DUNLOP
TIRE CORPORATION

EXCELLENCE THROUGH TEAMWORK

July 28, 1993

Mr. Bruce Wager, NYSDEC
New York State Dept. of Environmental Conservation
270 Michigan Ave.
Buffalo, N.Y. 14203-1109

Re: Consent Order No. 90-105,
Final Report, Wastewater Pond Cleaning

Dear Mr. Wager:

The attached Final Report on our Wastewater Pond Cleaning Project is submitted for your review and records.

Successful completion of this remediation project, together with the Potential Spill Source Projects schedule for completion by September of this year, will conclude those requirements as set forth by Consent Order No. 90-105.

Respectfully;

Daniel T. Parshall
Energy/Environmental Eng.

CC: J. Fox
M. Sieverding
H. Wood
D. Pyanowski

DUNLOP TIRE CORPORATION
BUFFALO PLANT

FINAL REPORT
WASTEWATER POND CLEANING

AS REQUIRED UNDER CONSENT ORDER NO. 90-105 OF THE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CONTRACTOR: DAMES & MOORE OF WILLOW GROVE, PA.

OVERSIGHT: URS CONSULTANTS, INC. OF BUFFALO, N.Y.

SUBMITTED BY: DANIEL T. PARSHALL
DUNLOP TIRE CORP.
JULY 28, 1993

CC: M. Sieverding
D. Pyanowski
G. May, NYSDEC
J. Wokasien, URS

FINAL REPORT
WASTEWATER POND CLEANING

I. OBJECTIVE OF WASTEWATER POND CLEANING

The objective of this project was to re-establish the Wastewater Pond to its original dimensions by removing sediment accumulations as recommend in your letter of March 11, 1992 as part of the Order on Consent No. 90-105.

II. RESULTS OF POND CLEANING

The original volume of the pond as calculated from construction drawings was 259,200 cu. ft. (180'x180'x 8'), which equates to 2,016,576 gallons. This effective volume was reduced to 172,789 cu. ft. (eff. depth of 5'4" per ODNY Report of 11/8/91), equivalent to 1,292,463 gallons or 66.6% of the original volume of the pond due to sediment build-up, see attachments A.

Elevations of the bottom taken after cleaning of the pond, as compared to the original design elevations, see attachment "B", show an overall increase in depth. The new average depth is calculated to be 9.37 ft. which equates to an effective volume of 303,588 cu. ft. (2,270,838 gallons). This change in depth was a result of clay removed from the bottom of the pond during remediation operations. Elevations were taken by Dames & Moore to verify completeness of this project, see attachment #04.

During the pond filling operation, after completion of remediation, process water meter reading were recorded which indicated that 2,191,000 gallons were used to fill the pond. However, un-metered city water was also discharge into the pond during this period, which, based on past records, is estimated to be up to 200,000 gallons/day.

It is therefore concluded that the pond was satisfactory cleaned and that its effective volume was, at a minimum, restored to design specifications.

III. GENERAL OPERATIONAL INFORMATION

Dunlop Tire Corporation awarded the Pond Sediment Removal Project to Dames and Moore, Inc. of Willow Grove, Pennsylvania, with project coordination and on-site inspection performed by URS Consultants, Inc. of Buffalo, N.Y.

As scheduled, mobilization for remediation of the pond commenced on May 20, 1993 with the following items in place prior to our plant shut-down on June 28, 1993:

- installation of by-pass pipings
- waste haul road established w/stone
- Two (2) 1.4 MGD pumps in place & tested w/ two (2) additional on stand-by
- Light stands and generators in place & tested
- Gabions, silt fences, straw bales, oil absorbent booms, diversion ditches in place to minimize contamination of our outfall.
- Heavy equipment ready
- Stabilization materials set-up
- Disposal cell established

By-pass of the pond commenced in the early morning hours of June 28, 1993 with one pump taking suction above the first stage dam. This pump was able to maintain flow around the pond during the entire remediation project. Water usage within the plant averaged approx 1.0 MGD during the plant shut-down period.

Pumping of the pond started during the morning of 6/28/93, and was completed at 4:00 am on 6/29/93. Cleaning of the concrete walls was completed on 7/8/93.

The gabions, silt fences, booms and other devices installed to reduce/minimize contamination of our out-fall water worked extremely well. Additional manpower was used to physically remove any floating algae and slight oil film on top of the water. Plant water flows, and visual out-fall quality were closely monitored with operations running on a 24 hour per day basis.

Initial pumping and working of the sludge to reduce water content proved unsuccessful and the decision was made to use a stabilizer. Analysis of fly ash from Niagara Mohawk had already been reviewed, and additional discussions were held with Mr. Mike Basel, their Environmental Engineer, as to its properties and disposal procedures.

Actual sludge removal commenced on 8/1/93 and continued until completion on 8/5/93. The sludge/fly ash mixture was taken to an on-site clay lined cell within the existing inactive landfill site #915018 A. This mixture will be capped and sealed in accordance with the procedures as established in the Record Of Decision (ROD) of 3/26/93.

A punch list of action items was submitted to Dames & Moore on 7/7/93, see attachment #01. These items have been completed as acknowledged in our memo of 7/26/93, see attachment #02. Transmittal Sheets from Dames & Moore, see attachments #03 through #08, verify fly ash analyticals, final pond bottom elevations, volume calculations of sludge removed, re-establishment of vegetation around the pond, re-establishment of weir flow baffles, and completion of the punch list, respectfully.

Re-establishment of the weir flow baffles was required due to damage to four of the baffles during the remediation process. Dames & Moore were given the report as compiled by Environmental Products and Services and verify that the baffles are reset to original elevations.

A TCLP test was completed on the sludge/fly ash mixture contained within the disposal cell at the recommendation of Mr. Glenn May, NYSDEC, see attachment #09.

The entire project was documented with photographs for future reference. Attached find selected copies of these photographs with descriptions by each.

The out-fall Parshall Flume was checked for calibration on 7/9/93 and found to be within 3% accurate and the monthly SPDES samples were taken on 7/20 and 7/27/93.

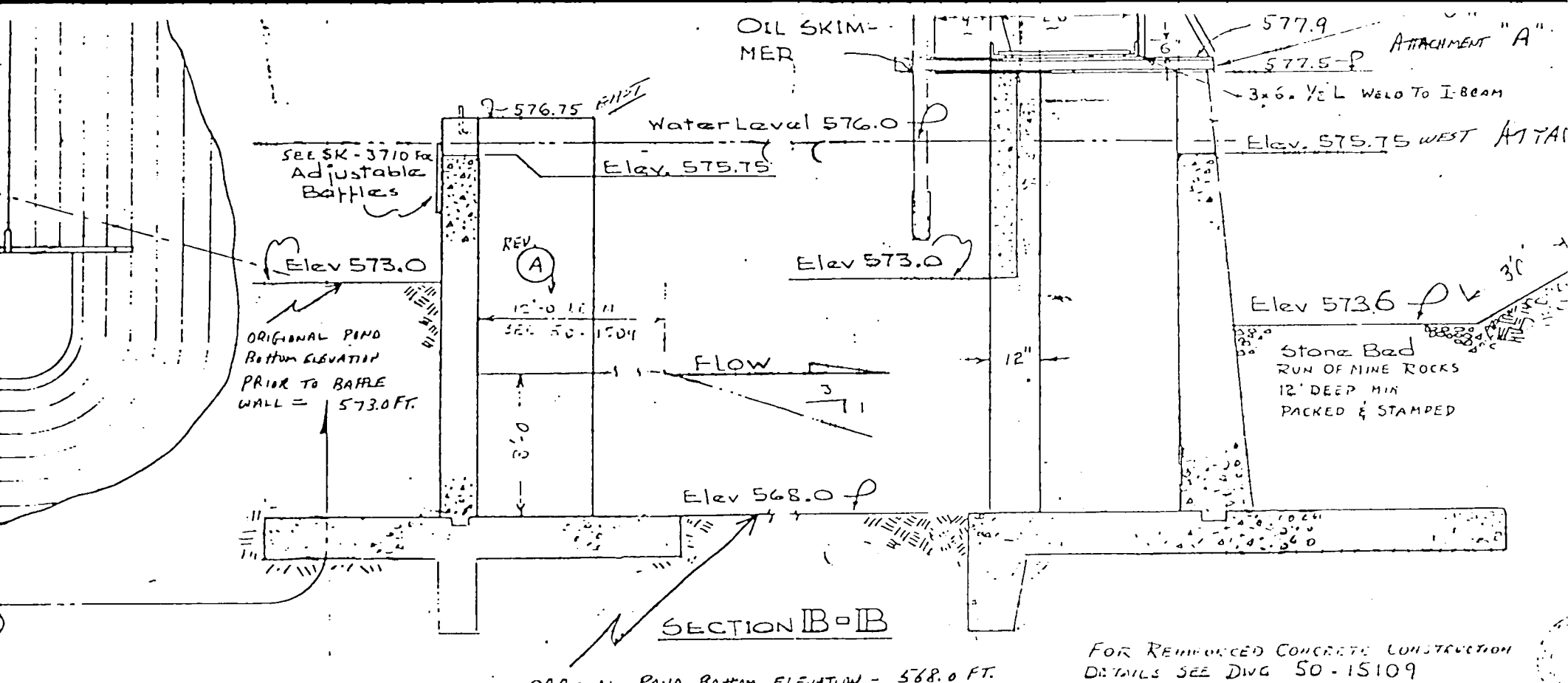
The pond was returned to normal operations for plant start-up on at 7:00 AM on July 5th. The pond site has been seeded and final clean-up is completed.

Review of the Pond Remediation Project, together with our Annual Water Inspection and status of the on-going Potential Spill Source Projects was conducted by your Mr. Robert Smythe of the NYSDEC, on 7/13/93.

Respectfully;

Daniel T. Parshall

Daniel T. Parshall
Energy/Environmental Eng.



