net Dry Wt. (gm)	Moist. Content
1	594.8	189.6	422.1	405.2	232.5	74.28%
2	591.3	189.6	405.1	401.7	215.5	86.40%

\$ By lunch time E.E. Cruz finishes the construction of the eighth lift and starts constructing the access roadway. The dredged material used for this portion has stones which are being handpicked by a laborer.

\$ It is expected to rain tonight, E.E. Cruz decides to seal the lift and open/disk it tomorrow morning.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

REPORT # 61
Date: June 09, 1999

Arrived at Site: 7:00 AM
WEATHER: Clear and Sunny
Temperature:81°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS: Rutgers University

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz continues to construct the access roadway at Elevation 14.0 ft.
- \$ E.E. Cruz is disking the eighth lift. SAI plans to conduct the troxler test. Rutgers was informed about this.
- \$ Downloaded the weather station data.
- \$ SAI and Rutgers perform the compaction tests.
- \$ The grades on northern toe of embankment #1 will end up in two to three feet of garbage. OENJ is aware of this. SAI will raise the Embankment #1 base elevation from 14.0 ft. to 16.0 ft. to avoid any major cuts in the garbage. E.E. Cruz has started stockpiling the garbage which is encountered during the cuts on northern toe of the Embankment #1.
- \$ E.E. Cruz will transport this garbage to restaging area in Parcel G. (South of Great Ditch Pipe).

REPORT # 62
Date: June 10, 1999

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

Arrived at Site: 7:00 AM
WEATHER: Clear and Sunny
Temperature: 78°F (hotter in PM)

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz is excavating within the footprints of access roadway to clear the garbage.
- \$ Two trucks are hauling the waste material into the staging area at Parcel G.
- \$ Top 2 to three feet of the stockpile are good dredge material which is stripped of and staged on the sides to be used for the construction.
- \$ Eighth lift which has failed from yesterday troxler test is being disked to aerate and dry. E.E. Cruz decides to leave this lift open for the night as it is expected to be nice weather.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

REPORT # 63
Date: June 11, 1999

Arrived at Site: 7:00 AM
WEATHER: Cloudy
Temperature:79°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS: Rutgers University

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz is compacting and rolling the eighth lift.
- \$ E.E. Cruz is clearing the two sides of the horizontal inclinometer which had gotten buried during the construction. Rutgers is going to take some initial readings.
- \$ E.E. Cruz finishes compaction and rolling by lunch time.
- \$ SAI and Rutgers are performing the compaction tests on eighth lift.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

REPORT # 64
Date: June 14 1999

Arrived at Site: 7:00 AM
WEATHER: Cloudy and occasional drizzle
Temperature:75°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz was permitted to construct the ninth lift on Embankment #2.
- \$ The dredged material used for the construction is hauled from the dry stockpiles near the embankment #1.
- \$ Two samples of the amended dredged material were taken to determine the initial moisture content.
- \$ By the end of the day E.E. Cruz finishes constructing the ninth lift.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

REPORT # 65
Date: June 15, 1999

Arrived at Site: 7:00 AM
WEATHER: Cloudy
Temperature:74°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS: McCutcheon Surveyors.

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz has started constructing the second lift on access roadway. They started building the second lift in the southern portion of the access roadway.
- \$ SAI has not performed the compaction test on the first lift of the access roadway, E.E. Cruz was told that they can not build the second lift until the first lift is approved. E.E. Cruz was told to stop constructing the lift. The dredged material from the portion which was built was stockpiled for future use.
- \$ E.E. Cruz continues to cut and haul the garbage encountered during the clearing of footprints of access roadway.
- \$ E.E. Cruz is disking the ninth lift on Embankment 2.
- \$ While excavating into the access roadway, the force main was hit and broken. E.E. Cruz is repairing the broken section of the force main.
- \$ McCutcheon Surveyors on site to lay out the southern toe of the embankment #1.

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June 15, 1999

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

\$ The moisture content for the stabilized dredged material samples was also determined.

Samples #	Gross Wet Wt. (gm)	Cont. Wt (gm)	Gross Dry Wt. (gm)	Net Wet Wt. (gm)	Net Dry Wt. (gm)	Moist. Content
1	633.3	189.6	445.7	443.7	256.1	73.25%
2	671.0	189.6	459.2	481.4	269.6	78.56%

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

REPORT # 66
Date: June 16 1999

Arrived at Site: 7:00 AM
WEATHER: Clear
Temperature:71°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS: McCutcheon Surveyors, Rutgers University

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz is dressing the ninth lift at Embankment 2.
- \$ The excavation in the access roadway continues. The dredged material stripped from the top of the access roadway is hauled into the footprints of Embankment #1 into portion which has already met the proposed elevation of MSL 16.0 ft.
- \$ E.E. Cruz is compacting/rolling the ninth lift to prepare for the compaction test.
- \$ SAI/Rutgers perform the compaction tests on ninth lift at Embankment #2.
- \$ McCutcheon on site to shoot the settlement plates tops.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

REPORT # 67
Date: June 17, 1999

Arrived at Site: 7:00 AM
WEATHER: Clear
Temperature:71°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ The construction of the tenth lift at Embankment started today and was completed at the end of the day.
- \$ The dredged material used for the construction was hauled from the stockpile closer to the wetlands transition area.
- \$ Two samples for initial moisture content were taken.
- \$ The moisture content for the stabilized dredged material samples was also determined.

Samples #	Gross Wet Wt. (gm)	Cont. Wt. (gm)	Gross Dry Wt. (gm)	Net Wet Wt. (gm)	Net Dry Wt. (gm)	Moist. Content
1	550	189.6	379	360.4	189.4	62.37%
2	540	189.6	380	350.4	190.4	71.26%

REMARKS:

REPORT # 68

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

Date: June 18, 1999

Arrived at Site: 7:00 AM
WEATHER: Cloudy
Temperature:78°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz is disking the 10th lift at Elevation of 22.5 ft. of Embankment #2.
- \$ Disking the southern portion of 1st lift at Elevation 15.0 ft. of Access roadway.
- \$ Weather station data downloaded.
- \$ The Excavation of waste to prepare the access roadway platform is complete.
- \$ RMT leaves site at 3:40 p.m.

REMARKS:

REPORT # 69
Date: June 21, 1999

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

Arrived at Site:

7:00 AM

WEATHER:

Clouds/Light
rain

Temperature: 68°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ It had rained over the weekend. Since the top of 10th lift at Embankment #1 was left open, the conditions are very wet.
- \$ E.E. Cruz is cutting into northern side of the access roadway. There are two big concrete slabs which were used during Walsh Dredge Material operation. I was told by OENJ that these slabs are sitting on piles. It was decided that these two slabs will not be removed.
- \$ E.E. Cruz has started sealing the 10th lift at Embankment #2, as it has started raining again.
- \$ E.E. Cruz is hauling the garbage encountered during the excavations from the access roadway footprints. The garbage is hauled into restaging area at Parcel G.

REMARKS:

REPORT # 70

Date: June 22, 1999

Arrived at Site:

7:00 a.m.

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

WEATHER: Clear
Temperature: 78°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz starts clearing the western portion of Embankment #1.
- \$ The dredged material is stockpiled and the garbage is hauled to the restaging area at Parcel G.
- \$ The geosynthetic fabric for the embankment 1 arrives on site today.
- \$ The dredged material stockpiled from the cuts into roadway and within the footprints of Embankment #1 is pushed to northern side of the Embankment #1 for the construction of the first lift at elevation 17.00 ft.
- \$ The dredged material closer to the roadway is pushed towards southern side of the access roadway for the construction of the 1st lift at access roadway.

REMARKS:

REPORT # 71
Date: June 23, 1999

Arrived at Site: 7:00 a.m.
WEATHER: Clear and Bright

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

Temperature: 82°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS: Rutgers University

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz starts the construction of 1st lift at elevation 17.0 ft of embankment 1. The dredged material stockpiled from the cuts into the access roadway is used for the construction of the 1st lift.
- \$ E.E. Cruz is dressing up the 10th lift at elevation 22.5 of embankment 2.
- \$ SAI/Rutgers conduct the compaction test on 10th lift. A total of 19 locations were tested and soil samples were collected for soil moisture content determination.
- \$
- \$ Weather station data download.
- \$ E.E Cruz has stockpiled some of the dredged material for the construction of the 1st lift at the access roadway.

REMARKS:

REPORT # 72
Date: June 24, 1999

Arrived at Site: 7:00 a.m.
WEATHER: Temperature: 87°F

PERSONNEL ON SITE:

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS: Aqua Survey

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz constructs the 1st lift at Elevation 17.00 ft. of Embankment 1.
- \$ The dredge material is hauled from the northern side of the stockpile.
- \$ Aqua Survey on site to collect the monthly samples of amended dredge.
- \$ A total of five samples were collected. Two for monthly TOC analysis and three for overall stabilized dredge material characterization.
- \$ RMT determines the moisture content for soil samples collected from 10th lift at Embankment #2. Some of the moisture contents are higher than 50%, but since the lift has been left untouched and temperatures have been very high, RMT determines that the higher moisture contents have been brought down.
- \$ E.E. Cruz was advised to go ahead and start constructing the 11th lift at Embankment #2.
- \$ Two samples from the stabilized dredge material were collected to determine the initial moisture content.

REMARKS:

REPORT # 73

Date: June 25, 1999

Arrived at Site: 7:00 a.m.

WEATHER:

Clear
and
Bright

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

Temperature: 79°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz starts the construction of 11th lift at Elevation 23.5 ft.
- \$ The material is hauled from north of Embankment #1 to construct the 11th lift.
- \$ Two samples were taken from stabilized dredge to determine the initial moisture content for 11th lift.
- \$ The lift is completed at the end of the day.
- \$ E.E. Cruz continued rolling/compacting the 1st lift of the roadway.

REMARKS:

REPORT # 74

Date: June 28, 1999

Arrived at Site: 7:00 a.m.

WEATHER:

Clear/Sunny

Temperature: 93°F

PERSONNEL ON SITE:

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS: McCutcheon Surveyors

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ RMT approves the 1st lift of the access roadway based on visual inspection. This lift has been rolled/compacted a few times.
- \$ E.E. Cruz starts constructing the 1st lift of access roadway at Elevation 16.00 ft.
- \$ RMT wanted to test the 1st lift(Elevation 17.00) of Embankment #1, but Rutgers is not available. RMT decides to test it tomorrow.
- \$ 1st lift of embankment rolled.
- \$ E.E. Cruz is rolling the 11th lift of Embankment #2.
- \$ The construction of the roadway still in progress.
- \$ The dredge material used for 11th lift of Embankment #2 has initial moisture content:

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June 28, 1999

Samples #	Gross Wet Wt. (gm)	Cont. Wt. (gm)	Gross Dry Wt. (gm)	Net Wet Wt. (gm)	Net Dry Wt. (gm)	Moist. Content
1	598.2	189.6	428.5	408.6	238.9	71.03%

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

2	578.3	189.6	402.3	388.7	212.7	82.75%
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\$ Four samples from raw dredge material for the construction of 2nd lift at access roadway yielded the initial moisture content of:

Samples #	Gross Wet Wt. (gm)	Cont. Wt. (gm)	Gross Dry Wt. (gm)	Net Wet Wt. (gm)	Net Dry Wt. (gm)	Moist. Content
1	598.3	189.7	434.1	408.6	244.4	67.18%
2	592.0	192.3	436.0	399.7	243.7	64.01%
3	591.9	194.5	423.9	397.4	229.4	73.23%
4	543.9	195.2	387.0	348.7	191.8	81.80%

\$ Rutgers conducted the compaction/stiffness test at Embankment #1.

\$ McCutcheon on site to layout the finished grades at Embankment #2.

REMARKS:

REPORT # 75
Date: June 29, 1999

Arrived at Site:

7:30 a.m.

WEATHER:

Cloudy/ Rain in the

p.m.

Temperature: 83°F

PERSONNEL ON SITE:

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

SAI: RMT, LMM, MS

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz is finishing the construction of 2nd lift at access roadway.
- \$ LMM on site to help RMT with Troxler test at 2nd lift of Embankment #1.
- \$ Mounir on site for site visit.
- \$ E.E. Cruz disked the 11th lift and rolled it at the end of the day.
- \$ E.E. Cruz is stockpiling the dredged material to be used for the construction of 2nd lift at Embankment #1.

REMARKS:

REPORT # 76
Date: June 30, 1999

Arrived at Site:

7:30 a.m.

WEATHER:

Sunny

Temperature: 82°F

PERSONNEL ON SITE:

SAI: RMT, LMM

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

CONTRACTORS: E.E. Cruz

OTHERS: Rutgers University

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz continues to stockpile the dredge material within the footprints of Embankment.
- \$ E.E. Cruz starts the construction of 2nd lift at Embankment #1 at Elevation 18.00 ft.
- \$ E.E. Cruz has compacted the 11th lift at Elevation 23.5 ft. of Embankment #2. The lift is ready for compaction test.
- \$ SAI/Rutgers perform the compaction test at the 11th lift. A total of 19 locations were tested. Soil samples collected for moisture content determination.
- \$ Four soil samples from the amended dredge were collected for initial moisture content determination. This dredge material is being used for the construction of 2nd lift at Embankment #1.

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June 30, 1999

Samples #	Gross Wet Wt. (gm)	Cont. Wt. (gm)	Gross Dry Wt. (gm)	Net Wet Wt. (gm)	Net Dry Wt. (gm)	Moist. Content
1	632.5	298.4	492.5	334.1	194.1	72.13%
2	610.5	296.7	477.4	313.8	180.7	73.66%
3	711.4	322.5	576.6	388.9	254.1	53.05%

Signature:

Ramesh Tharwani
Resident Engineer

DOT-EMBANKMENT DEMO PROJECT

DAILY FIELD REPORT

4	600.0	309.2	490.7	290.8	181.5	60.22%
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REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT #77
Date: July 01, 1999

Arrived at Site: 7:00 AM
WEATHER: Clear (Light to heavy rain in the p.m.)
Temperature: 79°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz is diskings the 2nd lift on access roadway.
- \$ The stockpiles of garbage excavated from embankment 1 footprints to meet the proposed grades of platform are cleared up and hauled to the restaging area in Parcel G.
- \$ No other construction work is in progress.
- \$ RMT leaves site at 3:30 PM.

REMARKS:

Signature:

Tharwani
Engineer

Ramesh
Resident

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 78
Date: July 02, 1999

Arrived at Site:
WEATHER:

PERSONNEL ON SITE:

SAI:

CONTRACTORS:

OTHERS:

EQUIPMENT:

DESCRIPTION OF THE ACTIVITIES:

\$ E.E. Cruz is off. They had worked 40 hours in the last four days.

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT #79
Date: July 06, 1999

Arrived at Site: 7:00 AM
WEATHER: Very hot
Temperature: 110°F
(Heat Index 117°F)

PERSONNEL ON SITE:

SAI: RMT, MQ

CONTRACTORS: E.E. Cruz

OTHERS: Rutgers, McCutcheon Surveyors

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ SAI/Rutgers are conducting the compaction test on the 2nd lift of access roadway
- \$ E.E. Cruz is working on the northern slopes of the embankment #2.
- \$ E.E. Cruz starts the installation of percolated water collection system at Embankment #1.
- \$ McCutcheon on site to layout the offsets for percolated collection system and proposed settlement plates on embankment #1.
- \$ Settlement plate #9 installed on elevation 23.5 of embankment #2.
- \$ McCutcheon does not have the percolated water laterals on their plans. RMT marking the percolated water laterals measured from the plans.
- \$ RMT leaves the site at 4:00 PM.

REMARKS:

REPORT # 80
Date: July 07, 1999

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Arrived at Site: 7:00 AM
WEATHER: Clear
Temperature: 89°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz constructing the 3rd lift on the access roadway.

- \$ The dredged material used for the construction of the 3rd lift of access roadway is being hauled from the dredged stockpile in wetland transition area.

- \$ Two samples taken from the amended dredge material were analyzed for initial moisture content determination. The material is used for the construction of the 3rd lift of the access roadway. The results of the initial moisture content are:

Samples #	Gross Wet Wt. (gm)	Cont. Wt. (gm)	Gross Dry Wt. (gm)	Net Wet Wt. (gm)	Net Dry Wt. (gm)	Moist. Content
1	657.2	329.8	513.1	332.4	188.3	76.53%
2	647.1	312.4	499.1	334.7	186.7	79.27%

**Page 2 of Report # 80
July 07, 1999**

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

\$ The installation of the percolated water collection pipe continues.

\$ RMT leaves the site at 3:15 p.m.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 81
Date: July 08, 1999

Arrived at Site: 7:30 AM
WEATHER: Clear
Temperature: 82°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS: Rutgers

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz is dressing up the 2nd lift of embankment 1.
- \$ Rutgers onsite to perform the compaction test.
- \$ Rutgers/SAI perform the compaction test on the 2nd lift (Elevation 18.0 ft.) Of Embankment # 1. A total of 26 locations were tested.
- \$ The portion of the lift is ready.
- \$ The percolated water laterals and horizontal inclinometer locations were marked by RMT as measured from the project plans. McCutcheon did not layout the leachate laterals. Apparently some miscommunication between McCutcheon office and Field crew.
- \$ E.E. Cruz continues to work on the northern slope of the embankment #2. The dredged material trimmed off from the slopes is being used on top of the embankment #2 to meet the proposed elevation of 24.5 (six inches of top soil will be used to meet the proposed elevation of 25.0 ft.)

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Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

July 08, 1999

\$ The garbage uncovered is being stockpiled and hauled to the restaging area of parcel G.

\$ RMT leaves the site at 3:30 PM.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 82
Date: July 09, 1999

Arrived at Site: 7:00 AM
WEATHER: Clear and Bright
Temperature: 82°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS: McCutcheon Surveyors, Rutgers

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ McCutcheon on site to shoot the settlement plate elevation on embankment #2.
- \$ Settlement plate 9 was installed on elevation 24.5 at embankment #2.
- \$ E.E. Cruz continues to construct the 3rd lift on the access roadway.
- \$ E.E. Cruz starts the installation of percolated water laterals on embankment #1.
- \$ The dredged material used for the construction of 3rd lift on access roadway has lot of debris. E.E. Cruz was advised to engage a labor to hand pick any foreign material (iron, wood, paper, tire or big stones) and place the clean dredged material for the construction.
- \$ E.E. Cruz starts the installation of geosynthetic fabric on Embankment #1.
- \$ Stra (Rutgers) on site to oversee the fabric installation. Three extra laborers on site for fabric installation.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 83
Date: July 12, 1999

Arrived at Site: 6:15 AM
WEATHER: Clear
Temperature: 68°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: E.E. Cruz

OTHERS: FJ (OENJ), Rutgers

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ EOHSI (Rutgers) is starting the second phase of air monitoring today. Four generators for air monitoring samplers power source were brought to site today.
- \$ E.E. Cruz continues to install the geosynthetic fabric in eastern portion of the embankment #1. Stra from Rutgers on site to oversee the fabric installation.
- \$ E.E. Cruz is placing the dredged material on top of fabric for the construction of 3rd lift on embankment #1. This lift is 1.5 ft. height to avoid any damage to fabric due to heavy equipment movement.
- \$ FJ from OENJ on site to see the fabric installation.
- \$ E.E. Cruz is disking the 3rd lift (Elevation 17.0 ft) of access roadway for drying and aeration.
- \$ At 1:00 PM , EOHSI cancels the air monitoring. They never showed up on site.
- \$ Two samples from the amended dredge were taken for initial moisture content determination. The dredge material is used for the construction of the 3rd lift of

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Embankment #1.
Page 2 of Report # 83
July 12, 1999

The results are:

Samples #	Gross Wet Wt. (gm)	Cont. Wt. (gm)	Gross Dry Wt. (gm)	Net Wet Wt. (gm)	Net Dry Wt. (gm)	Moist. Content
1	575.6	189.80	413.0	385.8	223.2	72.85%
2	599.3	192.10	428.3	407.6	236.2	72.57%

\$ RMT/AP Leave site at 3:30 PM

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 84
Date: July 13, 1999

Arrived at Site: 7:30 AM
WEATHER: Clear and Bright
Temperature: 71°F

PERSONNEL ON SITE:

SAI: RMT, LMM, MS

CONTRACTORS: E.E. Cruz

OTHERS: Rutgers

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz continues to construct the 3rd lift at Embankment #1.
- \$ E.E. Cruz rolling/compacting the 3rd lift at Access Roadway before SAI could test.
- \$ Approximate 37' of percolated water pipe was not installed because of unavailability of pipe. This section of the pipe was installed today.
- \$ The settlement plates 10 and 11 were installed today.
- \$ McCutcheon was requested to shoot the initial elevation of all six settlement plates at Embankment #1.
- \$ LMM on site to help RMT with Troxler test. Rutgers on site to perform the compaction test.
- \$ A total of 25 locations were tested for level of compaction. The wet densities results are very high.
- \$ MS on site for a site visit. He was informed about the construction progress.

Page 2 of Report #84

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

July 13, 1999

\$ Soil samples taken for moisture content determination were weighed and placed in oven at 224°F for 24 hrs.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 85
Date: July 14, 1999

Arrived at Site: 6:00 AM
WEATHER: Clear and Bright
Temperature: 69°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: E.E. Cruz

OTHERS: BA, NJDEP Representative

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ The second phase of Air Monitoring started today. Four Area samplers and Four personal samples were collected. The four personal samplers were attached to construction workers. Two operators and two teamsters.
- \$ E.E. Cruz starts the construction of the 4th lift (Elevation 18.0') at the access roadway. The construction started from southern portion.
- \$ E.E. Cruz starts the work on slopes on Embankment #2. The final lift at elevation 24.5 is being constructed from the dredged material obtained from cuts of the slopes on Embankment#2.
- \$ The 3rd lift at elevation 19.5 of Embankment #1 was opened and disked for aeration and drying.
- \$ Two samples of amended dredged material were collected to determine the initial moisture content of the material being used for the construction of 4th lift of the roadway and the results are:

Page 2 of Report #85

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

July 14, 1999

Samples #	Gross Wet Wt. (gm)	Cont. Wt. (gm)	Gross Dry Wt. (gm)	Net Wet Wt. (gm)	Net Dry Wt. (gm)	Moist. Content
1	593.2	189.8	418.6	403.4	228.8	76.31%
2	613.2	192.10	425.9	421.1	233.8	80.11%

\$ BA on site with NJDEP. BA feels that the road elevation is higher than proposed. McCutcheon was requested to shoot the roadway top elevations and adjacent parking lot elevation. MS in office was informed to coordinate this work with McCutcheon.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 86
Date: July 15, 1999

Arrived at Site: 5:50 AM
WEATHER: Clear and Bright
Temperature: 65°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: E.E. Cruz

OTHERS: EOSHI

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz continues to build the 4th lift at access roadway. The dredged material used for the construction of 4th lift is hauled from the dredge stockpile close to wetland transition area.

- \$ Air monitoring (Area samples and four personal samples) was performed for the second day.

- \$ Some of the construction workers reluctant to wear the pumps because they feel it interferes with their work. E.E. Cruz site manager was talked about this and he spoke with the construction workers and explained them the scope of the study.

- \$ The area sampling started at 6:50 AM and continued till 4:00 PM.

- \$ E. E. Cruz continues to work on the slopes on Embankment #2.

- \$ A brief construction progress meeting was held among RMT, E. E. Cruz Site Manager, and E.E. Cruz foreman to discuss the schedule and sequence of work items to be finished.
E. E. Cruz is expecting to complete the job within next two weeks.

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

**Page 2 of Report 86
July 15, 1999**

- \$ E.E. Cruz informed RMT that the construction of stormwater drains, installation of a 12" D.I.P. and a manhole in the access roadway are not part of their contract.
- \$ Bashar, SAI project manager, was informed about these construction items.
- \$ RMT/AP leave site at 5:00 PM

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 87
Date: July 16, 1999

Arrived at Site: 6:00 AM
WEATHER: Clear
Temperature: 71°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: E.E. Cruz

OTHERS: Rutgers, ETL (for monthly sample collection)

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ E. E. Cruz continues to build the access roadway on north-east side.
- \$ One operator is finishing up the slopes on embankment #2.
- \$ The roadway was completed and then one operator and truck started moving the garbage piled up in the area between two embankments.
- \$ The 3rd lift on Embankment 1 was disked again this morning and then dressed up and rolled for compaction test.
- \$ SAI and Rutgers conducted the compaction test on 3rd lift of the embankment 1. A total of 15 locations were tested. AP on site to help RMT with Troxler.
- \$ ETL on site to collect dredged material samples. Two samples from two fresh stockpiles were collected.
- \$ No personal or area sampling (Air monitoring) was performed today as the activities were just limited to disking and rolling.

REPORT # 88

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Date: July 19, 1999

Arrived at Site: 6:50 AM
WEATHER: Clear and Bright
Temperature:84°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS: .EOHSI

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ EOHSI on site to perform air monitoring. A total of three personal and four area samples are being collected.

- \$ E.E. Cruz has started constructing the 4th lift at Embankment 1. The dredged material being used for the construction is being hauled from the area between two embankments.

- \$ The excavator broke down this morning after fifteen minutes of operation. A new excavator was borrowed from other contractor to continue the work.

- \$ Three personal samplers are mounted on two truck drivers and one dozer operator.

- \$ Fourth sampler (PM10) was mounted on one operator after lunch as the dust generated during those hours is higher than the one generated during morning hours.

- \$ SAI/Rutgers conduct the compaction test at the final lift (elevation 24.5 ft) of embankment #2. A total of fifteen locations were sampled.

Page 2 of Report # 88July 19, 1999

- \$ Two soil samples were collected from the dredged material being used for the

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

construction of the 4th lift at Embankment #1. The results are:

Samples #	Gross Wet Wt. (gm)	Cont. Wt. (gm)	Gross Dry Wt. (gm)	Net Wet Wt. (gm)	Net Dry Wt. (gm)	Moist. Content
1	584.5	189.80	409.2	394.7	219.4	79.90%
2	594.9	192.10	412.6	402.8	220.5	82.68%

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 89
Date: July 20, 1999

Arrived at Site: 6:00 AM
WEATHER: Cloudy (is clearing up)
Temperature: 73°F

PERSONNEL ON SITE:

SAI: RMT, AP, MS

CONTRACTORS: E.E. Cruz

OTHERS: McCutcheon Surveyors

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ It had rained last night, site conditions are little wet. It is expected to get better as the day progresses. E.E. Cruz continues to build the 4th lift on Embankment #1.
- \$ The dredged material is being hauled from the dredge stockpile in between two embankments. The dredged material has lot of debris. RMT decides to stop the use of the dredged material from that stockpile.
- \$ The dredged material is hauled from the stockpile on eastern side.
- \$ Four area and three personal samples were collected as part of the air monitoring program.
- \$ E.E. Cruz is finishing up the fourth lift at the access roadway. BA and RMT decides to stop the access roadway at this elevation (18.5 ft. M.S.L) as the parking lot elevation on western side has been lowered than original elevation of 20 ft.
- \$ E.E. Cruz is rolling and compacting the access roadway top.
- \$ McCutcheon on site to shoot the settlement plate elevations on Embankment 1 and 2.

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

**Page 2 of Report # 89
July 20, 1999**

\$ MS on site for construction progress visit.

