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ELF NORGE A/S

FRIGG FIELD

TREATMENT PLATFORM N° 1

TP1

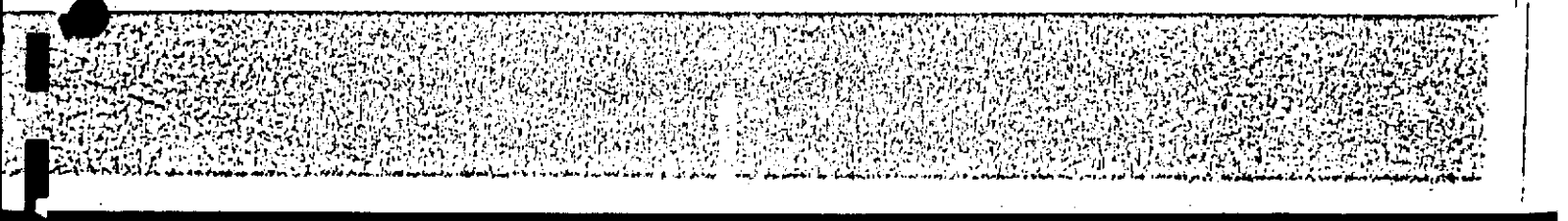
MONTHLY REPORT

N° 15

TP1-A-205-9

SCF 009

20 APRIL 1975



ELF-NORGE FRIGG TREATMENT PLATFORM N°1

CONTRACTOR'S MONTHLY REPORT N°15

TO 20TH APRIL, 1975

LIST OF CONTENTS

SECTION I - DESIGN PROGRESS REPORT

- A/ General Report
- B/ Structure drawings
- C/ Model tests
- D/ Temporary works and construction facilities

II - SITE PROGRESS REPORT

- A/ General Report
- B/ Progress schedule
- C/ Labour report
- D/ Plant report

III - PROCUREMENT PROGRESS REPORT

- A/ Bulk items
- B/ Prefabricated and brought in items

IV - SUPPORT FRAME

V - IMMERSION EQUIPMENTS

VI - RISERS AND J TUBES

VII - GROUTING

VIII - MARINE OPERATIONS

IX - ANTISCOURING

X - PROGRAMMES

XI - PHOTOGRAPHS

SECTION I - DESIGN PROGRESS REPORT

I - DESIGN PROGRESS REPORT

A/ General Report

New model tests reports allowed S.T.C. to send to both ELF and DnV full design justifications to sail out with 2500 T at top.

Specific design of column's tops resumed i.e. mainly for the MDH fixings but design criteria are pending of specification (loads on to board fenders and barge bumpers) acceptable to both DnV and S.T.C.

B/ Structural drawings

	<u>Progress</u>	<u>Approval</u>
as launched caisson	100 %	100 %
top of caisson	100 %	98 %
roof	100 %	-
built in items on roof	90 %	-
columns up to + 16.00 level	100 %	-
built in items for dito (inside)	60 %	-
" " " " " (outside)	-	-
columns + 16 to + 19.00	70 %	-
built in items for dito (outside)	-	-
slots and openings in columns	100 %	-

C/ Model tests

Preliminary results of new serial of tests were issued by NSMB.

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 15

TO 20TH APRIL, 1975

I DESIGN PROGRESS REPORT

(D) Temporary Works & Construction Facilities

Section of Work	Percentage Complete		Comments
	Engineering	Drafting	
<u>TEMPORARY WORKS</u>			
Items 1-15 - 100% Complete			
<u>CONSTRUCTION FACILITIES</u>			
20. Sheet Pile Sea Wall	100	100	
21. Basin Excavation	100	100	
22. Basin Well Pointing	100	100	
23. Tower Crane Erection	100	100	
24. Slipform Shutters to Caisson Walls	100	100	
25. Concrete Placing Booms	100	100	
26. Causeway to Floating Jetty	100	100	
27. Floating Jetty	100	100	
28. Offshore Moorings	100	100	
29. Sea Wall Removal & Dredging	100	100	
30. Tow Out and Moor	100	100	
31. Connect Services after Tow Out	100	100	
32. Slipform Shutters to Columns	100	100	
33. Construction Hoists to Columns	95	95	
34. Dismantle Tower Cranes	80	80	
35. Clear Platform for Tow	0	0	
36. Connect Tugs and Slip Moorings	0	0	

SECTION II - SITE PROGRESS REPORT

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY PROGRESS REPORT NO. 15

TO 20TH APRIL, 1975

II SITE PROGRESS REPORT

(A) GENERAL REPORT

1. General Comment

Construction of this Platform continues satisfactorily, in accordance with our detailed programme issued on 13th March, 1975.