FOR REINFORCED CONCRETE CONSTRUCTION DETAILS SEE DWG 50-15109

(B) FOR STEEL WALKWAY AND SKIMMER SUPPORT SEE COMMUNITY STEEL CORP DWG. JOB # 72.672 SHEET # A1 REF. DWG. 50-14784-B

DUNLO
TIRE AND RUBBER CORPO
BUF

MK.	REVISION	DATE	BY
B	DIMENSION 584.0 5 5 0 NOTE ADDED	4-3-73	
A		11-1-72	

TITLE OIL SPILL and/or F
OBJECT ENTRAPME
POND CONSTRUCTION DE

DWN. RC Czech | SCALE 1/16 & 1/2" = 1' | DAT
CHKD
APPR

50-151

ATTACHMENT 'B'

PREPARED BY: J. Gratz CLIENT: Dunlop
Reviewed BY: MBF 10.18.91 PROJECT NO.: 91-022
DATE: 11-15-91 REV: 0 SHEET: 2 OF 8
SUBJECT: Pond Review Continued

ODNY Incorporated
R-6576 East Quaker Street
Orchard Park, New York 14127
(716) 662-0795
FAX (716) 662-0797

Approximate Pond Dimensions:

180'0" W x 180'0" L x 8'0" Deep

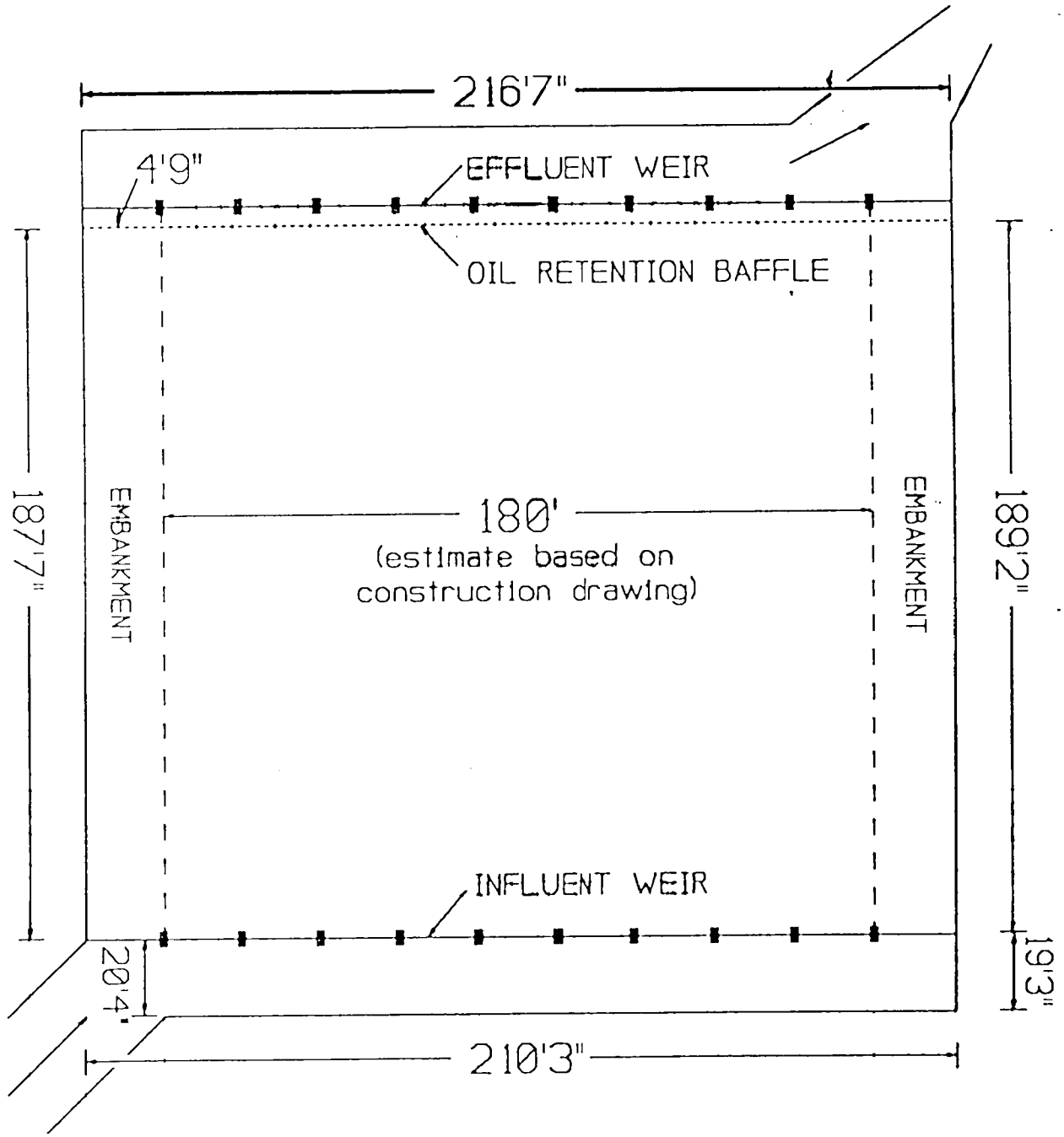
A_c = 180'0" x 8'0" = 1,440 ft^2 design

$\bar{A}_c$ = 180'0" x 5'4"* = 960 ft^2 current effective

* 5'4" is current average depth to sludge blanket.

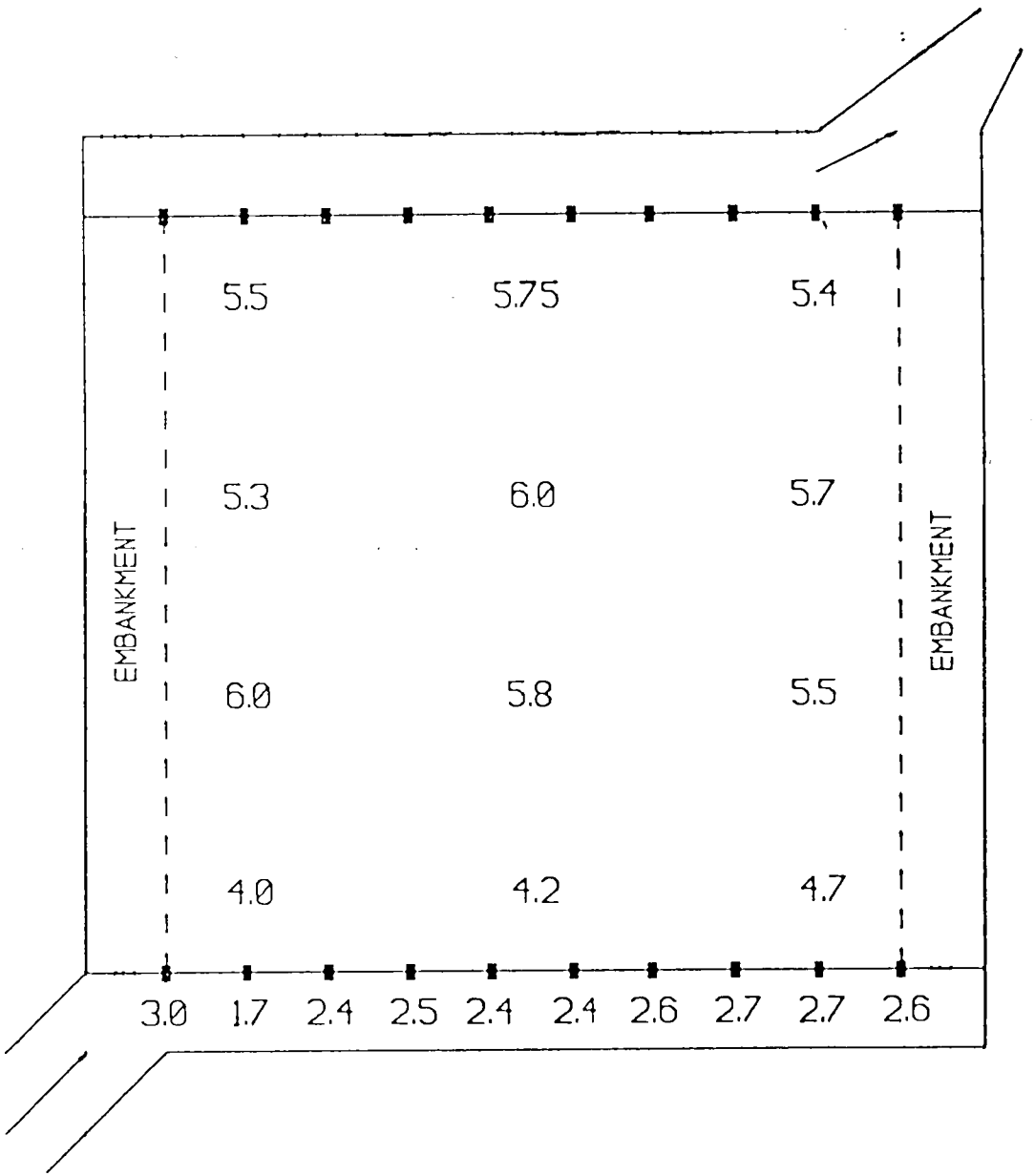
A_H = 180'0" x 180'0" = 32,400 ft^2

POND DIMENSIONS



POND WATER DEPTH IN FEET

TO TOP OF SLUDGE BLANKET



ATTACHMENT #01

DUNLOP

100 DUNLOP

July 7, 1993

TO: R. Davis, Dames & Moore, Inc.
Fm: D. Parshall, Dunlop Tire Corp.

Subj: Pond Remediation, Final Punch List

As verbalized in our meeting of yesterday, the following items need to be addressed in order to complete the Pond Sludge Removal Project:

1. Reinstall Boom in Pond

2. Re-establish North Bank to original pre-construction conditions

3. Repair 10" PVC Pipe and cover w/fill

4. Pull gabion and curtains at the road discharge pipe

5. Provide detailed information on:
   - Number of Fly Ash Trucks, weight, cubic yards, w/slips
   - Number of Trucks, cubic yards/truck, total yards to cells of sludge/fly ash
   - Net cubic yards of sludge delivered to cells

6. Re-adjust baffles and formally report flow distribution, see attached report for procedure

7. Submit final pond bottom elevations formally

8. Provide erosion protection fence along East side of pond to control runoff while working on borrow pit

9. Repair damaged concrete piers on baffle wall

10. Provide final clean-up of area to pre-construction conditions

11. Continue to turn-over/disk sludge in cells to reduce level of moisture to conditions that allow for clay capping

Provide written documentation upon completion of above.

Daniel T. Parshall
Energy/Environmental Eng.

CC: M. Sieverding
D. Pyanowski
J. Wokasien, URS

ATTACHMENT #002

DUNLOP
TIRE CORPORATION

EXCELLENCE THROUGH TEAMWORK

July 26, 1993

To: Peter Wallace, Dames & Moore

Fm: Dan Parhall, Dunlop Tire Corp.

Re: P.O.#15060B & #15061B, Job no. 26647-001

Subj: Pond Project Final Punch List, completion of;

In reply to your Transmittal Sheet of July 22, 1993, Dunlop Tire acknowledges that the final punch list is complete contingent upon restablishment of the seed along the NW bank of the sediment pond.

Daniel T. Parshall
Energy/Environmental Eng.

CC: M. Sieverding
D. Pyanowski
J. Wokasien, URS

ATTACHMENT #03

TRANSMITTAL SHEET

Dames & Moore

3065 SOUTHWESTERN BLVD., SUITE 202, ORCHARD PARK, NEW YORK 14127-1240 (716) 675-7130 FAX NOS. (716) 675-7136 (716) 675-713

To: Dunlop Tire Corporation
Central Engineering
P.O. Box 1109
Buffalo, NY. 14240

Date June 30, 1993

Your Order No. P.O. #15061b

Our Job No. 26647-001-159

Attention: Mr. Dan Parshall

Subject: Pond Sludge Removal Project

We are sending you via Hand Delivery the following Information

Analytical results for proposed fly ash solification material from Niagara Mohawk Power Company

This is ~~Transmitted~~ for Your review

No. of copies submitted: 1

Copies to: John Wokasien, URS

Dames & Moore

By Robb S Davis

Robb S. Davis

1146

Table 15

RESULTS OF TCLP LEACHATE ANALYSES
FOR HUNTLEY AND DUNKIRK POWER STATION FLY ASH

Substance or Chemical	Huntley Station Concentration (mg/l) Trial 1	Huntley Station Concentration (mg/l) Trial 2	Dunkirk Station Concentration (mg/l) Trial 1	Dunkirk Station Concentration (mg/l) Trial 2	NYDEC Discharge to Ground Water Standards[20] (mg/l)	Regulatory Limits
Arsenic	0.07*	0.067*	0.067*	0.067*	0.05*	5.0
Barium	0.6*	0.6*	0.5*	0.5*	0.2	100
Boron	5.03	5.08	4.52	4.33	--	--
Cadmium	0.04*	0.04*	0.05*	0.05*	0.02	1.0
Chromium	0.09	0.1	0.07	0.07	0.1	5.0
Copper	0.27	0.28	0.15	0.15	1.0	--
Lead	0.1*	0.1*	0.1*	0.1*	0.05	5.0
Mercury	0.0014	0.0016	0.0018	0.0018	0.004	0.2
Molybdenum	0.2	0.2	0.2	0.2	--	--
Nickel	0.42	0.42	0.36	0.36	2.0	--
Selenium	0.004	0.004	0.003	0.003	0.04	1.0
Silver	0.02	0.02	0.02	0.02	0.1	5.0
Zinc	0.01	0.01	0.01	0.01	5.0	--

*Exceeds Standard
--No specified limit for this substance or chemical.