\$ EOHSI decides to continue area sampling for six hours tomorrow.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 90
Date: June 21, 1999

Arrived at Site: 7:50 AM
WEATHER: Cloudy
Temperature: 80°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: E.E. Cruz

OTHERS: EOHSI

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz continues to construct the 4th lift on Embankment 1. The western portion of the embankment should be completed sometime around lunch.
- \$ EOHSI on site to perform area sampling as part of the air monitoring program.
- \$ E.E. Cruz completed the construction of the 4th lift of the Embankment 1 at elevation 20.5 ft. The lift was disked and opened for aerating and drying.
- \$ The area sampling completed at 2:30 p.m. as the construction work was completed for the day.
- \$ EOHSI determines that area sampling performed so far is sufficient for the assigned task.
- \$ RMT/AP leave site at 3:25 p.m.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 91
Date: July 22, 1999

Arrived at Site: 7:00 AM

WEATHER: Cloudy and Drizzles
Temperature: 76°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ E. E. Cruz is disking the 4th lift of Embankment 1. The dredged material used for this lift has lot of debris which is being cleaned up by one labor.
- \$ E.E. Cruz is dressing up the north-north eastern portion of parcel G.
- \$ The wet conditions and not enough time to dry and aerate the 4th disk, compaction test will be performed sometime tomorrow.

REMARKS:

92

REPORT #

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Date: July 23,

1999

Arrived at Site:

6:30 a.m.

WEATHER:

Clear and Bright

PERSONNEL ON SITE:

Temperature: 76°F

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS: ETL

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz is installing the connecting pipe between two percolated water pipes installed at Embankment #1 and #2.
- \$ A good amount of percolated water encountered when percolated water collection pipe from Embankment # 2 was opened to connect with connection pipe.
- \$ ETL was contacted to collect the percolated water sample.
- \$ ETL on site to collect the percolated water sample.

REMARKS:

REPORT # 93

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Date: July 26,

1999

Arrived at Site: 6:50 AM
WEATHER: Clear
Temperature: 92°F

PERSONNEL ON SITE:

SAI: RMT, KH

CONTRACTORS: E.E. Cruz

OTHERS: Rutgers

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ E.E. Cruz is dressing up the 4th lift (Elevation 20.5ft) at Embankment 1.
- \$ E.E. Cruz is rolling and compacted the 4th lift at Embankment 1.
- \$ Percolated water pipes from embankment 1 and Embankment 2 are connected to the manhole. The manhole does not have bottom. E.E. Cruz was told to pour some concrete in the bottom.
- \$ Both pipe ends in manhole are plugged for sampling purposes. An outlet from manhole is connected to a leachate cleanout.
- \$ SAI/Rutgers performed compaction tests on 4th lift of roadway and on 4th lift of Embankment 1. Eleven locations at roadway and Eighteen locations at Embankment 1 were tested.
- \$ Soil samples were collected for all locations to determine the moisture content.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

94

REPORT #

1999

Date: July 27,

Arrived at Site: 7:00 a.m.

WEATHER: Clear
Temperature: 89°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: E.E. Cruz

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller, and sample collectors

DESCRIPTION OF THE ACTIVITIES:

- \$ RMT on site to weigh the soil samples collected yesterday from Embankment 1 and roadway.
- \$ The troxler results for both the lifts (Roadway and Embankment 1) show that the required level of compaction has been achieved.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 95
Date: August 11, 1999

Arrived at Site: 7:45 a.m.
WEATHER: Partly cloudy,
Wind: 0-5 mph
Temperature: 110°F

PERSONNEL ON SITE:

SAI: LM

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ Dave and Farhad determined that dredge near wetlands is dry and therefore could be placed on Embankment #1. No Noticeable odors.

- \$ Large stockpile of bricks was being placed on top of screenings west of Embankment #2.

- \$ Dave Fedowski said trailer has arrived, should have electricity by this afternoon or tomorrow morning.

- \$ Embankment #1 received 1 lift today. The lift was sealed.

- \$ Key for trailer was received.

- \$ LM leaves site at 3:00 p.m.

REMARKS:

REPORT #96
Date: August 12, 1999

Arrived at Site: 7:40 AM

Signature:

Ramesh

Resident

Tharwani
Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

WEATHER:

Clear, humid
Temperature: 85°F

PERSONNEL ON SITE:

SAI: LM

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader,

DESCRIPTION OF THE ACTIVITIES:

- \$ Due to rain the previous night, no dredge will be moved.
- \$ Contractors will continue laying brick and rubble in area right of Embankment #2.
- \$ Key to trailer did not work.
- \$ LM leaves the site at 9:45 AM.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

**REPO
RT # 97
Date: August 13, 1999**

Arrived at Site: 6:45 a.m.
WEATHER: Clear
Temperature: 72oF

PERSONNEL ON SITE:

SAI: AL

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ KMC is constructing Embankment #1.
- \$ Any debris is being removed by hand.
- \$ Current lift is rolled and has been completed 60% towards bay and sealed.
- \$ AL leaves site at 3:00 p.m.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 98
Date: August 16, 1999

Arrived at Site: 8:20 a.m.
WEATHER: Clear
Temperature: 76oF

PERSONNEL ON SITE:

SAI: AL

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ AL checked the plug on the oven in the trailer. The plug is 20 amp. With 1 horizontal, 1 vertical prong, and a ground.
- \$ Kevin McVey hired for electrical work on oven. Work is contracted at \$150.00. Oven is moved to other trailer with instructions for Kevin to leave the oven on overnight at 90°F.
- \$ Dredge material is spread over lift and rolled.
- \$ Current lift is rolled and has been completed 60% towards bay and sealed.
- \$ AL leaves site at 2:00 p.m.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT # 99
Date: August 17, 1999

Arrived at Site: 7:20 a.m.
Weather: Cloudy
Temperature: 78°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozers, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ KMC continues to construct the first (KMC-s first, otherwise 5th lift) at elevation 21.5 ft. at Embankment 1.

- \$ The material being used for the construction of the lift has lot of debris. KMC was advised to bring one labor to clean the material. KMC has made some arrangement to bring the labor tomorrow.

- \$ The dredge material being used for the embankment was sampled for initial moisture content and placed into oven for drying over night.

- \$ OENJ has brought some recycled asphalt millings to be used on top of the embankment 2 as top cover. BA was asked to seek the approval. BA okayed the material to be used as top cover for the embankments and access roadway.

- \$ The material being used for the construction of the embankment is excavated from the area in between two embankments. Two dozers are pushing the dredged material in stockpiles to be used for the future construction.

- \$ RMT leaves the site at 3:00 pm.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT #99
Date: August 18, 1999

Arrived at Site: 7:00 AM
WEATHER: Clear
Temperature: 79°F

PERSONNEL ON SITE:

SAI: RMT, LM

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ KMC is diskings the first lift at an Elevation of 21.5 ft.
- \$ The samples for initial moisture content determinations were taken out. The average moisture content of two samples came out to be 75.5%.
- \$ Millings on top of Embankment #2.
- \$ RMT noticed that the settlement plate 1 pipe at Embankment 2 has been damaged by KMC during the construction activities. KMC was advised to repair the pipe.
- \$ KMC disked the 1st lift again, then after lunch the lift was rolled twice.
- \$ SAI conducted Troxler.
- \$ Rutgers was contacted by message but have not heard back.
- \$ Samples put in the oven at 240°F

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

\$ RMT, LM left site at 4:45pm.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT #100
Date: August 19,

1999

Arrived at Site: 7:10 AM
WEATHER: Partly Sunny
Temperature: 78°F

PERSONNEL ON SITE:

SAI: KH, LMM

CONTRACTORS: KMC

OTHERS: Rutgers University

EQUIPMENT: Excavator, Dozers, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ KMC opened up part of Embankment #1, they will compact it this afternoon.
- \$ Samples from Troxler test weighed. Test fails.
- \$ Rolling of Embankment #1, lift 21.5 ft is taking place.
- \$ Some concrete debris in dredge noted as lift was compacted.
- \$ SAI and Rutgers conducted the compaction test on the 21.5 ft. lift of Embankment #1. A total of 20 locations were tested. LMM on site to help KH with Troxler.
- \$ KH, LMM left site at 6:30 pm.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT #101
Date: August 20,

1999

Arrived at Site: 3:00 PM
WEATHER:

PERSONNEL ON SITE:

SAI: KH

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Loader, Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

\$ KH on site to weigh samples from the oven.

\$ 21.5 ft. lift passes. KMC will begin building next lift on Monday.

REMARKS:

REPORT #102

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Date: August 23,

1999

Arrived at Site: 7:20 AM
WEATHER: Clear
Temperature: 66°F

PERSONNEL ON SITE:

SAI: LMM

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Loaders

DESCRIPTION OF THE ACTIVITIES:

- \$ KMC has begun constructing the lift at elevation 22.5 ft. on Embankment #1.
- \$ Dredge used in construction is being taken from the stockpile to the side of the Embankment and appears clean and free of debris.
- \$ LMM collected two samples of the dredge material being used to construct the lift. Samples put into the oven at 240°F.
- \$ OENJ has hired a full-time laborer to hand pick any garbage or debris from the lift.
- \$ LMM left site at 2:30pm.

REMARKS:

REPORT #103

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

Date: August 24,

1999

Arrived at Site: 7:20 AM
WEATHER: Hazy
Temperature: 72°F

PERSONNEL ON SITE:

SAI: LMM, BA

CONTRACTORS: KMC

OTHERS: ETL Inc.

EQUIPMENT: Excavator, Dozers, Loaders, Disking blade, Roller and Sample Collectors

DESCRIPTION OF THE ACTIVITIES:

\$ KMC is excavating and stockpiling material to be used to finish the lift.

\$ John from Environmental Testing Laboratories collected two samples of the dredge used in constructing the lift for the monthly sample.

\$ The two samples taken from the amended dredge material were analyzed for initial moisture content determination. The results are:

\$

Samples #	Gross Wet Wt. (gm)	Cont. Wt. (gm)	Gross Dry Wt. (gm)	Net Wet Wt. (gm)	Net Dry Wt. (gm)	Moist. Content
1	642.7	189.4	475.5	453.3	286.1	58.44%
2	621.8	192	465.0	439.8	273	61.09%

\$ OENJ plans to finish the lift tomorrow. Troxler testing is planned for tomorrow afternoon.

\$ LMM left site at 2:30pm.

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

**REPO
RT #104**

Date: August 25,

1999

Arrived at Site: 7:05 AM
WEATHER: Clear
Temperature: 78°F

PERSONNEL ON SITE:

SAI: LM, KH

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Loaders Disking blade and Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ KMC is finishing the 22.5 ft. lift.
- \$ Called Stra from Rutgers to tell that Troxler testing would be in the afternoon.
- \$ Strong petroleum odor noticed south of Embankment #2.
- \$ Embankment #1 was disked then rolled.
- \$ SAI and Rutgers conducted the compaction test on the 22.5 ft. lift of Embankment #1. A total of 14 locations were tested. KH on site to help LM with Troxler.
- \$ LM, KH left site at 5:50 pm.

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REMARKS:

REPORT #105
Date: August 27,

1999

Arrived at Site: 9:15 AM
WEATHER: Cloudy
Temperature: 78°F

PERSONNEL ON SITE:

SAI: LMM

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Loaders

DESCRIPTION OF THE ACTIVITIES:

- \$ KMC is not working. Heavy rains both yesterday and last night have left conditions very wet.
- \$ Samples were taken out of the oven and weighed. Lift fails.
- \$ LMM left site at 11:00am.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT #106
Date: August 30,

1999

Arrived at Site: 7:30 AM
WEATHER: Cloudy and windy
Temperature: 64°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS: McCutcheon Surveyors

EQUIPMENT: Excavator, Dozer, Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ McCutcheon on site to shoot the settlement plate for biweekly readings
- \$ KMC dinking the 7th lift at elevation 22.5 ft. This lift had failed yesterday.
- \$ KMC and SAI decide that this lift will be dinked twice and leave it open overnight to dry it and then seal it and roll it in the morning.
- \$ RMT will test the lift tomorrow.
- \$ One settlement (#1) at embankment 2 has been hit by truck. KMC was advised to repair it.
- \$ RMT leaves the site early at 11:00

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

**DOT-EMBANKMENT DEMO PROJECT
DAILY FIELD REPORT**

REPORT #107
Date: August 31, 1999

Arrived at Site: 2:30 PM
WEATHER: Clear
Temperature: 82°F

PERSONNEL ON SITE:

SAI: RMT, LM

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Roller

DESCRIPTION OF THE ACTIVITIES:

- \$ KMC has rolled and compacted the seventh lift at elevation 22.5 ft.
- \$ A total of 22 locations were tested. Rutgers has been informed about the testing.
- \$ RMT checks the manhole to check the percolated water accumulation. There is not much percolated water accumulated in the pipes.
- \$ One settlement (#1) at embankment 2 was repaired by KMC.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

1999

Arrived at Site: 7:30 AM.
WEATHER: Clear
Temperature: 82°F

PERSONNEL ON SITE:

SAI: RMT, AP

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Roller

DESCRIPTION OF THE ACTIVITIES:

- ! KMC has started building 8th lift at elevation 23.5 ft. at Embankment 1.
- ! The material used for the construction of the lift is clean. Few brick pieces being cleaned by a labor.
- ! Horizontal inclinometers are buried during the construction. Rutgers was informed.
- ! AP on site to move the field equipment for the field trailer.
- ! Moisture content determination for the samples collected yesterday.

REMARKS:

Tharwani
Engineer

Signature:

Ramesh
Resident

REPORT #109

Date: September 7, 1999

Arrived at Site:

7:30 AM.

WEATHER:

Clear

Temperature: 82°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Roller

DESCRIPTION OF THE ACTIVITIES:

- ! KMC continued to construct the lift at elevation 23.5 ft. at Embankment 1.
- ! The material used for the construction of the lift is relatively clean.
- ! KMC is disking the dredged material stock pile in the transition area.
- ! RMT leaves the Site early around 1:30 PM.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

REPORT #110

Date: September 8, 1999

Arrived at Site:

7:30 AM.

WEATHER:

Clear

Temperature: 82°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Roller

DESCRIPTION OF THE ACTIVITIES:

- ! KMC continued to construct the lift at elevation 23.5 ft. at Embankment 1.
- ! The material used for the construction of the lift is relatively clean.
- ! KMC is disking the dredged material stock pile in the transition area.
- ! RMT leaves the Site early around 1:30 PM.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

Date: September 9, 1999

Arrived at Site:

7:30 AM.

WEATHER:

Cloudy

Temperature: 79°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Roller, Disk

DESCRIPTION OF THE ACTIVITIES:

- ! KMC is disking the lift at elevation 23.5 ft. at Embankment 1.
- ! The material is too wet. It had rained last night. The site conditions are too wet.
- ! KMC had decided that they will seal the lift this afternoon and open it on Monday at it is expected to rain this afternoon.
- ! RMT leaves the Site early around 2:00 PM.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

Date: September 13, 1999

Arrived at Site:

7:00 AM.

WEATHER:

Clear

Temperature: 72°F

PERSONNEL ON SITE:

SAI: RMT/PR

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Roller, Disk

DESCRIPTION OF THE ACTIVITIES:

- ! KMC worked over the weekend and disked the lift.
- ! The lift has been opened and disked multiple times over the weekends.
- ! RMT inspected the material it looks dry enough.
- ! KMC is dressing up the lift and will roll and compact during lunch time.
- ! PR from SAI on site to help RMT with Troxler test.
- ! A total of 18 locations were tested.
- ! Rutgers will perform the compaction test tomorrow early in the morning.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

Date: September 14, 1999

Arrived at Site:

8:00 AM.

WEATHER:

Clear

Temperature: 64°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS: McCutcheon Surveyor, FJ/Lou from OENJ

EQUIPMENT: Excavator, Dozer, Roller, Disk

DESCRIPTION OF THE ACTIVITIES:

- ! McCutcheon laying out the final top grades so that KMC can push the dirt from slopes and meet the proposed grades.
- ! KMC is pushing the dredge material from high spots to low spots.
- ! FJ/Lou from OENJ on site to discuss the project progress.
- ! KMC will place the dirt from slopes and high spots to meet the final proposed grades.
- ! KMC is dressing up the lift and will roll and compact during lunch time.
- ! PR from SAI on site to help RMT with Troxler test.
- ! A total of 18 locations were tested.
- ! Rutgers will perform the compaction test tomorrow early in the morning.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

Date: September 15 1999

Arrived at Site:

8:00 AM.

WEATHER:

Cloudy, light rain

Temperature: 68°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS: ETL

EQUIPMENT: Excavator, Dozer, Roller, Disk

DESCRIPTION OF THE ACTIVITIES:

- ! KMC has finished dressing the top of the Embankment, because it is raining, KMC rushed to finish the dressing up the top.
- ! KMC was advised to redress the top to meet the finished quality of the lift. There are few low spots which may facilitate water ponding during rainy days. Slopes and stormwater water channels need to be worked on.
- ! FJ/Lou from OENJ on site to discuss the project progress.
- ! ETL on site to collect the monthly TOC samples. One sample from Embankment 2 percolated water was collected.
- ! The access to the manhole is very difficult. Since there was no detail on manhole, EE Cruz installed this manhole from their left over stock. Which is 8.0 ft. deep.
- ! Because of an exit from the manhole to the leachate clean out there is a potential of gas accumulation. Prior to each percolated water sampling efforts, manhole should be properly ventilated.
- ! KMC will place the dirt from slopes and high spots to meet the final proposed grades.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

REPORT #115

Date: September 20, 1999

Arrived at Site:

8:00 AM.

WEATHER:

Cloudy

Temperature: 65°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Roller, Disk, Trucks

DESCRIPTION OF THE ACTIVITIES:

- ! KMC is moving the dredged material from stockpile in between two embankments toward waste restaging area where it will be used as cover soil.
- ! The inclinometer pipes at both the embankments have been buried which were scheduled to be retrieved today. Since excavator is busy with trucks, it got postponed to tomorrow.
- ! RMT returns to the office at 10:30 am.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

Date: September 23, 1999

Arrived at Site:

8:00 AM.

WEATHER:

Clear

Temperature: 65°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS: Rutgers

EQUIPMENT: Excavator, Dozer, Roller, Disk, Trucks

DESCRIPTION OF THE ACTIVITIES:

- ! KMC is excavating inclinometers pipe. The horizontal inclinometers were buried during the construction and heavy rains.
- ! Four 6.0 ft diameter and 8.0 ft. long HDPE pipe sections were bought to use as protective casing for horizontal inclinometers.
- ! Rutgers on site to oversee the horizontal inclinometer retrieving efforts.

RMT leaves the Site at 12:45 PM.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

Date: September 24, 1999

Arrived at Site:

8:00 AM.

WEATHER:

Clear

Temperature: 70 F

PERSONNEL ON SITE:

SAI: RMT/LM

CONTRACTORS: KMC

OTHERS: ETL

EQUIPMENT: Excavator, Dozer

DESCRIPTION OF THE ACTIVITIES:

- ! KMC is pushing the dredged material in the area between two embankments.
- ! From previous rain events, rain water has accumulated around both embankments depressions.
- ! ETL was contacted to collect stormwater samples from both the embankment.
- ! ETL on site at 11:45 am to collect the stormwater samples
- ! RMT leaves the site at 12:45 pm.
- ! Four 6.0 ft diameter and 8.0 ft. long HDPE pipe sections were bought to use as protective casing for horizontal inclinometers.
- ! Rutgers on site to oversee the horizontal inclinometer retrieving efforts.

RMT leaves the Site at 12:45 PM.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

REPORT #118

Date: September 27, 1999

Arrived at Site:

8:00 AM.

WEATHER:

Cloudy in am, clear in
the pm.

Temperature: 70°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Excavator, Dozer, Roller, Disk, Trucks

DESCRIPTION OF THE ACTIVITIES:

- ! KMC is working on the southern slope of embankment 1.
- ! Four inch forcemain was damaged during dredge material moving yesterday.
- ! KMC is repairing the forcemain.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

REPORT #119

Date: September 28, 1999

Arrived at Site:

7:20 AM.

WEATHER:

Cloudy in am, clear in
the pm.

Temperature: 70°F

PERSONNEL ON SITE:

SAI: LM

CONTRACTORS:

OTHERS: McCutcheon Surveyors

EQUIPMENT: Excavator, Dozer, Roller, Disk, Trucks

DESCRIPTION OF THE ACTIVITIES:

- ! KMC continues to work on the southern slope of embankment #1.
- ! McCutcheon on site to lay out the stormwater ditches. Apparently there is some confusion between McCutcheon field crew and their office. Field crew does not have plans for the stormwater ditches.
- ! KMC dressing up the top of embankment 1.
- ! LM checks the percolated water accumulation in pipes. There is not much water accumulation to collect the samples.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

Date: September 30, 1999

Arrived at Site:

9:00 AM

WEATHER:

Clear.

Temperature: 62°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS:

OTHERS:

EQUIPMENT:

DESCRIPTION OF THE ACTIVITIES:

- ! KMC is not performing any construction related activities. The slopes have been dressed up and completed.
- ! KMC is waiting for top soil which could be installed on the slopes and in transition area.
- ! ETL had left the sample collection bottles for stormwater sample collections.
- ! RMT picked up the bottles from WT trailer and collected the samples from embankment 1 and 2. The stormwater had accumulated in depressions around both the embankments.
- ! ETL is expected to come and pick up the sample bottles. RMT leaves the bottles with Dave (OENJ).
- ! RMT leaves the site at 12:00 noon.
- ! LM checks the percolated water accumulation in pipes. There is not much water accumulation to collect the samples.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

REPORT #121
Date: October 4,

1999

Arrived at Site:
WEATHER:

8:00 AM
Clear, is getting
cloudy and rain
Temperature: 52°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS:

OTHERS:

EQUIPMENT:

DESCRIPTION OF THE ACTIVITIES:

- ! KMC is not expected to work on DOT related work.
- ! Site conditions are too wet. It had rained over the weekend.
- ! RMT leaves the site at 10:30 AM.

Signature:

Ramesh

Resident

Tharwani

Engineer

Date: October 5, 1999

Arrived at Site:

8:30 AM

WEATHER:

Rain

Temperature: 59°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS:

OTHERS:

EQUIPMENT: Dozer, Excavator, Roller

DESCRIPTION OF THE ACTIVITIES:

- ! KMC is pushing the milling on the access roadway.
- ! Millings are placed on top of the embankments and access roadway to simulate the actual roadway conditions.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

Date: October 6 1999

Arrived at Site:

8:00 AM

WEATHER:

Clear Sky

Temperature: 45°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Dozer, Excavator, Roller

DESCRIPTION OF THE ACTIVITIES:

- ! ETL has dropped of the sample bottles for stormwater sample collection.
- ! RMT collects the stormwater samples from Embankment 1 and Embankment 2.
- ! KMC is stripping of the top soil applied to the southern slope of embankment 1 because it has bricks, stone and wood pieces. OENJ was informed that this type of material is not suitable as cover.
- ! RMT leaves the Site at 11:45 AM.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

Date: October 7, 1999

Arrived at Site:

8:00 AM

WEATHER:

Clear Sky

Temperature: 42°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Dozer, Excavator, Roller

DESCRIPTION OF THE ACTIVITIES:

- ! OENJ is bringing top soil for slope cover at embankments and wetland transition area.
- ! Sadat was informed that the source of the material was sampled and tested by Sadat for recyclable use at the OENJ site.
- ! There are larger pieces of stones, bricks and wood in first 8 truck loads. OENJ was advised not to use those loads.
- ! RMT and FJ (OENJ) determines that this material is not suitable as top soil for slopes at the embankments.
- ! After 10 truck loads or so, the material has improved and SAI decides that this material can be used for slope covers.
- ! The placement of top soil at the northern slope of the embankment 1 starts. Somewhere between 6" and 8" of top soil is placed on slopes.
- ! RMT leaves the site at 1:30 PM.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

Date: October 11, 1999

Arrived at Site:

8:00 AM

WEATHER:

Clear Sky

Temperature: 42°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Dozer, Excavator, Roller

DESCRIPTION OF THE ACTIVITIES:

- ! OENJ is placing millings on the top of embankment 1.
- ! Because of some traffic problems, OENJ is not getting enough truck loads of clean dirt for application as top soil.
- ! Almost half of the transition area is complete and northern slope is complete. Southern slope of Embankment 1 and both slopes of embankment 2 need to be completed.
- ! RMT leaves the site at 1:30 PM.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

Date: October 12, 1999

Arrived at Site:

8:30 AM

WEATHER:

Clear Sky

Temperature: 56°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Dozer, Excavator, Roller

DESCRIPTION OF THE ACTIVITIES:

- ! OENJ is placing millings on the top of embankment 1.
- ! Because of some traffic problems, OENJ is not getting enough truck loads of clean dirt for application as top soil.
- ! Almost half of the transition area is complete and northern slope is complete. Southern slope of Embankment 1 and both slopes of embankment 2 need to be completed.
- ! RMT leaves the site at 1:30 PM.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

Date: October 13, 1999

Arrived at Site:

8:30 AM

WEATHER:

Clear Sky

Temperature: 56°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Dozer, Excavator, Roller

DESCRIPTION OF THE ACTIVITIES:

- ! KMC continues to place millings on the top of embankment 1.
- ! Soil on the slopes of two embankments has been completed.
- ! KMC will start installing the stormwater ditches. Need some sort of survey equipment to control the pitch. RMT drives to the OENJ-Bayonne site to pick up the level. Will install the stormwater ditches tomorrow.
- ! RMT leaves the site at 1:30 PM.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

Date: October 14, 1999

Arrived at Site:

8:00 AM

WEATHER:

Cloudy, very cold,
windy
Temperature: 44°F

PERSONNEL ON SITE:

SAI: RMT/KR

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Dozer, Excavator, Roller

DESCRIPTION OF THE ACTIVITIES:

- ! KMC starts installing the southern stormwater ditch at Embankment 1.
- ! We are using a level to control the pitch toward Newark Bay.
- ! KR on site for training. RMT is on level and Dave (OENJ) is on survey rod.
- ! BA has decided that we will not be placing any stone in the ditches. After excavation, top soil will be placed and then ditches will be hydroseeded.
- ! Because of cold weather and wind, 90% of the ditch could be completed.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

REPORT #127

Date: October 15, 1999

Arrived at Site:

8:00 AM

WEATHER:

Cloudy, clearing as day progresses
Temperature: 54°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Dozer, Excavator, Roller

DESCRIPTION OF THE ACTIVITIES:

- ! KMC completes the southern stormwater ditch at embankment 1 and starts installing the southern stormwater ditch at Embankment 2.
- ! Level was used to control the pitch.
- ! Some equipment problem. KMC wants to stop working an hour earlier to fix the equipment. Southern stormwater ditch at Embankment 2 is completed.

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

REPORT #128

Date: October 18, 1999

Arrived at Site:

8:00 AM

WEATHER:

Clear

Temperature: 56°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Dozer, Excavator, Roller

DESCRIPTION OF THE ACTIVITIES:

- ! KMC installing the ditch connecting two stormwater ditches at embankments and draining into the wetlands transition area.
- ! Level was used to control the pitch.
- ! Hydroseeding of the area planned for the day.
- ! RM leaves the site at 1:30 PM

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

Date: October 19, 1999

Arrived at Site:

8:00 AM

WEATHER:

Clear

Temperature: 66°F

PERSONNEL ON SITE:

SAI: RMT

CONTRACTORS: KMC

OTHERS:

EQUIPMENT: Dozer, Excavator, Roller

DESCRIPTION OF THE ACTIVITIES:

- ! KMC is placing the top soil in the stormwater ditches. Some portions were left because there was not enough clean soil coming to the Site.
- ! The transition area and slopes have been hydroseeded.
- ! The area between two embankments needs some type of cover. OENJ was informed, but they seem reluctant to place some cover material. BA in the office was informed.
- ! Onsite weather station was removed from the site and brought to the field room.
- ! As of today, the entire construction related to DOT-Demo project was completed.
- ! Level was used to control the pitch.
- ! Hydroseeding of the area planned for the day.
- ! RM leaves the site at 1:30 PM

REMARKS:

Signature:

Ramesh Tharwani
Resident Engineer

APPENDIX B-2

Construction Photographs



Stockpiling the material available for Embankment construction



Construction of lift at el. 13.0 ft.