At 20th April, slip forming of the caisson walls was 'On programme'.

2. Photographs

An aerial photograph of the Platform and access bridge, taken on 17th April, 1975, is included at the end of this Report.

A comparison of this photograph with photograph with photograph No. 75/217/13 included with our last Report gives some indication of the progress made on construction of the caisson walls since slip forming was re-started on 8th April.

3. Weather

Except for a few mild, dry days during the first week in April, the weather was mainly showery with moderate to fresh winds.

Temperatures were below normal for the time of the year.

4. Labour

Details of the effective Labour strength during the month are given in Part (C) of this Section.

There were no labour disputes during the month.

5. Plant & Equipment

Details of the principle items of Plant being used on construction of the Elf Platform and its associated works are included in Part (D) of this Section.

6. Temporary Works

(a) Access Roads

Apart from general cleaning there was no work carried out on the roads during the month.

Cont'd/....

II SITE PROGRESS REPORT (Cont'd)

(A) GENERAL REPORT

6. Cont'd

(b) Camp

By 20th April, 3 of the 8 No. dormitory blocks in Phase III extension to the Camp had been completed and occupied with internal work to a fourth block almost completed. The other 4 dormitory blocks were erected and installation of services and fittings in progress. Every effort is being made to have these completed as soon as possible.

Fitting out of the church, which is part of the Phase III extension was completed in time for the first service to be held on Sunday, 20th April.

(c) Caisson Roof Fabrication Area

Paving of the area with a layer of mass concrete is some 70% complete and continuing.

(d) Caisson Cell Roof Shutter Units

Steelwork and timber formwork have been completed to 6 No. units and a further unit is under construction.

7. Platform & Shore to Platform Access Bridge

Erection of the pontoon bridge between the shore and the platform was completed by 2nd April, except for final adjustments to the moorings. Strong winds on 3rd and 4th April caused some interruption of this work, and also hampered installation of the concrete pipelines, electric cables and other services along the platform to the bridge. These were eventually completed and slip forming of the caisson walls commenced at 6.00 p.m. on 8th April.

By midnight on 20th April, a height of 13.5 metres of wall had been poured and work was continuing satisfactorily to programme.

8. Materials

Apart from minor exceptions all items required to be built into the caisson walls have been received. The outstanding items are being progressed and will be on Site to meet requirements. Delivery of bulk materials during the month has been satisfactory.

9. Programmes

A detailed programme covering the work to be done on the Platform during the months of April, May and June, 1975, has been prepared and will be issued shortly.

CONTRACTOR'S MONTHLY REPORT NO. 15

TO 20TH APRIL, 1975

II SITE PROGRESS REPORT (Cont'd)

(B) PROGRESS SCHEDULE

1. Temporary Works & Construction Facilities

Section of Work	Percentage Complete		Progress for Month (Percent -age)	Comments
	Programmed	Actual		
<u>TEMPORARY WORKS</u>				
1. Office Accommodation				
(a) McAlpine	100	100	-	
(b) Sea Tank	100	100	-	
(c) Shell	100	100	-	
2. Camp Accommodation				
(a) Phases I & II	100	100	-	
(b) Phase III	100	85	30	
3. (a) Canteen	100	100	-	
(b) New Main Site Canteen	100	100	-	
(c) Extension to Camp Canteen	100	100	-	
4. Site Water Supply	100	100	-	
5. Electricity Supply to Site	100	90	-	Main incoming supply to be upgraded from 11,000 volts to 33,000 volts
6. Telephones	-	-	-	37 No. lines are now in use on the Site. The G.P.O. are taking steps to make 50 lines available
7. Site Foul Drainage	100	100	-	
8. Wharf	100	100	-	
9. Auxiliary Concrete Batcher	100	100	-	
10. Main Concrete Batcher	100	100	-	
11. Concrete Mix Approval	100	100	-	

II SITE PROGRESS REPORT (Cont'd)

