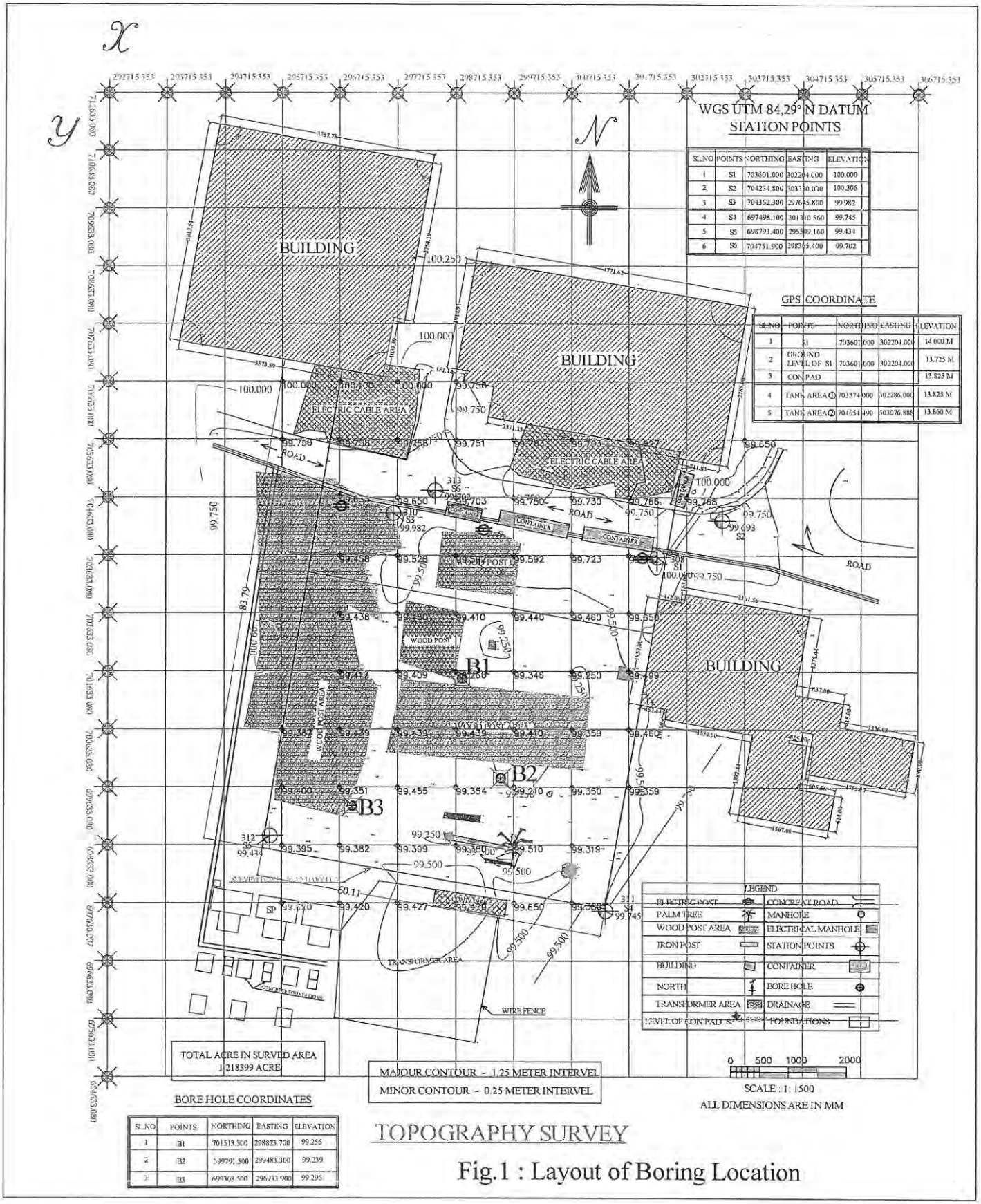
ATTACHMENT



SL.NO	POINTS	NORTHING	EASTING	ELEVATION
1	S1	703601.000	302204.000	100.000
2	S2	704234.800	303330.000	100.306
3	S3	704362.300	297645.800	99.982
4	S4	697498.100	301300.560	99.745
5	S5	698793.400	295599.160	99.434
6	S6	704751.900	298365.400	99.702

SL.NO	POINTS	NORTHING	EASTING	ELEVATION
1	S1	703601.000	302204.000	14.000 M
2	GROUND LEVEL OF S1	703601.000	302204.000	13.725 M
3	CON.PAD			13.825 M
4	TANK AREA ①	703374.000	302286.000	13.825 M
5	TANK AREA ②	704654.490	303076.888	13.860 M

SL.NO	POINTS	NORTHING	EASTING	ELEVATION
1	B1	701513.300	298823.700	99.256
2	B2	699791.500	299483.300	99.239
3	B3	699308.500	296933.900	99.296

Fig.1 : Layout of Boring Location

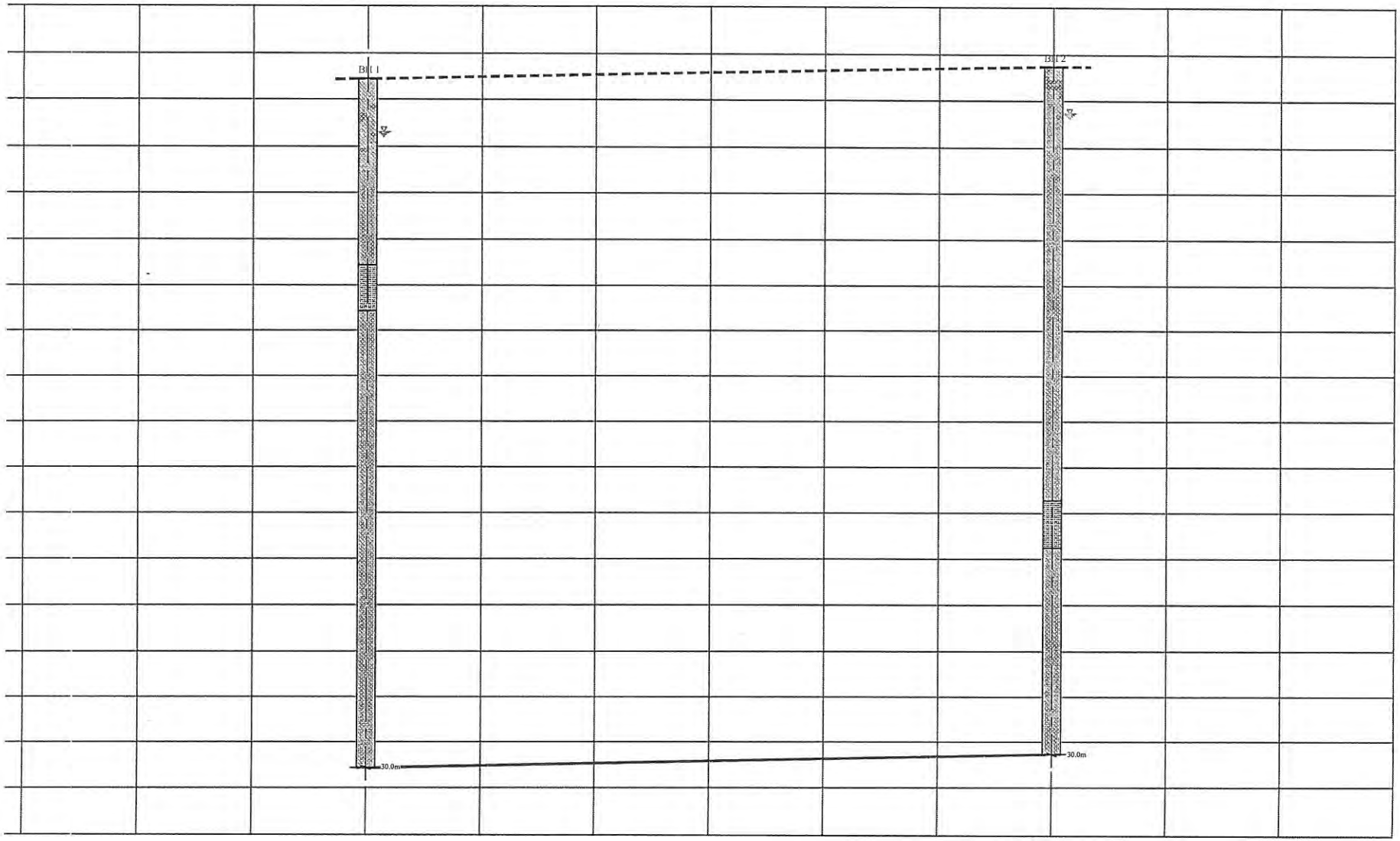


Fig. 2: Soil Profile (1 - 2)

Bezaleel + Turnkey Contractors,Inc.