Disking in progress



Construction of Piezometer at Location of 5.5 ft Embankment



Consistency of C. life at Elanora H.S. H. Embroidered + 2



Geographica Tabern. at Elevatio 14 ft. Substratum 12



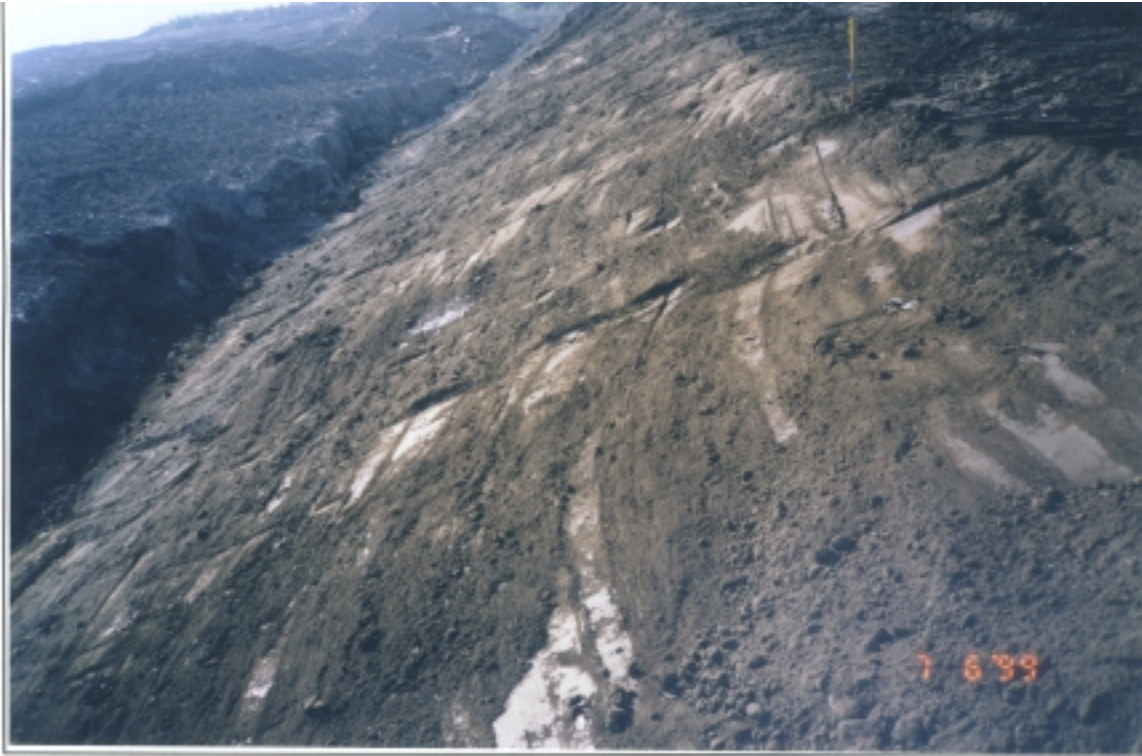
Personal Sampling to Collect Samples in Breathing Zone



Respirometry rig setup



Stiffness Test in Progress (By Rutgers University)



Slope Preparation at Embankment #2



Left ready after rolling



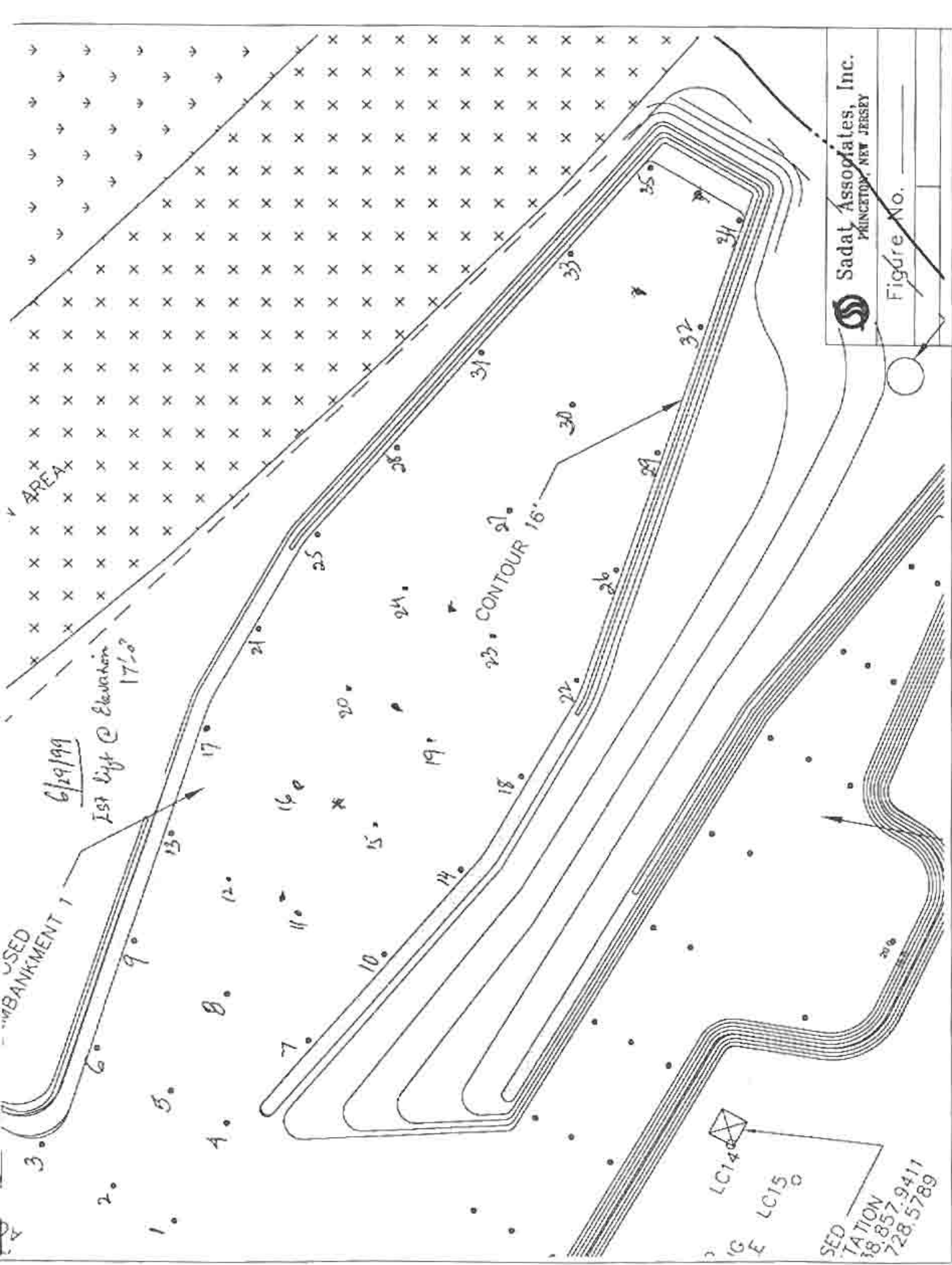
Storm water sample collection from puddle water within footprints of Embankment # 1

APPENDIX B-3

Troxler Results and Locations

TROXLER DENSITY TEST RESULTS AT ELEVATION 17 ft. AT EMBANKMENT #1
 OENJ-DOT DEMO PROJECT
 DATE: June 29, 1999

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS	
1	96.7	598.2	189.80	462.1	408.4	272.3	49.98%	64.47	91.5% of max. dry density	PASS
2	94.9	604.9	192.10	465.3	412.8	273.2	51.10%	62.81	89.1% of max. dry density	FAIL
3	92.5	606.5	191.10	471.4	415.4	280.3	48.20%	62.42	88.5% of max. dry density	PASS
4	96.4	606.4	199.80	472.5	406.6	272.7	49.10%	64.65	91.7% of max. dry density	PASS
5	97.9	608.5	189.70	479.3	418.8	289.6	44.61%	67.70	96.0% of max. dry density	PASS
6	98.7	608.0	195.00	469.6	413	274.6	50.40%	65.62	93.1% of max. dry density	FAIL
7	96.0	602.6	189.10	465.6	413.5	276.5	49.55%	64.19	91.1% of max. dry density	PASS
8	105.1	598.2	193.90	471.2	404.3	277.3	45.80%	72.09	102.2% of max. dry density	PASS
9	96.6	596.2	192.30	462.4	403.9	270.1	49.54%	64.60	91.6% of max. dry density	PASS
10	98.4	582.1	193.00	454.3	389.1	261.3	48.91%	66.08	93.7% of max. dry density	PASS
11	98.2	608.9	194.50	475.4	414.4	280.9	47.53%	66.56	94.4% of max. dry density	PASS
12	96.3	608.2	186.20	465.1	422	278.9	51.31%	63.64	90.3% of max. dry density	FAIL
13	97.2	594.7	192.10	459.5	402.6	267.4	50.56%	64.56	91.6% of max. dry density	FAIL
14	97.2	603.0	196.60	470	406.4	273.4	48.65%	65.39	92.8% of max. dry density	PASS
15	100.8	602.1	195.20	477.9	406.9	282.7	43.93%	70.03	99.3% of max. dry density	PASS
16	99.9	598.7	196.10	469.3	402.6	273.2	47.36%	67.79	96.2% of max. dry density	PASS
17	100.6	501.9	206.10	412.2	295.8	206.1	43.52%	70.09	99.4% of max. dry density	PASS
18	103.8	575.9	205.40	454.3	370.5	248.9	48.85%	69.73	98.9% of max. dry density	PASS
19	99.1	606.7	313.10	512.3	293.6	199.2	47.39%	67.24	95.4% of max. dry density	PASS
20	100.3	589.0	298.30	488.2	290.7	189.9	53.08%	65.52	92.9% of max. dry density	FAIL
21	101.2	581.3	295.80	492.1	285.5	196.3	45.44%	69.58	98.7% of max. dry density	PASS
22	100.6	574.7	322.50	495.2	252.2	172.7	46.03%	68.89	97.7% of max. dry density	PASS
23	96.7	561.1	309.20	477.9	251.9	168.7	49.32%	64.76	91.9% of max. dry density	PASS
24	99.2	540.9	315.20	462.1	225.7	146.9	53.64%	64.57	91.6% of max. dry density	FAIL
25	97.0	586.1	312.80	494.3	273.3	181.5	50.58%	64.42	91.4% of max. dry density	FAIL
26	101.7	606.5	306.20	507.9	300.3	201.7	48.88%	68.31	96.9% of max. dry density	PASS
27	95.5	607.6	313.10	510.4	294.5	197.3	49.27%	63.98	90.8% of max. dry density	PASS
28	99.5	581.6	297.40	505.3	284.2	207.9	36.70%	72.79	103.2% of max. dry density	PASS
29	94.3	585.9	309.80	498.7	276.1	188.9	46.16%	64.52	91.5% of max. dry density	PASS
30	93.3	575.4	324.50	499.1	250.9	174.6	43.70%	64.93	92.1% of max. dry density	PASS
31	92.9	568.3	312.30	483.5	256	171.2	49.53%	62.13	88.1% of max. dry density	PASS




 Sadat Associates, Inc.
 PRINCETON, NEW JERSEY

Figure No. _____

SEDIMENTATION TATION
 88.857.9411
 728.5789

TROXLER DENSITY TEST RESULTS AT ELEVATION 18 ft. AT EMBANKMENT #1
 OENJ-DOT DEMO PROJECT
 DATE: July 8, 1999

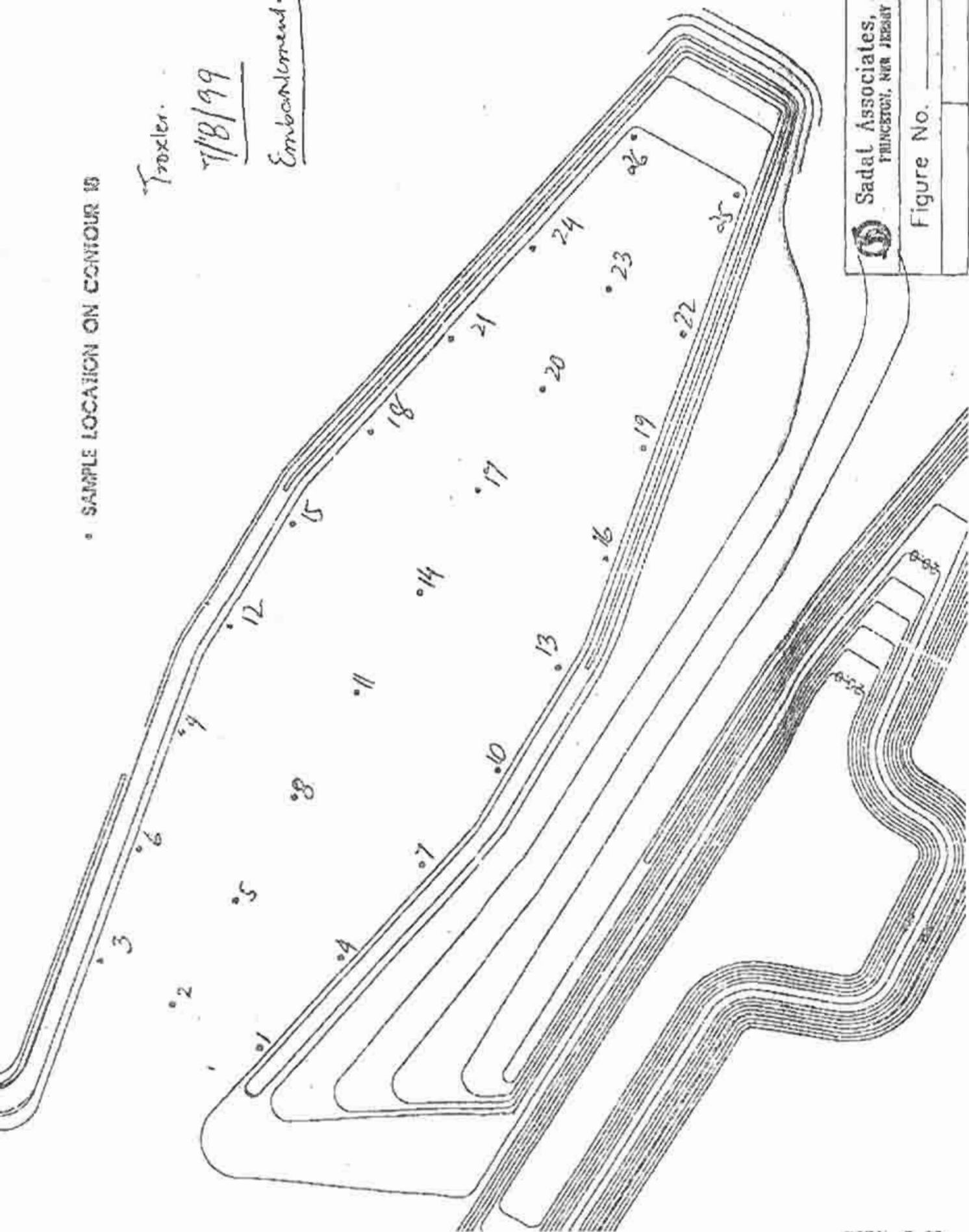
Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS	
1	98.6	614.2	189.80	483.2	424.4	293.4	44.65%	68.17	96.7% of max. dry densit	PASS
2	94.8	707.1	192.10	511.5	515	319.4	61.24%	58.79	83.4% of max. dry densit	FAIL
3	98.4	770.8	191.10	577.5	579.7	386.4	50.03%	65.59	93.0% of max. dry densit	FAIL
4	94.3	603.7	199.80	469	403.9	269.2	50.04%	62.85	89.2% of max. dry densit	FAIL
5	94.5	613.9	189.70	492.2	424.2	302.5	40.23%	67.39	95.6% of max. dry densit	PASS
6	101.3	703.0	195.00	544.2	508	349.2	45.48%	69.63	98.8% of max. dry densit	PASS
7	97.5	719.4	189.10	571.2	530.3	382.1	38.79%	70.25	99.6% of max. dry densit	PASS
8	95.1	678.4	193.90	537.6	484.5	343.7	40.97%	67.46	95.7% of max. dry densit	PASS
9	97.9	786.3	192.30	643.3	594	451	31.71%	74.33	105.4% of max. dry densit	PASS
10	97.0	713.1	193.00	545.3	520.1	352.3	47.63%	65.70	93.2% of max. dry densit	PASS
11	95.9	736.5	194.50	576.5	542	382	41.88%	67.59	95.9% of max. dry densit	PASS
12	96.7	636.8	186.20	481.4	450.6	295.2	52.64%	63.35	89.9% of max. dry densit	FAIL
13	96.5	713.4	192.10	542.1	521.3	350	48.94%	64.79	91.9% of max. dry densit	PASS
14	97.3	724.0	196.60	531.9	527.4	335.3	57.29%	61.86	87.7% of max. dry densit	FAIL
15	98.9	688.0	195.20	566.8	492.8	371.6	32.62%	74.58	105.8% of max. dry densit	PASS
16	102.1	584.9	196.10	447.7	388.8	251.6	54.53%	66.07	93.7% of max. dry densit	FAIL
17	99.6	660.0	206.10	526.2	453.9	320.1	41.80%	70.24	99.6% of max. dry densit	PASS
18	97.3	664.3	205.40	522.3	458.9	316.9	44.81%	67.19	95.3% of max. dry densit	PASS
19	99.2	740.7	313.10	624	427.6	310.9	37.54%	72.13	102.3% of max. dry densit	PASS
20	101.0	784.1	298.30	662.3	485.8	364	33.46%	75.68	107.3% of max. dry densit	PASS
21	103.8	662.4	295.80	555.2	366.6	259.4	41.33%	73.45	104.2% of max. dry densit	PASS
22	102.5	712.8	322.50	613.4	390.3	290.9	34.17%	76.40	108.4% of max. dry densit	PASS
23	101.4	677.8	309.20	570.3	368.6	261.1	41.17%	71.83	101.9% of max. dry densit	PASS
24	100.9	703.8	315.20	597.9	388.6	282.7	37.46%	73.40	104.1% of max. dry densit	PASS
25	98.8	744.3	312.80	620	431.5	307.2	40.46%	70.34	99.8% of max. dry densit	PASS
26	102.3	750.4	306.20	625	444.2	318.8	39.34%	73.42	104.1% of max. dry densit	PASS

• SAMPLE LOCATION ON CONTOUR IS

Foxler.

7/18/99

Embankment of 1



Sadal Associates, Inc.
PRINCETON, NEW JERSEY

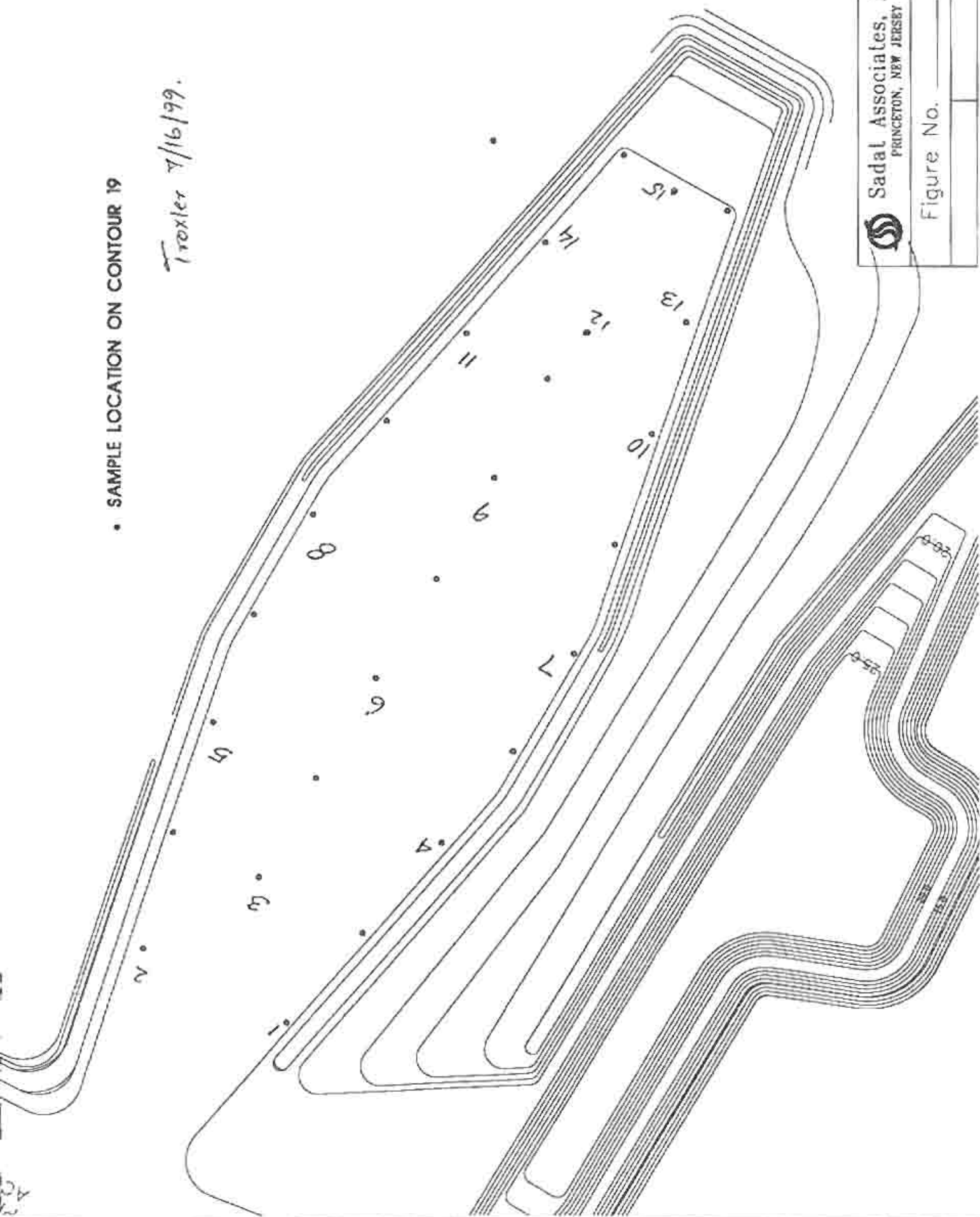
Figure No. _____

TROXLER DENSITY TEST RESULTS AT ELEVATION 19.5 ft. AT EMBANKMENT #1
 OENJ-DOT DEMO PROJECT
 DATE: July 16, 1999

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS	
1	93.7	611.0	189.4	472.4	421.6	283	48.98%	62.90	89.2% of max. dry density	PASS
2	98.9	571.4	192	428.8	379.4	236.8	60.22%	61.73	87.6% of max. dry density	FAIL
3	99.9	548.5	191.1	429.9	357.4	238.8	49.66%	66.75	94.7% of max. dry density	PASS
4	93.5	663.2	200	504.9	463.2	304.9	51.92%	61.55	87.3% of max. dry density	PASS
5	93.6	604.4	189.4	471.1	415	281.7	47.32%	63.54	90.1% of max. dry density	PASS
6	96.6	642.2	195.1	493.2	447.1	298.1	49.98%	64.41	91.4% of max. dry density	PASS
7	90.1	626.5	188.9	471.4	437.6	282.5	54.90%	58.17	82.5% of max. dry density	FAIL
8	94.2	684.0	193.7	517.5	490.3	323.8	51.42%	62.21	88.2% of max. dry density	PASS
9	91.3	654.4	192.3	497.9	462.1	305.6	51.21%	60.38	85.6% of max. dry density	FAIL
10	93.5	659.4	193.1	517.5	466.3	324.4	43.74%	65.05	92.3% of max. dry density	PASS
11	98.4	584.0	194.3	473.8	389.7	279.5	39.43%	70.57	100.1% of max. dry density	PASS
12	96.8	616.1	186.1	473.9	430	287.8	49.41%	64.79	91.9% of max. dry density	PASS
13	100.5	577.2	191.9	459	385.3	267.1	44.25%	69.67	98.8% of max. dry density	PASS
14	97.5	651.0	196.8	491	454.2	294.2	54.38%	63.15	89.6% of max. dry density	PASS
15	97.4	654.9	195.2	476	459.7	280.8	63.71%	59.50	84.4% of max. dry density	FAIL

• SAMPLE LOCATION ON CONTOUR 19

Troxler 7/16/99.