(B) PROGRESS SCHEDULE

1. Temporary Works & Construction Facilities

Section of Work	Percentage Complete		Progress for Month (Percentage)	Comments
	Programmed	Actual		
<u>TEMPORARY WORKS</u> (Cont'd)				
12. Reinforcement Yard	100	100	-	
13. Joiners Shop	100	100	-	
14. Fitters Shop	100	100	-	
15. Prestressing Store	100	100	-	

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 15

TO 20TH APRIL, 1975

II SITE PROGRESS REPORT (Cont'd)

(B) PROGRESS SCHEDULE

1. Temporary Works & Construction Facilities (Cont'd)

Section of Work	Percentage Complete		Progress for Month (Percentage)	Comments
	Programmed	Actual		
<u>CONSTRUCTION FACILITIES</u>				
20. Sheet Pile Sea Wall	100	100	-	
21. Basin Excavation	100	100	-	
22. Basin Well Pointing	100	100	-	
23. Tower Crane Erection	100	100	-	
24. Slipform Shutters to Caisson Walls	100	100	-	
25. Concrete Placing Booms	100	100	-	
26. Prepare Floating Jetty	100	100	25	
27. Prepare Offshore Moorings	100	100	3	
28. Sea Wall Removal & Dredging	100	100	-	
29. Tow Out and Moor	100	100	100	
30. Connect Services after Tow Out	100	100	100	
31. Slipform Shutters to Columns	-	-	-	
32. Construction Hoists to Columns	-	-	-	
33. Dismantle Tower Cranes	-	-	-	
34. Clear Platform for Tow	-	-	-	
35. Connect Tugs & Slip Moorings	-	-	-	

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 15

TO 20TH APRIL, 1975

II SITE PROGRESS REPORT (Cont'd)

(B) PROGRESS SCHEDULE

2. Permanent Structure

Section of Work	Percentage Complete		Progress for Month (Percent -age)	Comments
	Programmed	Actual		
1. Precast Skirt Sections				
(a) Make	100	100	-	
(b) Place	100	100	-	
2. Caisson Base Slab 0.50m	100	100	-	
3. Prestress Base Slab	100	100	-	
4. Vent Pipework	-	87	49	
5. Grouting Pipework	-	34	13	
6. Piezometer Pipework	-	37	12	
7. J-Tubes	-	25	-	
8. Sea Bed Riser Tunnels	-	95	62	
9. Immersion Pipework	-	3	-	U.I.E.
10. Caisson Dwarf Walls	100	100	-	
11. Caisson Walls in Basin	100	100	-	
12. Complete Fillet in Basin	100	100	-	
13. Caisson Walls at Moorings	62	62	62	
14. Complete Base Slab	-	-	-	
15. Caisson Ballast Concrete	-	-	-	
16. Construct Columns (2 No.)	-	-	-	
17. Prestress & Grout Columns	-	-	-	
18. Caisson Roofs	-	-	-	
19. Immersion Module & Cabling	-	-	-	

BLE-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 15

TO 20TH APRIL, 1975

II SITE PROGRESS REPORT

(c) LABOUR REPORT

The effective Labour strength, taken as the average of the totals on each Wednesday of the month was as follows:-

McAlpine Labour

	<u>Elf</u>	<u>Ardyne Point</u>
Steelfixers (including S/Fixer Labourers)	57	27
Joiners (including Joiner's Labourers)	25	65
General Labourers	71	125
Other Trades	<u>75</u>	<u>331</u>
	<u>228</u>	<u>548</u>

NOTES :

1. Elf numbers are averages of men employed on the construction of the Elf Platform.
2. Ardyne Point numbers are averages of men engaged upon completing, running and maintaining the Site facilities for the benefit of all Platforms under construction at Ardyne Point.

Sub-contractor's Labour on Site at the 20th of the month

Kockum	21
Tyers Welding	1
Sterling Construction	19
Terrapin	21
H.G.S. Limited	107
Findlay	14
Kilpatrick	29
Fox Diving	4
Beaver Cleaners	19
Foremost	<u>19</u>
	<u>254</u>

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 15

TO 20TH APRIL, 1975

II SITE PROGRESS REPORT

(D) PLANT REPORT

Plant Return for major items of equipment in effective use.