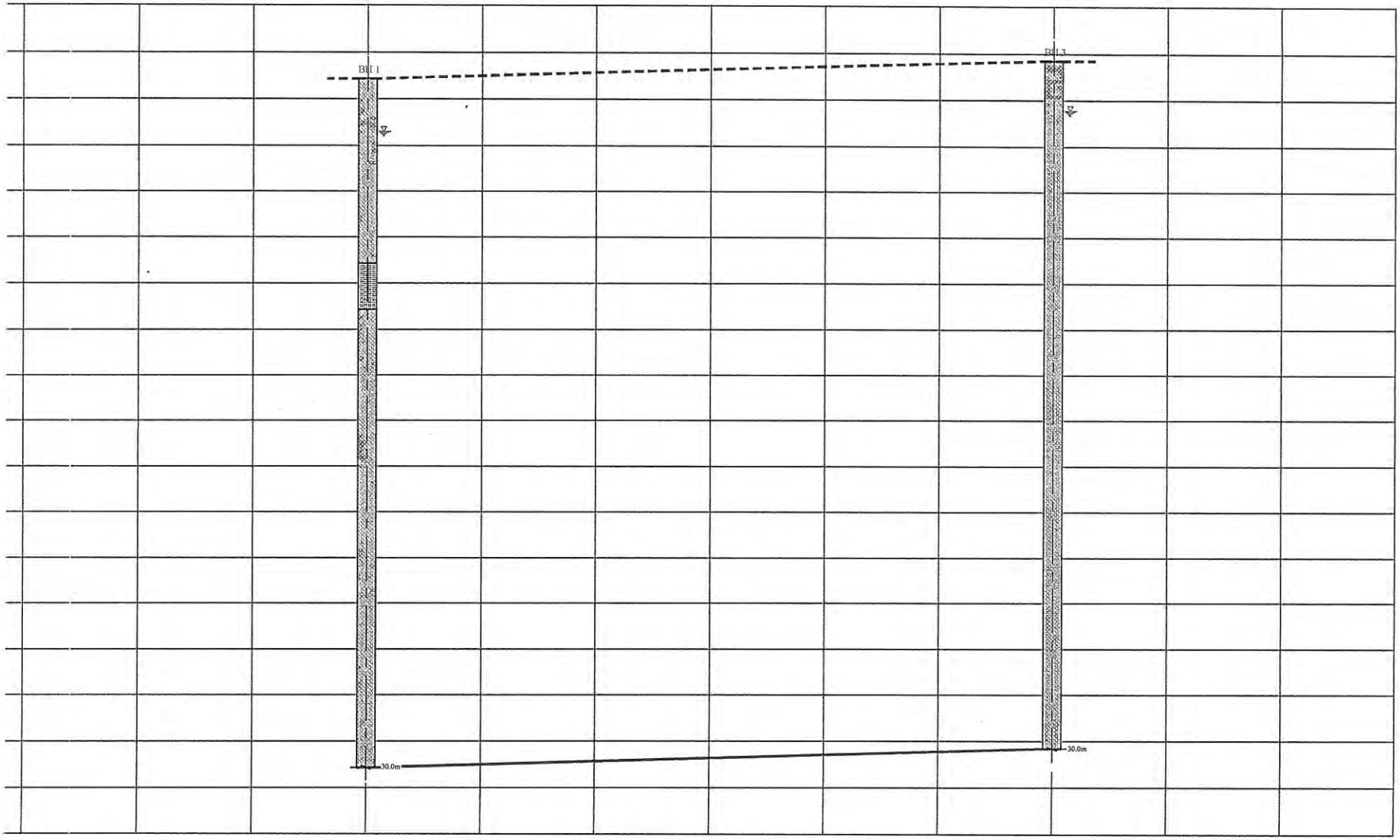


Fig. 3: Soil Profile (1 - 3)

Bezaleel + Turnkey Contractors,Inc.

APPENDIX A

STANDARD PENETRATION TEST: FIELD RESULT

Start date: 11/03/2012 **End date: 12/03/2012**

PROJECT: Proposed Construction of New Power House and New Subsation at Bushrod Island Power Station, Monrovia, Liberia.

RIG: Mobile Drill Rig

METHOD OF BORING: Rotary

DRILLER: Mohammed

BORING: BH 1

STATION:

CA SIZE : 4"

FIELD TECHNICIAN: Ahmed

WL = 2.30m

Depth (m)	Number of Blows at 0.15 m interval	Description of Layer
0.00 - 0.60	2, 2, 2	Brownish loose organic top soil
1.5 - 2.1	3, 5, 6	Greyish medium dense SAND
3.0 - 3.6	9, 11, 13	Brownish medium dense fine SAND
4.5 - 5.1	10, 13, 16	Brownish medium dense fine SAND
6.0 - 6.6	11, 8, 8	Brownish medium dense coarse SAND
7.5 - 8.1	8, 14, 18	Brownish dense coarse SAND
9 - 9.6	2, 4, 8	Greyish stiff CLAY
10.5 - 11.1	9, 28, 20	Brownish dense coarse SAND
12 - 12.6	10, 32, 48	Brownish very dense coarse SAND
13.5 - 14.1	11, 28, 34	Brownish very dense coarse SAND
15 - 15.6	11, 28, 32	Brownish very dense fine SAND
16.5 - 17.1	12, 30, 42	Brownish very dense fine SAND
18.0 - 18.6	12, 21, 29	Brownish very dense coarse SAND
19.5 - 20.1	13, 22, 27	Brownish dense fine SAND

APPENDIX A

STANDARD PENETRATION TEST: FIELD RESULT

Start date: 11/03/2012 **End date: 12/03/2012**

PROJECT: Proposed Construction of New Power House and New Subsation at Bushrod Island Power Station, Monrovia, Liberia.
RIG: Mobile Drill Rig
METHOD OF BORING: Rotary
DRILLER: Mohammed

BORING: BH 1 Cont'd
STATION:
CA SIZE : 4"
FIELD TECHNICIAN: Ahmed

Depth (m)	Number of Blows at 0.15 m interval	Description of Layer
21.0 - 21.6	18, 21, 32	Brownish very dense fine SAND
22.5 - 23.1	19, 28, 30	Brownish very dense fine SAND
24.0 - 24.6	11, 18, 21	Brownish dense SAND
25.5 - 26.1	14, 21, 30	Brownish very dense fine SAND
27.0 - 27.6	18, 21, 33	Brownish very dense SAND
28.5 - 29.1	15, 28, 39	Brownish very dense SAND
30.0 - 30.6	21, 32, 48	Brownish very dense SAND
31.5 - 32.1		
33.0 - 33.6		
34.5 - 35.1		
36.0 - 36.6		
37.5 - 38.1		
39.0 - 39.6		
40.5 - 41.1		

APPENDIX A

STANDARD PENETRATION TEST: FIELD RESULT

PROJECT: Proposed Construction of New Power House and New Subsation at Bushrod Island Power Station, Monrovia, Liberia.
Start date: 13/03/2012 **End date: 14/03/2012**
RIG: Mobile Drill Rig
METHOD OF BORING: Rotary
DRILLER: Mohammed
BORING: BH 2
STATION:
CA SIZE : 4"
FIELD TECHNICIAN: Ahmed

WL = 2.20m

Depth (m)	Number of Blows at 0.15 m interval	Description of Layer
0.00 - 0.60	1, 2, 2	Loose fill material
1.5 - 2.1	4, 6, 5	Greyish medium dense fine grain SAND
3.0 - 3.6	6, 9, 7	Brownish grey medium dense fine SAND
4.5 - 5.1	8, 11, 14	Brownish grey medium dense fine SAND
6.0 - 6.6	7, 8, 9	Brownish medium dense coarse SAND
7.5 - 8.1	9, 11, 12	Brownish medium dense coarse SAND
9 - 9.6	10, 13, 10	Brownish medium dense fine SAND
10.5 - 11.1	13, 18, 21	Brownish red dense fine SAND
12 - 12.6	14, 17, 23	Brownish dense fine SAND
13.5 - 14.1	11, 18, 22	Brownish red dense fine SAND
15 - 15.6	19, 17, 19	Greyish dense fine SAND
16.5 - 17.1	14, 18, 21	Brownish dense fine SAND
18.0 - 18.6	11, 21, 24	Brownish dense fine SAND
19.5 - 20.1	8, 10, 12	Greyish very stiff CLAY

APPENDIX A

STANDARD PENETRATION TEST: FIELD RESULT

PROJECT: Proposed Construction of New Power House and New Subsation at Bushrod Island Power Station, Monrovia, Liberia.
RIG: Mobile Drill Rig
METHOD OF BORING: Rotary
DRILLER: Mohammed

Start date: 13/03/2012 **End date: 14/03/2012**
BORING: BH 2 Cont'd
STATION:
CA SIZE : 4"
FIELD TECHNICIAN: Ahmed

Depth (m)	Number of Blows at 0.15 m interval	Description of Layer
21.0 - 21.6	16, 22, 24	Brownish dense coarse SAND
22.5 - 23.1	18, 23, 21	Brownish dense coarse SAND
24.0 - 24.6	16, 24, 28	Brownish very dense fine grain SAND
25.5 - 26.1	11, 18, 21	Brownish dense fine grain SAND
27.0 - 27.6	13, 21, 24	Brownish dense fine SAND
28.5 - 29.1	18, 25, 32	Brownish very dense SAND
30.0 - 30.6	19, 24, 30	Brownish very dense SAND
31.5 - 32.1		
33.0 - 33.6		
34.5 - 35.1		
36.0 - 36.6		
37.5 - 38.1		
39.0 - 39.6		
40.5 - 41.1		

APPENDIX A

STANDARD PENETRATION TEST: FIELD RESULT

PROJECT:	Proposed Construction of New Power House and New Subsation at Bushrod Island Power Station, Monrovia, Liberia.	**Start date: 16/03/2012**	**End date: 17/03/2012**
RIG:	Mobile Drill Rig	BORING: BH 3	
METHOD OF BORING:	Rotary	STATION:	
DRILLER:	Mohammed	CA SIZE : 4"	
		FIELD TECHNICIAN: Ahmed	