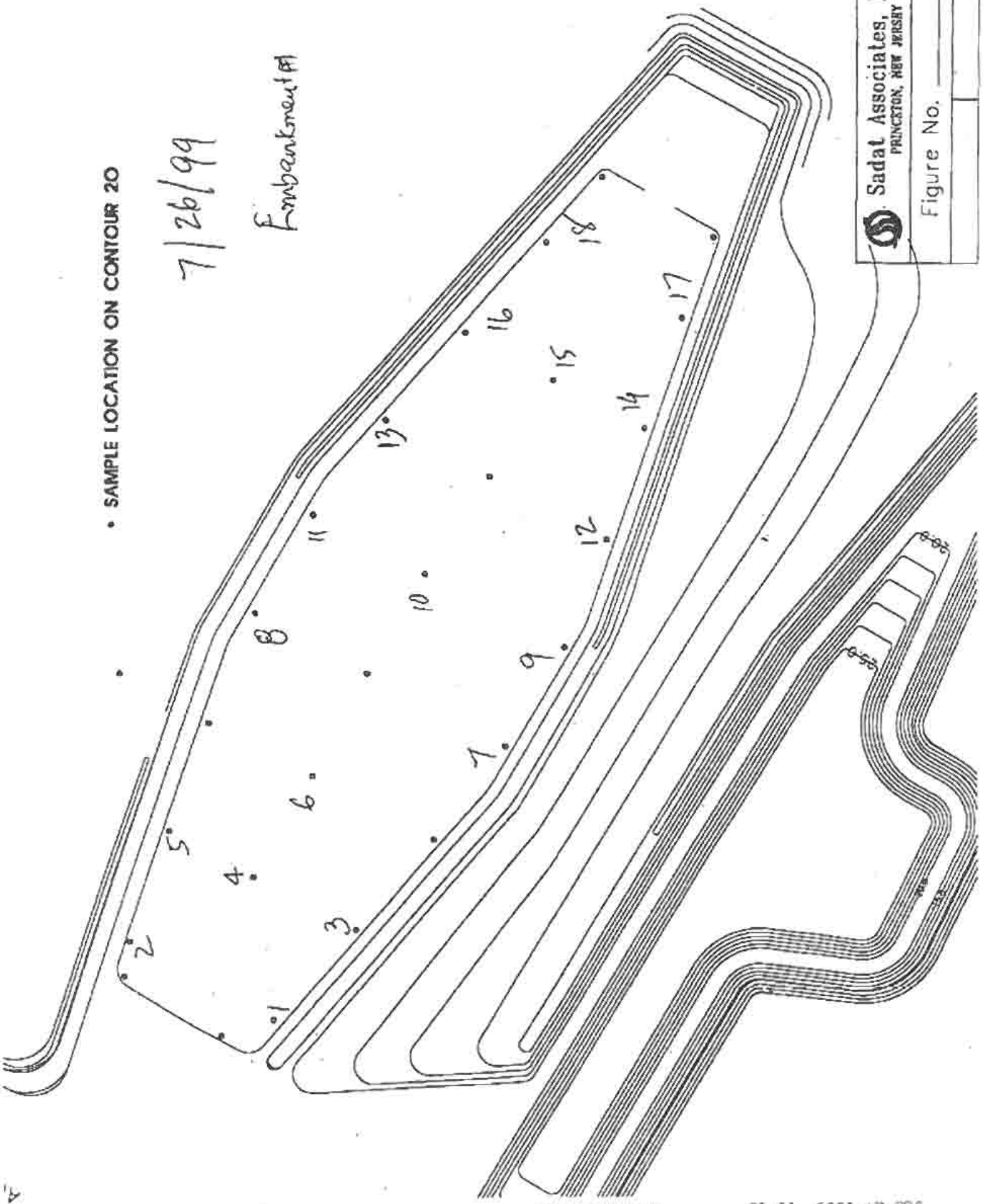
Sadal Associates, Inc.
PRINCETON, NEW JERSEY

Figure No. _____

• SAMPLE LOCATION ON CONTOUR 20

7/26/99

Embankment A1



Sadat Associates, Inc.
 PRINCETON, NEW JERSEY

Figure No. _____

TROXLER DENSITY TEST RESULTS AT ELEVATION 21.5 ft (Embankment #1)

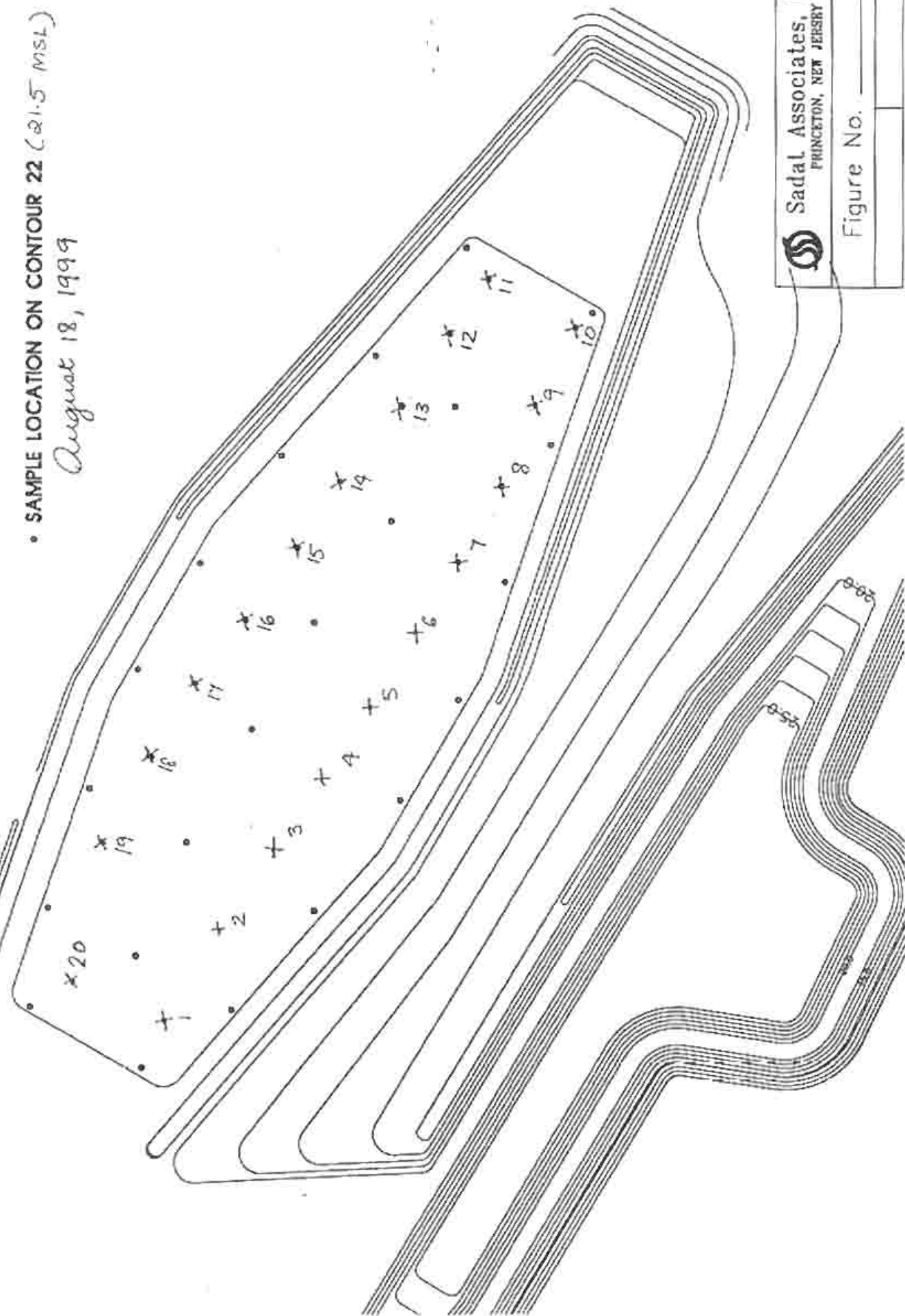
OENJ-DOT DEMO PROJECT

DATE: August 18, 1999

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	EMARKS	
1	96.2	620.2	189.4	449.4	430.8	260	65.69%	58.06	82.4% of max. dry density	FAIL
2	90.8	719.6	192	511.9	527.6	319.9	64.93%	55.05	78.1% of max. dry density	FAIL
3	94.2	745.1	191.1	527.5	554	336.4	64.68%	57.20	81.1% of max. dry density	FAIL
4	98.1	693.6	200	513.7	493.6	313.7	57.35%	62.35	88.4% of max. dry density	FAIL
5	95.8	625.2	189.4	476	435.8	286.6	52.06%	63.00	89.4% of max. dry density	FAIL
6	100.8	694.2	195.1	544.2	499.1	349.1	42.97%	70.51	100.0% of max. dry density	PASS
7	103.0	662.8	188.9	518.8	473.9	329.9	43.65%	71.70	101.7% of max. dry density	PASS
8	103.5	732.2	193.7	557.4	538.5	363.7	48.06%	69.90	99.2% of max. dry density	PASS
9	103.3	672.1	192.3	503.7	479.8	311.4	54.08%	67.04	95.1% of max. dry density	FAIL
10	101.0	757.4	193.1	572.5	564.3	379.4	48.73%	67.91	96.3% of max. dry density	PASS
11	101.1	610.0	194.3	471.5	415.7	277.2	49.96%	67.42	95.6% of max. dry density	PASS
12	107.3	742.2	186.1	572.6	556.1	386.5	43.88%	74.58	105.8% of max. dry density	PASS
13	104.7	713.2	191.9	533.2	521.3	341.3	52.74%	68.55	97.2% of max. dry density	FAIL
14	100.3	722.2	196.8	571.5	525.4	374.7	40.22%	71.53	101.5% of max. dry density	PASS
15	101.6	650.1	195.2	505	454.9	309.8	46.84%	69.19	98.1% of max. dry density	PASS
16	97.4	629.3	196	504.8	433.3	308.8	40.32%	69.41	98.5% of max. dry density	PASS
17	104.2	556.1	206	461.1	350.1	255.1	37.24%	75.93	107.7% of max. dry density	PASS
18	102.3	693.2	206	554.6	487.2	348.6	39.76%	73.20	103.8% of max. dry density	PASS
19	100.7	706.6	312.9	588.2	393.7	275.3	43.01%	70.42	99.9% of max. dry density	PASS
20	95.3	684.0	298.3	567.9	385.7	269.6	43.06%	66.61	94.5% of max. dry density	PASS

Note: 1) In order to consider each 12-in lift completed, at least 75% of the total sampling points must pass the requirements for both Moisture Content and Dry Density.
 2) Since requirement # 1 was not satisfied, the lift was reopened, then, disked and rolled.
 A new set of sampling points were collected, and the lift was considered complete as shown in Table dated August 19, 1999 (Troxler-1-21.5B.wb3)

• SAMPLE LOCATION ON CONTOUR 22 (21.5 MSL)
August 18, 1999




 Sadat Associates, Inc.
PRINCETON, NEW JERSEY

Figure No. _____

TROXLER DENSITY TEST RESULTS AT ELEVATION 21.5 ft (Embankment #1

OENJ-DOT DEMO PROJECT

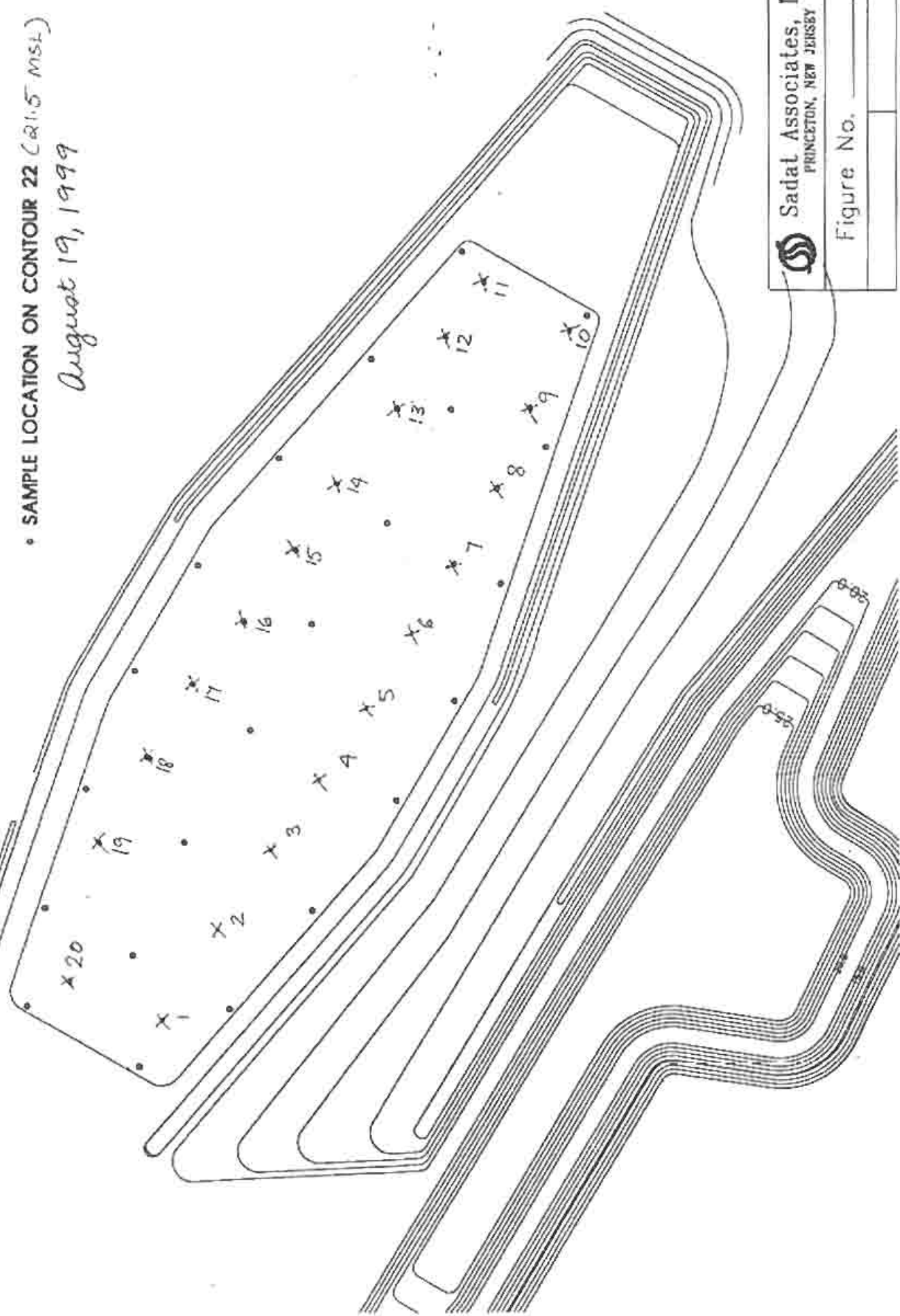
DATE: August 19, 1999

Status: Re-Test of Elevation 21.5 ft. at Embankment #1

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	EMARKS	
1	91.9	652.3	189.4	417.7	462.9	228.3	102.76%	45.32	64.3% of max. dry density	FAIL
2	96.9	643.8	192	483.2	451.8	291.2	55.15%	62.46	88.6% of max. dry density	FAIL
3	94.7	595.8	191.1	450	404.7	258.9	56.32%	60.58	85.9% of max. dry density	FAIL
4	111.6	627.3	200	497.4	427.3	297.4	43.68%	77.67	110.2% of max. dry density	PASS
5	98.3	641.7	189.4	488.5	452.3	299.1	51.22%	65.00	92.2% of max. dry density	FAIL
6	103.0	709.8	195.1	551.1	514.7	356	44.58%	71.24	101.1% of max. dry density	PASS
7	104.6	656.7	188.9	516.5	467.8	327.6	42.80%	73.25	103.9% of max. dry density	PASS
8	102.6	697.4	193.7	551.2	503.7	357.5	40.90%	72.82	103.3% of max. dry density	PASS
9	96.0	665.8	192.3	516	473.5	323.7	46.28%	65.63	93.1% of max. dry density	PASS
10	100.8	713.3	193.1	556	520.2	362.9	43.35%	70.32	99.7% of max. dry density	PASS
11	104.7	639.7	194.3	505.5	445.4	311.2	43.12%	73.15	103.8% of max. dry density	PASS
12	98.2	674.6	186.1	528.9	488.5	342.8	42.50%	68.91	97.7% of max. dry density	PASS
13	103.9	601.3	191.9	487.3	409.4	295.4	38.59%	74.97	106.3% of max. dry density	PASS
14	100.1	509.1	196.8	483.2	312.3	286.4	9.04%	91.80	130.2% of max. dry density	PASS
15	102.1	517.1	195.2	423	321.9	227.8	41.31%	72.25	102.5% of max. dry density	PASS
16	98.3	555.4	196	450	359.4	254	41.50%	69.47	98.5% of max. dry density	PASS
17	100.3	601.1	206	484.7	395.1	278.7	41.77%	70.75	100.4% of max. dry density	PASS
18	100.2	591.9	206	478.2	385.9	272.2	41.77%	70.68	100.3% of max. dry density	PASS
19	99.2	552.2	312.9	481.9	239.3	169	41.60%	70.06	99.4% of max. dry density	PASS
20	101.6	638.9	298.3	430.1	340.6	131.8	158.42%	39.32	55.8% of max. dry density	FAIL

- Note:**
- 1) In order to consider each 12-in lift completed, at least 75% of the total sampling point must pass the requirements for both Moisture Content and Dry Density
 - 2) Since requirement # 1 was satisfied, the lift was considered complete

• SAMPLE LOCATION ON CONTOUR 22 (R1.5' MSL)
August 19, 1999



Sadat Associates, Inc.
PRINCETON, NEW JERSEY

Figure No. _____

TROXLER DENSITY TEST RESULTS AT ELEVATION 22.5 ft (Embankment #1)

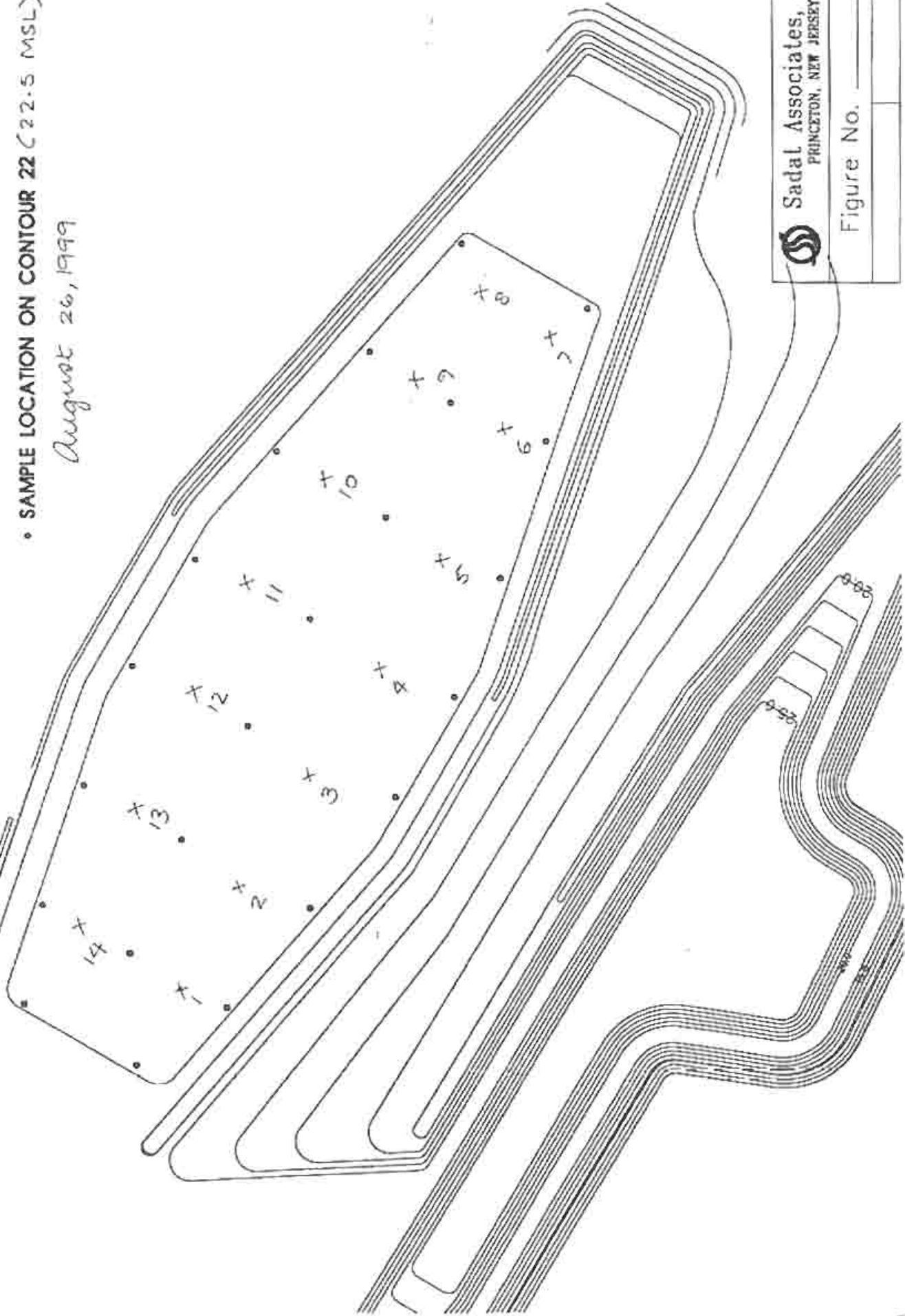
OENJ-DOT DEMO PROJECT

DATE: August 26, 1999

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS
1	97.2	695.4	189.4	550	506	360.6	40.32%	69.27	98.3% of max. dry density PASS
2	97.8	620.0	192	482.5	428	290.5	47.33%	66.38	94.2% of max. dry density PASS
3	90.4	700.5	191.1	541.3	509.4	350.2	45.46%	62.15	88.2% of max. dry density PASS
4	98.3	753.1	200	601.4	553.1	401.4	37.79%	71.34	101.2% of max. dry density PASS
5	100.0	536.5	189.4	406.5	347.1	217.1	59.88%	62.55	88.7% of max. dry density FAIL
6	111.9	856.1	195.1	749.1	661	554	19.31%	93.79	133.0% of max. dry density PASS
7	100.2	626.0	188.9	461.4	437.1	272.5	60.40%	62.47	88.6% of max. dry density FAIL
8	106.3	690.0	193.7	501.5	496.3	307.8	61.24%	65.93	93.5% of max. dry density FAIL
9	118.6	748.5	192.3	680.8	556.2	488.5	13.86%	104.16	147.8% of max. dry density PASS
10	97.6	692.3	193.1	507.1	499.2	314	58.98%	61.39	87.1% of max. dry density FAIL
11	96.8	674.0	194.3	512.3	479.7	318	50.85%	64.17	91.0% of max. dry density PASS
12	100.3	623.9	186.1	472.6	437.8	286.5	52.81%	65.64	93.1% of max. dry density PASS
13	97.4	679.9	191.9	504.5	488	312.6	56.11%	62.39	88.5% of max. dry density FAIL
14	97.5	676.6	196.8	507.3	479.8	310.5	54.52%	63.10	89.5% of max. dry density PASS

- Note:**
- 1) In order to consider each 12-in lift completed, at least 75% of the total sampling points must pass the requirements for both Moisture Content and Dry Density.
 - 2) Since requirement # 1 was satisfied, the lift was considered complete.

• SAMPLE LOCATION ON CONTOUR 22 (22.5 MSL)
August 26, 1999



 Sadat Associates, Inc.
PRINCETON, NEW JERSEY

Figure No. _____

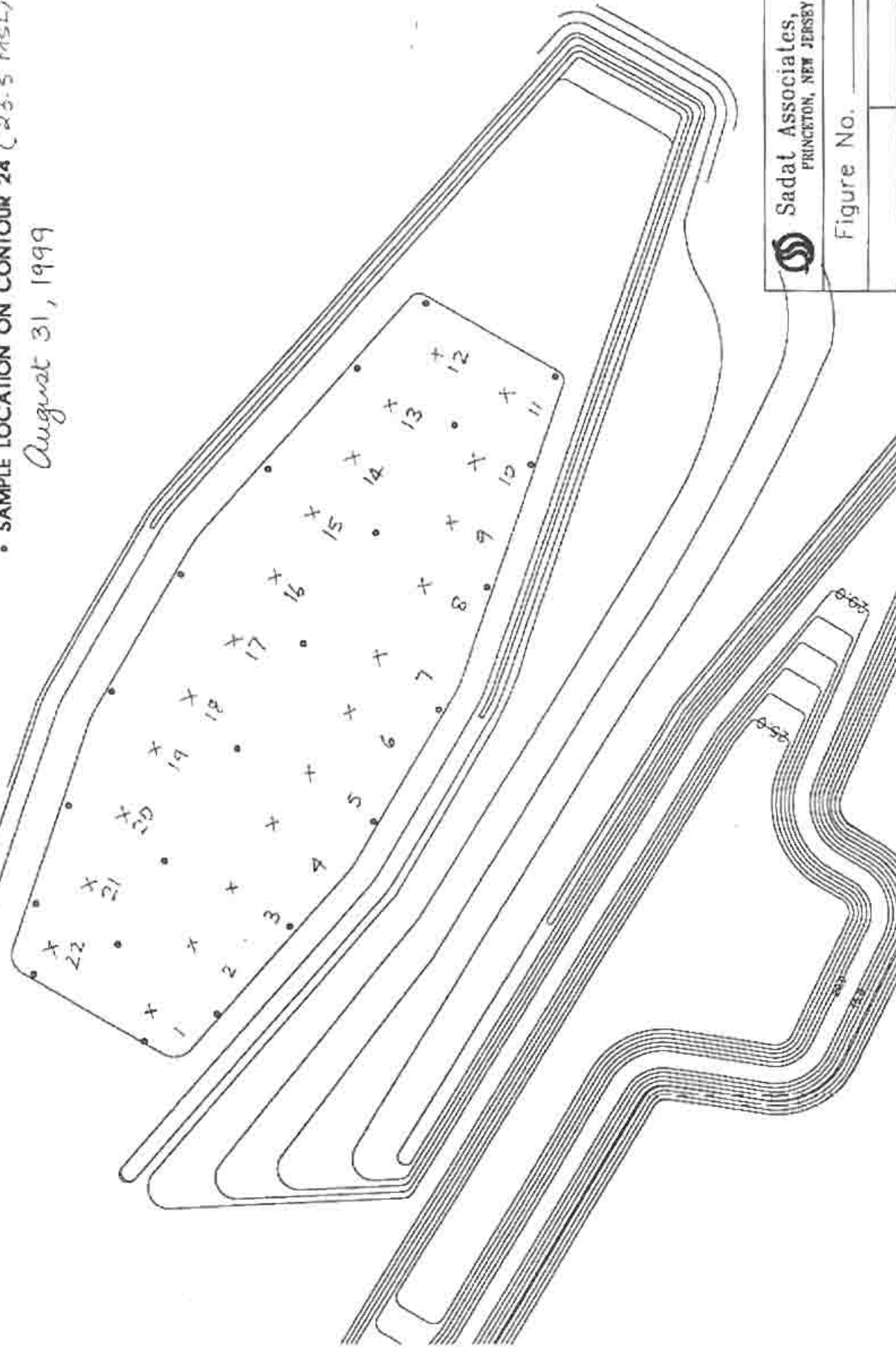
A2

**TROXLER DENSITY TEST RESULTS AT ELEVATION 23.5 ft (Embankment #1
 OENJ-DOT DEMO PROJECT
 DATE: August 31, 1999**

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS	
1	99.1	660.4	189.4	516.60	471	327.2	43.95%	68.84	97.7% of max. dry density	PASS
2	100.1	687.6	192	568.00	495.6	376	31.81%	75.94	107.7% of max. dry density	PASS
3	97.3	729.3	191.1	582.40	538.2	391.3	37.54%	70.74	100.3% of max. dry density	PASS
4	102.6	656.7	200	521.00	456.7	321	42.27%	72.11	102.3% of max. dry density	PASS
5	100.0	677.9	189.4	528.90	488.5	339.5	43.89%	69.50	98.6% of max. dry density	PASS
6	100.1	715.0	195.1	559.30	519.9	364.2	42.75%	70.12	99.5% of max. dry density	PASS
7	96.4	633.1	188.9	497.05	444.2	308.15	44.15%	66.87	94.9% of max. dry density	PASS
8	98.2	745.8	193.7	586.90	552.1	393.2	40.41%	69.94	99.2% of max. dry density	PASS
9	98.0	657.0	192.3	516.90	464.7	324.6	43.16%	68.45	97.1% of max. dry density	PASS
10	98.1	656.2	193.1	508.00	463.1	314.9	47.06%	66.71	94.6% of max. dry density	PASS
11	98.3	700.0	194.3	543.50	505.7	349.2	44.82%	67.88	96.3% of max. dry density	PASS
12	97.9	664.7	186.1	534.20	478.6	348.1	37.49%	71.21	101.0% of max. dry density	PASS
13	100.9	729.3	191.9	565.40	537.4	373.5	43.88%	70.13	99.5% of max. dry density	PASS
14	100.6	726.6	196.8	564.00	529.8	367.2	44.28%	69.73	98.9% of max. dry density	PASS
15	111.1	685.6	195.2	579.90	490.4	384.7	27.48%	87.15	123.6% of max. dry density	PASS
16	118.6	689.9	196	615.40	493.9	419.4	17.76%	100.71	142.9% of max. dry density	PASS
17	122.3	708.4	206	646.30	502.4	440.3	14.10%	107.18	152.0% of max. dry density	PASS
18	102.6	663.6	206	523.70	457.6	317.7	44.04%	71.23	101.0% of max. dry density	PASS
19	101.3	650.5	313	553.80	337.5	240.8	40.16%	72.28	102.5% of max. dry density	PASS
20	103.7	663.2	298.2	559.90	365	261.7	39.47%	74.35	105.5% of max. dry density	PASS
21	104.00	684.5	295.7	563.40	388.8	267.7	45.24%	71.61	101.6% of max. dry density	PASS
22 (26)	102.70	678.8	305.9	557.00	372.9	251.1	48.51%	69.16	98.1% of max. dry density	PASS

Note: 1) In order to consider each 12-in lift completed, at least 75% of the total sampling point must pass the requirements for both Moisture Content and Dry Density
 2) Since requirement # 1 was satisfied, the lift was considered complete