<u>Crawler Cranes/Excavators</u>	2 No. NCK 1405
	1 No. NCK 605
	3 No. Priestman Lion III A
	1 No. NCK Andes C41B
	1 No. NCK Rapier 305
<u>Back Actor Excavators</u>	2 No. $\frac{5}{8}$ cy. Hydraulic Excavators
	1 No. 1 cy. " "
	1 No. $1\frac{1}{2}$ cy. " "
<u>Crawler Tractor/Dozers</u>	2 No.
<u>Tracked Shovel Loaders</u>	5 No.
<u>Wheeled Tractors</u>	3 No.
<u>Wheeled Shovel/Excavators/Loaders</u>	5 No.
<u>Dumptrucks</u>	11 No.
<u>8 Ton Mobile Cranes</u>	2 No.
<u>Truckcretes</u>	8 No.
<u>Dumpers</u>	4 No.
<u>Concrete Batcher</u>	1 No. Winget 2x2cy. (Batcher No.
	1 No. Winget 2x1cy. (Batcher No.
<u>Tower Cranes</u>	1 No. Record 646E (Reinf. Yard)
	4 No. Record 764CDM (Elf Platform)

Also, Generators, Welding Sets, Lighting Sets, Concrete Vibrators, Mobile Concrete Mixers, Pumps, Transport Vehicles, Air Compressors, Piling Hammers and Extractors, Fuel and Water Bowers, Chainsaws, Saw Benches, Boilers, Transformers, Battery Charger, Grabs, Rollers, Reinforcement Cutting and Bending Machines, Storage Tanks, Aggregate Screening Plant, Mobile Toilets, Boats, Aggregate Hoppers, Coaches, pontoons, Cement Silos, Concrete Pumps, Concrete Placing Booms, Cement Tankers, Road Cleaner Wagon.

SECTION III - PROCUREMENT PROGRESS REPORT

ELF-NORGE FRIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY REPORT NO. 15

TO 20TH APRIL, 1975

III PROCUREMENT PROGRESS REPORT

(A) BULK ITEMS

MATERIAL	ORDER PLACED	TOTAL QUANTITIES DELIVERED		QUANTITY DELIVERED FOR MONTH	COMMENTS
		SCHEDULED TO MEET CONSTRUCTION PROGRAMME	ACTUAL		
Concrete Aggregate	15/1/74	30650 tonnes	60360 tonnes	6560 tonnes	
Concrete Sand	15/1/74	19156 tonnes	33100 tonnes	5720 tonnes	
Cement	7/1/74	10983 tonnes	10983 tonnes	4085 tonnes	See Note 1
Reinforcement		5310 tonnes	5483 tonnes	NIL	Delivery Complete See Note 2

NOTES :

1. Cement called forward to suit consumption and storage space.
2. Reinforcement quantities amended in line with latest estimate of requirements.

NLF-NORCE ERIGG TREATMENT PLATFORM NO. 1

CONTRACTOR'S MONTHLY PROGRESS REPORT NO. 15

TO 20TH APRIL, 1975

III PROCUREMENT PROGRESS REPORT (Cont'd)

(B) FABRICATED AND BOUGHT-IN ITEMS

NOTE : Items noted in previous Reports as having been received are not listed below.

Item	Order Placed	Fabrication	Delivery Required	Delivery Made	Comments
<u>Caisson Walls at Jetty</u>					
Padeyes - Type 3) - Type 5) - Type 7)	3016/NE/231 (25/3/75)	Hutsons Ltd Glasgow	28/3/75	5 No. 3/4/75 19 No 7/4/75	Delivery complete
Plates Type 18	3016/NE/210	F & E Metals	10/3/75	27/3/75 3/4/75	Delivery complete
Unistrut P330 Channels	3016/NE/211 (26/2/75)	The Unistrut Ltd.	26/3/75	17/4/75	Delivery complete
Vent-fix Frames & Plates	3016/NE/209 (7/3/75)	Avingrade Eng. Ltd.	10/3/75	21/3/75 27/3/75 7/4/75	Delivery complete
Vent-fix Frames & Plates	3016/NE/225 (14/3/75)	Avingrade Eng. Ltd.	2/4/75	7/4/75	
Padeye Sockets	3016/NE/228 (21/3/75)	F & E Metals	10/4/75	3/4/75	Delivery complete
Threaded Couplers	3016/NE/227 (20/3/75)	C.C.L. Systems Ltd.	20/4/75		
2100 No. Heat Shrunk Sleeves	3016/NE/233 (25/3/75)	Raychem Ltd. Stirling	500 No. by 1/4/75 further 1000 No. by 6/4/75 balance by 15/4/75	20/4/75	Delivery complete
Vent-fixings - Plates for Safety Device	3016/NE/245 (10/4/75)	G.G.N. Reid Glasgow	17/4/75		
<u>Thickening to Base Slab</u>					
Plates	3016/NE/234 (14/3/75)	F & E Metals	31/3/75	3/4/75	Delivery complete

SECTION IV - SUPPORT FRAME



IV - SUPPORT FRAME

Design

- fixings along columns are to be reconsidered by MDH to send new design of structure and electric insulation is to be taken into account.