Table 13

MAJOR CONSTITUENTS IN FLY ASH[14]
HUNTLEY AND DUNKIRK POWER STATIONS

Parameters	Huntley Station Trial 1 (%)	Huntley Station Trial 2 (%)	Dunkirk Station Trial 1 (%)	Dunkirk Station Trial 2 (%)
Silicon Dioxide (SiO_2)	47.35	47.25	40.24	40.77
Iron Oxide (Fe_2O_3)	19.26	19.39	17.36	17.18
Aluminum Oxide (Al_2O_3)	13.48	13.32	16.17	16.00
Calcium Oxide (CaO)	3.58	3.63	3.81	4.04
Magnesium Oxide (MgO)	0.52	0.52	0.48	0.52
Potassium Oxide (K_2O)	2.39	2.45	1.81	1.53
Sodium Oxide (Na_2O)	0.77	0.76	0.76	0.73
Titanium Oxide (TiO_2)	1.22	1.25	1.17	1.07
Manganese Dioxide (MnO_2)	0.02	0.02	0.02	0.02
Sulfur Trioxide (SO_3)	0.95	0.95	1.31	1.27
Loss-On-Ignition	10.46	10.46	16.87	16.87
Total	100	100	100	100

GAI CONSULTANTS, INC.

Table 16

MONOFILLED SOLID WASTE LEACHATE TESTING (EPA METHOD SW-924)
BY GAI CONSULTANTS, INC.
HUNTLEY POWER STATION FLY ASH

Parameter	Test Results in mg/l: Sample 1 Leachate No. 1	Sample 1 Leachate No. 2	Sample 1 Leachate No. 3	Sample 1 Leachate No. 4	Blank Leachate No. 1	Blank Leachate No. 2	Blank Leachate No. 3	Blank Leachate No. 4	NYDEC Discharge to Ground Water Standards[20] (mg/l)
pH	9.8*	10.0*	9.8*	9.8*	6.6	5.8	5.8	5.8	6.5 to 8.5
TDS	1230	280	176	52	<4	<4	<4	<4	-
Alkalinity	84.9	65.8	44.3	35.4	3.85	4.65	3.85	4.55	-
Chloride	<50	<50	<50	<50	<50	<50	<50	<50	500
Sulfate	672	68.4	<25	<25	<25	<25	<25	<25	500
Aluminum	3.92*	5.39*	3.55*	2.82*	0.25	0.25	0.25	0.25	2.0
Arsenic	0.145*	0.132*	0.346*	0.481*	<0.025	<0.025	<0.025	<0.025	0.05
Barium	0.10	<0.05	--	--	<0.05	<0.05	<0.05	<0.05	2.0
Cadmium	0.010	<0.005	--	--	<0.005	<0.005	<0.005	<0.005	0.02
Calcium	281	53.1	17.6	11.5	<5.0	<5.0	<5.0	<5.0	-
Chromium	<0.05	--	--	--	<0.05	<0.05	<0.05	<0.05	0.1
Copper	<0.05	--	--	--	<0.05	<0.05	<0.05	<0.05	1.0
Iron	<0.05	--	--	--	<0.05	<0.05	<0.05	<0.05	0.6
Lead	<0.025	--	--	--	<0.025	<0.025	<0.025	<0.025	0.05
Manganese	<0.050	--	--	--	<0.050	<0.050	<0.050	<0.050	0.6
Mercury	0.002	0.002	0.002	0.001	<0.001	<0.001	<0.001	<0.001	0.004
Nickel	<1.00	--	--	--	<1.00	<1.00	<1.00	<1.00	2.0
Potassium	38.3	<5.00	--	--	<5.00	<5.00	<5.00	<5.00	-
Selenium	0.058*	0.041*	0.033	0.022	<0.010	<0.010	<0.010	<0.010	0.04
Silver	<0.025	--	--	--	<0.025	<0.025	<0.025	<0.025	0.1
Sodium	50.0	<25.0	--	--	<25.0	<25.0	<25.0	<25.0	-
Zinc	<1.20	--	--	--	<1.20	<1.20	<1.20	<1.20	5.0

*Exceeds Standard.
-No limit specified for this parameter.
--Test not continued since prior leaching yielded a concentration below the detectable limit.

Table 18

MONOFILLED SOLID WASTE LEACHATE TESTING (EPA METHOD SW-9
FLOWABLE FLY ASH FROM HUNTLEY AND DUNKIRK STATIONS

Sample	Arsenic Concentration (mg/l) Leachate No. 1	2	3	4	NYDEC Discharg Ground Standard For Ars (mg/
Huntley	0.046	0.047	0.044	0.040	0.0
Dunkirk	0.006	0.038	0.020	0.021	0.0

ATTACHMENT # 04

TRANSMITTAL SHEET

Dames & Moore

3065 SOUTHWESTERN BLVD., SUITE 202, ORCHARD PARK, NEW YORK 14127-1240 (716) 675-7130 FAX. NOS. (716) 675-7136 (716) 675-713

To: URS Consultants, Inc.
282 Delaware Avenue
Buffalo, NY 14202

Date July 7, 1993

Your Order No. Dunlop P.O. #15060B & 15061B
Our Job No. 26647-001

Attention: John C. Wokasien

Subject: Dunlop Tire Corporation
Sedimentation Pond

We are sending you via Hand Delivery the following elevations of the clay bottom of the Sedimentation Pond in Area B.

This is for for your review

No. of copies submitted: (1)

Copies to: K. Wood
R. Davis
C. Cencetti
R. Davis

Dames & Moore

By Carl Wright
Carl Wright

1/7/93

RECD 1/7/93

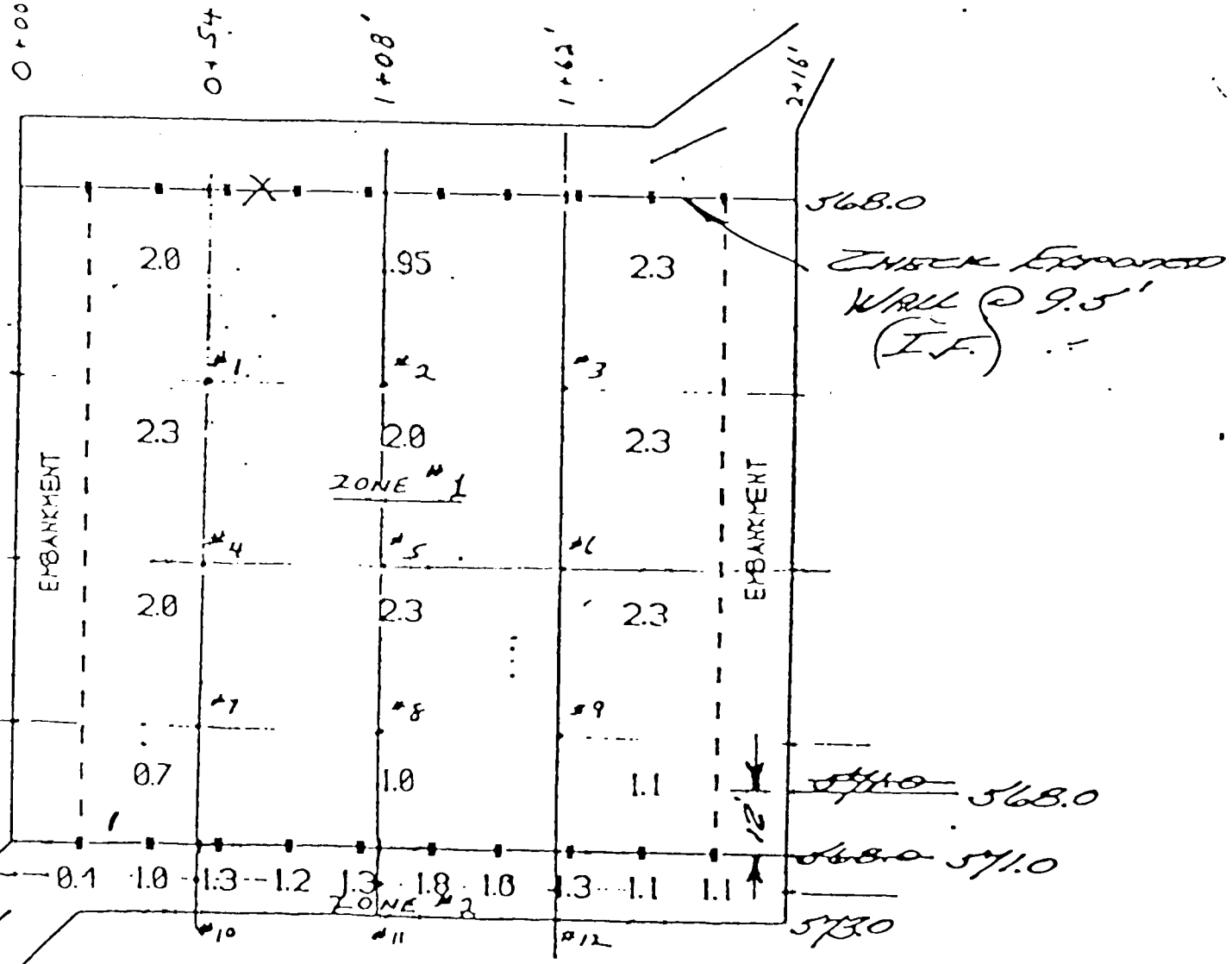
1146

SLUDGE THICKNESS FIELD MEASUREMENTS (FEET)

FIG. 5
POND SAMPLING

AVERAGE ELEV. #1 → #9 = 566.63'

ATION	ELEVATION
	567.50
	567.45
3	567.14
4	567.00
5	566.74
	566.69
7	566.53
8	565.09
9	565.63
0	571.18
1	571.81
2	571.90



(BENCHMARK ELEV. - 577.50
(TOP OF CONCRETE AL BAFFLE)

ELEVATIONS TAKEN BY:
Carl Wright

TRANSMITTAL SHEET

Dames & Moore

ATTACHMENT #05

2325 MARYLAND ROAD, WILLOW GROVE, PENNSYLVANIA 19090
(215) 657-7134 FAX: (215) 657-5406

To: URS Consultants, Inc.
282 Delaware Avenue
Buffalo, NY 14202

Date July 12, 1993

Your Order No. Dunlop P.O. #15060B & 15061B
Our Job No. 26647-001

Attention: John C. Wokasien

Subject: Dunlop Tire Corporation
Sedimentation Basin: Additive Volume Calculations
Sediment Volume Calculations

We are sending you via Hand Delivery the following

- Dames & Moore Flyash Logs
- Dames & Moore Flyash Volume Calculations
- Copies of Delivery Tickets (weight slips) for Flyash
- Copies of Operator Notes (i.e., truckload counts) for material removed from the pond
- Calculations for Net Volume of Sediment removed from the pond

~~XXXX~~
~~XXXXX~~
These are for review by DTC and URS

No. of copies submitted: 4

Copies to: Dan Pyanowski - Dunlop
D. Parshall - Dunlop
B. Hoffman - URS

Dames & Moore
Robb S Davis
By Robb Davis

DUNLOP TIRE CORPORATION
SEDIMENTATION POND PROJECT
POND VOLUME CALCULATIONS

SUMMARY OF MATERIAL REMOVED FROM POND

DATE/TIME	NUMBER OF LOADS	YDS^3 VOLUME PER LOAD	YDS^3 GROSS VOLUME
7/2/93 - day - 1:30 am	65	13	845
7/2/93 - 7/3/93 - 1:30 am - 6:30 pm	88	13	1,144
7/3/93 - 7/4/93 - 6:30 pm - 6:30 am	21	13	273
7/3/93 - 7/4/93 - 6:30 pm - 6:30 am	34	18	612
7/4/93 - 6:00 am - 6:00 pm	66	13	858
7/4/93 - 7/5/93 - 6:00 pm - 6:00 am	60	13	780
7/5/93 - 6:00 am - 10:30 pm	121	13	1,573
TOTAL NET VOLUME REMOVED FROM POND			6,085

NOTE: SEE OPERATOR RECORDS ATTACHED (4 CS)

This chart summarizes the total volume of sediment and fly ash removed from the pond during the project. The volume calculations for additive and net sediment removed are also attached.