• SAMPLE LOCATION ON CONTOUR 24 (23.5 MSL)
August 31, 1999



Sadat Associates, Inc.
PRINCETON, NEW JERSEY

Figure No. _____

407

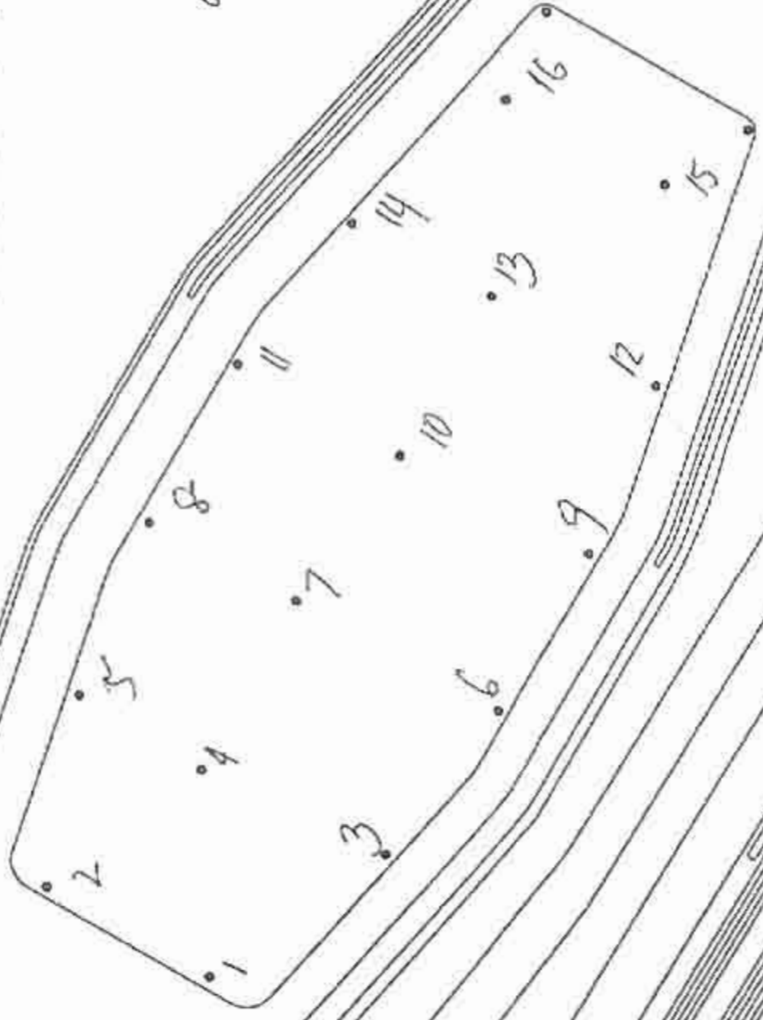
TROXLER DENSITY TEST RESULTS AT ELEVATION 24.5 ft (Embankment #1)
 OENJ-DOT DEMO PROJECT
 DATE: September 13, 1999

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS	
1	97.2	625.6	189.4	475.50	436.2	286.1	52.46%	63.75	90.4% of max. dry density	PASS
2	100.2	571.5	192	440.90	379.5	248.9	52.47%	65.72	93.2% of max. dry density	PASS
3	95.5	559.9	191.1	434.30	368.8	243.2	51.64%	62.98	89.3% of max. dry density	PASS
4	94.8	537.5	200	421.80	337.5	221.8	52.16%	62.30	88.4% of max. dry density	PASS
5	102.0	701.9	189.4	528.10	512.5	338.7	51.31%	67.41	95.6% of max. dry density	PASS
6	100.6	768.8	195.1	579.20	573.7	384.1	49.36%	67.35	95.5% of max. dry density	PASS
7	101.4	752.9	188.9	578.80	564	389.9	44.65%	70.10	99.4% of max. dry density	PASS
8	104.2	641.0	193.7	504.30	447.3	310.6	44.01%	72.36	102.6% of max. dry density	PASS
9	98.0	636.1	192.3	487.90	443.8	295.6	50.14%	65.27	92.6% of max. dry density	PASS
10	101.5	567.3	193.1	446.70	374.2	253.6	47.56%	68.79	97.6% of max. dry density	PASS
11	104.9	724.1	194.3	549.90	529.8	355.6	48.99%	70.41	99.9% of max. dry density	PASS
12	96.2	518.0	186.1	405.60	331.9	219.5	51.21%	63.62	90.2% of max. dry density	PASS
13	106.0	685.9	191.9	533.10	494	341.2	44.78%	73.21	103.8% of max. dry density	PASS
14	100.0	500.9	196.8	404.30	304.1	207.5	46.55%	68.23	96.8% of max. dry density	PASS
15	100.7	728.4	195.2	571.00	533.2	375.8	41.88%	70.97	100.7% of max. dry density	PASS
16	103.8	690.7	196	520.90	494.7	324.9	52.26%	68.17	96.7% of max. dry density	PASS
17	104.5	503.5	206	408.50	297.5	202.5	46.91%	71.13	100.9% of max. dry density	PASS
18	104.1	531.8	206	423.80	325.8	217.8	49.59%	69.59	98.7% of max. dry density	PASS

Note: 1) In order to consider each 12-in lift completed, at least 75% of the total sampling point must pass the requirements for both Moisture Content and Dry Density
 2) Since requirement # 1 was satisfied, the lift was considered complete

• SAMPLE LOCATION ON CONTOUR 25

9/13/99



 Sadat Associates, Inc.
PRINCETON, NEW JERSEY

Figure No. _____

ACI

Troxler Density Gauge Readings at DOT Embankment Project

Date: April 6, 1999

Elevation: 13.0 ft. at Embankment #2

Location #	Wet Density (pcf)	Wet Weight (g)	Dry Weight (g)	Moisture Content (%)	Dry Density (pcf)	REMARKS		
1	100.60	232.70	149.70	55.44	64.72	91.80%	of max. dry density	PASS
2	100.30	303.40	191.10	58.77	63.18	89.61%	of max. dry density	PASS
3	99.90	301.40	188.90	59.56	62.61	88.81%	of max. dry density	PASS
4	96.80	266.70	173.30	53.89	62.90	89.22%	of max. dry density	PASS
5	100.00	293.00	203.70	43.84	69.52	98.61%	of max. dry density	PASS
6	98.30	271.30	177.80	52.59	64.42	91.38%	of max. dry density	PASS
7	99.70	275.90	174.50	58.11	63.06	89.44%	of max. dry density	PASS
8	100.40	280.10	196.00	42.91	70.25	99.65%	of max. dry density	PASS
9	97.20	277.00	183.20	51.20	64.29	91.18%	of max. dry density	PASS
10	99.30	270.70	173.70	55.84	63.73	90.38%	of max. dry density	PASS
11	99.70	297.10	206.20	44.08	69.20	98.15%	of max. dry density	PASS
12	94.00	300.70	220.20	36.56	68.84	97.64%	of max. dry density	PASS
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TROVER ...
AT ...

EMBANKMENT #2



BY

TROXLER DENSITY TEST RESULTS AT ELEVATION 14.0 FT (EMBANKMENT #2)

OENJ-DOT DEMO PROJECT

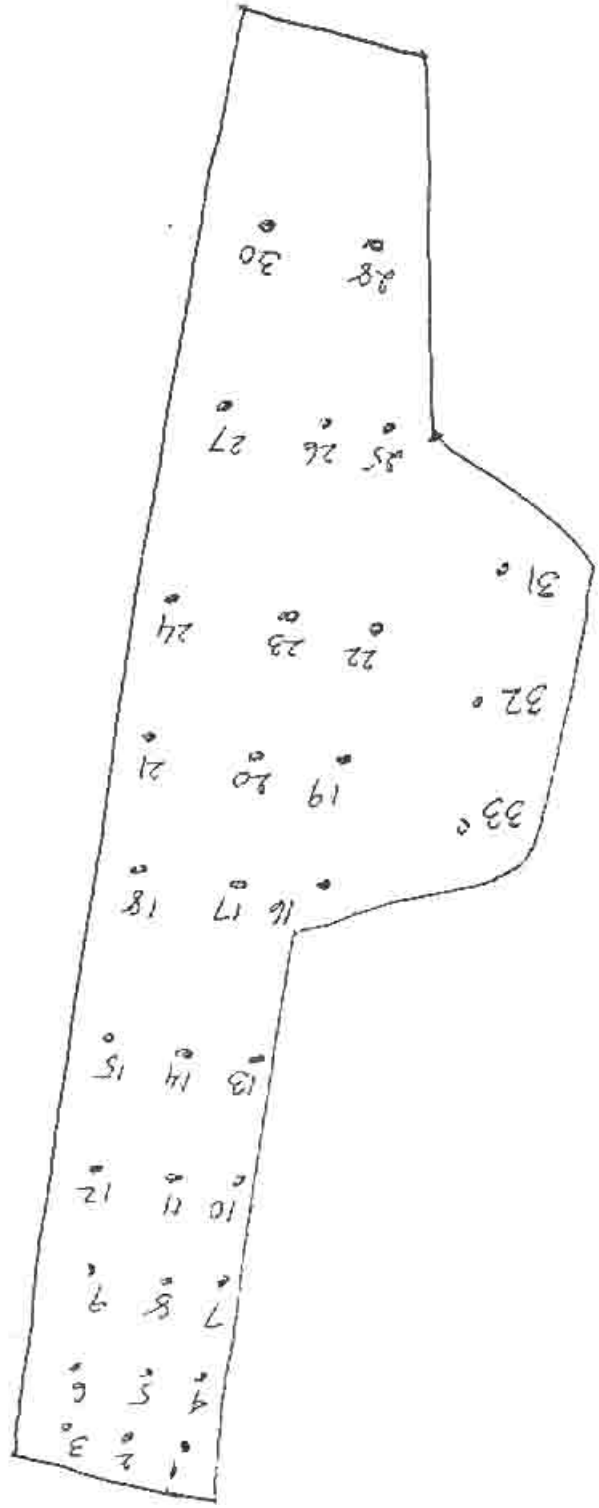
DATE: April 15, 1999

Sample #	Wet Density (pcf)	Net Wet Weight (g)	Container wt. (g)	Gross Wet wt. (g)	Gross Dry wt. (g)	Net Dry wt. (g)	Moisture Content (%)	Dry Density (pcf)	REMARKS		
1	94.20	156.30	189.80	346.10	290.00	100.20	56.0%	60.39	85.66%	of max. dry density	FAIL
2	97.70	239.60	192.10	431.70	345.00	152.90	56.7%	62.35	88.44%	of max. dry density	FAIL
3	98.50	196.30	191.10	387.40	325.00	133.90	46.6%	67.19	95.30%	of max. dry density	PASS
4	96.60	163.70	199.80	363.50	302.20	102.40	59.9%	60.43	85.71%	of max. dry density	FAIL
5	96.80	254.80	189.70	444.50	358.30	168.60	51.1%	64.05	90.85%	of max. dry density	FAIL
6	97.60	208.10	195.00	403.10	324.20	129.20	61.1%	60.60	85.95%	of max. dry density	FAIL
7	97.40	252.20	189.10	441.30	345.60	156.50	61.2%	60.44	85.73%	of max. dry density	FAIL
8	97.80	243.50	193.90	437.40	359.20	165.30	47.3%	66.39	94.17%	of max. dry density	PASS
9	98.40	262.90	192.30	455.20	355.20	162.90	61.4%	60.97	86.48%	of max. dry density	FAIL
10	97.30	214.20	193.00	407.20	332.20	139.20	53.9%	63.23	89.69%	of max. dry density	FAIL
11	94.10	218.60	194.50	413.10	334.20	139.70	56.5%	60.14	85.30%	of max. dry density	FAIL
12	97.50	213.60	186.20	399.80	321.50	135.30	57.9%	61.76	87.60%	of max. dry density	FAIL
13	97.10	200.80	192.10	392.90	323.20	131.10	53.2%	63.40	89.92%	of max. dry density	FAIL
14	98.40	236.30	196.60	432.90	326.90	130.30	81.4%	54.26	76.96%	of max. dry density	FAIL
15	96.90	197.20	195.20	392.40	323.00	127.80	54.3%	62.80	89.08%	of max. dry density	FAIL
16	96.20	199.80	196.10	395.90	312.90	116.80	71.1%	56.24	79.77%	of max. dry density	FAIL
17	97.70	212.90	206.10	419.00	323.00	116.90	82.1%	53.65	76.09%	of max. dry density	FAIL
18	98.00	177.00	205.40	382.40	302.20	96.80	82.9%	53.60	76.02%	of max. dry density	FAIL
19	98.10	166.30	313.10	479.40	421.00	107.90	54.1%	63.65	90.28%	of max. dry density	FAIL
20	99.70	166.60	298.30	464.90	406.50	108.20	54.0%	64.75	91.85%	of max. dry density	FAIL
21	97.30	168.60	295.80	464.40	402.20	106.40	58.5%	61.40	87.10%	of max. dry density	FAIL
22	101.20	211.00	322.50	533.50	451.20	128.70	63.9%	61.73	87.56%	of max. dry density	FAIL
23	98.60	199.60	309.20	508.80	439.50	130.30	53.2%	64.37	91.30%	of max. dry density	FAIL
24	98.80	222.20	315.20	537.40	453.20	138.00	61.0%	61.36	87.04%	of max. dry density	FAIL
25	102.10	227.20	312.80	540.00	452.90	140.10	62.2%	62.96	89.30%	of max. dry density	FAIL
26	96.60	208.80	306.20	515.00	436.80	130.60	59.9%	60.42	85.70%	of max. dry density	FAIL
27	99.00	180.70	313.10	493.80	414.60	101.50	78.0%	55.61	78.88%	of max. dry density	FAIL
28											
29											
30	100.10	177.10	324.50	501.60	452.00	127.50	38.9%	72.07	102.22%	of max. dry density	PASS
31	96.00	195.70	312.30	508.00	435.20	122.90	59.2%	60.29	85.52%	of max. dry density	FAIL
32	93.20	177.60	297.40	475.00	402.50	105.10	69.0%	55.15	78.23%	of max. dry density	FAIL
33	94.30	212.40	309.80	522.20	439.60	129.80	63.6%	57.63	81.74%	of max. dry density	FAIL
34											

Note: 1) In order to consider each 12-in lift completed, at least 75% of the total sampling points must pass the requirements for both Moisture Content and Dry Density.
 2) Since requirement # 1 was not satisfied, the lift was reopened, then, disked and rolled. A new set of sampling points were collected, and the lift was considered complete as shown in Table dated April 21, 1999 (Troxlter-2-14B.wb3)

Tooxler test @ 14'-0"
2nd lift (Embolic #2)
4/15/99.

File: Tooxler 2-14A.wb3



TROXLER DENSITY TEST RESULTS AT ELEVATION 14.0 FT (EMBANKMENT #2)

OENJ-DOT DEMO PROJECT

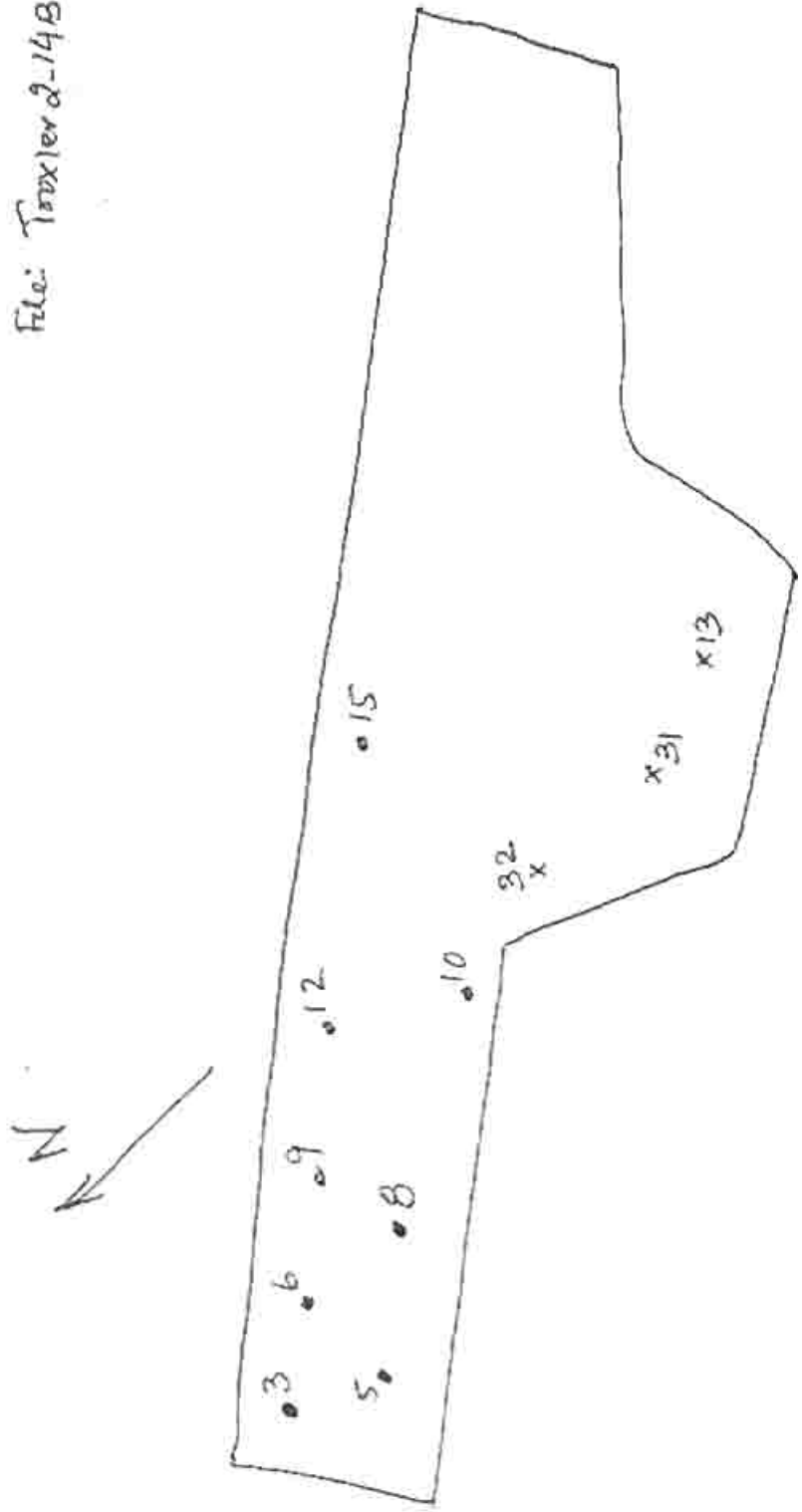
DATE: April 21, 1999

Status: Re-Test of Elevation 14.0 ft. at Embankment #2

Sample #	Wet Density (pcf)	Net Wet Weight (g)	Container wt. (g)	Gross Wet wt. (g)	Gross Dry wt. (g)	Net Dry wt. (g)	Moisture Content (%)	Dry Density (pcf)	REMARKS		
3	101.90	192.60	189.80	382.40	322.00	132.20	45.69%	69.94	99.21%	of max. dry density	PASS
5	98.70	391.00	195.20	586.20	449.40	254.20	53.82%	64.17	91.02%	of max. dry density	PASS
6	100.80	177.10	192.10	369.20	309.10	117.00	51.37%	66.59	94.46%	of max. dry density	PASS
8	103.90	376.20	186.20	562.40	435.20	249.00	51.08%	68.77	97.55%	of max. dry density	PASS
9	97.00	193.60	191.10	384.70	318.10	127.00	52.44%	63.63	90.26%	of max. dry density	PASS
10	99.40	374.70	194.50	569.20	441.20	246.70	51.88%	65.44	92.83%	of max. dry density	PASS
12	99.40	196.40	199.80	396.20	326.60	126.80	54.89%	64.17	91.03%	of max. dry density	PASS
13	103.10	385.40	189.10	574.50	434.40	245.30	57.11%	65.62	93.08%	of max. dry density	FAIL
15	98.50	181.30	189.70	371.00	307.80	118.10	53.51%	64.16	91.01%	of max. dry density	PASS
18	101.30	309.00	195.00	504.00	389.70	194.70	58.71%	63.83	90.54%	of max. dry density	FAIL
31	97.70	399.50	193.90	593.40	443.80	249.90	59.86%	61.11	86.69%	of max. dry density	FAIL
32	99.30	344.60	192.30	536.90	414.50	222.20	55.09%	64.03	90.82%	of max. dry density	FAIL

Troxler test @ 14'-0"
Second Run (Embed #2)
4/21/99

File: Troxler2-14B.wb3



TROXLER DENSITY TEST RESULTS AT ELEVATION 15.5 FT (EMBANKMENT #2)
OENJ-DOT DEMO PROJECT
DATE: MAY 01, 1999

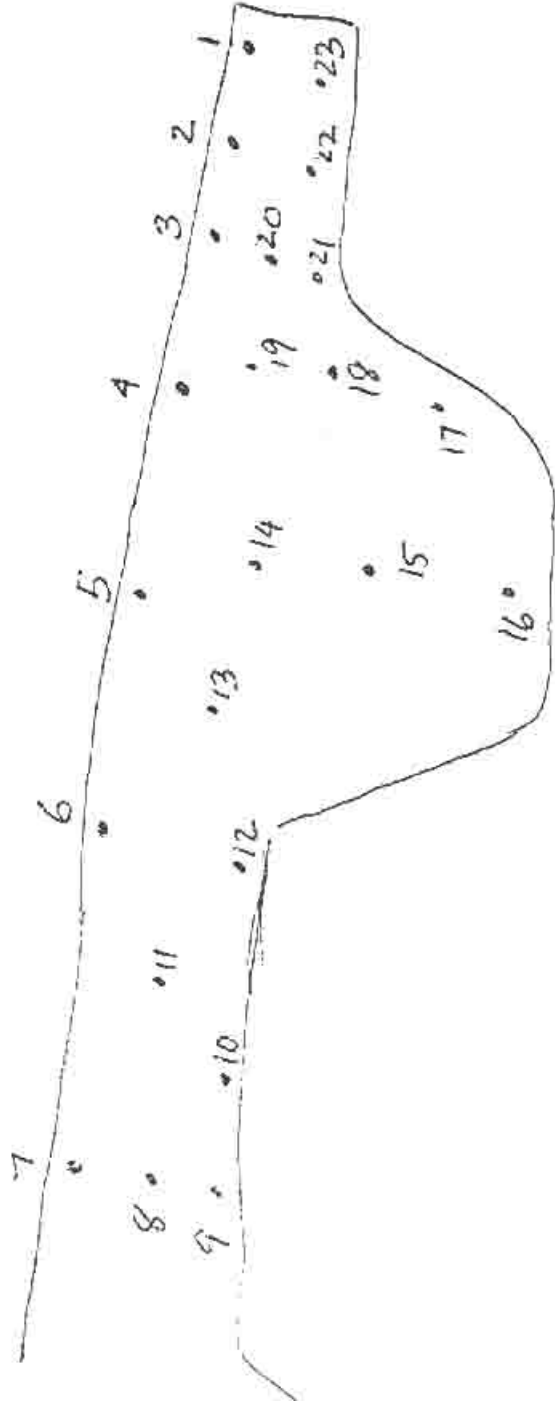
Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS	
1	96.7	493.8	196.6	395.6	297.2	199	49.35%	64.75	91.8% of max. dry density	PASS
2	93.4	553.9	313	470.4	240.9	157.4	53.05%	61.03	86.6% of max. dry density	FAIL
3	97.5	496.2	206.1	400	290.1	193.9	49.61%	65.17	92.4% of max. dry density	PASS
4	93.8	545.6	285.5	459.1	260.1	173.6	49.83%	62.61	88.8% of max. dry density	PASS
5	97.3	469.2	195.1	383.2	274.1	188.1	45.72%	66.77	94.7% of max. dry density	PASS
6	95	550	309.1	478.1	240.9	169	42.54%	66.65	94.5% of max. dry density	PASS
7	97.7	472.8	194.4	385.5	278.4	191.1	45.68%	67.06	95.1% of max. dry density	PASS
8	97.2	535.5	298.3	450.2	237.2	151.9	56.16%	62.25	88.3% of max. dry density	FAIL
9	99.8	498.2	196.2	384.2	302	188	60.64%	62.13	88.1% of max. dry density	FAIL
10	99.1	497.8	191.7	397.8	306.1	206.1	48.52%	66.72	94.6% of max. dry density	PASS
11	97.9	556.5	386	485.4	170.5	99.4	71.53%	57.07	81.0% of max. dry density	FAIL
12	97.4	497.8	186	398.6	311.8	212.6	46.66%	66.41	94.2% of max. dry density	PASS
13	97.7	497.1	205.3	424.2	291.8	218.9	33.30%	73.29	104.0% of max. dry density	PASS
14	95.9	491.1	189.5	390.4	301.6	200.9	50.12%	63.88	90.6% of max. dry density	FAIL
15	98.6	475	191.1	390.5	283.9	199.4	42.38%	69.25	98.2% of max. dry density	PASS
16	96.6	480.9	191.8	399.3	289.1	207.5	39.33%	69.33	98.3% of max. dry density	PASS
17	93.4	485.6	199.6	385	286	185.4	54.26%	60.55	85.9% of max. dry density	FAIL
18	99.6	485.8	189.5	386	296.3	196.5	50.79%	66.05	93.7% of max. dry density	FAIL
19	99.1	473.3	195	393.6	278.3	198.6	40.13%	70.72	100.3% of max. dry density	PASS
20	94.4	532.9	189.1	426.3	343.8	237.2	44.94%	65.13	92.4% of max. dry density	PASS
21	95.9	467.2	193.8	359.5	273.4	165.7	65.00%	58.12	82.4% of max. dry density	FAIL
22	97.9	501.5	192.4	387.6	309.1	195.2	58.35%	61.82	87.7% of max. dry density	FAIL
23	97	490.5	192.9	402.5	297.6	209.6	41.98%	68.32	96.9% of max. dry density	PASS

Note:

- 1) In order to consider each 12-in lift completed, at least 75% of the total sampling points must pass the requirements for both Moisture Content and Dry Density.
- 2) Since requirement # 1 was satisfied, the lift was considered complete.

TROXLER AT ELEVATION 15.5
FT.