WL = 2.30m

Depth (m)	Number of Blows at 0.15 m interval	Description of Layer
0.00 - 0.60	1, 1, 1	Brownish loose fill material
1.5 - 2.1	3, 5, 4	Dark brownish loose fine SAND
3.0 - 3.6	5, 8, 6	Dark brownish medium dense fine SAND
4.5 - 5.1	9, 10, 13	Brownish medium dense fine SAND
6.0 - 6.6	8, 9, 10	Brownish medium dense coarse SAND
7.5 - 8.1	7, 12, 15	Brownish medium dense coarse SAND
9 - 9.6	11, 14, 9	Brownish medium dense fine SAND
10.5 - 11.1	12, 17, 20	Brownish red medium dense fine SAND
12 - 12.6	13, 18, 24	Brownish dense fine SAND
13.5 - 14.1	10, 17, 20	Brownish dense fine SAND
15 - 15.6	18, 16, 18	Brownish dense fine SAND
16.5 - 17.1	13, 17, 20	Reddish brown dense fine SAND
18.0 - 18.6	11, 21, 25	Brownish red dense fine SAND
19.5 - 20.1	11, 18, 21	Brownish dense fine SAND

APPENDIX A

STANDARD PENETRATION TEST: FIELD RESULT

PROJECT: Proposed Construction of New Power House and New Subsation at Bushrod Island Power Station, Monrovia, Liberia.
RIG: Mobile Drill Rig
METHOD OF BORING: Rotary
DRILLER: Mohammed

Start date: 16/03/2012 **End date: 17/03/2012**
BORING: BH 3 Cont'd
STATION:
CA SIZE : 4"
FIELD TECHNICIAN: Ahmed

Depth (m)	Number of Blows at 0.15 m interval	Description of Layer
21.0 - 21.6	15, 21, 23	Brownish dense fine SAND
22.5 - 23.1	17, 22, 20	Brownish dense fine SAND
24.0 - 24.6	15, 20, 24	Brownish dense fine SAND
25.5 - 26.1	11, 21, 24	Brownish dense fine SAND
27.0 - 27.6	14, 22, 25	Brownish dense fine SAND
28.5 - 29.1	18, 26, 29	Brownish very dense SAND
30.0 - 30.6	19, 25, 29	Brownish very dense SAND
31.5 - 32.1		
33.0 - 33.6		
34.5 - 35.1		
36.0 - 36.6		
37.5 - 38.1		
39.0 - 39.6		
40.5 - 41.1		

Bezaleel + Turnkey Contractors,Inc.

FIGURE: APPENDIX B
BORING: BH 1
STATION:

PROJECT: PROPOSED STRUCTURES FOR LEC EXPANSION, BUSHROD ISLAND, MONROVIA, LIBERIA.

DRILLER: MOHAMMED SPOON OD: 1 1/2" CASING SIZE: 4" CORE SIZE: 2"

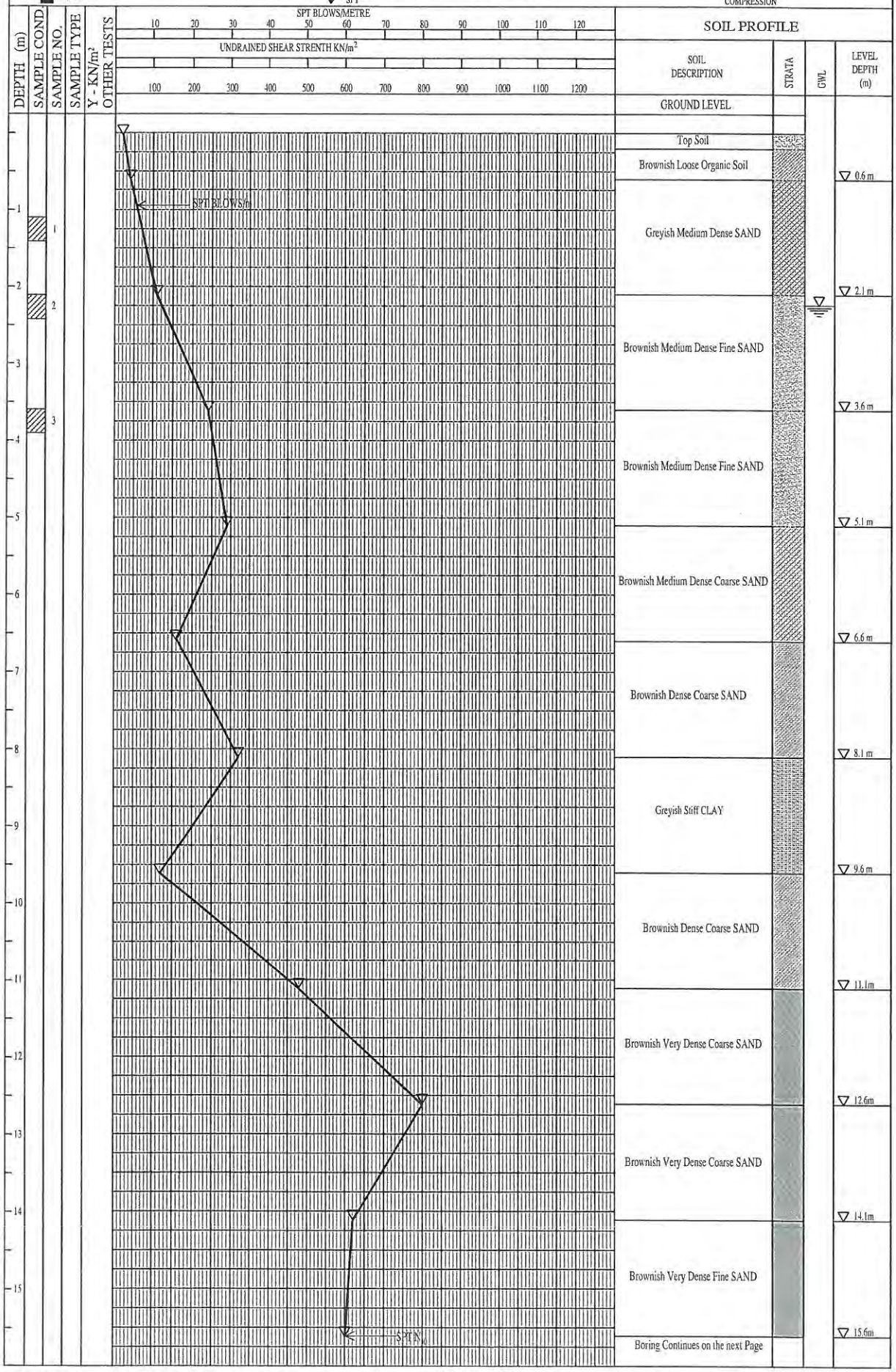
DATE: MARCH, 2012.

SAMPLE CONDITION
- UNDISTURBED
- DISTURBED
- LOST

SAMPLE TYPE
- A.S. AUGER
- S.S. SPLIT SPOON
- T.O. OPEN TUBE
- P.S. PISTON
- R.C. ROCK CORE

FIELD AND LABORATORY TESTS
- + INSITU-VANE UNDIST
- × INSITU-VANE REMOULDED
- ● WATER CONTENT
- I ATTERBERG LIMITS
- O UNDRAINED COMPRESSION
- ▼ SPT
- G GRAIN SIZE
- C CONSOLIDATION
- U UNCONFINED
- Q UNDRAINED TRIAXIAL
- Y WET UNIT WEIGHT

4 - 0%
13 - 0 - 5%
10%
STRAIN AT FAILURE FOR UNDRAINED COMPRESSION



SITECH ENGINEERING LIMITED

FIGURE: APPENDIX B
BORING: BH 1 Cont'd
STATION:
DATE: MARCH, 2012.

PROJECT: PROPOSED STRUCTURES FOR LEC EXPANSION, BUSHROD ISLAND, MONROVIA, LIBERIA.

DRILLER: MOHAMMED SPOON OD: 1 1/2" CASING SIZE: 4" CORE SIZE: 2"

SAMPLE CONDITION
- UNDISTURBED
- DISTURBED
- LOST

SAMPLE TYPE
- A.S. AUGER
- S.S. SPLIT SPOON
- T.O. OPEN TUBE
- P.S. PISTON
- R.C. ROCK CORE

FIELD AND LABORATORY TESTS
- + INSITU-VANE UNDIST
- × INSITU-VANE REMOULDED
- ● WATER CONTENT
- ⊢ ATTERBERG LIMITS
- ○ UNDRAINED COMPRESSION
- ▼ SPT
- G GRAIN SIZE
- C CONSOLIDATION
- U UNCONFINED
- Q UNDRAINED TRIAXIAL
- Y WET UNIT WEIGHT

4 - 0%
13 - 0 - 5%
10%
STRAIN AT FAILURE FOR UNDRAINED COMPRESSION

SPT BLOWS/METRE: 10 20 30 40 50 60 70 80 90 100 110 120

UNDRAINED SHEAR STRENTH KN/m²: 100 200 300 400 500 600 700 800 900 1000 1100 1200

DEPTH (m)	SAMPLE COND.	SAMPLE NO.	SAMPLE TYPE	Y - KN/m²	OTHER TESTS	SOIL DESCRIPTION	STRATA	GWL	LEVEL DEPTH (m)
						GROUND LEVEL			
15.6									▽ 15.6 m
						Brownish Very Dense Fine SAND			
16.6									
									▽ 17.1 m
17.6						Brownish Very Dense Coarse SAND			
									▽ 18.6 m
18.6						Brownish Dense Coarse SAND			
19.6									▽ 20.1 m
						Brownish Very Dense Fine SAND			
20.6									
21.6									▽ 21.6 m
						Brownish Very Dense Fine SAND			
22.6									▽ 23.1 m
23.6						Brownish Dense SAND			
									▽ 24.6 m
24.6						Brownish Very Dense Fine SAND			
25.6									▽ 26.1 m
26.6						Brownish Very Dense SAND			
27.6									▽ 27.6 m
28.6						Brownish Very Dense SAND			
									▽ 29.1 m
29.6						Brownish Very Dense SAND			
30.6						End of Boring			▽ 30.6 m

Bezaleel + Turnkey Contractors Inc.