DUNLOP TIRE CORPORATION
SEDIMENTATION POND PROJECT
FLY ASH SUMMARY

NUMBER OF TRUCKS	DATE RECEIVED	ORIGIN	NET TONS	TONS/YDS^3 DENSITY	NET YARDS
1	7/2/93	LANDFILL	21.25	1.01	21.04
2	7/2/93	LANDFILL	24.06	1.01	23.82
3	7/2/93	LANDFILL	24.26	1.01	24.02
4	7/2/93	LANDFILL	24.39	1.01	24.15
5	7/2/93	LANDFILL	24.23	1.01	23.99
6	7/2/93	LANDFILL	23.64	1.01	23.41
7	7/2/93	LANDFILL	19.37	1.01	19.18
8	7/2/93	LANDFILL	21.65	1.01	21.44
9	7/2/93	LANDFILL	25.14	1.01	24.89
10	7/2/93	LANDFILL	25.67	1.01	25.42
11	7/2/93	LANDFILL	23.87	1.01	23.63
12	7/2/93	LANDFILL	22.25	1.01	22.03
13	7/2/93	LANDFILL	18.68	1.01	18.50
14	7/2/93	LANDFILL	19.27	1.01	19.08
15	7/2/93	LANDFILL	21.61	1.01	21.40
16	7/2/93	LANDFILL	23.47	1.01	23.24
17	7/2/93	LANDFILL	21.43	1.01	21.22
18	7/2/93	LANDFILL	21.54	1.01	21.33
19	7/2/93	STACK	30.26	0.96	31.52
20	7/2/93	STACK	31.09	0.96	32.39
21	7/2/93	STACK	29.24	0.96	30.46
22	7/2/93	STACK	27.78	0.96	28.94
23	7/2/93	STACK	27.49	0.96	28.64
24	7/2/93	STACK	27.82	0.96	28.98
25	7/2/93	STACK	25.74	0.96	26.81
26	7/2/93	STACK	28.44	0.96	29.63
27	7/2/93	STACK	28.71	0.96	29.91

DUNLOP TIRE CORPORATION
SEDIMENTATION POND PROJECT
FLY ASH SUMMARY

NUMBER OF TRUCKS	DATE RECEIVED	ORIGIN	NET TONS	TONS/YDS^3 DENSITY	NET YARDS
28	7/2/93	STACK	28.58	0.96	29.77
29	7/2/93	STACK	27.31	0.96	28.45
30	7/2/93	LANDFILL	29.02	1.01	28.73
31	7/2/93	LANDFILL	29.38	1.01	29.09
32	7/2/93	LANDFILL	22.36	1.01	22.19
33	7/2/93	LANDFILL	30.68	1.01	30.38
34	7/3/93	LANDFILL	18.82	1.01	18.63
35	7/3/93	LANDFILL	19.43	1.01	19.24
36	7/3/93	LANDFILL	18.20	1.01	18.02
37	7/3/93	LANDFILL	19.13	1.01	18.94
38	7/3/93	LANDFILL	19.35	1.01	19.16
39	7/3/93	LANDFILL	21.47	1.01	21.26
40	7/3/93	LANDFILL	19.49	1.01	19.30
41	7/3/93	LANDFILL	20.27	1.01	20.07
42	7/3/93	STACK	19.92	0.96	20.75
43	7/3/93	STACK	22.65	0.96	23.59
44	7/3/93	STACK	21.74	0.96	22.65
45	7/3/93	STACK	20.90	0.96	21.77
46	7/3/93	STACK	22.60	0.96	23.54
47	7/3/93	STACK	20.78	0.96	21.65
48	7/3/93	LANDFILL	21.13	1.01	20.92
49	7/3/93	LANDFILL	23.81	1.01	23.57
50	7/3/93	LANDFILL	25.81	1.01	25.55
51	7/3/93	LANDFILL	26.51	1.01	26.25
52	7/3/93	LANDFILL	20.47	1.01	20.27
53	7/3/93	STACK	22.35	0.96	23.28
54	7/3/93	STACK	22.68	0.96	23.63

DUNLOP TIRE CORPORATION
SEDIMENTATION POND PROJECT
FLY ASH SUMMARY

NUMBER OF TRUCKS	DATE RECEIVED	ORIGIN	NET TONS	TONS/YDS^3 DENSITY	NET YARDS
55	7/3/93	LANDFILL	22.03	1.01	21.81
56	7/3/93	LANDFILL	21.53	1.01	21.32
57	7/3/93	LANDFILL	19.44	1.01	19.25
58	7/3/93	LANDFILL	22.06	1.01	21.84
59	7/3/93	LANDFILL	21.61	1.01	21.40
60	7/3/93	LANDFILL	19.21	1.01	19.02
61	7/3/93	LANDFILL	21.56	1.01	21.35
62	7/3/93	LANDFILL	23.20	1.01	22.97
63	7/3/93	LANDFILL	22.63	1.01	22.41
64	7/3/93	LANDFILL	22.61	1.01	22.39
65	7/4/93	STACK	19.92	0.96	20.75
66	7/4/93	STACK	22.89	0.96	23.84
67	7/4/93	STACK	23.56	0.96	24.54
68	7/4/93	STACK	24.78	0.96	25.81
69	7/4/93	STACK	25.26	0.96	26.31
70	7/4/93	STACK	24.71	0.96	25.74
71	7/4/93	STACK	24.26	0.96	25.27
72	7/4/93	STACK	25.02	0.96	26.06
73	7/4/93	STACK	21.31	0.96	22.20
74	7/4/93	STACK	22.24	0.96	23.17
75	7/4/93	LANDFILL	21.24	1.01	21.03
76	7/4/93	LANDFILL	22.54	1.01	22.32
77	7/4/93	LANDFILL	22.19	1.01	21.97
78	7/4/93	LANDFILL	21.92	1.01	21.70
79	7/4/93	LANDFILL	22.37	1.01	22.15
80	7/4/94	STACK	19.26	0.96	20.06
81	7/4/93	STACK	24.19	0.96	25.20

DUNLOP TIRE CORPORATION
SEDIMENTATION POND PROJECT
FLY ASH SUMMARY

NUMBER OF TRUCKS	DATE RECEIVED	ORIGIN	NET TONS	TONS/YDS^3 DENSITY	NET YARDS
82	7/4/93	STACK	24.98	0.96	26.02
83	7/4/93	STACK	25.53	0.96	26.59
84	7/4/93	STACK	24.61	0.96	25.64
85	7/4/93	STACK	25.01	0.96	26.05
86	7/4/93	STACK	24.51	0.96	25.53
87	7/4/93	STACK	22.47	0.96	23.41
88	7/4/93	STACK	22.23	0.96	23.25
89	7/4/93	STACK	21.22	0.96	22.10
90	7/4/93	STACK	20.95	0.96	21.82
91	7/4/93	LANDFILL	22.51	1.01	22.29
92	7/4/93	LANDFILL	21.65	1.01	21.44
93	7/4/93	LANDFILL	23.53	1.01	23.30
94	7/4/93	LANDFILL	23.50	1.01	23.27
95	7/4/93	STACK	22.91	0.96	23.86
				TOTAL VOLUME OF FLYASH =	2,236.20

DUNLOP TIRE CORPORATION
SEDIMENTATION POND PROJECT

DENSITY CALCULATIONS

DENSITY OF FLYASH FROM STACK:

MOISTURE CONTENT APPROXIMATELY 15 - 20% USE 17.5% (SEE TELEPHONE RECORD - ATTACHED)

FROM MOISTURE-DENSITY CURVE (ATTACHED) @ 17.5% MOISTURE, DENSITY IS APPROXIMATELY 70.8 LB/FT^3

THEREFORE, (70.8 LB/FT^3)(27 FT^3/YDS^3)(1 TON/2,000 LBS) = 0.96 TON/YDS^3

DENSITY OF FLYASH FROM LANDFILL:

MOISTURE CONTENT APPROXIMATELY 35% (SEE TELEPHONE RECORD - ATTACHED)

FROM MOISTURE - DENSITY CURVE (ATTACHED) @ 35% MOISTURE, DENSITY IS APPROXIMATELY 75 LBS/FT^3

THEREFORE, (75 LB/FT^3)(27 FT^3/YDS^3)(1 TON/2,000 LBS) = 1.01 TON/YDS^3

VOLUME CALCULATIONS

FROM SUMMARY SHEETS:

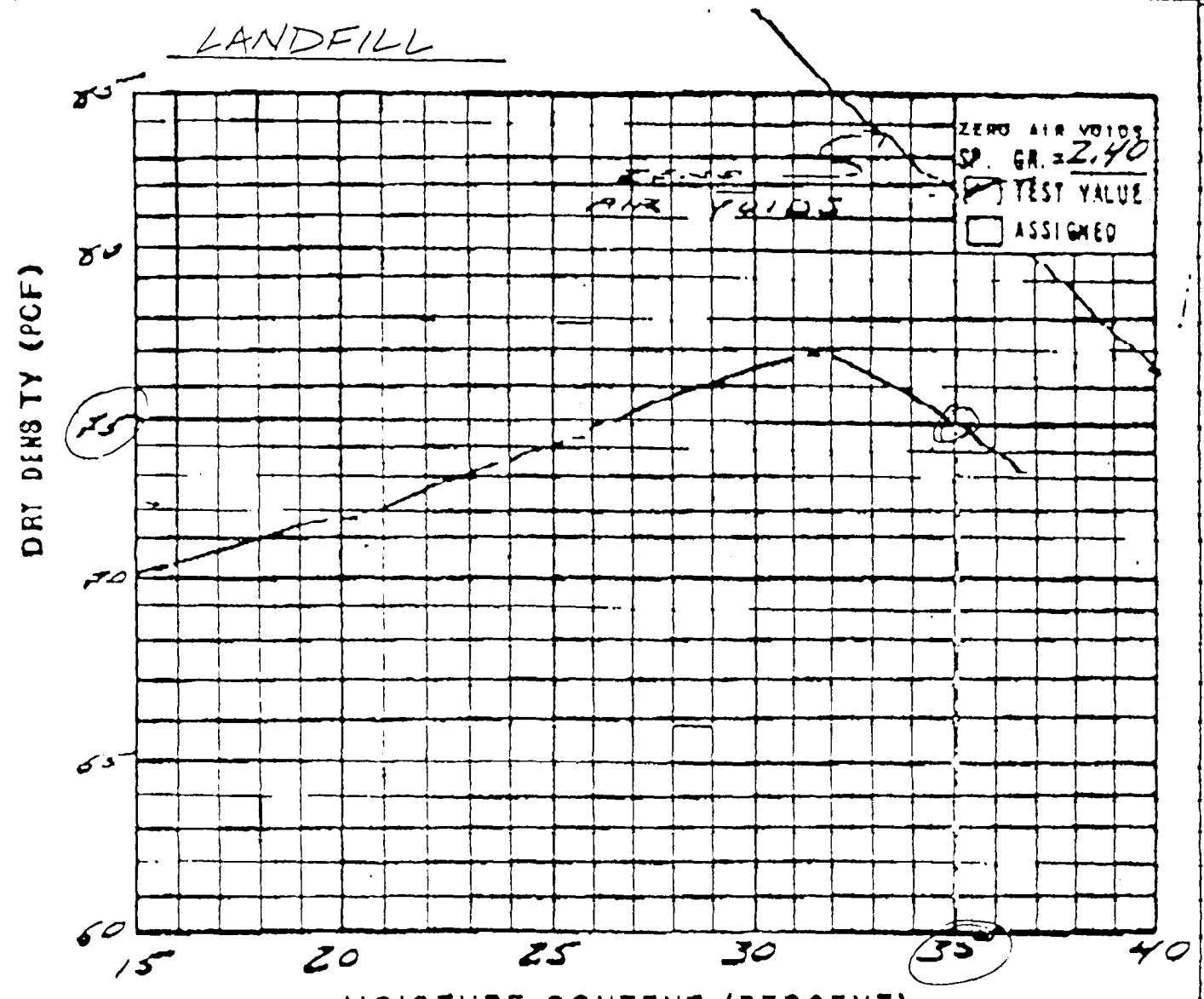
TOTAL VOLUME REMOVED FROM POND = 6,085 YDS^3
TOTAL VOLUME OF FLYASH PLACED IN POND = 2,236.2 YDS^3

THEREFORE, NET VOLUME OF SEDIMENT = 3,848.8 YDS^3

NET YARDS OF SEDIMENT X 20% = 770 YDS^3

770 YDS^3 - 600 YDS^3 = 170 YDS^3 ADDITIONAL FLYASH

LANDFILL



TEST:

☑ ASTM D698-78

☐ ASTM D1557-78

METHOD: A

MATERIAL DESCRIPTION:

FLY ASH

RESULTS:

OPTIMUM MOISTURE CONTENT 31.5%

MAXIMUM DRY DENSITY 76.5 PCF

MOISTURE-DENSITY RELATIONSHIP TEST

HUNTSVILLE STEAM PLANT FLY ASH

COMPOSITE 1

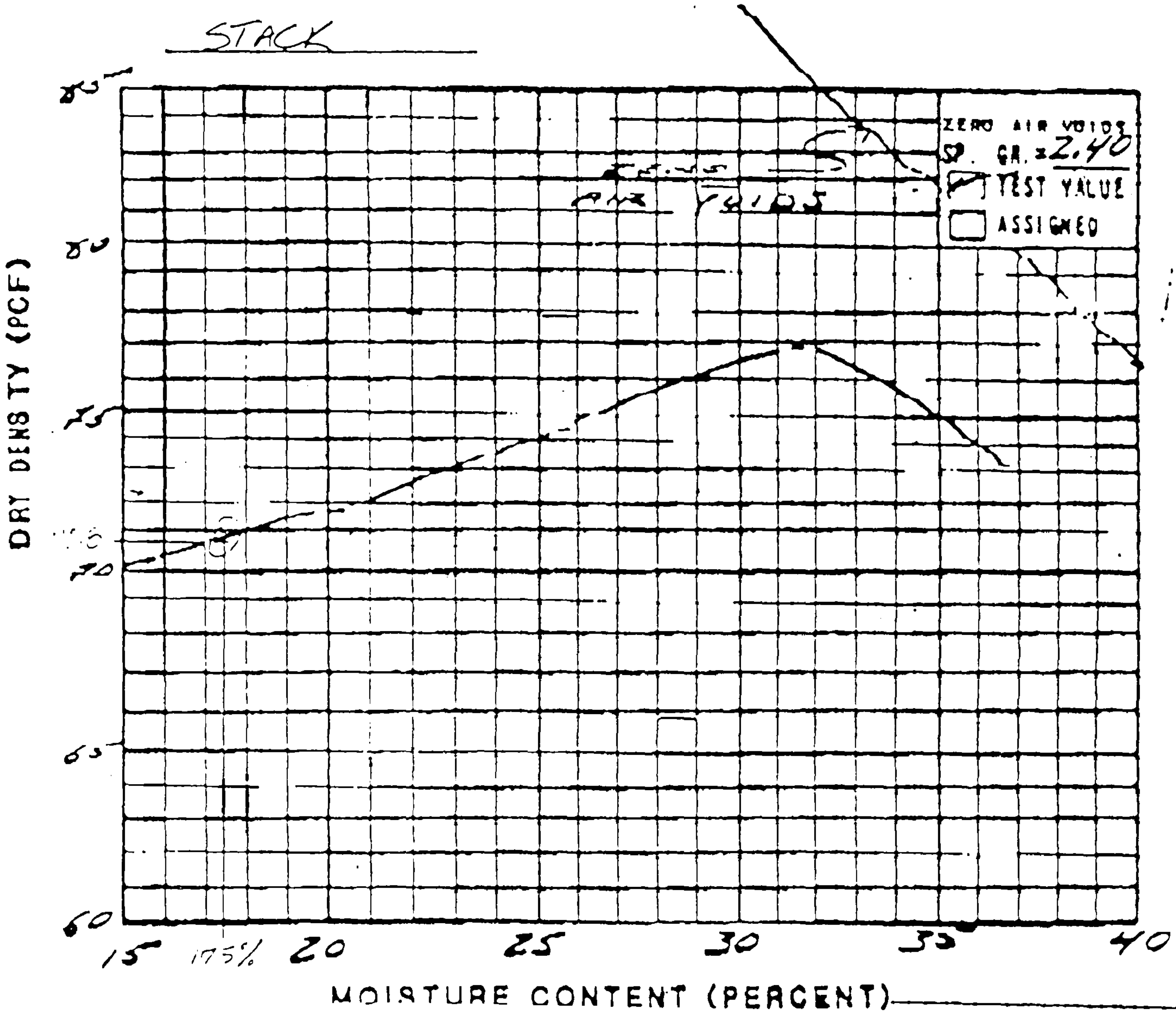
DWN. PAC CHKD. MEL

DATE 7/6/81

SCALE: —

DRAWING NUMBER

Figure 9



TEST:	**MATERIAL DESCRIPTION:**	**RESULTS:**
☒ ASTM D698-78	FLY ASH	OPTIMUM MOISTURE CONTENT 31.5
☐ ASTM D1557-78		MAXIMUM DRY DENSITY 76.9 PCF
METHOD: A	SAMPLE PREPARATION: ☐ DRY ☒ MOIST HAMMER TYPE: ☐ MECHANICAL ☒ MANUAL	

GAI Consultants, Inc. — Engineers • Geologists • Planners	MOISTURE-DENSITY RELATIONSHIP TEST Humphreys Station Fly Ash	DWN. PAG CHKD. MEL
		DAS DATE 7/.../81
	COMPOSITE 1	SCALE: —
		DRAWING NUMBER

Figure 9

RECORD OF TELEPHONE CONVERSATION

DATE 7-7-93 JOB NO.: 26647-001

RECORDED BY: CARL CENCETTI OWNER/CLIENT:

TALKED WITH: Tony Parisio OF Parisio Trucking

NATURE OF CALL: INCOMING ☒ OUTGOING ☐

ROUTE TO: INFORMATION ACTION

MAIN SUBJECT OF CALL: Fly Ash Moisture.

ITEMS DISCUSSED: Fly Ash Coming from the stacks at NYMO is approximately 15-20 percent. Ash from the Landfill is 35%. This number (35%) is what is Required for Maximum Compaction for Landfilling. Tony also said The Moisture Curve is the most Recent issue. Fly Ash never changes. Filtering Methods do But not the Ash. Anyone who says anything else About the Ash Really doesn't know what their talking About.

ATTACHMENT #06

TRANSMITTAL SHEET

Dames & Moore

2325 MARYLAND ROAD, WILLOW GROVE, PENNSYLVANIA 19090
(215) 657-7134 FAX: (215) 657-5406

To: URS Consultants, Inc.
282 Delaware Avenue
Buffalo, NY 14202

Date July 16,1993

Your Order No. Dunlop P.O. #15060B & 15061B
Our Job No. 26647-001

Attention: John C. Wokasien

Subject: Dunlop Tire Corporation: POND SEDIMENT REMOVAL PROJECT
RE-ESTABLISHMENT OF VEGETATION

We are sending you via Hand Delivery the following:

Proposed methods for re-establishing the vegetation along the bank and north west fringe areas of the sedimentation pond.

This is
These are for your review and approval prior to submission to DTC.

No. of copies submitted: One originiinal

Copies to: Dan Pyanowski - Dunlop
D Parshall - Dunlop

Dames & Moore
By Peter Wallace

PROPOSED METHODS
FOR RE-ESTABLISHMENT OF VEGETATION
ALONG THE BANK OF SEDIMENTATION POND

Dames & Moore proposes the following methods to re-establish the vegetation along the north western edge of the sedimentation pond:

-The area will be graded to the preconstruction contours.

-The area will be hand seeded to re-establish vegetation to prevent soil erosion and wash out from entering the pond.

-The area will be watered using water from the pond on a daily basis until the seed has taken hold.

-Areas that do not "take" will be re-seeded and watered until the seed is established.

-If this method is not successful, the area will be hydroseeded at the completion of the LPS project.

ATTACHMENT #07

TRANSMITTAL SHEET

Dames & Moore

2325 MARYLAND ROAD, WILLOW GROVE, PENNSYLVANIA 19090
(215) 657-7134 FAX: (215) 657-5406

To: URS Consultants, Inc.
282 Delaware Avenue
Buffalo, NY 14202

Date July 21, 1993

Your Order No. Dunlop P.O. #15060B & 15061B
Our Job No. 26647-001

Attention: John C. Wokasien

Subject: Dunlop Tire Corporation

We are sending you via Hand Delivery the following

Statement of confirmation regarding the repairs made to the four weir plates knocked out of alignment by Dames & Moore during the Pond Sediment Removal Project.

~~XThese~~ These are for your reivew and submission to Dunlop for approval

No. of copies submitted: One copy and One Original

Copies to: ~~Dan Parshall - Dunlop~~
Dan Parshall - Dunlop

Dames & Moore
By Peter Wallace

DAMES & MOORE
3065 SOUTHWESTERN BOULEVARD, SUITE 202, ORCHARD PARK, NEW YORK 14127-1240
(716) 675-7130 FAX: (716) 675-7136

July 19, 1993

Mr. Dan Parshall
Dunlop Tire Corporation
P.O. Box 1109
Buffalo, NY 14109

Re: *Repair to the Four Weir Plates Knocked Out of Alignment by Dames & Moore During the Pond Sludge Removal Project*

Dear Mr. Parshall:

I am writing to confirm that Dames & Moore has completed the repair and re-alignment of the four weir plates that were effected during the above referenced project. The one plate which was bent was removed and repaired by flattening to its original shape. The one plate was reinstalled and all four plates effected were realigned so the water flowing over the sill is maintained at one inch in depth.