File: Troxler 3-16.wb3



5/1/99

TROXLER DENSITY TEST RESULTS AT ELEVATION 16.5 FT (EMBANKMENT #2)
OENJ-DOT DEMO PROJECT
DATE: MAY 11, 1999

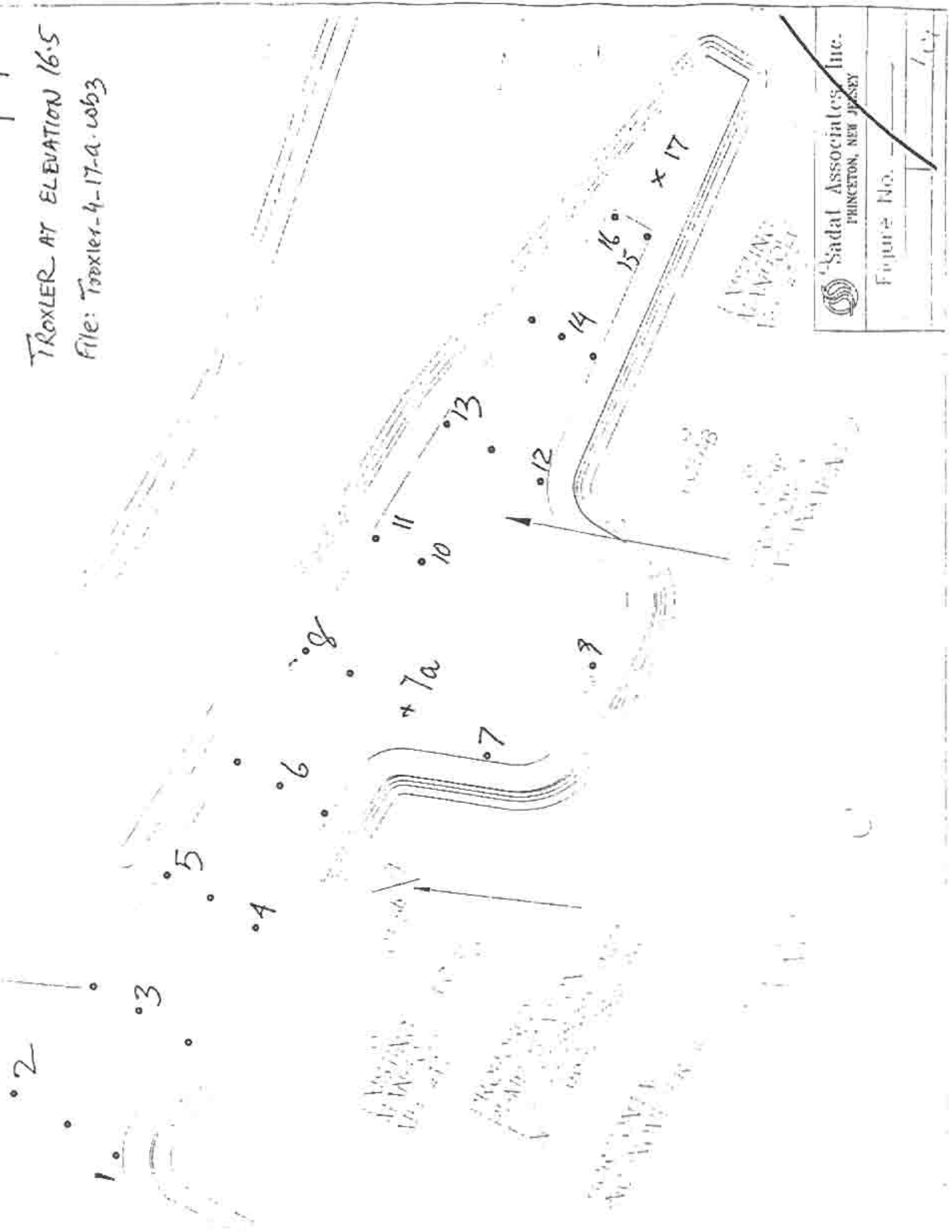
Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS
1	101.4	580.6	189.4	460.6	391.2	271.2	44.25%	70.30	99.7% of max. dry density PASS
2	100.1	575.9	192	442.8	383.9	250.8	53.07%	65.39	92.8% of max. dry density FAIL
3	98.1	602.5	191.1	433.8	411.4	242.7	69.51%	57.87	82.1% of max. dry density FAIL
4	98.6	562	200	445.3	362	245.3	47.57%	66.81	94.8% of max. dry density PASS
5	101.6	584.1	189.4	445.8	394.7	256.4	53.94%	66.00	93.6% of max. dry density FAIL
6	97.9	577.2	195.1	439.4	382.1	244.3	56.41%	62.59	88.8% of max. dry density FAIL
7	99.7	585.9	188.9	433.3	397	244.4	62.44%	61.38	87.1% of max. dry density FAIL
7A	99.7	574	205.3	443.2	368.7	237.9	54.98%	64.33	91.2% of max. dry density FAIL
8	101.9	537.8	193.7	412.2	344.1	218.5	57.48%	64.71	91.8% of max. dry density FAIL
9	101.5	588.5	192.3	423.8	396.2	231.5	71.14%	59.31	84.1% of max. dry density FAIL
10	95.5	587.6	193.1	431.2	394.5	238.1	65.69%	57.64	81.8% of max. dry density FAIL
11	98.9	585.9	194.3	445.6	391.6	251.3	55.83%	63.47	90.0% of max. dry density FAIL
12	97.2	583.5	186.1	444.3	397.4	258.2	53.91%	63.15	89.6% of max. dry density FAIL
13	97.5	593.4	191.9	462.5	401.5	270.6	48.37%	65.71	93.2% of max. dry density PASS
14	96.3	591.4	196.8	492.4	394.6	295.6	33.49%	72.14	102.3% of max. dry density PASS
15	99.8	591.3	195.2	443.2	396.1	248	59.72%	62.49	88.6% of max. dry density FAIL
16	98.7	567.7	cancelled	-	-	-	-	-	- - -
17	106.3	537.9	206	459	331.9	253	31.19%	81.03	114.9% of max. dry density PASS

Note:

- 1) In order to consider each 12-in lift completed, at least 75% of the total sampling points must pass the requirements for both Moisture Content and Dry Density.
- 2) Since requirement # 1 was not satisfied, the lift was reopened, then, disked and rolled. A new set of sampling points were collected, and the lift was considered complete as shown in Table dated May 12, 1999 (Troxlter-4-17B.wb3)

TROXLER AT ELEVATION 16.5

File: Troxler-4-17-a-wob3




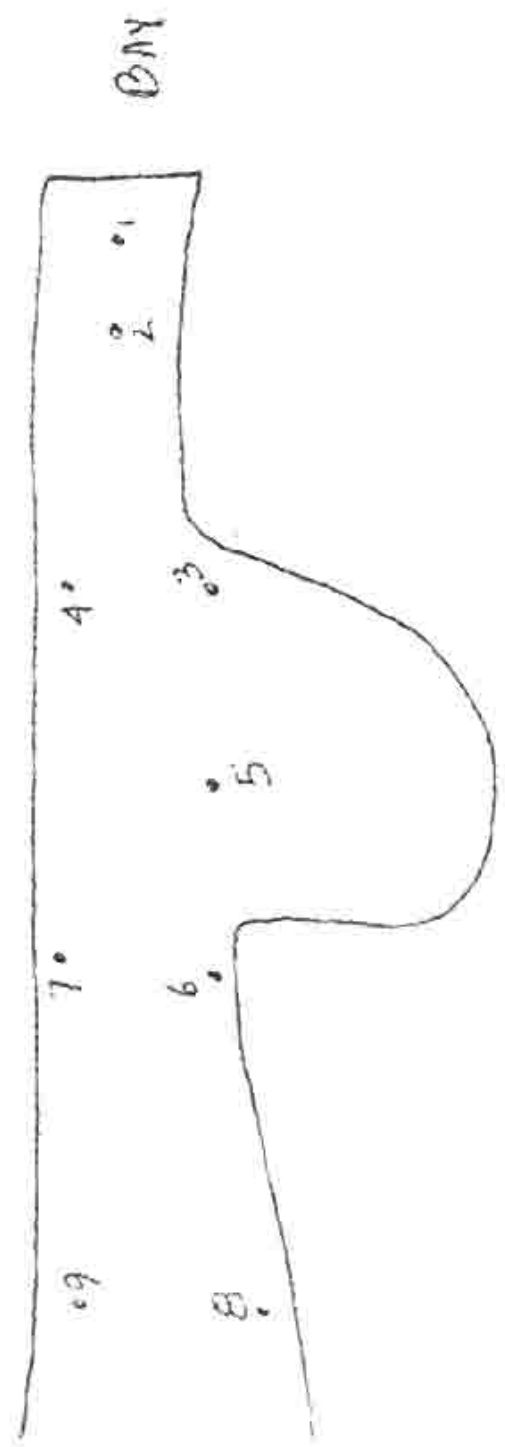
 Sadat Associates, Inc.
PRINCETON, NEW JERSEY

Figure No. _____

TROXLER DENSITY TEST RESULTS AT ELEVATION 16.5 FT (EMBANKMENT #2)**OENJ-DOT DEMO PROJECT****DATE: MAY 12, 1999****Status: Re-Test of Elevation 16.5 ft. at Embankment #2**

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS
1	98.2	593	189.4	455.9	403.6	266.5	51.44%	64.84	92.0% of max. dry density FAIL
2	97.2	602.6	192	476.5	410.6	284.5	44.32%	67.35	95.5% of max. dry density PASS
3	92.9	601	191.1	474.9	409.9	283.8	44.43%	64.32	91.2% of max. dry density PASS
4	98.9	600.5	200	465	400.5	265	51.13%	65.44	92.8% of max. dry density FAIL
5	100.9	544.9	189.4	425	355.5	235.6	50.89%	66.87	94.9% of max. dry density FAIL
6	100.4	593	195.1	456.3	397.9	261.2	52.34%	65.91	93.5% of max. dry density FAIL
7	100.1	602.9	188.9	464.9	414	276	50.00%	66.73	94.7% of max. dry density PASS
8	98	594.1	193.7	461.2	400.4	267.5	49.68%	65.47	92.9% of max. dry density PASS
9	98.3	582.5	192.3	453.9	390.2	261.6	49.16%	65.90	93.5% of max. dry density PASS

PROXLER TEST
AT ELEVATION 16.5
File 4-17-b.wb3



Dated 5/12/99

TROXLER DENSITY TEST RESULTS AT ELEVATION 17.5 FT (EMBANKMENT #2)

OENJ-DOT DEMO PROJECT

DATE: MAY 17, 1999

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)
1	98.30	523.2	189.4	414.5	333.8	225.1	48.29%	66.29
2	95.60	544.3	192	432.3	352.3	240.3	46.61%	65.21
3	94.50	512.3	191.1	406.8	321.2	215.7	48.91%	63.46
4	97.70	558.2	200	401.3	358.2	201.3	77.94%	54.91
5	98.20	524.3	189.4	415.9	334.9	226.5	47.86%	66.41
6	95.30	512.4	195.1	405.5	317.3	210.4	50.81%	63.19
7	98.90	506.7	188.9	412.6	317.8	223.7	42.07%	69.62
8	100.50	505.5	193.7	409.8	311.8	216.1	44.29%	69.65
9	101.40	598.5	192.3	429.4	406.2	237.1	71.32%	59.19
10	99.50	543.3	193.1	438.4	350.2	245.3	42.76%	69.70
11	96.20	594.4	194.3	435.6	400.1	241.3	65.81%	58.02
12	98.30	519.9	186.1	434.5	333.8	248.4	34.38%	73.15
13	94.50	580.5	191.9	459.3	388.6	267.4	45.33%	65.03
14	99.30	603.2	196.8	469.2	406.4	272.4	49.19%	66.56
15	97.50	599.3	195.2	451.9	404.1	256.7	57.42%	61.94
16	103.40	543.3	196	456.2	347.3	260.2	33.47%	77.47

Note: 1) In order to consider each 12-in lift completed, at least 75% of the total sampling points

must pass the requirements for both Moisture Content and Dry Density.

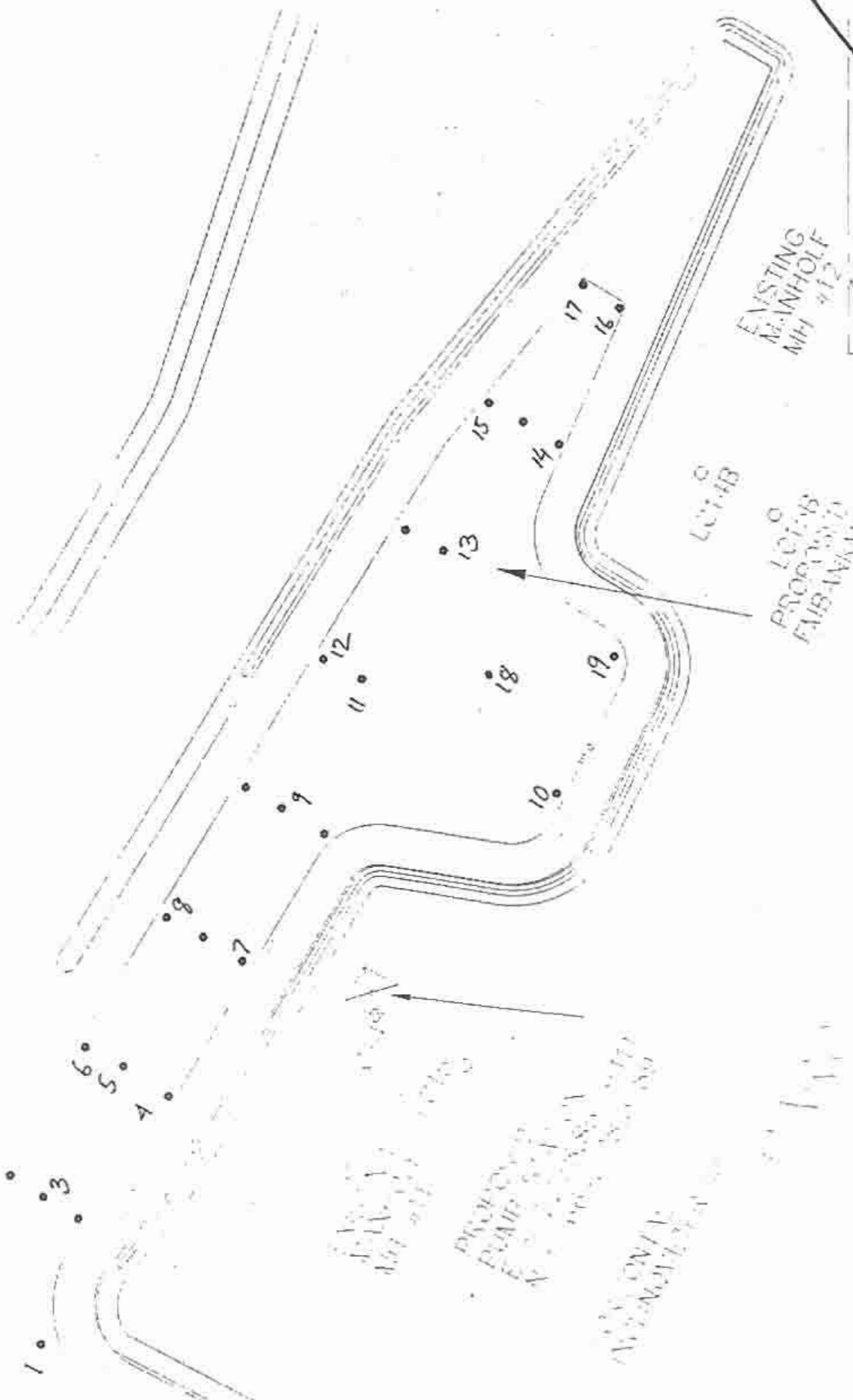
2) Since requirement # 1 was satisfied, the lift was considered complete.

TROXLER DENSITY TEST RESULTS AT ELEVATION 18.5 FT (EMBANKMENT #2)
 OENJ-DOT DEMO PROJECT
 DATE: MAY 21, 1999

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS		
1	103.20	548.3	189.4	420.4	358.9	231	55.37%	66.42	94.2%	of max. dry density	FAIL
2	111.80	546	192	440.3	354	248.3	42.57%	78.42	111.2%	of max. dry density	PASS
3	96.10	510.5	191.1	404.3	319.4	213.2	49.81%	64.15	91.0%	of max. dry density	PASS
4	98.90	598.2	200	450	398.2	250	59.28%	62.09	88.1%	of max. dry density	FAIL
5	98.20	538.3	189.4	412.3	348.9	222.9	56.53%	62.74	89.0%	of max. dry density	FAIL
6	94.90	512.2	195.1	415.2	317.1	220.1	44.07%	65.87	93.4%	of max. dry density	PASS
7	99.90	511.3	188.9	398.8	322.4	209.9	53.60%	65.04	92.3%	of max. dry density	FAIL
8	100.80	500.3	193.7	406.4	306.6	212.7	44.15%	69.93	99.2%	of max. dry density	PASS
9	99.10	612.3	192.3	484.4	420	292.1	43.79%	68.92	97.8%	of max. dry density	PASS
10	95.30	552.3	193.1	420.9	359.2	227.8	57.68%	60.44	85.7%	of max. dry density	FAIL
11	95.90	592.5	194.3	460	398.2	265.7	49.87%	63.99	90.8%	of max. dry density	PASS
12	97.40	525.8	186.1	398.3	339.7	212.2	60.08%	60.84	86.3%	of max. dry density	FAIL
13	93.60	572.1	191.9	440.3	380.2	248.4	53.06%	61.15	86.7%	of max. dry density	FAIL
14	96.30	608.9	196.8	448.8	412.1	252	63.53%	58.89	83.5%	of max. dry density	FAIL
15	97.30	599.3	195.2	463.8	404.1	268.6	50.45%	64.67	91.7%	of max. dry density	FAIL
16	99.90	542.9	196	418.6	346.9	222.6	55.84%	64.10	90.9%	of max. dry density	FAIL
17	96.00	595.4		484.5	595.4	484.5	22.89%	78.12	110.8%	of max. dry density	PASS
18	97.10	528.8	206	413	322.8	207	55.94%	62.27	88.3%	of max. dry density	FAIL
19	92.90	582.1		495.4	582.1	495.4	17.50%	79.06	112.1%	of max. dry density	PASS

Note: 1) In order to consider each 12-in lift completed, at least 75% of the total sampling points must pass the requirements for both Moisture Content and Dry Density.
 2) Since requirement # 1 was not satisfied, the lift was reopened, then, disked and rolled.
 A new set of sampling points were collected, and the lift was considered complete as shown in Table dated May 27, 1999 (Troxtler-6-19B.wb3)

AT ELEVATION 18.5
File: Troxler 6-19-a.wb3



 Sadal Associates, Inc.
PRINCETON, NEW JERSEY

Figure No. 5/2/99

EXISTING
MAINHOLE
MH #12

LOC 18
PROPOSED
FAIRWAY

LOC 18

PROPOSED
FAIRWAY

PROPOSED
FAIRWAY

PROPOSED
FAIRWAY

TROXLER DENSITY TEST RESULTS AT ELEVATION 18.5 FT (EMBANKMENT #2)

OENJ-DOT DEMO PROJECT

DATE: MAY 27, 1999

Status: Re-Test of Elevation 18.5 ft. at Embankment #2

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS		
1	102.6	600.3	189.4	477.2	410.9	287.8	42.77%	71.86	101.9%	of max. dry density	PASS
2	101.3	582.5	192	471.4	390.5	279.4	39.76%	72.48	102.8%	of max. dry density	PASS
3	103.9	529.2	191.1	430.7	338.1	239.6	41.11%	73.63	104.4%	of max. dry density	PASS
4	95.6	598.5	200	483.2	398.5	283.2	40.71%	67.94	96.4%	of max. dry density	PASS
5	100.5	569.4	189.4	462	380	272.6	39.40%	72.10	102.3%	of max. dry density	PASS
6	102.0	596.9	195.1	471.3	401.8	276.2	45.47%	70.12	99.5%	of max. dry density	PASS
7	100.1	582.6	188.9	464.7	393.7	275.8	42.75%	70.12	99.5%	of max. dry density	PASS
8	104.5	598.0	193.7	478.9	404.3	285.2	41.76%	73.72	104.6%	of max. dry density	PASS
9	104.3	580.0	192.3	451.9	387.7	259.6	49.35%	69.84	99.1%	of max. dry density	PASS
10	99.6	581.0	193.1	457.3	387.9	264.2	46.82%	67.84	96.2%	of max. dry density	PASS
11	99.6	586.4	194.3	464.2	392.1	269.9	45.28%	68.56	97.2%	of max. dry density	PASS
12	97.7	565.9	186.1	435.8	379.8	249.7	52.10%	64.23	91.1%	of max. dry density	FAIL
13	96.2	606.2	191.9	465.1	414.3	273.2	51.65%	63.44	90.0%	of max. dry density	FAIL
14	95.6	592.7	196.8	459.1	395.9	262.3	50.93%	63.34	89.8%	of max. dry density	FAIL
15	103.0	481.9	195.2	379.7	286.7	184.5	55.39%	66.28	94.0%	of max. dry density	FAIL
16	95.3	505.9	196	397.6	309.9	201.6	53.72%	62.00	87.9%	of max. dry density	FAIL
17	96.8	557.2	206	441	351.2	235	49.45%	64.77	91.9%	of max. dry density	PASS
18	97.4	550.7	206	436	344.7	230	49.87%	64.99	92.2%	of max. dry density	PASS
19	95.1	583.1	312.9	486.7	270.2	173.8	55.47%	61.17	86.8%	of max. dry density	FAIL
20	96.5	583.1	298.3	487.4	284.8	189.1	50.61%	64.07	90.9%	of max. dry density	FAIL
21	99.5	606.2	295.7	503.9	310.5	208.2	49.14%	66.72	94.6%	of max. dry density	PASS
22	96.8	561.3	322.8	478.1	238.5	155.3	53.57%	63.03	89.4%	of max. dry density	FAIL

TROXLER DENSITY TEST RESULTS AT ELEVATION 19.5 FT (EMBANKMENT #2)
OENJ-DOT DEMO PROJECT
DATE: June 2, 1999

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS
1	101.5	604.2	189.4	444.1	414.8	254.7	62.86%	62.32	88.4% of max. dry density FAIL
2	99.4	601.8	192	454.9	409.8	262.9	55.88%	63.77	90.5% of max. dry density FAIL
3	97.7	574.3	191.1	428.4	383.2	237.3	61.48%	60.50	85.8% of max. dry density FAIL
4	99.3	603.0	200	455.1	403	255.1	57.98%	62.86	89.2% of max. dry density FAIL
5	99.6	602.5	189.4	454.2	413.1	264.8	56.00%	63.84	90.6% of max. dry density FAIL
6	98.0	602.0	195.1	448	406.9	252.9	60.89%	60.91	86.4% of max. dry density FAIL
7	98.6	585.9	188.9	455.7	397	266.8	48.80%	66.26	94.0% of max. dry density PASS
8	97.9	539.6	193.7	423.9	345.9	230.2	50.26%	65.15	92.4% of max. dry density FAIL
9	97.4	584.9	192.3	464.5	392.6	272.2	44.23%	67.53	95.8% of max. dry density PASS
10	96.8	596.9	193.1	464.9	403.8	271.8	48.57%	65.16	92.4% of max. dry density PASS
11	93.1	572.0	194.3	456.2	377.7	261.9	44.22%	64.56	91.6% of max. dry density PASS
12	98.6	604.5	186.1	476.3	418.4	290.2	44.18%	68.39	97.0% of max. dry density PASS
13	92.2	588.8	191.9	458.4	396.9	266.5	48.93%	61.91	87.8% of max. dry density PASS
14	93.7	548.9	196.8	442.8	352.1	246	43.13%	65.46	92.9% of max. dry density PASS
15	100.3	604.9	195.2	482.8	409.7	287.6	42.45%	70.41	99.9% of max. dry density PASS
16	95.0	606.0	196	487.6	410	291.6	40.60%	67.57	95.8% of max. dry density PASS
17	95.0	603.2	206	496.4	397.2	290.4	36.78%	69.46	98.5% of max. dry density PASS
18	96.1	588.6	206	488.1	382.6	282.1	35.63%	70.86	100.5% of max. dry density PASS
19	98.4	585.0	312.9	499.2	272.1	186.3	46.05%	67.37	95.6% of max. dry density PASS
20	96.6	577.2	298.3	507.2	278.9	208.9	33.51%	72.35	102.6% of max. dry density PASS

Note: 1) In order to consider each 12-in lift completed, at least 75% of the total sampling points must pass the requirements for both Moisture Content and Dry Density.
2) Since requirement # 1 was not satisfied, the lift was reopened, then, disked and rolled. A new set of sampling points were collected, and the lift was considered complete as shown in Table dated June 7, 1999 (Troxler-7-20B.wb3)

AT ELEVATION 11.5
File: TROXLER-7-20a.wbz



 Sadat Associates, Inc. PRINCETON, NEW JERSEY
Figure No. _____
6/2/99
LCR

TROXLER DENSITY TEST RESULTS AT ELEVATION 19.5 FT (EMBANKMENT #2)

OENJ-DOT DEMO PROJECT

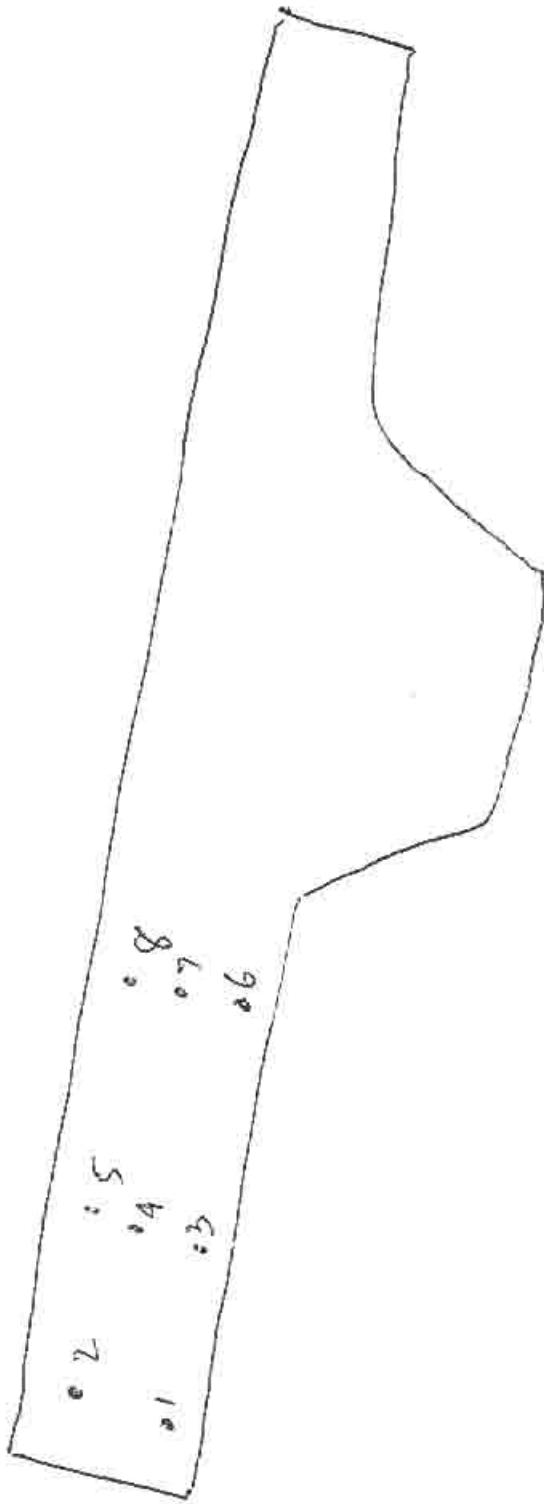
Date: June 7, 1999

Status: Re-Test of Elevation 19.5 ft. at Embankment #2

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS	
1	98.4	553.6	189.4	436.5	364.2	247.1	47.39%	66.76	94.7% of max. dry density	PASS
2	97.0	592.6	192	458.5	400.6	266.5	50.32%	64.53	91.5% of max. dry density	FAIL
3	98.2	606.5	191.1	468.7	415.4	277.6	49.64%	65.62	93.1% of max. dry density	PASS
4	98.4	594.6	200	466.7	394.6	266.7	47.96%	66.51	94.3% of max. dry density	PASS
5	99.9	608.8	189.4	471.3	419.4	281.9	48.78%	67.15	95.2% of max. dry density	PASS
6	96.0	595.2	195.1	476.4	400.1	281.3	42.23%	67.50	95.7% of max. dry density	PASS
7	94.4	601.5	188.9	463.1	412.6	274.2	50.47%	62.74	89.0% of max. dry density	FAIL
8	95.8	602.8	193.7	455.8	409.1	262.1	56.09%	61.38	87.1% of max. dry density	FAIL