Loads on those fixings are still to be checked and approved by DnV.

- MDH reissued drawings for stainless steel sheeting and fire walls = materials to be ordered accordingly.
- Location of manhole in the central tank was specified and therefore allowed the central tank's positioning.
- CMP is expecting load out procedure from ELF to sit the skidding rails.

Fabrication

- Progress (see photographs hereby)
 - support frame and steel caps 80 %
 - tie in cans 80 %
 - miscellaneous 25 %
- Main trusses were erected along steel caps
- Painting started
- Rubber impact fenders were supplied from Dunlop and Firestone.
- Barge bumpers are at the stage of shop drawings and material supplies
- Other miscellaneous still on "HOLD".

SECTION V - IMMERSION EQUIPMENTS

V - IMMERSION EQUIPMENTS

Design progress

Hydraulic devices	95 %
electric	85 %
electronics	90 %
pipng	100 %
immersion temporary bridge	70 %

Fabrication progress

- Due to unsatisfactory tests ball valves and operators had to be sent back to factory : ball valves were dismantled and joints rectified, at the same time operators were improved to reach a better safety factor on closing : operating hydraulic pressure will have to be increased accordingly. However the immersion module is still scheduled to be loaded in column C1 for May 15th.
- Access and lifting eyes were provided into BR/WIMPEY platform in C1 in order to facilitate maintenance of module.
- Electronical shelters are being fitted with their equipments at MATRA's shop.
- Immersion bridge
 - structural steel ordered

SECTION VI- RISERS AND J TUBES

VI - RISERS AND J TUBES

- Access slots in both column's bases were cancelled, therefore all handlings will have to be done through roof level by derrick barge or tower cranes.
- Tower cranes will be extended along both columns for ancillary handling
- Postponing of some fixings for the external approach in order to clear towing lines is being investigated by ELF and NDA.
- S.T.C. pointed out the urgent need of specific drawings showing all equipments inside both columns.