FIGURE: APPENDIX B
BORING: BH 2
STATION:
DATE: MARCH, 2012.

PROJECT: PROPOSED STRUCTURES FOR LEC EXPANSION, BUSHROD ISLAND, MONROVIA, LIBERIA.

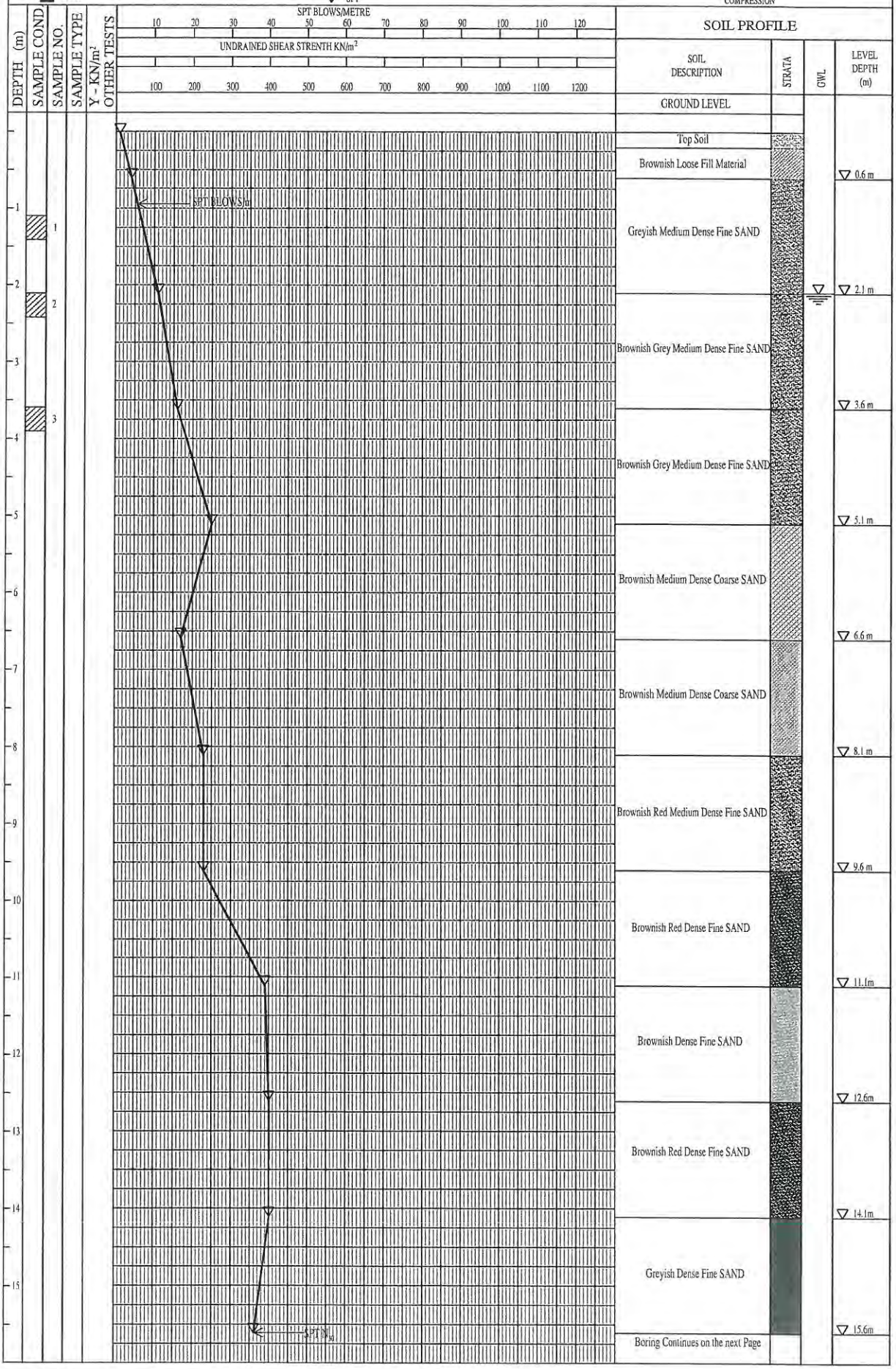
DRILLER: MOHAMMED SPOON OD: 1 1/2" CASING SIZE: 4" CORE SIZE: 2"

SAMPLE CONDITION
- UNDISTURBED
- DISTURBED
- LOST

SAMPLE TYPE
- A.S. AUGER
- S.S. SPLIT SPOON
- T.O. OPEN TUBE
- P.S. PISTON
- R.C. ROCK CORE

FIELD AND LABORATORY TESTS
- + INSITU-VANE UNDIST
- × INSITU-VANE REMOULDED
- ● WATER CONTENT
- ⊢⊣ ATTERBERG LIMITS
- O UNDRAINED COMPRESSION
- ▼ SPT
- G GRAIN SIZE
- C CONSOLIDATION
- U UNCONFINED
- Q UNDRAINED TRIAXIAL
- Y WET UNIT WEIGHT

4 - 0%
13 - 0 - 5%
10%
STRAIN AT FAILURE FOR UNDRAINED COMPRESSION



Bezaleel + Turnkey Contractors Inc.

FIGURE: APPENDIX B
BORING: BH 2 Cont'd
STATION:

PROJECT: PROPOSED STRUCTURES FOR LEC EXPANSION, BUSHROD ISLAND, MONROVIA, LIBERIA.

DRILLER: MOHAMMED SPOON OD: 1 1/2" CASING SIZE: 4" CORE SIZE: 2"

DATE: MARCH, 2012.

SAMPLE CONDITION
- UNDISTURBED
- DISTURBED
- LOST

SAMPLE TYPE
- A.S. AUGER
- S.S. SPLIT SPOON
- T.O. OPEN TUBE
- P.S. PISTON
- R.C. ROCK CORE

FIELD AND LABORATORY TESTS
- + INSITU-VANE UNDIST
- × INSITU-VANE REMOULDED
- ● WATER CONTENT
- ⊢⊣ ATTERBERG LIMITS
- ○ UNDRAINED COMPRESSION
- ▼ SPT
- G GRAIN SIZE
- C CONSOLIDATION
- U UNCONFINED
- Q UNDRAINED TRIAXIAL
- Y WET UNIT WEIGHT

4 - 0%
↑
13 - 0 - 5%
↓
10%
STRAIN AT FAILURE FOR UNDRAINED COMPRESSION

SPT BLOWS/METRE
10 20 30 40 50 60 70 80 90 100 110 120

UNDRAINED SHEAR STRENTH KN/m²
100 200 300 400 500 600 700 800 900 1000 1100 1200

DEPTH (m)	SAMPLE COND.	SAMPLE NO.	SAMPLE TYPE	Y - KN/m²	OTHER TESTS	SOIL DESCRIPTION	STRATA	GWL	LEVEL DEPTH (m)
						GROUND LEVEL			
15.6									▽ 15.6 m
						Brownish Dense Fine SAND			
16.6									▽ 17.1 m
						Brownish Dense Fine SAND			
18.6									▽ 18.6 m
						Greyish Very Stiff CLAY			
19.6									▽ 20.1 m
						Brownish Dense Coarse SAND			
21.6									▽ 21.6 m
						Brownish Dense Coarse SAND			
22.6									▽ 23.1 m
						Brownish Very Dense Fine SAND			
24.6									▽ 24.6 m
						Brownish Dense Fine SAND			
25.6									▽ 26.1 m
						Brownish Dense Fine SAND			
27.6									▽ 27.6 m
						Brownish Very Dense SAND			
28.6									▽ 29.1 m
						Brownish Very Dense SAND			
30.6									▽ 30.6 m
						End of Boring			

SPT N

Bezaleel + Turnkey Contractors Inc.

FIGURE: APPENDIX B
BORING: BH 3
STATION:
DATE: MARCH, 2012.

PROJECT: PROPOSED STRUCTURES FOR LEC EXPANSION, BUSHROD ISLAND, MONROVIA, LIBERIA.