Troxler Test @ 19.5
Second Run
Embankment #2
6/7/99

File: Troxlev-7-206.wb3



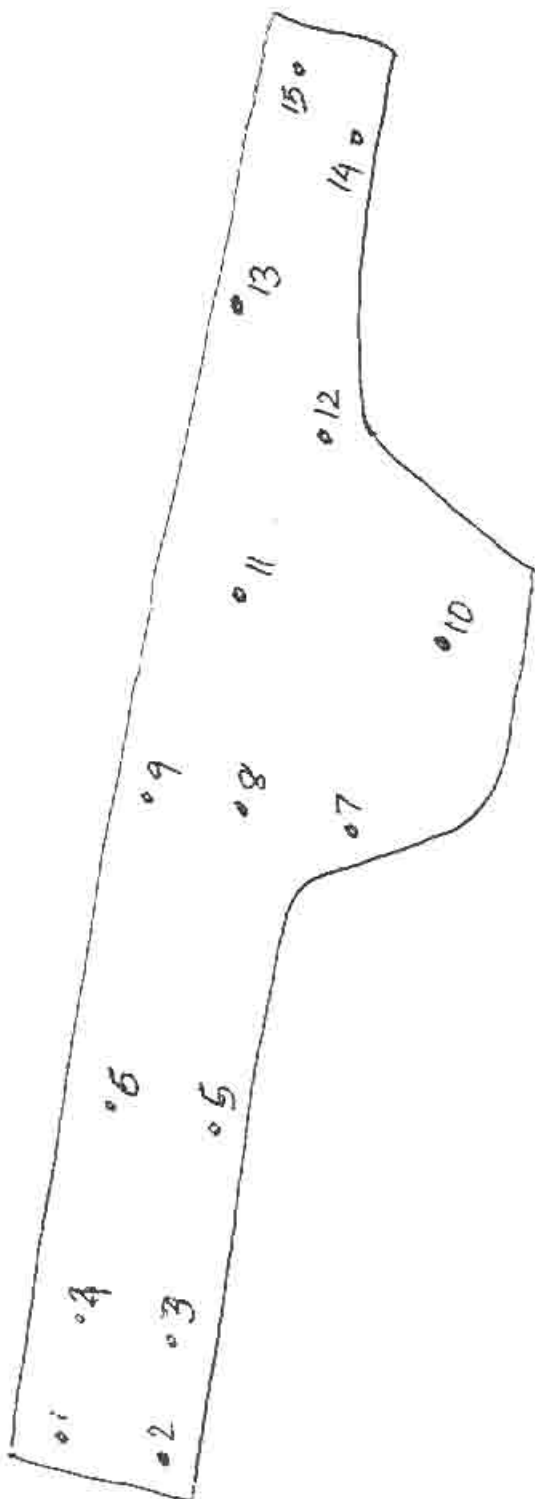
TROXLER DENSITY TEST RESULTS AT ELEVATION 20.5 FT (EMBANKMENT #2)
OENJ-DOT DEMO PROJECT
DATE: June 9, 1999

Sample #	Wet Dens (pcf)	Gross Wt. (gm)	Containr wt. (gm)	Gross Dr wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Dens (pcf)	REMARKS
1	98.4	524.9	189.4	401.1	335.5	211.7	58.48%	62.09	88.1% of max. dry FAIL
2	101.0	593.4	192	456.8	401.4	264.8	51.59%	66.63	94.5% of max. dry FAIL
3	95.2	602.7	191.1	458.7	411.6	267.6	53.81%	61.89	87.8% of max. dry FAIL
4	97.6	583.0	200	450.2	383	250.2	53.08%	63.76	90.4% of max. dry FAIL
5	96.7	530.6	189.4	409.4	341.2	220	55.09%	62.35	88.4% of max. dry FAIL
6	97.1	575.0	195.1	434.8	379.9	239.7	58.49%	61.27	86.9% of max. dry FAIL
7	95.9	568.1	188.9	434.3	379.2	245.4	54.52%	62.06	88.0% of max. dry FAIL
8	94.5	589.0	193.7	454.0	395.3	260.3	51.86%	62.23	88.3% of max. dry FAIL
9	98.1	597.8	192.3	451.9	405.5	259.6	56.20%	62.80	89.1% of max. dry FAIL
10	94.9	581.9	193.1	449.7	388.8	256.6	51.52%	62.63	88.8% of max. dry FAIL
11	97.0	547.2	194.3	431.0	352.9	236.7	49.09%	65.06	92.3% of max. dry PASS
12	101.8	514.9	186.1	399.8	328.8	213.7	53.86%	66.16	93.8% of max. dry FAIL
13	95.8	534.9	191.9	416.6	343	224.7	52.65%	62.76	89.0% of max. dry FAIL
14	94.2	561.3	196.8	429.0	364.5	232.2	56.98%	60.01	85.1% of max. dry FAIL
15	95.5	530.0	195.2	411.4	334.8	216.2	54.86%	61.67	87.5% of max. dry FAIL

Note: 1) In order to consider each 12-in lift completed, at least 75% of the total sampling points must pass the requirements for both Moisture Content and Dry Density.
2) Since requirement # 1 was not satisfied, the lift was reopened, then, disked and rolled. A new set of sampling points were collected, and the lift was considered complete as shown in Table dated June 11, 1999 (Troxl-8-21B.wb3)

Troxler Test 8th Lift.
Elevation 20.5ft
6/9/99. ENONK#2

File: Troxler - B-21A



TROXLER DENSITY TEST RESULTS AT ELEVATION 20.5 FT (EMBANKMENT #2)

OENJ-DOT DEMO PROJECT

DATE: June 11, 1999

Status: Re-Test of Elevation 20.5 ft. at Embankment #2

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS
1	101.0	577.1	189.4	458.8	387.7	269.4	43.91%	70.18	99.5% of max. dry density PASS
2	102.2	597.4	192	456.9	405.4	264.9	53.04%	66.78	94.7% of max. dry density FAIL
3	95.5	535.6	191.1	428.7	344.5	237.6	44.99%	65.87	93.4% of max. dry density PASS
4	96.0	570.5	200	467.1	370.5	267.1	38.71%	69.21	98.2% of max. dry density PASS
5	98.5	575.1	189.4	461.4	385.7	272	41.80%	69.46	98.5% of max. dry density PASS
6	96.9	575.8	195.1	460.4	380.7	265.3	43.50%	67.53	95.8% of max. dry density PASS
7	92.8	575.0	188.9	469.7	386.1	280.8	37.50%	67.49	95.7% of max. dry density PASS
8	96.4	518.8	193.7	425.4	325.1	231.7	40.31%	68.70	97.5% of max. dry density PASS
9	101.7	561.2	192.3	450.8	368.9	258.5	42.71%	71.26	101.1% of max. dry density PASS
10	95.5	548.6	193.1	452.6	355.5	259.5	36.99%	69.71	98.9% of max. dry density PASS
11	99.8	531.1	194.3	432.7	336.8	238.4	41.28%	70.64	100.2% of max. dry density PASS
12	94.8	548.7	186.1	449.9	362.6	263.8	37.45%	68.97	97.8% of max. dry density PASS
13	94.0	593.1	191.9	487.0	401.2	295.1	35.95%	69.14	98.1% of max. dry density PASS
14	96.1	552.8	196.8	443.1	356	246.3	44.54%	66.49	94.3% of max. dry density PASS
15	92.7	549.1	195.2	441.8	353.9	246.6	43.51%	64.59	91.6% of max. dry density PASS

TROXLER TEST.

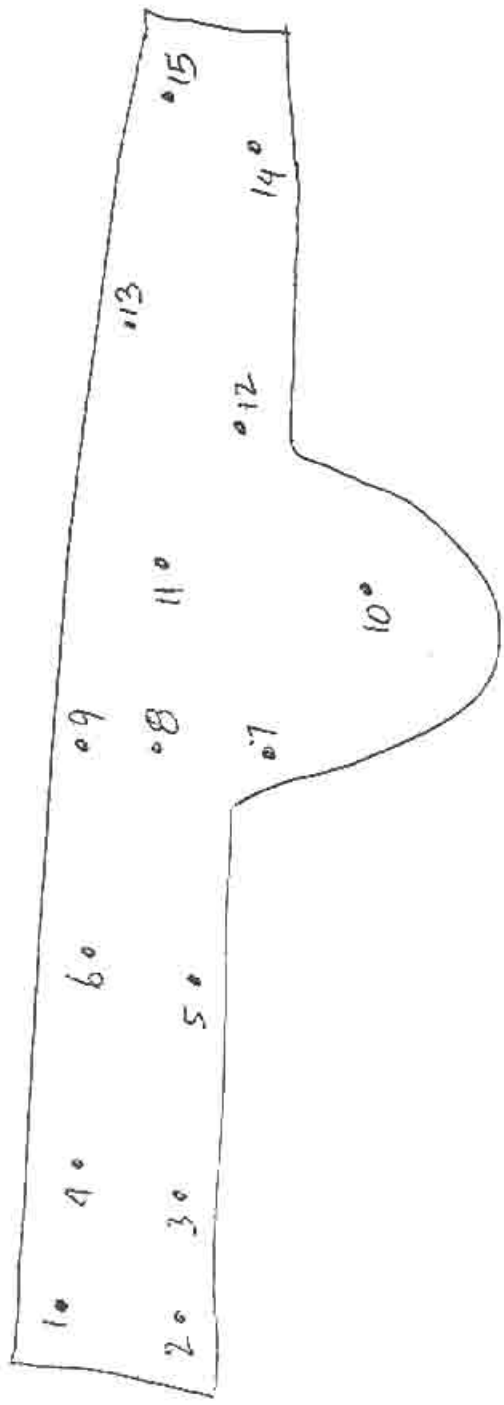
And set

GN list Elevation 20.5 ft

6/11/99. Embank #2

File: Troxler - 8-21b.wb3

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TROXLER DENSITY TEST RESULTS AT ELEVATION 21.5 FT (EMBANKMENT #2)

OENJ-DOT DEMO PROJECT

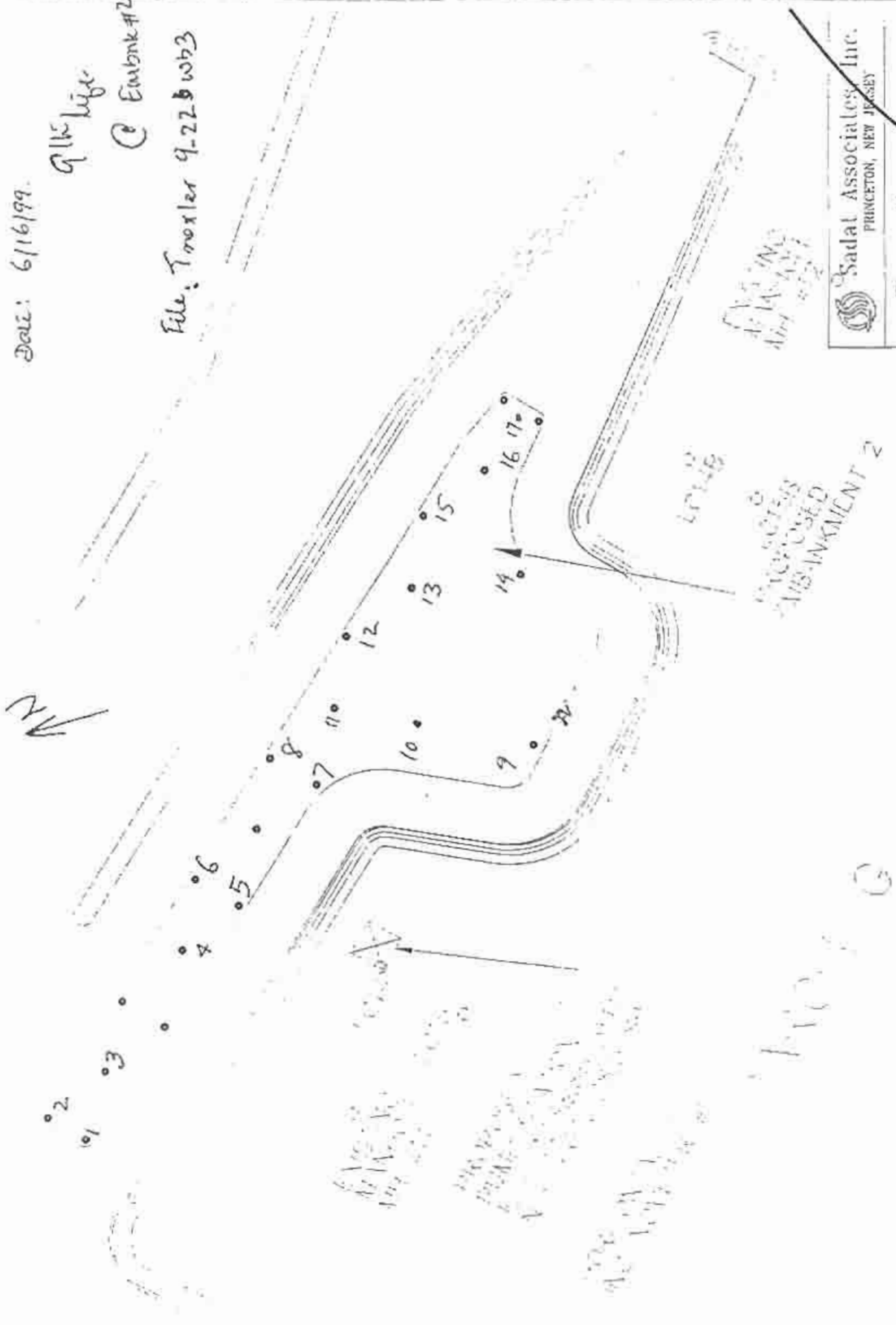
DATE: June 16, 1999

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS	
1	100.7	506.8	189.4	408.6	317.4	219.2	44.80%	69.54	98.6% of max. dry density	PASS
2	100.6	554.6	192	440.3	362.6	248.3	46.03%	68.89	97.7% of max. dry density	PASS
3	97.3	501.0	191.1	403.9	309.9	212.8	45.63%	66.81	94.8% of max. dry density	PASS
4	99.8	543.8	200	426.4	343.8	226.4	51.86%	65.72	93.2% of max. dry density	FAIL
5	102.7	588.6	189.4	463.0	399.2	273.6	45.91%	70.39	99.8% of max. dry density	PASS
6	95.6	570.4	195.1	448.6	375.3	253.5	48.05%	64.57	91.6% of max. dry density	PASS
7	97.5	498.9	188.9	403.8	310	214.9	44.25%	67.59	95.9% of max. dry density	PASS
8	101.5	527.3	193.7	416.8	333.6	223.1	49.53%	67.88	96.3% of max. dry density	PASS
9	98.4	583.0	192.3	453.3	390.7	261	49.69%	65.73	93.2% of max. dry density	PASS
10	100.0	520.0	193.1	416.1	326.9	223	46.59%	68.22	96.8% of max. dry density	PASS
11	101.9	582.8	194.3	459.1	388.5	264.8	46.71%	69.45	98.5% of max. dry density	PASS
12	98.0	532.5	186.1	422.5	346.4	236.4	46.53%	66.88	94.9% of max. dry density	PASS
13	98.8	530.0	191.9	420.8	338.1	228.9	47.71%	66.89	94.9% of max. dry density	PASS
14	102.3	533.0	196.8	436.8	336.2	240	40.08%	73.03	103.6% of max. dry density	PASS
15	101.9	497.0	195.2	405.4	301.8	210.2	43.58%	70.97	100.7% of max. dry density	PASS
16	99.0	592.0	191.8	488.7	400.2	296.9	34.79%	73.45	104.2% of max. dry density	PASS
17	100.1	578.0	199.6	477.0	378.4	277.4	36.41%	73.38	104.1% of max. dry density	PASS

TROXLER TEST @ 21.5 FT.
DATE: 6/16/99

9 1/2' high
@ Embank #12

File: Troxler 9-22-99 w b3



Sadal Associates, Inc.
PRINCETON, NEW JERSEY

Figure No. _____

PROPOSED
IMPROVEMENT 2

G

TROXLER DENSITY TEST RESULTS AT ELEVATION 22.5 FT (EMBANKMENT #2)
OENJ-DOT DEMO PROJECT
DATE: June 23, 1999

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS	
1	100.4	536.7	189.4	427.2	347.3	237.8	46.05%	68.74	97.5% of max. dry density	PASS
2	99.6	562.4	192	431.5	370.4	239.5	54.66%	64.40	91.3% of max. dry density	PASS
3	97.8	577.3	191.1	445.6	386.2	254.5	51.75%	64.45	91.4% of max. dry density	PASS
4	99.4	571.4	200	441.2	371.4	241.2	53.98%	64.55	91.6% of max. dry density	PASS
5	97.4	574.0	189.4	435.3	384.6	245.9	56.41%	62.27	88.3% of max. dry density	FAIL
6	94.4	534.4	195.1	431.4	339.3	236.3	43.59%	65.74	93.3% of max. dry density	PASS
7	100.2	587.5	188.9	440.9	398.6	252	58.17%	63.35	89.9% of max. dry density	FAIL
8	98.4	562.2	193.7	451.2	368.5	257.5	43.11%	68.76	97.5% of max. dry density	PASS
9	102.0	573.8	192.3	451.5	381.5	259.2	47.18%	69.30	98.3% of max. dry density	PASS
10	97.8	599.4	193.1	465.4	406.3	272.3	49.21%	65.55	93.0% of max. dry density	PASS
11	99.5	519.0	194.3	406.9	324.7	212.6	52.73%	65.15	92.4% of max. dry density	PASS
12	97.7	500.6	186.1	379.4	314.5	193.3	62.70%	60.05	85.2% of max. dry density	FAIL
13	97.6	532.5	191.9	402.4	340.6	210.5	61.81%	60.32	85.6% of max. dry density	FAIL
14	96.7	526.8	196.8	405.9	330	209.1	57.82%	61.27	86.9% of max. dry density	FAIL
15	100.3	566.8	195.2	441.1	371.6	245.9	51.12%	66.37	94.1% of max. dry density	PASS
16	101.5	571.4	191.8	454.6	379.6	262.8	44.44%	70.27	99.7% of max. dry density	PASS
17	102.6	574.3	199.6	456.5	374.7	256.9	45.85%	70.34	99.8% of max. dry density	PASS
18	101.0	570.2	206	450.4	364.2	244.4	49.02%	67.78	96.1% of max. dry density	PASS
19	96.6	599.4	312.9	510	286.5	197.1	45.36%	66.46	94.3% of max. dry density	PASS

- Note:**
- 1) In order to consider each 12-in lift completed, at least 75% of the total sampling points must pass the requirements for both Moisture Content and Dry Density.
 - 2) Since requirement # 1 was satisfied, the lift was considered complete.

TROXLER DENSITY TEST RESULTS AT ELEVATION 23.5 FT (EMBANKMENT #2)

OENJ-DOT DEMO PROJECT

DATE: June 30, 1999

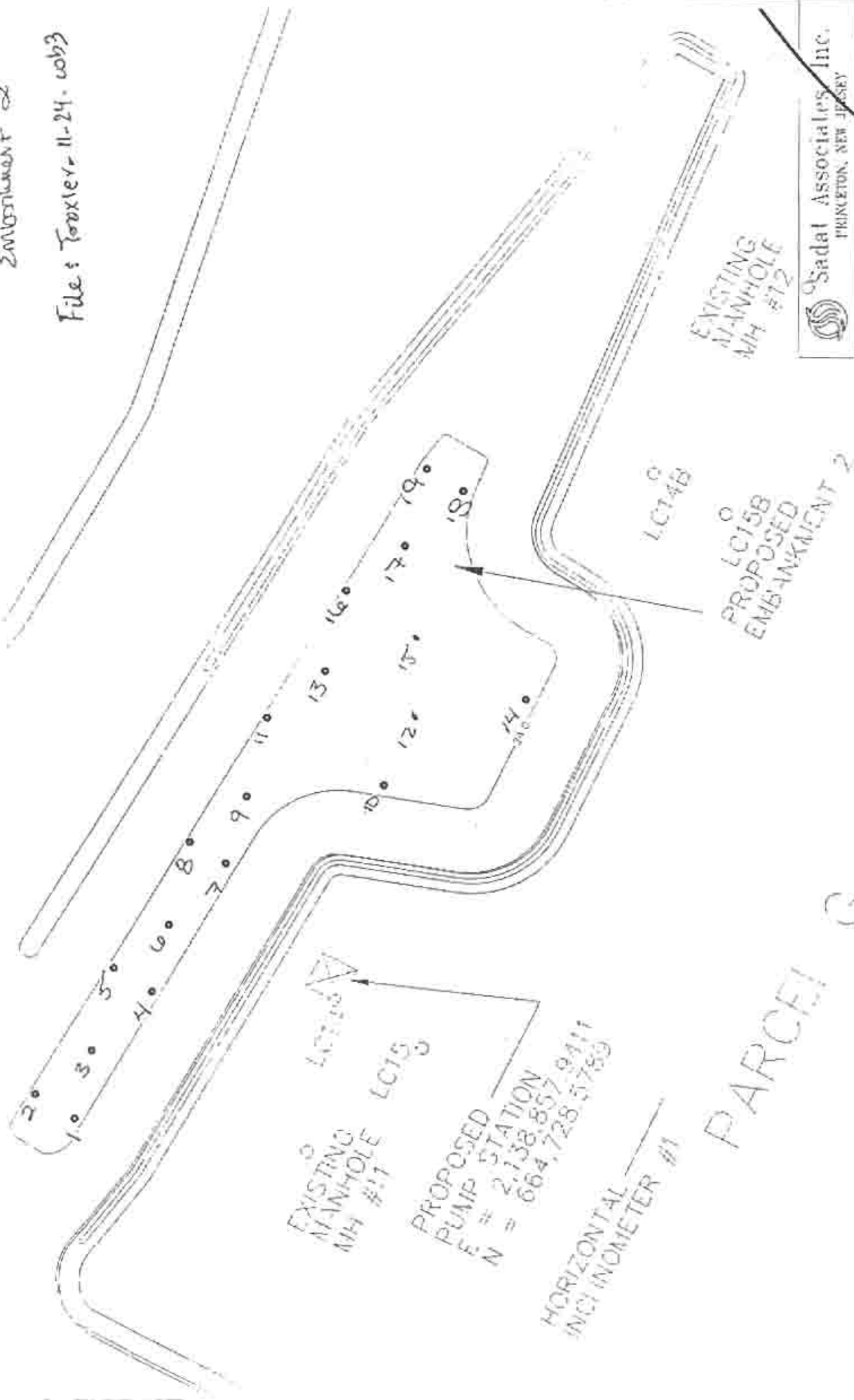
Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)
1	95.9	638.4	189.4	490.0	449	300.6	49.37%	64.20
8	95.3	680.0	192	537.8	488	345.8	41.12%	67.53
3	95.5	609.0	191.1	480.0	417.9	288.9	44.65%	66.02
4	97.9	706.5	200	512.5	506.5	312.5	62.08%	60.40
5	94.5	672.0	189.4	519.4	482.6	330	46.24%	64.62
6	98.2	736.3	195.1	573.1	541.2	378	43.17%	68.59
7	96.6	601.6	188.9	471.1	412.7	282.2	46.24%	66.05
8	92.4	646.4	193.7	504.5	452.7	310.8	45.66%	63.44
9	100.3	656.9	192.3	513.1	464.6	320.8	44.83%	69.26
10	93.2	679.9	193.1	511.9	486.8	318.8	52.70%	61.04
11	95.5	686.5	194.3	540.0	492.2	345.7	42.38%	67.08
12	97.2	643.2	186.1	494.0	457.1	307.9	48.46%	65.47
13	96.0	631.1	191.9	487.8	439.2	295.9	48.43%	64.68
14	96.6	664.6	196.8	497.3	467.8	300.5	55.67%	62.05
15	97.7	641.4	195.2	498.1	446.2	302.9	47.31%	66.32
16	91.0	602.6	191.8	480.5	410.8	288.7	42.29%	63.95
17	94.2	611.9	199.6	489.0	412.3	289.4	42.47%	66.12
18	100.2	611.3	206	504.4	405.3	298.4	35.82%	73.77
19	101.3	656.2	312.9	576.4	343.3	263.5	30.28%	77.75

Note: 1) In order to consider each 12-in lift completed, at least 75% of the total sampling points must pass the requirements for both Moisture Content and Dry Density.
 2) Since requirement # 1 was satisfied, the lift was considered complete.