SECTION VII - GROUTING

SECTION VIII - MARINE OPERATIONS

VIII - MARINE OPERATIONS

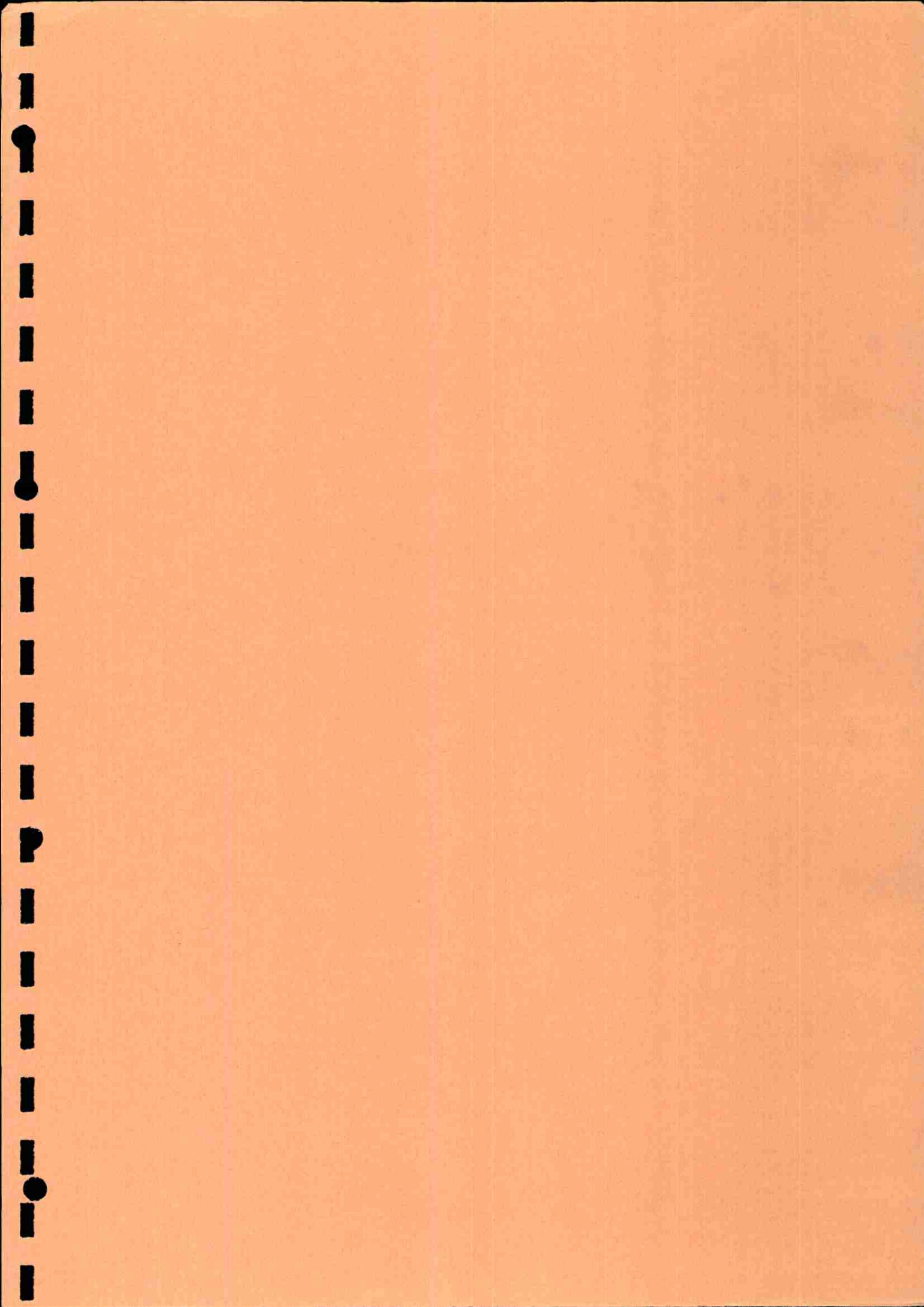
- Damage protection around caisson was set according to NDA request.
- S.T.C. is investigating media of protection for following stages
- Loch Fyne immersion procedures are still to be specified in close coordination with the support frame's erector.