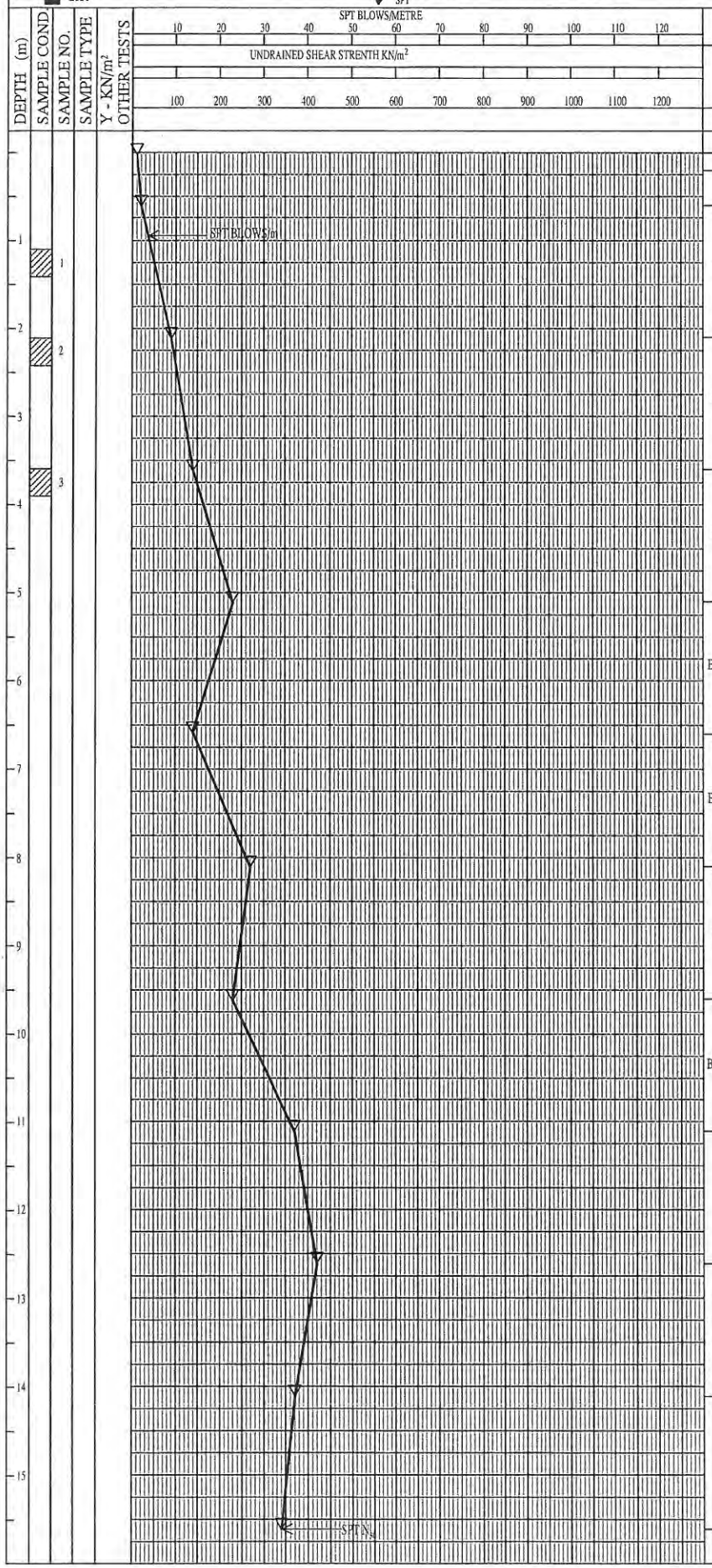
DRILLER: MOHAMMED SPOON OD: 1 1/2" CASING SIZE: 4" CORE SIZE: 2"

SAMPLE CONDITION
- UNDISTURBED
- DISTURBED
- LOST

SAMPLE TYPE
- A.S. AUGER
- S.S. SPLIT SPOON
- T.O. OPEN TUBE
- P.S. PISTON
- R.C. ROCK CORE

FIELD AND LABORATORY TESTS
- + INSITU-VANE UNDIST
- × INSITU-VANE REMOULDED
- ● WATER CONTENT
- ⊢ ATTERBERG LIMITS
- ○ UNDRAINED COMPRESSION
- ▼ SPT
- G GRAIN SIZE
- C CONSOLIDATION
- U UNCONFINED
- Q UNDRAINED TRIAXIAL
- Y WET UNIT WEIGHT

4 - 0%
13 - 0 - 5%
10%
STRAIN AT FAILURE FOR UNDRAINED COMPRESSION



SOIL PROFILE

SOIL DESCRIPTION	STRATA	GWL	LEVEL DEPTH (m)
GROUND LEVEL			
Top Soil			
Brownish Loose Fill Material			0.6 m
Dark Brownish Loose Fine SAND			2.1 m
Brownish Medium Dense Fine SAND			3.6 m
Brownish Medium Dense Fine SAND			5.1 m
Brownish Medium Dense Coarse SAND			6.6 m
Brownish Medium Dense Coarse SAND			8.1 m
Brownish Medium Dense Fine SAND			9.6 m
Brownish Red Medium Dense Fine SAND			11.1m
Brownish Dense Fine SAND			12.6m
Brownish Dense Fine SAND			14.1m
Brownish Dense Fine SAND			15.6m
Boring Continues on the next Page			

Bezaleel + Turnkey contractors,Inc.

FIGURE: APPENDIX B
BORING: BH 3 Cont'd
STATION:
DATE: MARCH, 2012.

PROJECT: PROPOSED STRUCTURES FOR LEC EXPANSION, BUSHROD ISLAND, MONROVIA, LIBERIA.

DRILLER: MOHAMMED SPOON OD: 1 1/2" CASING SIZE: 4" CORE SIZE: 2"

SAMPLE CONDITION
- UNDISTURBED
- DISTURBED
- LOST

SAMPLE TYPE
- A.S. AUGER
- S.S. SPLIT SPOON
- T.O. OPEN TUBE
- P.S. PISTON
- R.C. ROCK CORE

FIELD AND LABORATORY TESTS
- + INSITU-VANE UNDIST
- × INSITU-VANE REMOULDED
- ● WATER CONTENT
- O ATTERBERG LIMITS
- ▼ UNDRAINED COMPRESSION SPT
- G GRAIN SIZE
- C CONSOLIDATION
- U UNCONFINED
- Q UNDRAINED TRIAXIAL
- Y WET UNIT WEIGHT

4 - 0%
13 - 0 - 5%
10%
STRAIN AT FAILURE FOR UNDRAINED COMPRESSION

SPT BLOWS/METRE: 10 20 30 40 50 60 70 80 90 100 110 120

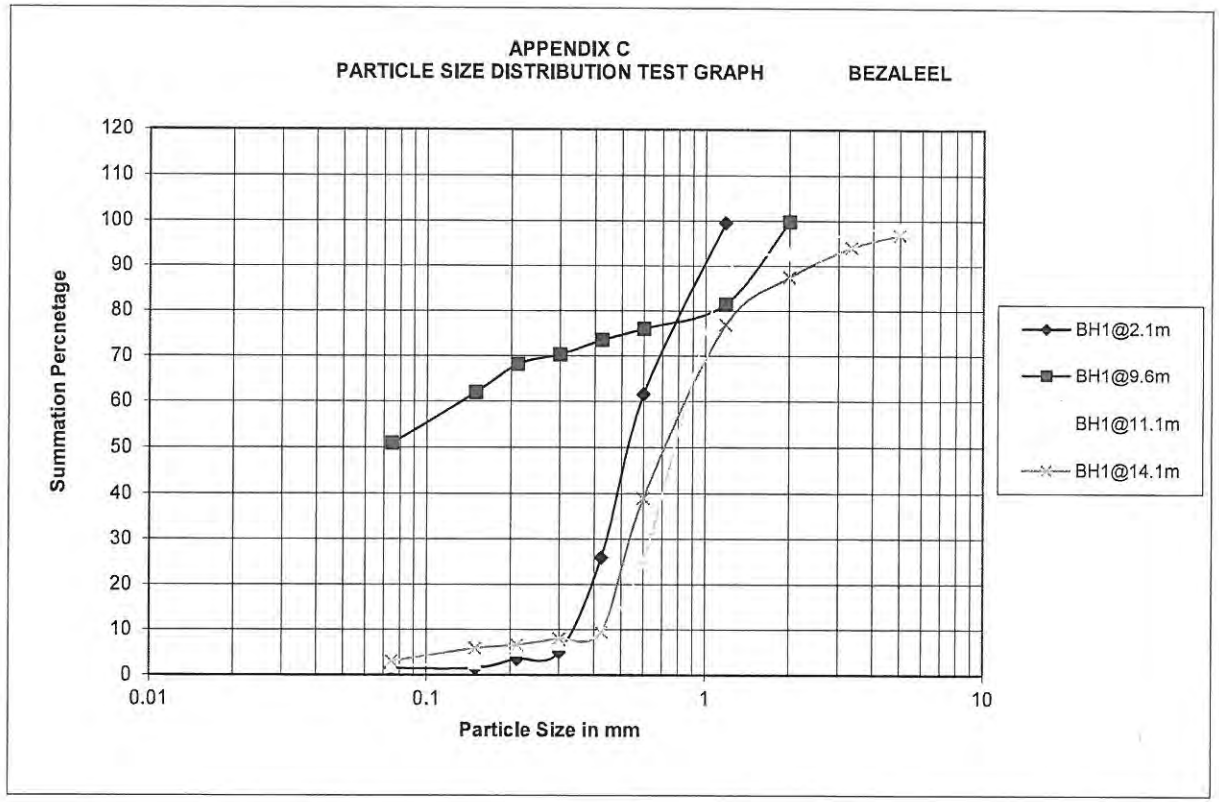
UNDRAINED SHEAR STRENTH KN/m²: 100 200 300 400 500 600 700 800 900 1000 1100 1200