6/30/99

Toxier Test
@ 11th List
Embarkment 2

File: Toxier-11-24-00b3



 Sadat Associates, Inc.
PRINCETON, NEW JERSEY

Figure 117

PARCEL C

EXISTING
MANHOLE
MH #17

PROPOSED
PUMP STATION
E = 2,138.857
N = 664,728.575

HORIZONTAL
INCLINOMETER #1

LC148

LC158
PROPOSED
EMBANKMENT 2

LC150

LC15

EXISTING
MANHOLE
MH #12

TROXLER DENSITY TEST RESULTS AT ELEVATION 24.5 ft. AT EMBANKMENT #2

OENJ-DOT DEMO PROJECT

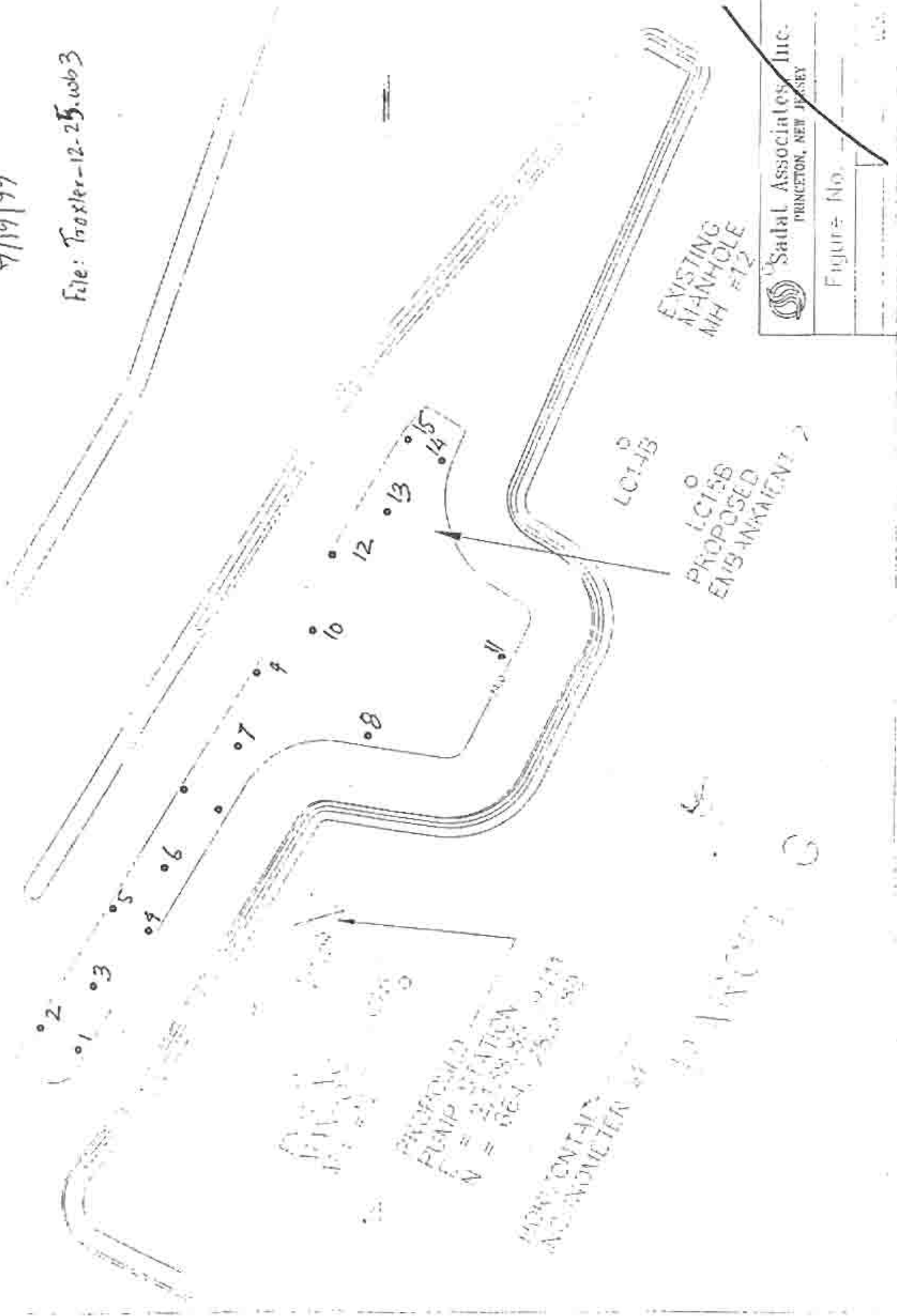
DATE: July 19, 1999

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS	
1	89.0	718.3	189.4	573.7	528.9	384.3	37.63%	64.67	91.7% of max. dry density	PASS
2	94.9	704.0	192	561.9	512	369.9	38.42%	68.56	97.3% of max. dry density	PASS
3	100.1	764.9	191.1	629.1	573.8	438	31.00%	76.41	108.4% of max. dry density	PASS
4	98.9	719.4	200	586.9	519.4	386.9	34.25%	73.67	104.5% of max. dry density	PASS
5	82.6	667.3	189.4	Rejected	-	-	-	-	-	-
6	91.8	585.5	195.1	471.7	390.4	276.6	41.14%	65.04	92.3% of max. dry density	PASS
7	98.8	691.2	188.9	550	502.3	361.1	39.10%	71.03	100.7% of max. dry density	PASS
8	87.4	665.5	193.7	549.9	471.8	356.2	32.45%	65.99	93.6% of max. dry density	PASS
9	89.9	675.3	192.3	543.7	483	351.4	37.45%	65.41	92.8% of max. dry density	PASS
10	96.1	718.7	193.1	573.7	525.6	380.6	38.10%	69.59	98.7% of max. dry density	PASS
11	87.9	635.1	194.3	524	440.8	329.7	33.70%	65.75	93.3% of max. dry density	PASS
12	91.6	652.4	186.1	552.1	466.3	366	27.40%	71.90	102.0% of max. dry density	PASS
13	94.3	575.5	191.9	488.6	383.6	296.7	29.29%	72.94	103.5% of max. dry density	PASS
14	97.1	653.6	196.8	520.9	456.8	324.1	40.94%	68.89	97.7% of max. dry density	PASS
15	97.8	658.4	195.2	531.7	463.2	336.5	37.65%	71.05	100.8% of max. dry density	PASS

Troxler @ 24.5ft.
Embankment #2

7/19/99

File: Troxler-12-25.wb3



Sadal Associates, Inc.
PRINCETON, NEW JERSEY

Figure No. _____

10/25

TROXLER DENSITY TEST RESULTS AT ELEVATION 16 ft (Access Roadway)
 OENJ-DOT DEMO PROJECT
 DATE: July 6, 1999

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS	
1	95.8	660.70	189.40	524.40	471.30	335.00	40.69%	68.09	96.6% of max. dry density	PASS
2	98.8	613.20	192.00	470.00	421.20	278.00	51.51%	65.21	92.5% of max. dry density	PASS
3	98.4	629.00	191.10	475.50	437.90	284.40	53.97%	63.91	90.6% of max. dry density	PASS
4	93.1	604.50	200.00	458.50	404.50	258.50	56.48%	59.50	84.4% of max. dry density	FAIL
5	99.7	604.90	189.40	492.50	415.50	303.10	37.08%	72.73	103.2% of max. dry density	PASS
6	96.7	709.80	195.10	538.00	514.70	342.90	50.10%	64.42	91.4% of max. dry density	PASS
7	98.3	681.30	188.90	521.00	492.40	332.10	48.27%	66.30	94.0% of max. dry density	PASS
8	95.3	609.10	193.70	469.90	415.40	276.20	50.40%	63.37	89.9% of max. dry density	PASS
9	96.5	591.40	192.30	462.10	399.10	269.80	47.92%	65.24	92.5% of max. dry density	PASS
10	101.6	791.90	193.10	593.00	598.80	399.90	49.74%	67.85	96.2% of max. dry density	PASS
11	99.5	602.60	194.30	475.90	408.30	281.60	44.99%	68.62	97.3% of max. dry density	PASS
12	95.8	591.40	186.10	461.10	405.30	275.00	47.38%	65.00	92.2% of max. dry density	PASS
13	98.4	700.80	191.90	539.80	508.90	347.90	46.28%	67.27	95.4% of max. dry density	PASS
14	98.5	706.60	196.80	546.80	509.80	350.00	45.66%	67.62	95.9% of max. dry density	PASS

TROXLER DENSITY TEST RESULTS AT ELEVATION 17 ft (Access Roadway)

OENJ-DOT DEMO PROJECT

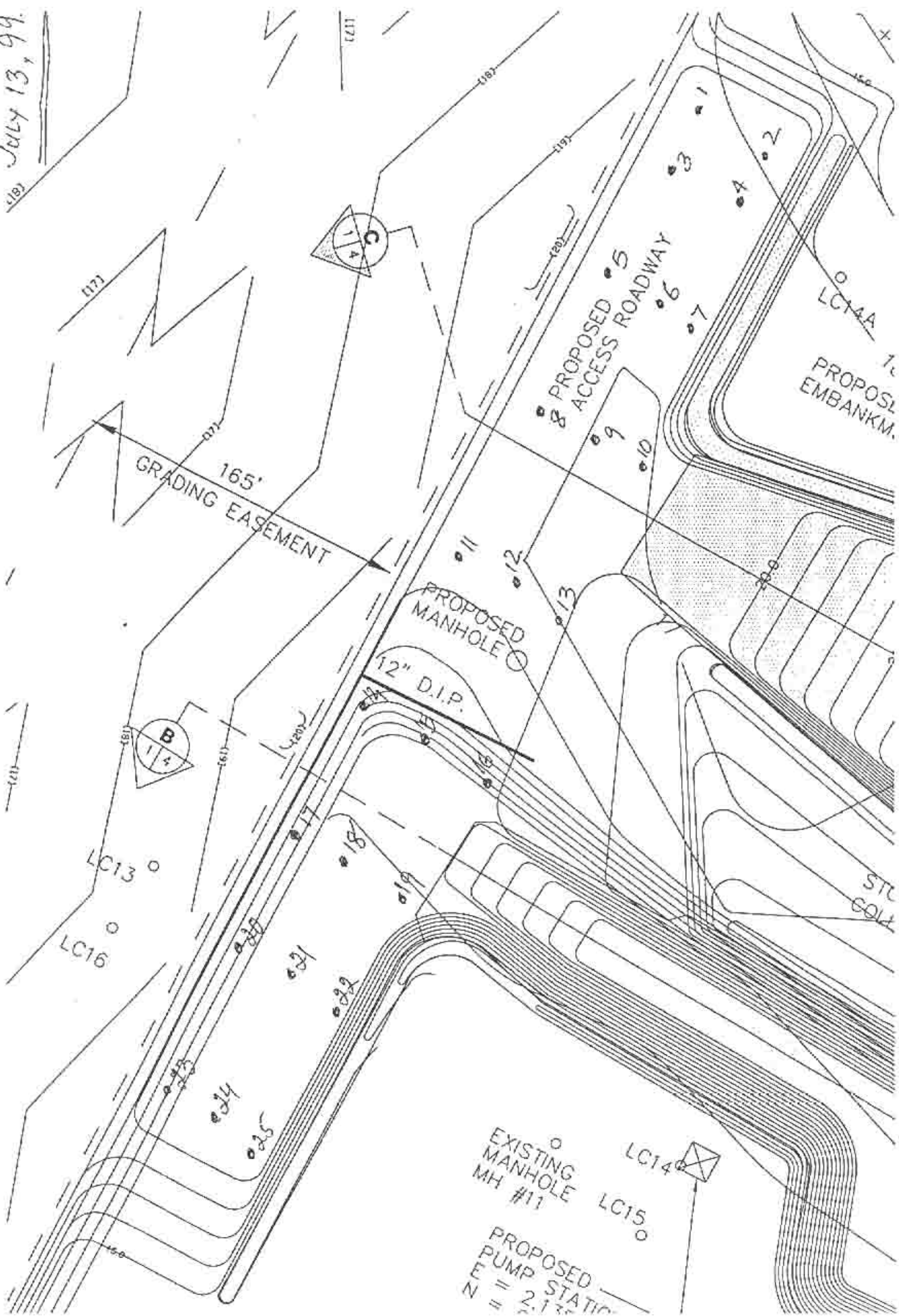
DATE: July 15, 1999

Sample #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS	
1	98.7	498.1	189.4	398.9	308.7	209.5	47.35%	66.98	95.0% of max. dry density	PASS
2	99.0	532.0	192	435.2	340	243.2	39.80%	70.81	100.4% of max. dry density	PASS
3	99.1	536.5	191.1	436	345.4	244.9	41.04%	70.27	99.7% of max. dry density	PASS
4	99.5	552.5	200	450.7	352.5	250.7	40.61%	70.76	100.4% of max. dry density	PASS
5	100.7	598.3	189.4	463.5	408.9	274.1	49.18%	67.50	95.7% of max. dry density	PASS
6	98.8	636.0	195.1	505.7	440.9	310.6	41.95%	69.60	98.7% of max. dry density	PASS
7	105.0	671.1	188.9	533.5	482.2	344.6	39.93%	75.04	106.4% of max. dry density	PASS
8	102.5	696.4	193.7	552.7	502.7	359	40.03%	73.20	103.8% of max. dry density	PASS
9	105.9	660.3	192.3	522.1	468	329.8	41.90%	74.63	105.9% of max. dry density	PASS
10	102.7	621.4	193.1	493.5	428.3	300.4	42.58%	72.03	102.2% of max. dry density	PASS
11	93.8	643.8	194.3	497.9	449.5	303.6	48.06%	63.35	89.9% of max. dry density	PASS
12	97.4	665.9	186.1	524	479.8	337.9	41.99%	68.59	97.3% of max. dry density	PASS
13	95.9	588.7	191.9	460.6	396.8	268.7	47.67%	64.94	92.1% of max. dry density	PASS
14	99.9	676.0	196.8	514.2	479.2	317.4	50.98%	66.17	93.9% of max. dry density	FAIL
15	93.5	626.0	195.2	491.4	430.8	296.2	45.44%	64.29	91.2% of max. dry density	PASS
16	98.1	573.8	196	452.9	377.8	256.9	47.06%	66.71	94.6% of max. dry density	PASS
17	100.6	611.4	206	487.7	405.4	281.7	43.91%	69.90	99.2% of max. dry density	PASS
18	98.5	599.4	206	483.7	393.4	277.7	41.66%	69.53	98.6% of max. dry density	PASS
19	97.4	734.8	312.9	616.1	421.9	303.2	39.15%	70.00	99.3% of max. dry density	PASS
20	96.1	690.5	298.3	570.3	392.2	272	44.19%	66.65	94.5% of max. dry density	PASS
21	98.50	742.9	295.7	610.3	447.2	314.6	42.15%	69.29	98.3% of max. dry density	PASS
22	97.60	699.3	322.2	591.5	377.1	269.3	40.03%	69.70	98.9% of max. dry density	PASS
23	98.50	696.5	309.3	580.6	387.2	271.3	42.72%	69.02	97.9% of max. dry density	PASS
24	98.40	743.3	315.2	623.4	428.1	308.2	38.90%	70.84	100.5% of max. dry density	PASS
25	94.50	725.2	312.5	603	412.7	290.5	42.07%	66.52	94.4% of max. dry density	PASS

INDEX BEST LOCATIONS

ACCESS ROADWAY 3RD LIFT (17.0' F)

JULY 13, 99.



165' GRADING EASEMENT

PROPOSED ACCESS ROADWAY

PROPOSED MANHOLE
12" D.I.P.

PROPOSED EMBANKM.

EXISTING MANHOLE MH #11

PROPOSED PUMP STATION
E = 2.13'

LC13

LC16

LC14

LC15

(11)

(B)

(C)

(17)

(17)

(17)

(18)

(19)

(20)

(17)

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(20)

(18)

(19)

(16)

STC
COLL

LC14A

LC14B

(16)

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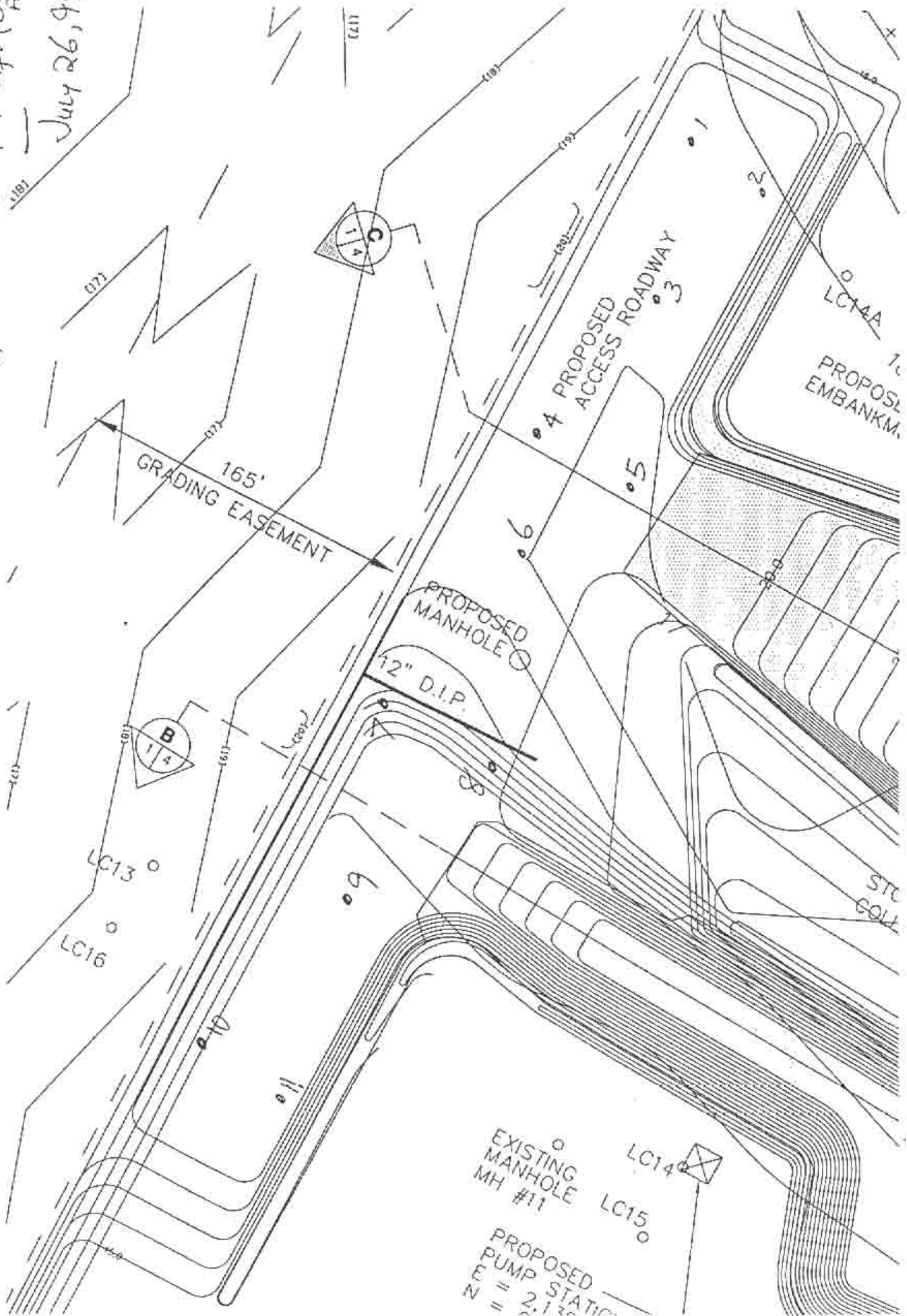
TROXLER DENSITY TEST RESULTS AT ELEVATION 18.00 ft (Access Roadway)
 OENJ-DOT DEMO PROJECT
 DATE: July 26, 1999

Sample #	Container #	Wet Density (pcf)	Gross Wet wt. (gm)	Container wt. (gm)	Gross Dry wt. (gm)	Net Wet wt. (gm)	Net Dry wt. (gm)	Moisture Content	Dry Density (pcf)	REMARKS	
1	19	97.0	736.3	312.9	631.1	423.4	318.2	33.06%	72.90	103.4% of max. dry density	PASS
2	20	91.2	726.8	298.4	610.4	428.4	312	37.31%	66.42	94.2% of max. dry density	PASS
3	21	96.4	753.0	296.7	653.2	456.3	356.5	27.99%	75.32	106.8% of max. dry density	PASS
4	22	90.9	718.3	322.5	620	395.8	297.5	33.04%	68.32	96.9% of max. dry density	PASS
5	23	94.7	737.7	309.2	629.8	428.5	320.6	33.66%	70.85	100.5% of max. dry density	PASS
6	24	92.5	680.5	315	582.2	365.5	267.2	36.79%	67.62	95.9% of max. dry density	PASS
7	25	94.4	697.1	312.4	606.1	384.7	293.7	30.98%	72.07	102.2% of max. dry density	PASS
8	26	93.8	694.6	305.7	591.9	388.9	286.2	35.88%	69.03	97.9% of max. dry density	PASS
9	27	92.3	648.0	313.2	544	334.8	230.8	45.06%	63.63	90.3% of max. dry density	PASS
10	30	92.8	684.1	324.1	575.3	360	251.2	43.31%	64.75	91.8% of max. dry density	PASS
11	31	95.0	661.8	312.4	549.4	349.4	237	47.43%	64.44	91.4% of max. dry density	PASS

ROXLER TEST LOCATIONS

Access Roadway 4 1/2" Lift (180 ft)

July 26, 99



APPENDIX B-4

Construction Cost Estimates

Table B-4-1:
Estimated Construction Cost for Embankments (Equipment and Labor)
OENJ-DOT Demonstration Project

LIFT # (AT)	Elevation (FT. MSL)	Volume per lift (cu. yds.)	Water Content (%)			Average Ambient Temp. (oF) [C]	Construction Time [D]		Equipment Costs			Labor Costs		Calculated Cost		Remarks
			Initial (Avg) [A]	Final (Avg) [B]	Difference		Days	Dates	Dozer	Disking Blade	Roller	Foreman	Labor	Each Lift	Per Cu. Yd.	
1 2 (EMB 1)	18	2520	65%	48%	17%	82	6	6/30-7/8	\$5,700	\$1,200	\$3,300	\$4,800	\$1,920	\$16,920	\$6.7	Rain on 6/30/99
2 3 (EMB 1)	19.5	2370	73%	51%	22%	74	5	7/12 - 7/16	\$4,750	\$1,000	\$2,750	\$2,500	\$1,500	\$12,500	\$5.3	No rain event
3 4 (EMB 1)	20.5	2220	81%	41%	40%	78	6	7/19 - 7/26	\$5,700	\$1,200	\$3,300	\$3,000	\$1,800	\$15,000	\$6.8	Rain on 7/20/99
4 5 (EMB 1)	21.5	2070	76%	49%	27%	76	5	8/16 - 8/19	\$4,750	\$1,000	\$2,750	\$2,500	\$1,500	\$12,500	\$6.0	No rain event
5 6 (EMB 1)	22.5	1930	60%	47%	13%	75	7	8/23 - 8/31	\$6,650	\$1,400	\$3,850	\$3,500	\$2,100	\$17,500	\$9.1	Rain on 8/25/99
6 7 (EMB 1)	23.5	1780	76%	39%	36%	76	5	9/10-9/14	\$4,750	\$1,000	\$2,750	\$4,000	\$1,600	\$14,100	\$7.9	No rain event
7 8 (EMB 1)	24.5	1710	78%	44%	34%	70	5	9/15 - 9/23	\$4,750	\$1,000	\$2,750	\$4,000	\$1,600	\$14,100	\$8.2	No rain event
8 7 (EMB 2)	19.5	1080	74%	48%	25%	74	4	5/28 - 6/4	\$3,800	\$800	\$2,200	\$2,000	\$1,200	\$10,000	\$9.3	No rain event
9 8 (EMB 2)	20.5	970	80%	48%	32%	74	4	6/7 - 6/11	\$3,800	\$800	\$2,200	\$2,000	\$1,200	\$10,000	\$10.3	No rain event
10 9 (EMB 2)	21.5	870	76%	45%	31%	70	4	6/14 - 6/16	\$3,800	\$800	\$2,200	\$2,000	\$1,200	\$10,000	\$11.5	No rain event
11 10 (EMB 2)	22.5	770	67%	51%	16%	68	5	6/17 - 6/23	\$4,750	\$1,000	\$2,750	\$2,500	\$1,500	\$12,500	\$16.2	Rain on 6/20-21/99
12 11 (EMB 2)	23.5	680	77%	46%	31%	78	4	6/25 - 6/29	\$3,800	\$800	\$2,200	\$2,000	\$1,200	\$10,000	\$14.7	Rain on 6/29/99
13 2 (Road)	16	2010	72%	48%	24%	82	6	6/28 - 7/6	\$5,700	\$1,200	\$3,300	\$3,000	\$1,800	\$15,000	\$7.5	Rain on 6/29/99
14 3 (Road)	17	1840	78%	43%	35%	76	5	7/7 - 7/13	\$4,750	\$1,000	\$2,750	\$2,500	\$1,500	\$12,500	\$6.8	No rain event
15 4 (Road)	18	1670	78%	37%	41%	79	6	7/14 - 7/26	\$5,700	\$1,200	\$3,300	\$3,000	\$1,800	\$15,000	\$9.0	Rain on 7/20/99
Total / Average		24490	74%	46%	28%	76	5							\$197,620	\$8.1	
Standard Deviation			6%	4%	9%	4	1									3

[A] = Initial Water Content was determined by taking at least two samples from SDM stockpiles used for the construction of that particular lift.
[B] = Final Water Content is the average of water contents determined for the samples taken from several test locations during compaction testing.
[C] = Average Ambient Temperature was determined by recording daily temperatures for the days between start of the construction and final approval of the lift.
[D] = Construction Days account for the days when equipments were used. This excludes any weekends and holidays when work was not performed.

Total cubic yards of SDM (Construction/Compaction) 24,490.00
Number of days (Construction/Compaction) 58
Average cubic yards of SDM processed per day 422

Table B-4-2

**Estimated Construction Cost for Embankments (Equipment and Labor) - Affected by Rain Events
OENJ-DOT Demonstration Project**

LIFT # (AT)	Elevation (FT. MSL)	Volume per lift (cu. yds.)	Water Content (%)			Average Ambient Temp. (oF) [C]	Construction Time [D] Days	Dates	Equipment Costs			Labor Costs		Calculated Cost		Remarks
			Initial (Avg.) [A]	Final (Avg.) [B]	Difference				Dozer	Disking Blade	Roller	Foreman	Labor	Each	Per	
2 (EMB 1)	18	2,520	65%	48%	17%	82	6	6/30-7/8	\$5,700	\$1,200	\$3,300	\$4,800	\$1,920	\$16,920	\$6.7	Rain on 6/30/99
4 (EMB 1)	20.5	2,220	81%	41%	40%	78	6	7/19 - 7/26	\$5,700	\$1,200	\$3,300	\$3,000	\$1,800	\$15,000	\$6.8	Rain on 7/20/99
6 (EMB 1)	22.5	1,930	60%	47%	13%	75	7	8/23 - 8/31	\$6,650	\$1,400	\$3,850	\$3,500	\$2,100	\$17,500	\$9.1	Rain on 8/25/99
10(EMB 2)	22.5	770	67%	51%	16%	68	5	6/17 - 6/23	\$4,750	\$1,000	\$2,750	\$2,500	\$1,500	\$12,500	\$16.2	Rain on 6/20-21/99
11(EMB 2)	23.5	680	77%	46%	31%	78	4	6/25 - 6/29	\$3,800	\$800	\$2,200	\$2,000	\$1,200	\$10,000	\$14.7	Rain on 6/29/99
2 (Road)	16	2,010	72%	48%	24%	82	6	6/28 - 7/6	\$5,700	\$1,200	\$3,300	\$3,000	\$1,800	\$15,000	\$7.5	Rain on 6/29/99
4 (Road)	18	1,670	78%	37%	41%	79	6	7/14 - 7/26	\$5,700	\$1,200	\$3,300	\$3,000	\$1,800	\$15,000	\$9.0	Rain on 7/20/99
Total / Average		11,800	71%	45%	26%	78	6							\$101,920	\$8.6	
Standard Deviation			8%	5%	12%	5	1								\$3.9	

- [A] = Initial Water Content was determined by taking at least two samples from SDM stockpiles used for the construction of that particular lift.
- [B] = Final Water Content is the average of water contents determined for the samples taken from several test locations during compaction testing.
- [C] = Average Ambient Temperature was determined by recording daily temperatures for the days between start of the construction and final approval of the lift.
- [D] = Construction Days account for the days when equipments were used. This excludes any weekends and holidays when work was not performed.

Table B-4-3

Estimated Construction Cost for Embankments (Equipment and Labor) - Not Affected by Rain Events
 OENJ-DOT Demonstration Project

LIFT # (AT)	Elevation (FT. MSL)	Volume per lift (cu. yds.)	Water Content (%)			Average Ambient Temp. (oF) [C]	Construction Time [D]		Equipment Costs			Labor Costs		Calculated Cost		Remarks
			Initial (Avg.) [A]	Final (Avg.) [B]	Difference		Days	Dates	Dozer	Disking Blade	Roller	Foreman	Labor	Each	Per cu. yd.	
3 (EMB 1)	19.5	2,370	73%	51%	22%	74	5	7/12 - 7/16	\$4,750	\$1,000	\$2,750	\$2,500	\$1,500	\$12,500	\$5.3	No rain event
5 (EMB 1)	21.5	2,070	76%	49%	27%	76	5	8/16 - 8/19	\$4,750	\$1,000	\$2,750	\$2,500	\$1,500	\$12,500	\$6.0	No rain event
7 (EMB 1)	23.5	1,780	76%	39%	36%	76	5	9/10-9/14	\$4,750	\$1,000	\$2,750	\$4,000	\$1,600	\$14,100	\$7.9	No rain event
8 (EMB 1)	24.5	1,710	78%	44%	34%	70	5	9/15 - 9/23	\$4,750	\$1,000	\$2,750	\$4,000	\$1,600	\$14,100	\$8.2	No rain event
7 (EMB 2)	19.5	1,080	74%	48%	25%	74	4	5/28 - 6/4	\$3,800	\$800	\$2,200	\$2,000	\$1,200	\$10,000	\$9.3	No rain event
8 (EMB 2)	20.5	970	80%	48%	32%	74	4	6/7 - 6/11	\$3,800	\$800	\$2,200	\$2,000	\$1,200	\$10,000	\$10.3	No rain event
9(EMB 2)	21.5	870	76%	45%	31%	70	4	6/14 - 6/16	\$3,800	\$800	\$2,200	\$2,000	\$1,200	\$10,000	\$11.5	No rain event
3 (Road)	17.0	1,840	78%	43%	35%	76	5	7/7 - 7/13	\$4,750	\$1,000	\$2,750	\$2,500	\$1,500	\$12,500	\$6.8	No rain event

Total / Average		12,690	76%	46%	30%	74	5							\$95,700	\$7.5	
Standard Deviation			2%	4%	5%	3	1								\$2.1	

[A] = Initial Water Content was determined by taking at least two samples from SDM stockpiles used for the construction of that particular lift.

[B] = Final Water Content is the average of water contents determined for the samples taken from several test locations during compaction testing.

[C] = Average Ambient Temperature was determined by recording daily temperatures for the days between start of the construction and final approval of the lift.

[D] = Construction Days account for the days when equipments were used. This excludes any weekends and holidays when work was not performed.

Cubic yards NOT
 Number of NOT
 Total Dollars OK