If you have any additional questions please feel free to contact me at the site trailer. I will be happy to discuss this matter with you if you need additional information.

Sincerely,

Peter Wallace
Project Manager, Construction &
Remediation Services Group

PW:mr

cc: K. Wood
Project File

MR:001:004.DTC

TRANSMITTAL SHEET

Dames & Moore

ATTACHMENT #08

2325 MARYLAND ROAD, WILLOW GROVE, PENNSYLVANIA 19090
(215) 657-7134 FAX: (215) 657-5406

To: URS Consultants, Inc.
282 Delaware Avenue
Buffalo, NY 14202

Date July 22, 1993

Your Order No. Dunlop P.O. #15060B & 15061B
Our Job No. 26647-001

Attention: John C. Wokasien

Subject: Dunlop Tire Corporation : SEDIMENT POND SLUDGE REMOVAL PROJECT
RE: COMPLETION OF PUNCHLIST ITEMS

We are sending you via Hand Delivery the following :

Letter of completion of final punchlist for the sediment pond project.

This is
These are for your review and submittal to DUNLOP for review and approval.

No. of copies submitted: one original and one copy

Copies to: ~~Dan Ryanowski~~ - Dunlop
Dan Parshall

Dames & Moore
By Peter Wallace

DAMES & MOORE CONSTRUCTION SERVICES

ACTION	INFO	FILE
Dan Parshall-DTC John Wokasien - URS		26647-001-159
FROM: Pete Wallace		DATE: July 23, 1993
RE: Completion of Final Punch List Items For The Sediment Pond Sludge Removal Project.		

Dames & Moore has completed the Final Punch List items for the above referenced project. A final walk through inspection should be scheduled in order to obtain the approval of DTC. If DTC agrees that the punch list items have been satisfactorily completed, written confirmation is requested for the project files. Dames & Moore understands that the final approval will be contingent upon the establishment of the seed along the north western bank of the sediment pond. Please let me know when you can perform this final walk through inspection. Thank you for your assistance in completing this phase of the project.

ATTACHMENT #09

DUNLOP
TIRE CORPORATION

EXCELLENCE THROUGH TEAMWORK

July 26, 1993

Mr. Glenn May
N. Y. S. Dept. of Environmental Conservation
Division of Hazardous/Solid Waste
270 Michigan Ave.
Buffalo, New York 14203-1109

Dear Mr. May:

In response to your recommendation to conduct TCLP testing of our landfilled pond sludge/fly ash stabilization wastes in their final disposal cell, the attached analytical results are enclosed for your review and records.

Test results conclude that the waste are non-hazardous, which correspond to the separate testing of the pond sludge and analysis of the fly ash as received from Niagara Mohawk.

Should you have any further questions please contact me at 879-8536.

Respectfully,

Daniel T. Parshall
Energy/Environmental Eng.

cc: J. Fox
M. Sieverding
D. Pyanowski

DUNLOP TIRE

SLUDGE-POND/CELL SAMPLE

Prepared By:

ADVANCED ENVIRONMENTAL SERVICES INC.

"A Company Dedicated to Honesty, Quality and Service"

July 22, 1993
REF: CSN332C

QA/QC VERIFICATION FOR PROJECT ID 332C

The following report, as well as the supporting data, have been carefully reviewed for accuracy, adherance to the cited methods, and completeness. All data contained in this report was generated in accordance with the AES Laboratory Quality Assurance/Quality Control Program.

Linda A. Ratka
Inorganic Senior Technician

Joseph P. Masaracchia
Laboratory Manager

W. Joseph McDougall FOR
Paul T. McMahon
Quality Control Officer

Joseph J. Curtis
Project Manager

All 'Total' results on soil matrices are calculated on a dry weight basis, unless otherwise noted.

The following are standard abbreviations:

BQL - Below Quantifiable Limits
ND - None Detected
NG - No Growth of Colonies
NR - Not Requested

CLIENT: Dunlop Tire
SAMPLE ID: #70893-1
COLLECTION METHOD: Composite
COLLECTION DATE(S): 07/08/93
SAMPLE TYPE: Sludge

AES CLIENT ID: DUNLOP
AES SAMPLE ID: 332C-1

PROJECT ID: 332C

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
PCB-1016	BQL	mg/kg	0.04	SW 846 8080
PCB-1221	BQL	mg/kg	0.04	SW 846 8080
PCB-1232	BQL	mg/kg	0.04	SW 846 8080
PCB-1242	BQL	mg/kg	0.04	SW 846 8080
PCB-1248	0.12	mg/kg	0.04	SW 846 8080
PCB-1254	BQL	mg/kg	0.04	SW 846 8080
PCB-1260	BQL	mg/kg	0.04	SW 846 8080

CLIENT: Dunlop Tire
SAMPLE ID: #70893-1
COLLECTION METHOD: Composite
COLLECTION DATE(S): 07/08/93
SAMPLE TYPE: Sludge

AES CLIENT ID: DUNLOP
AES SAMPLE ID: 332C-1
PROJECT ID: 332C

TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP)

Analytical Parameters	Analytical Results (mg/l)	Maximum Allowable Concentration	Practical Quantifiable Limit	Method
Arsenic	BQL	5.0	0.05	SW 846 6010
Barium	1.17	100	0.01	SW 846 6010
Cadmium	BQL	1.0	0.02	SW 846 6010
Chromium	BQL	5.0	0.05	SW 846 6010
Lead	BQL	5.0	0.05	SW 846 6010
Mercury	BQL	0.2	0.001	SW 846 7470
Selenium	BQL	1.0	0.40	SW 846 6010
Silver	BQL	5.0	0.025	SW 846 6010
Total Cresol	BQL	200	0.020	SW 846 8270
2,4,5-Trichlorophenol	BQL	400	0.020	SW 846 8270
2,4,6-Trichlorophenol	BQL	2.0	0.020	SW 846 8270
1,4-Dichlorobenzene	BQL	7.5	0.020	SW 846 8270
2,4-Dinitrotoluene	BQL	0.13	0.020	SW 846 8270
Hexachlorobenzene	BQL	0.13	0.020	SW 846 8270
Hexachlorobutadiene	BQL	0.5	0.020	SW 846 8270
Hexachloroethane	BQL	3.0	0.020	SW 846 8270
Nitrobenzene	BQL	2.0	0.020	SW 846 8270
Pentachlorophenol	BQL	100	0.020	SW 846 8270
Pyridine	BQL	5.0	0.020	SW 846 8270
Benzene	BQL	0.5	0.10	SW 846 8240
Carbon tetrachloride	BQL	0.5	0.10	SW 846 8240
Chlorobenzene	BQL	100	0.10	SW 846 8240
Chloroform	BQL	6.0	0.10	SW 846 8240
1,2-Dichloroethane	BQL	0.5	0.10	SW 846 8240
1,1-Dichloroethene	BQL	0.7	0.10	SW 846 8240
Methyl Ethyl Ketone	BQL	200	0.20	SW 846 8240
Tetrachloroethene	BQL	0.7	0.10	SW 846 8240
Trichloroethene	BQL	0.5	0.10	SW 846 8240

CLIENT: Dunlop Tire
SAMPLE ID: #70893-1
COLLECTION METHOD: Composite
COLLECTION DATE(S): 07/08/93
SAMPLE TYPE: Sludge

AES CLIENT ID: DUNLOP
AES SAMPLE ID: 332C-1
PROJECT ID: 332C

TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP)

Analytical Parameters	Analytical Results (mg/l)	Maximum Allowable Concentration	Practical Quantifiable Limit	Method
Vinyl chloride	BQL	0.2	0.10	SW 846 8240

CLIENT: Dunlop Tire

AES CLIENT ID: DUNLOP
PROJECT ID: 332C

ACCURACY

Analytical Parameter(s)	Method	Sample ID	Type	Percent Recovery
Arsenic	SW 846 6010	332C-1	Matrix Spike	90
Barium	SW 846 6010	332C-1	Matrix Spike	87
Cadmium	SW 846 6010	332C-1	Matrix Spike	83
Chromium	SW 846 6010	332C-1	Matrix Spike	86
Lead	SW 846 6010	332C-1	Matrix Spike	81
Mercury	SW 846 7470	332C-1	Matrix Spike	110
Selenium	SW 846 6010	332C-1	Matrix Spike	88
Silver	SW 846 6010	332C-1	Matrix Spike	79
Total Cresol	SW 846 8270	332C-1	Matrix Spike	57
2,4,5-Trichlorophenol	SW 846 8270	332C-1	Matrix Spike	65
2,4,6-Trichlorophenol	SW 846 8270	332C-1	Matrix Spike	63
1,4-Dichlorobenzene	SW 846 8270	332C-1	Matrix Spike	62
2,4-Dinitrotoluene	SW 846 8270	332C-1	Matrix Spike	66
Hexachlorobenzene	SW 846 8270	332C-1	Matrix Spike	64
Hexachlorobutadiene	SW 846 8270	332C-1	Matrix Spike	64
Hexachloroethane	SW 846 8270	332C-1	Matrix Spike	68
Nitrobenzene	SW 846 8270	332C-1	Matrix Spike	65
Pentachlorophenol	SW 846 8270	332C-1	Matrix Spike	47
Pyridine	SW 846 8270	332C-1	Matrix Spike	101
Benzene	SW 846 8240	332C-1	Matrix Spike	90
Carbon tetrachloride	SW 846 8240	332C-1	Matrix Spike	96
Chlorobenzene	SW 846 8240	332C-1	Matrix Spike	96
Chloroform	SW 846 8240	332C-1	Matrix Spike	92
1,2-Dichloroethane	SW 846 8240	332C-1	Matrix Spike	92
1,1-Dichloroethene	SW 846 8240	332C-1	Matrix Spike	82
Methyl Ethyl Ketone	SW 846 8240	332C-1	Matrix Spike	97
Tetrachloroethene	SW 846 8240	332C-1	Matrix Spike	96
Trichloroethene	SW 846 8240	332C-1	Matrix Spike	90
Vinyl chloride	SW 846 8240	332C-1	Matrix Spike	76

ADVANCED ENVIRONMENTAL SERVICES, INC.

EXTRACTION TRACEABILITY REPORT

INORGANICS REPORT

AES JOB CODE CSN

AES JOB NUMBER 332C

TECHNICIAN	ANALYTICAL METHOD	SAMPLE CODE (S)	DATE OF EXTRACTION
DO	1311	CSN 332C-1	7/11-12/93

Advanced Environmental Services

Sample Traceability Report

Organics Analysis

AES Job Code CSN

AES Job No. 332C

		Sample Prep			Analysis		
AES Sample No.	Sample Date	Method Number	Date	Analyst	Method Number	Date	Analyst
332C-1	7-8-93	3510 8270	7-15-93	MM	8270	7-17-93	JF
332C-1	〃	3550 8080	7-16-93	MM	8080	7-19-93	CF
332C-1	7/8/93	—	—	—	8240	7/14/93	KR

Advanced Environmental Services

Sample Traceability Report

Inorganics Analysis

AES Job Code CSN

AES Job No. 3320

		Sample Prep			Analysis		
AES Sample No.	Sample Date	Method Number	Date	Analyst	Method Number	Date	Analyst
3320-1	7/9/93	3010	7/14/93	DS	7470	7-14-93	FS
					6010	7/21/93	CJC

Note: Areas marked using a dash indicate that no sample preparation was required under the applied methodology.