SOIL PROFILE

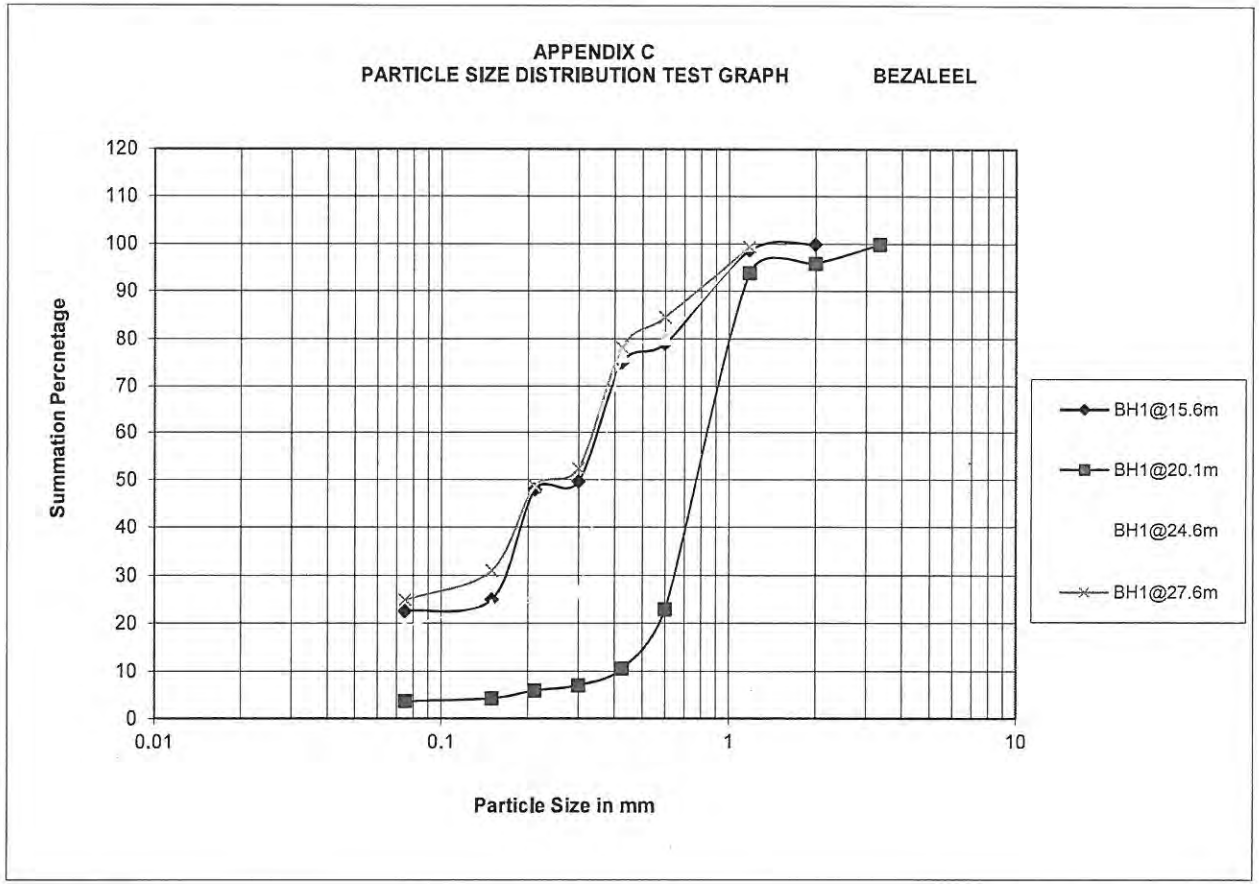
DEPTH (m)	SAMPLE COND	SAMPLE NO.	SAMPLE TYPE	Y - KN/m²	OTHER TESTS	SOIL DESCRIPTION	STRATA	GWL	LEVEL DEPTH (m)
						GROUND LEVEL			
15.6									▽ 15.6 m
						Reddish Brown Dense Fine SAND			
16.6									▽ 17.1 m
						Brownish Red Dense Fine SAND			
17.6									
18.6									▽ 18.6 m
						Brownish Dense Fine SAND			
19.6									▽ 20.1 m
						Brownish Dense Fine SAND			
20.6									
21.6									▽ 21.6 m
						Brownish Dense Fine SAND			
22.6									▽ 23.1 m
						Brownish Dense Fine SAND			
23.6									
24.6									▽ 24.6 m
						Brownish Dense Fine SAND			
25.6									▽ 26.1 m
						Brownish Dense Fine SAND			
26.6									
27.6									▽ 27.6 m
						Brownish Very Dense SAND			
28.6									▽ 29.1 m
						Brownish Very Dense SAND			
29.6									
30.6						End of Boring			▽ 30.6 m