LOCH FYNE MOORING

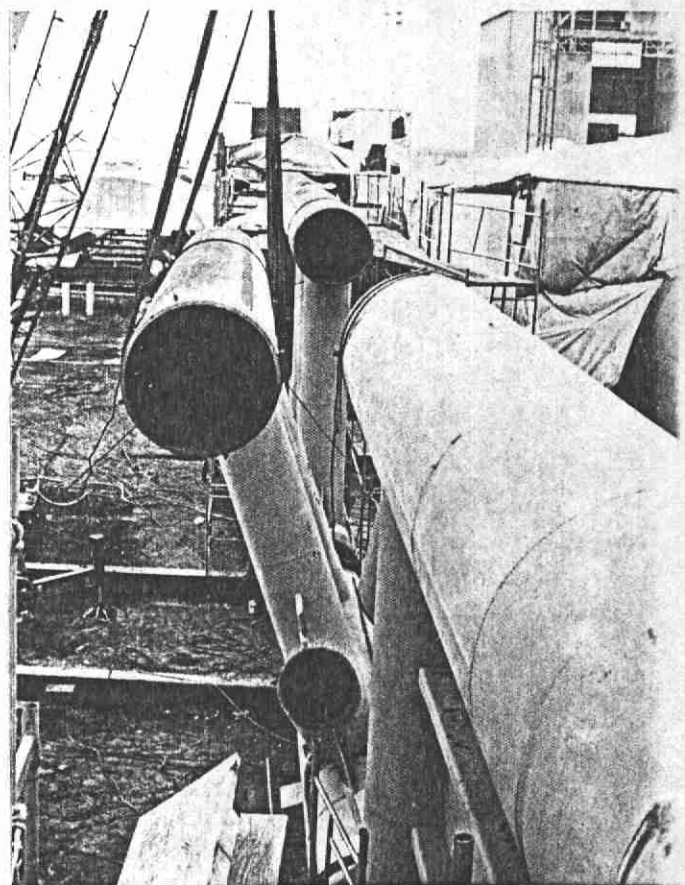
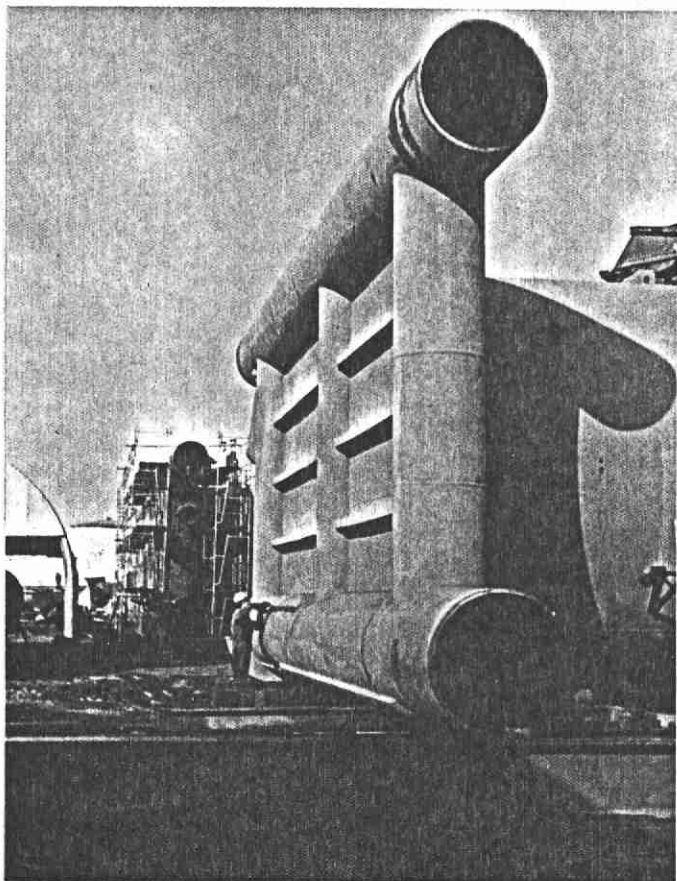
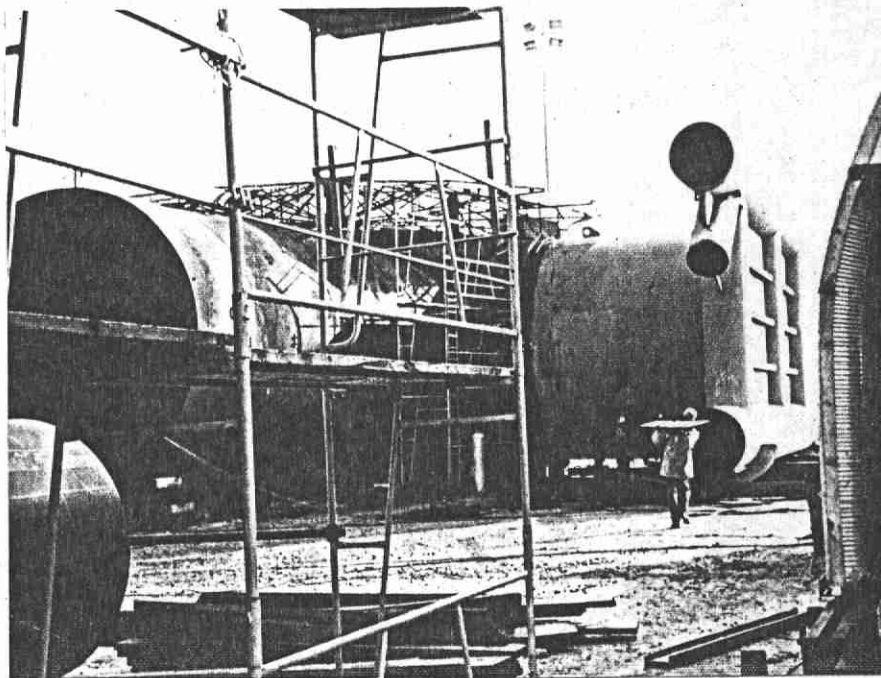
- Calculation notes of the mooring system were issued by SMIT and submitted to NDA.
- Final location is being finalized and some undisturbed sample tests may be required.
- Chain connections were ordered and quotations were called for towage from Ardyne to Loch Fyne and for the mooring lay down
- SMIT proceeded with design of tensionning barges and gravity anchors.

SECTION IX - ANTISCOURING

SECTION X - PROGRAMMES



SECTION XI - PHOTOGRAPHS



24 APRIL 1975



75/289/18

ELF PLATFORM FROM WEST

17.4.75.