ADVANCED ENVIRONMENTAL SERVICES, INC.
2186 LIBERTY DRIVE
NIAGARA FALLS, NY 14304 • (716) 283-3120

CHAIN OF CUSTODY RECORD

Dunlap

CSN

PROJECT NAME: Sludge – Pond/Cell sample

JOB CODE: AKD

SAMPLER'S SIGNATURE: Daniel T. Dunbold

IDENTIFICATION OF BLIND FIELD DUPLICATE SITE: _____

DATE	TIME	SAMPLE IDENTIFICATION	GRAB	COMP	SAMPLE TYPE	CONTAINER CLASSIFICATION: UNPRESERVED	HNO3	H2SO4	HCL	NAOH	VIAL (PRES.)	VIAL (UNPRES.)	TOTAL	PARAMETERS/REMARKS
7/8/93	0730	# 70893-1		✓	Sludge	X								Composite sample from 8 location of our sludge/fly ash waste in clay cell

TOTAL NUMBER OF CONTAINERS (1)

NOTE: Please indicate required analysis, and whom we may contact with questions, if you have not yet done so through your customer service representative.

	DATE	TIME	RECEIVED BY:
1. RELINQUISHED BY: Daniel T. Dunbold	7/8/93	9 35 AM	D. Dutton
2. RELINQUISHED BY: D. Dutton	7/8/93	10 00 AM	Wendy Herbst
3. RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

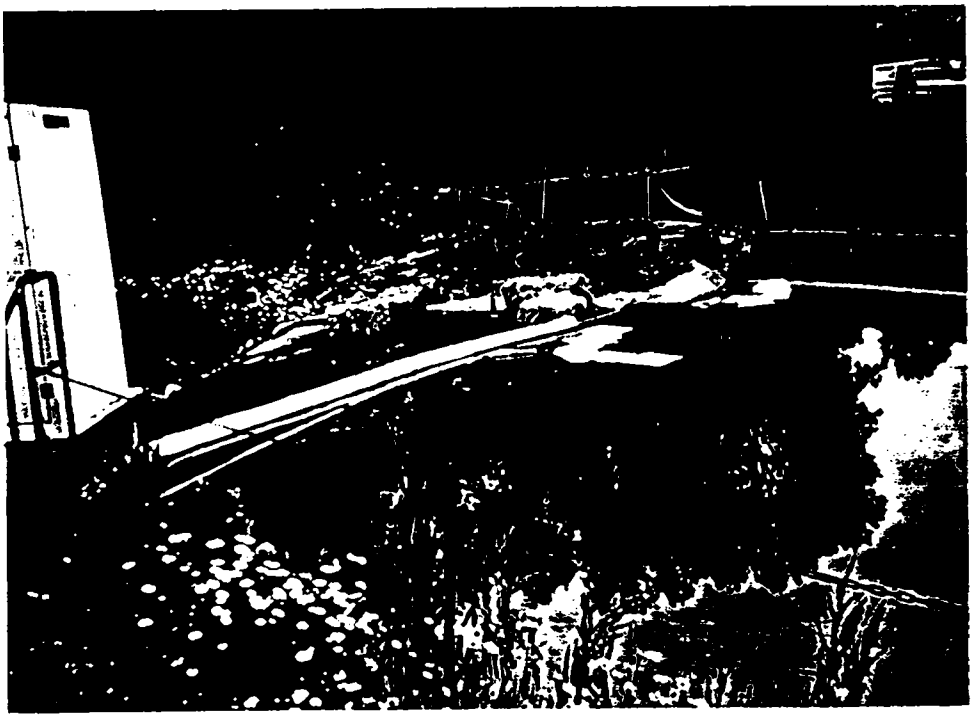
332C

#1

GABIONS + SILT FENCES IN PLACE PRIOR TO BY-PASSING POND

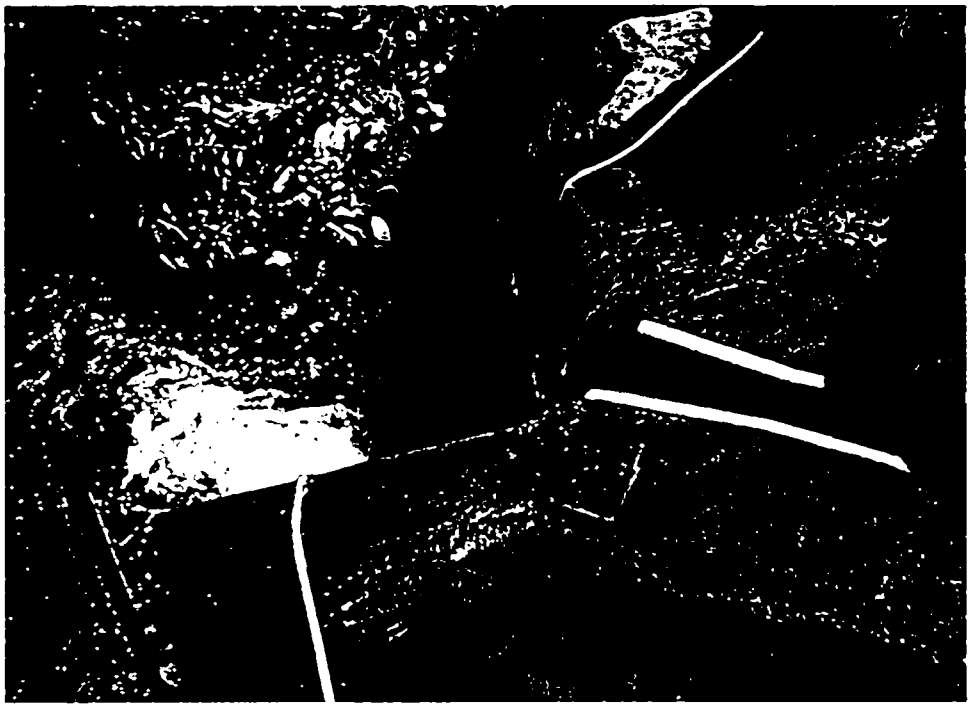
#2

BY-PASSING POND FROM ABOVE 1ST STAGE DAM USING PUMPS

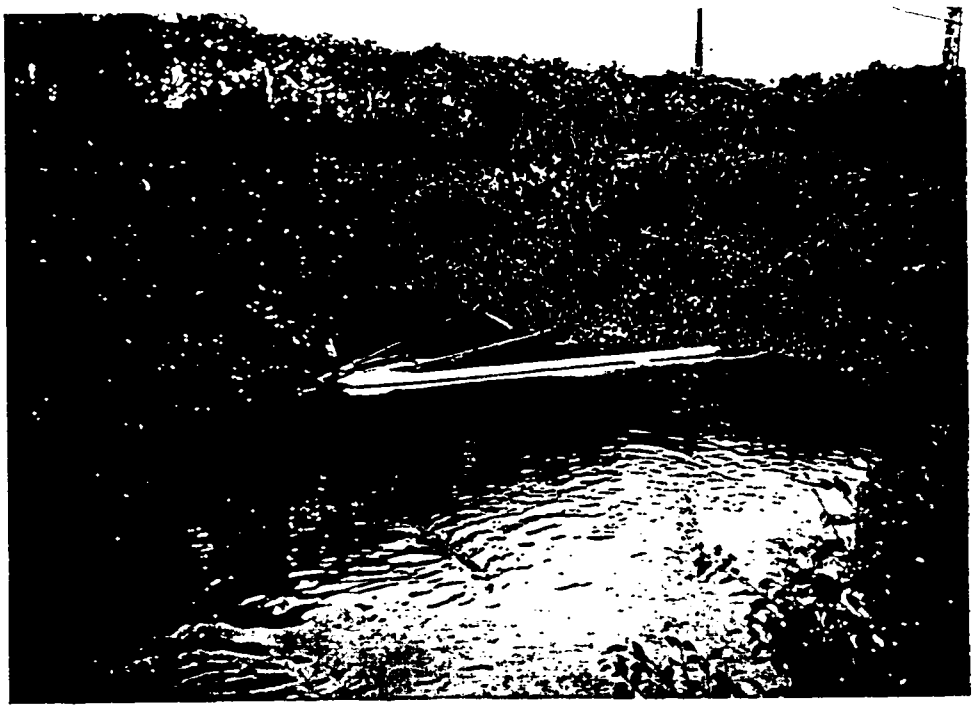


#3
STRAW BALES, ABSORBENT BOOM IN PLACE DURING PUMPING OPERATIONS

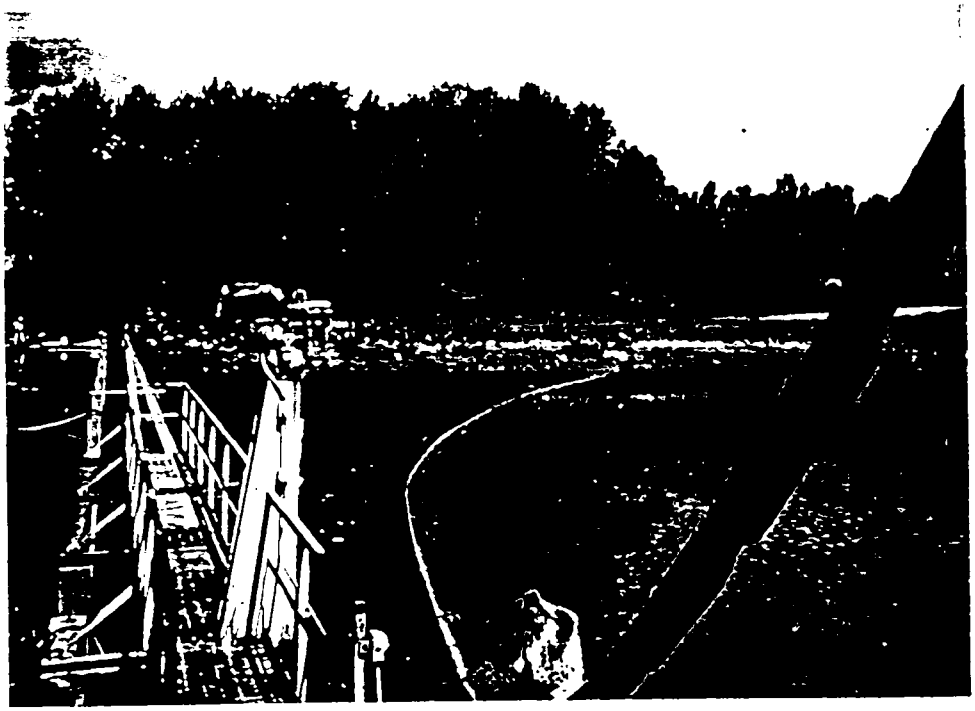
#4
MANUAL CLEANING OF DISCHARGE AT OUTFALL