SPT N 40

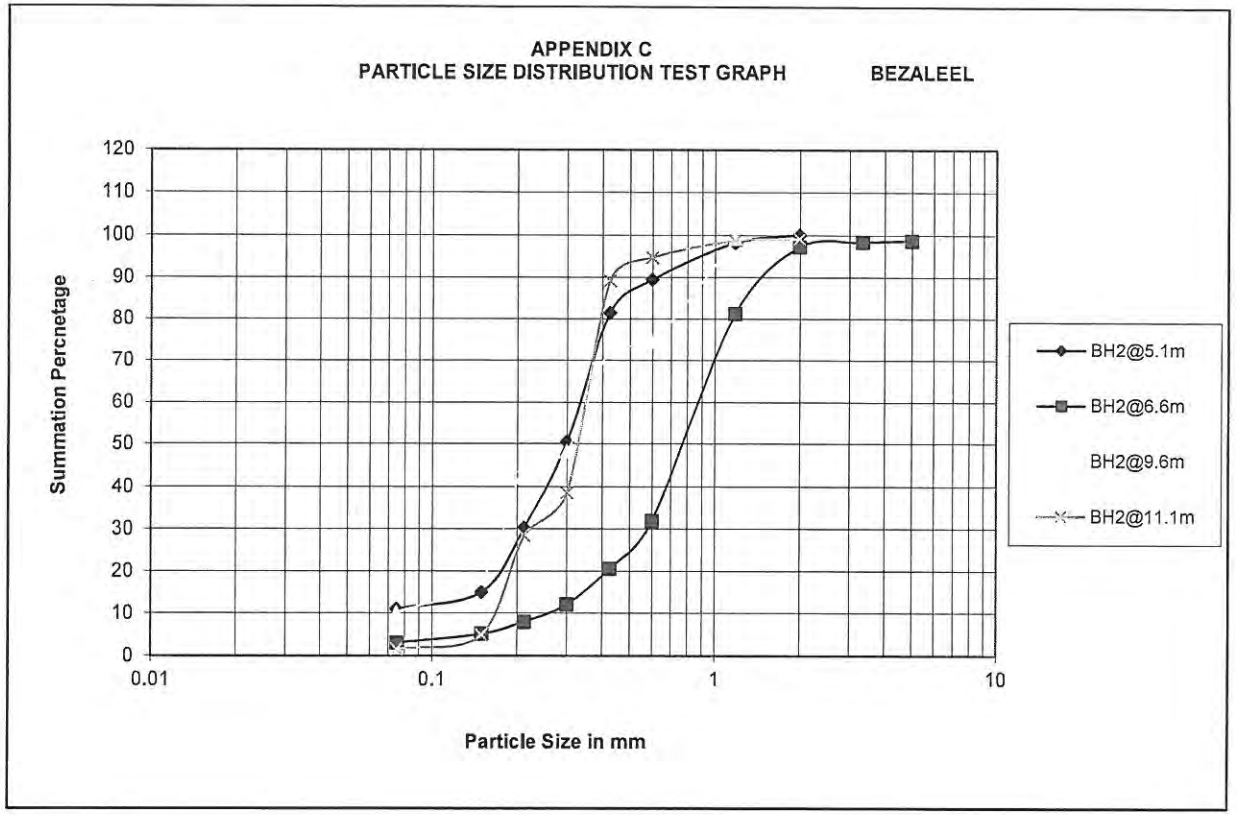
APPENDIX C
PARTICLE SIZE DISTRIBUTION TEST GRAPH BEZALEEL



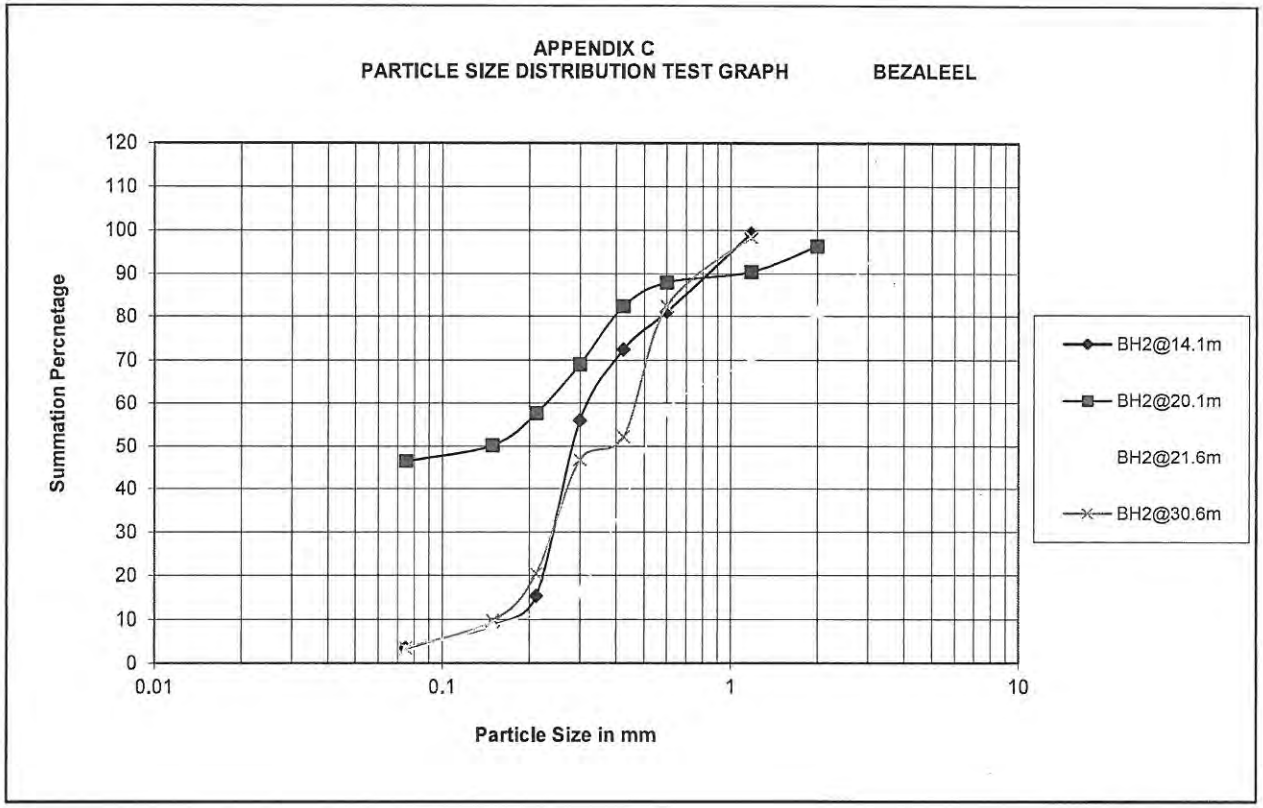
APPENDIX C
PARTICLE SIZE DISTRIBUTION TEST GRAPH BEZALEEL



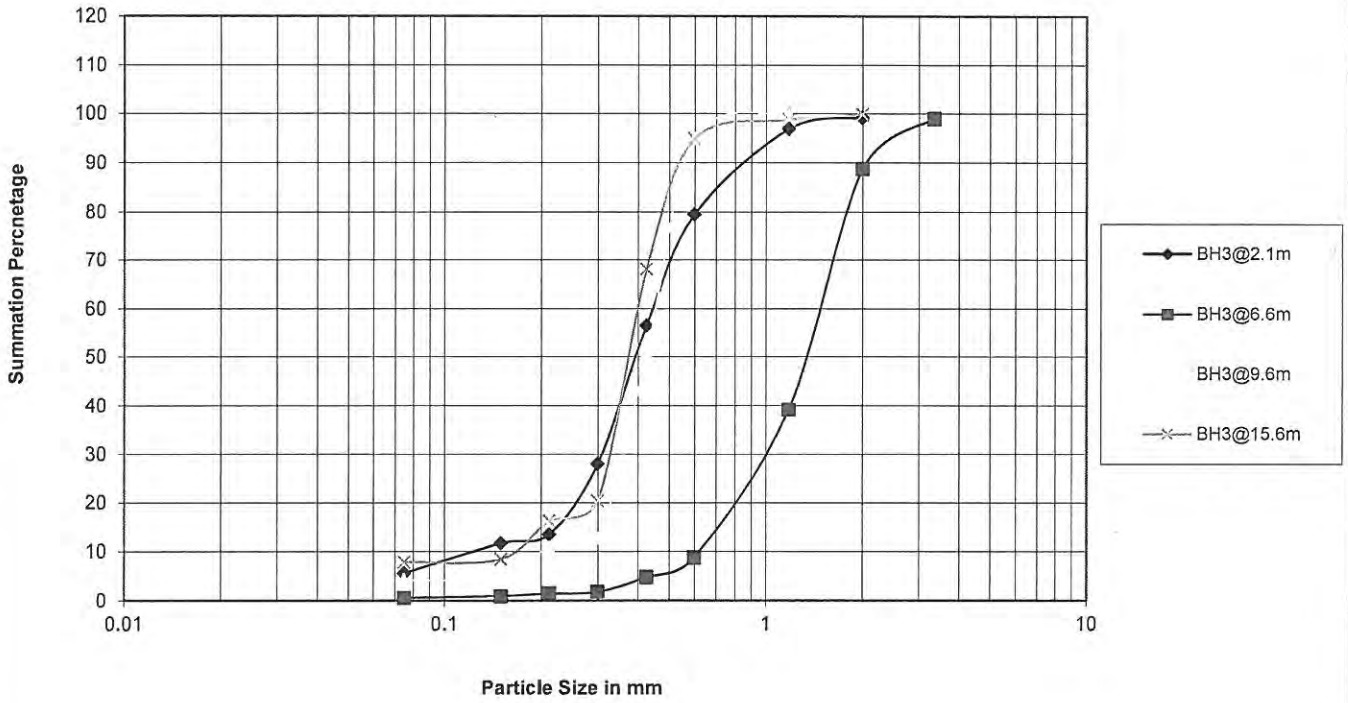
APPENDIX C
PARTICLE SIZE DISTRIBUTION TEST GRAPH BEZALEEL



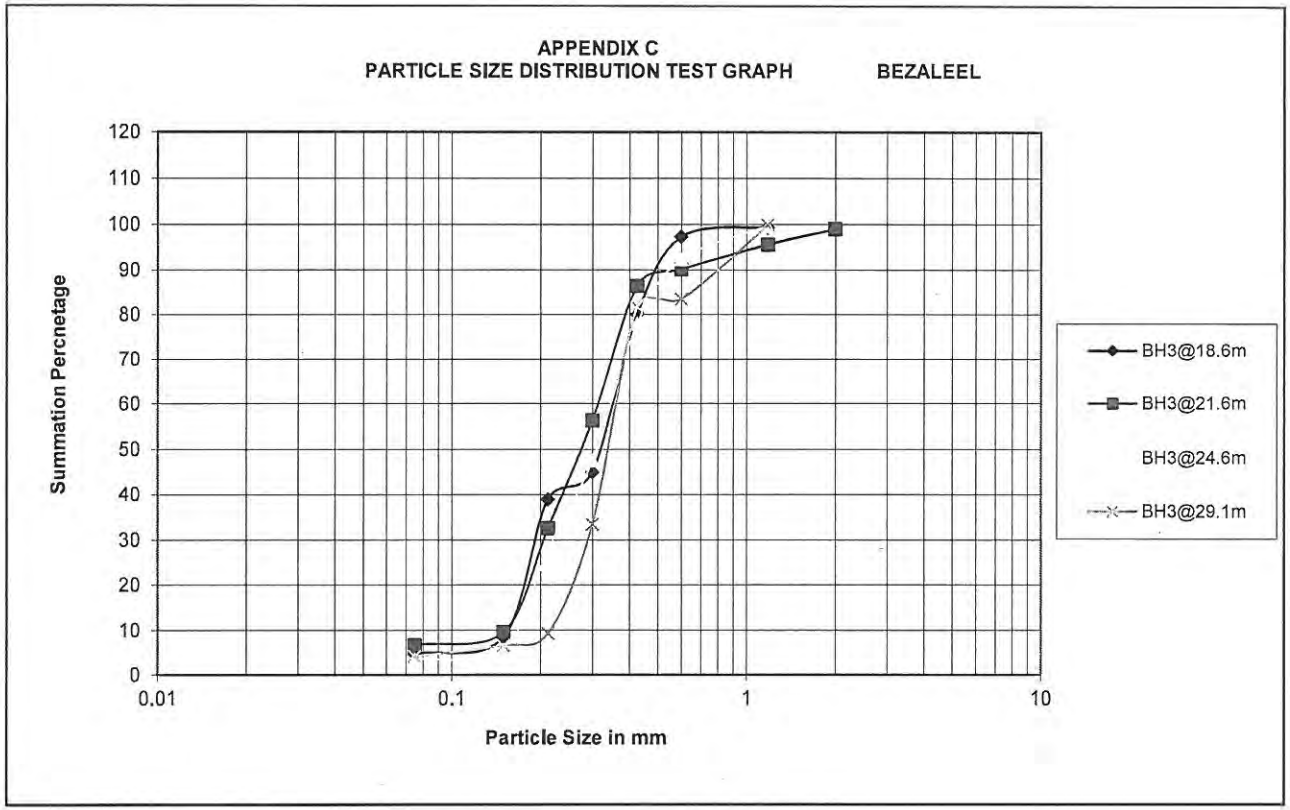
APPENDIX C
PARTICLE SIZE DISTRIBUTION TEST GRAPH BEZALEEL



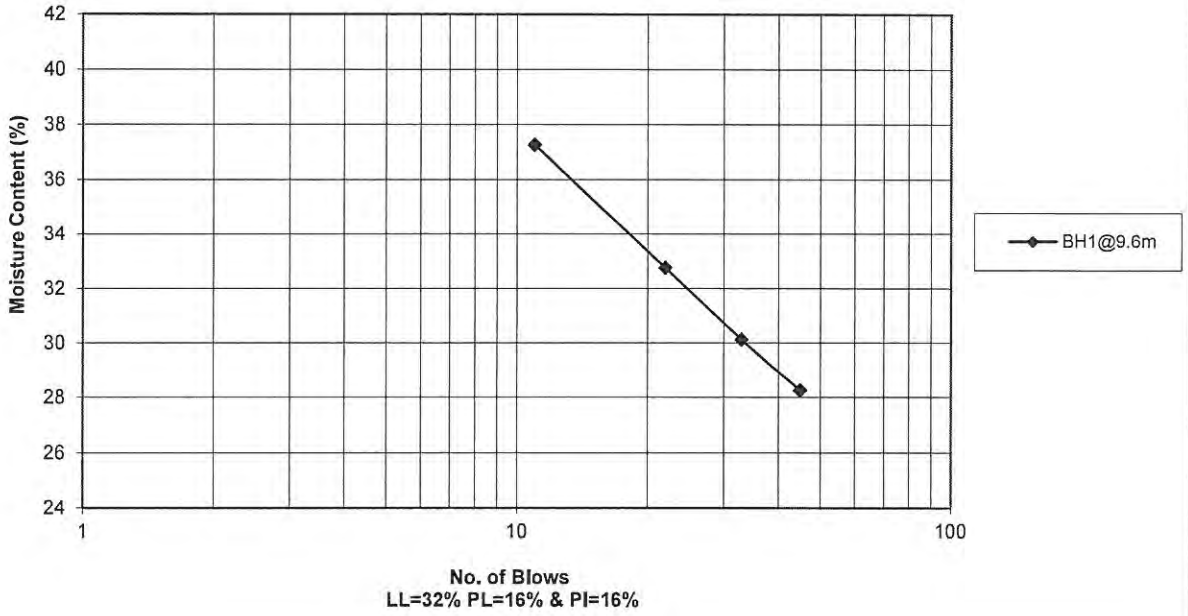