#5
WATER QUALITY AT PARSHALL FLUME



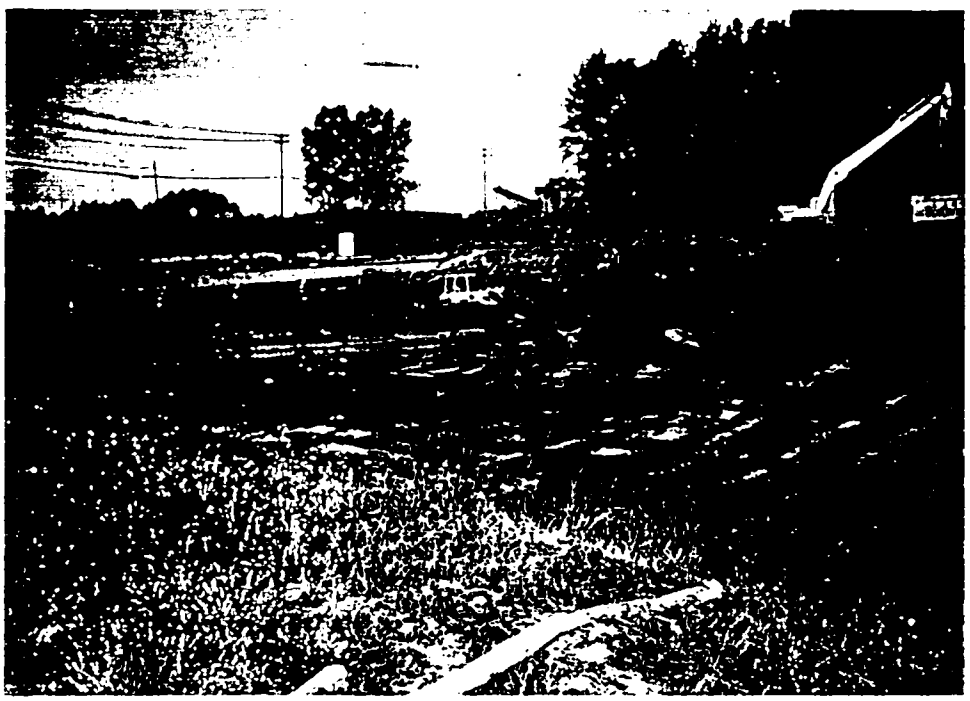
#6
FINAL OIL ABSORBENT BOOM & GABION AT DISCHARGE PIPE UNDER RIVER Rd.



#7
COMPLETION OF POND PUMPING AND PULLING OF BOOM. NOTE FENCE: + HAUL ROAD IN BACKGROUND

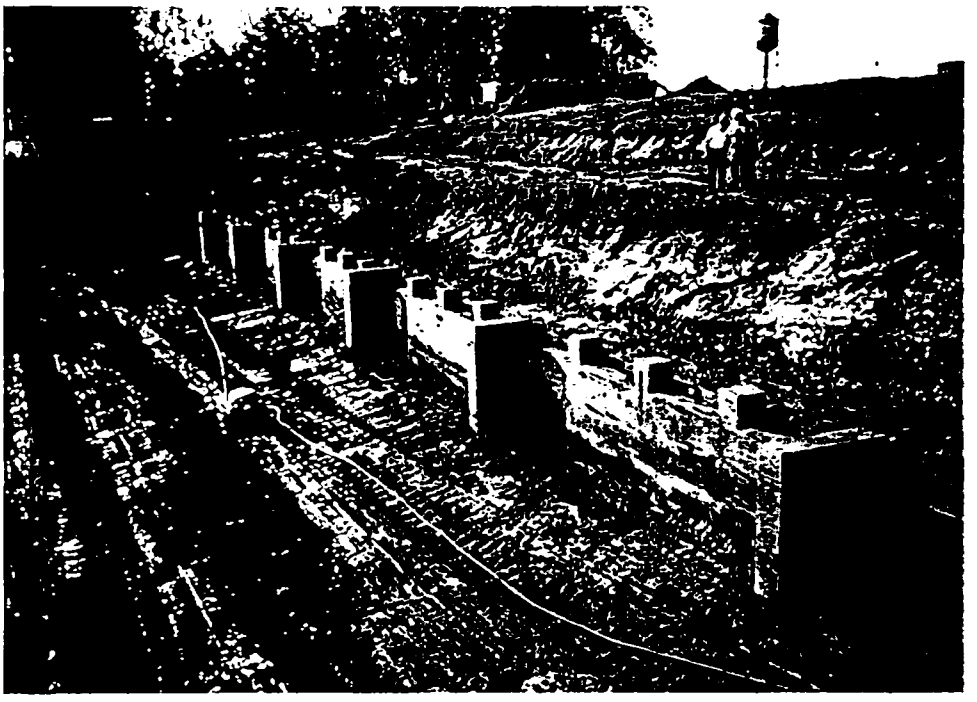
#8
CONSTRUCTION OF CLAY DISPOSAL CELL IN CENTER OF LANDFILL SITE "A"

#9
START OF "MUCKING" OPERATIONS



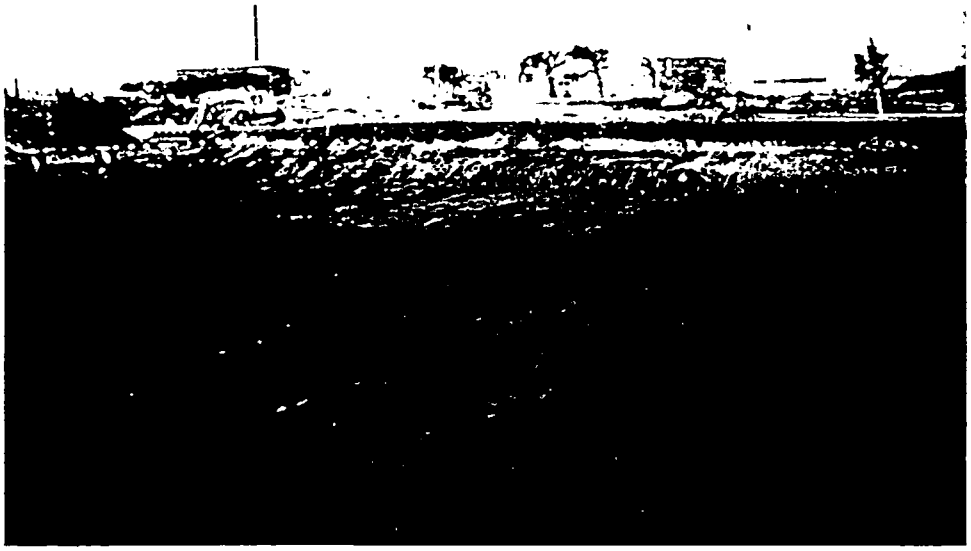
#10
CONTINUATION OF "MUCKING" OPERATIONS

#11
"MUCKING" OPERATION IN FINAL STAGES

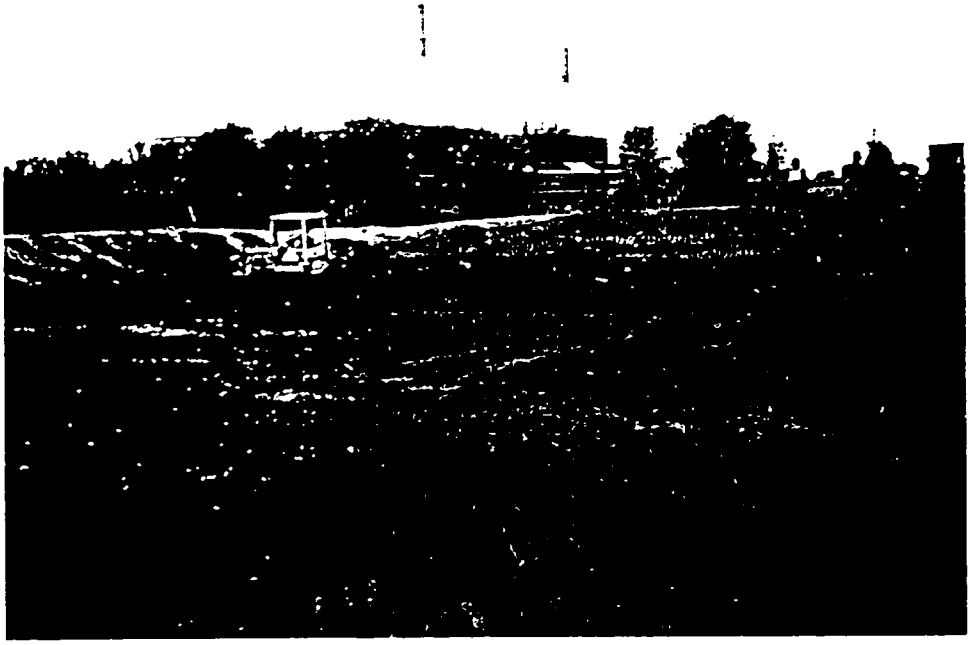


#12
VIEW OF BAFFLE WALL AFTER CLEANING

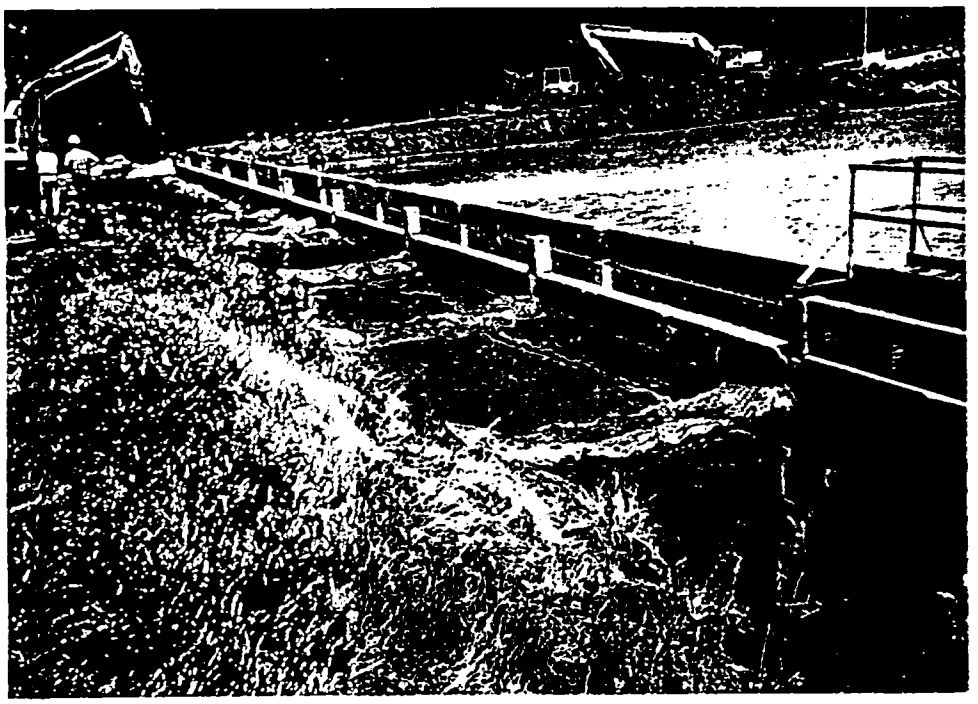
#13
CLEAN POND



#14
READY TO RENEW WATER TO POND



#15
PUSHING SLUDGE-FLY ASH MIXTURE TO CLAY DISPOSAL CELL-LAND FILL SITE "A"



#16
PULLING GABIONS AS POND SLOWLY FILLS
NOTE BUILD-UP OF SOLIDS WHICH WERE REMOVED PRIOR TO POND OVER FLOW

#17
POND FILLING
NOTE SILT FENCH
+ NORTH BANK
PRIOR TO FINAL
GRADING + SEEDING

#18
POND BACK
IN OPERATION