APPENDIX C
PARTICLE SIZE DISTRIBUTION TEST GRAPH BEZALEEL



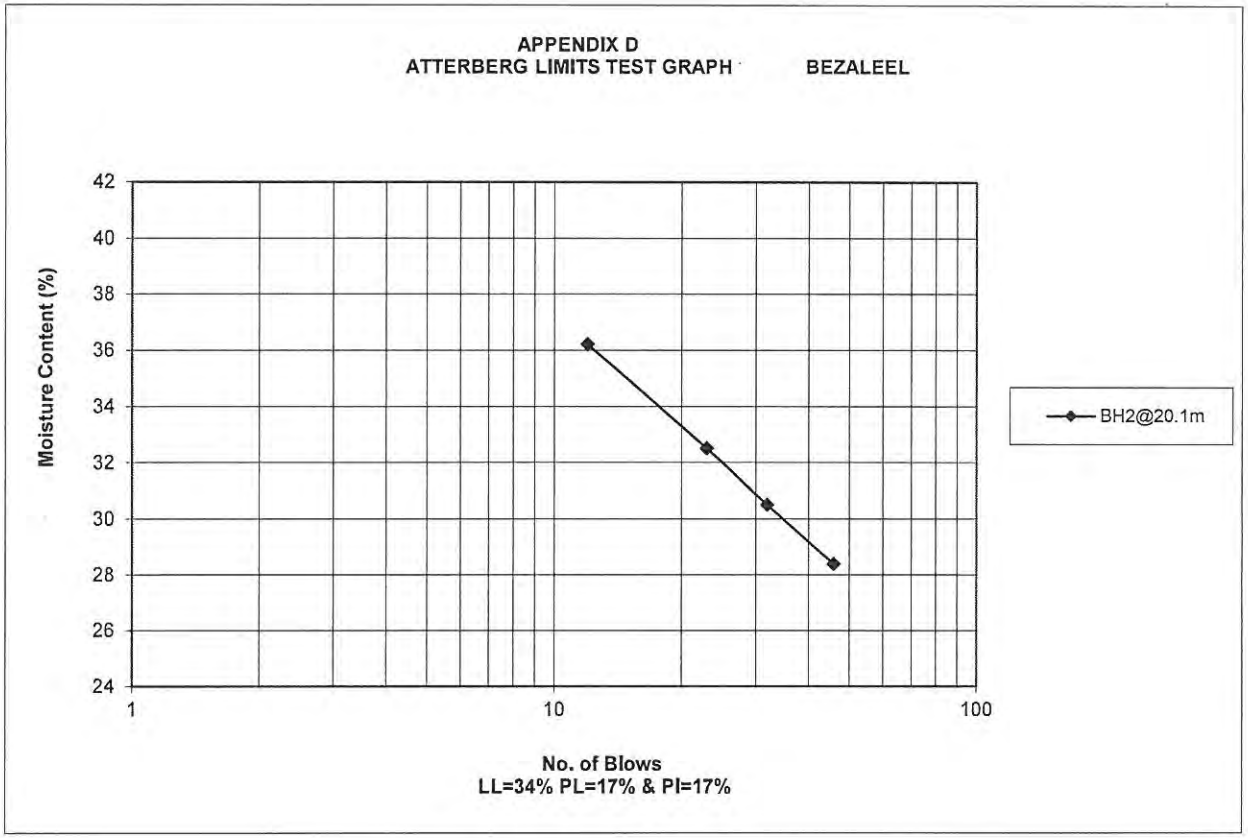
APPENDIX C
PARTICLE SIZE DISTRIBUTION TEST GRAPH BEZALEEL



APPENDIX D
ATTERBERG LIMITS TEST GRAPH BEZALEEL



APPENDIX D
ATTERBERG LIMITS TEST GRAPH BEZALEEL



Ref: BS 1377 (1990)

Bezaleel + Turnkey Contractors

UNDRAINED DIRECT SHEAR BOX TEST

APPENDIX E

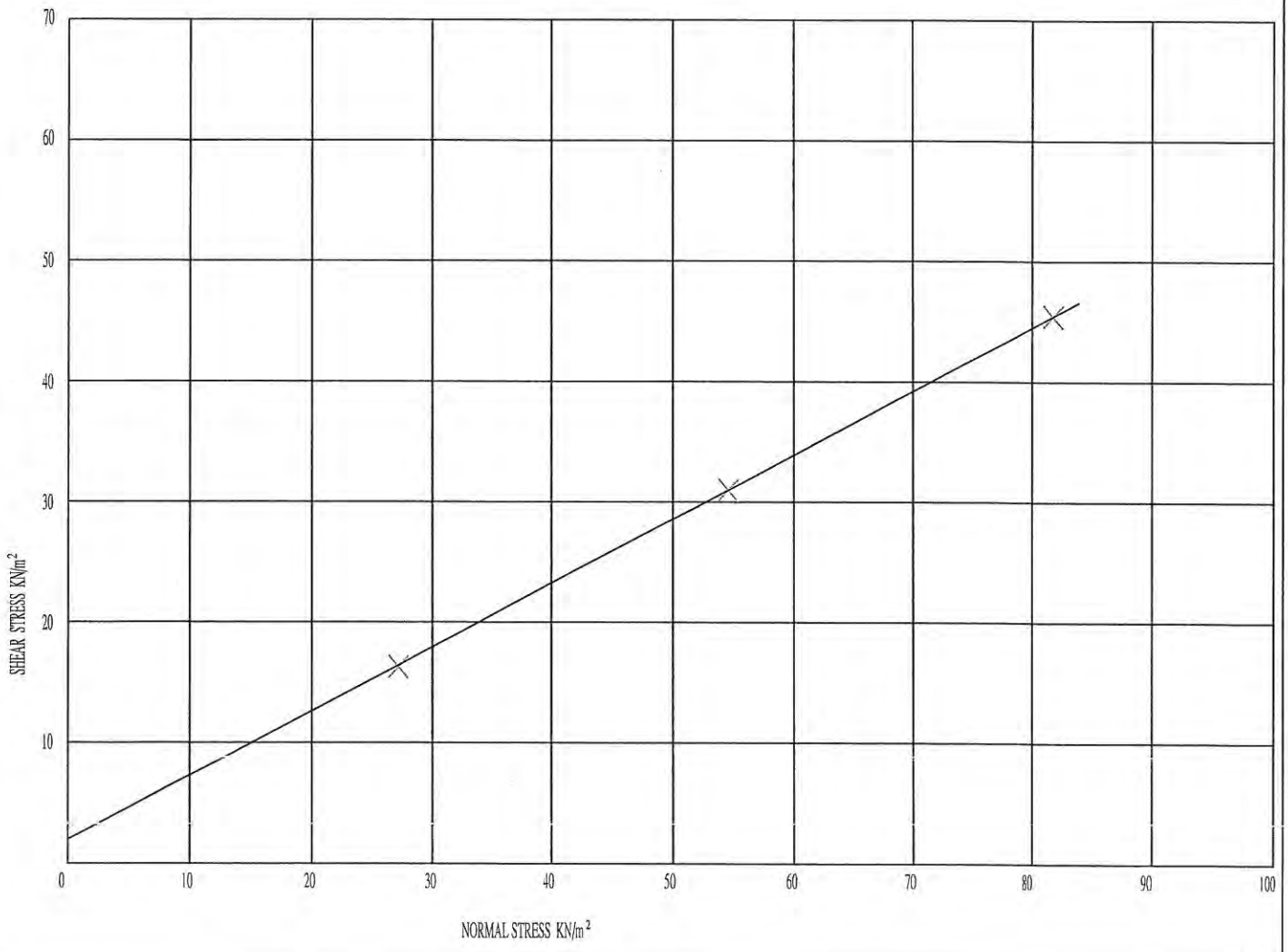
Project No. _____ Project Name: PROPOSED CONSTRUCTION OF NEW POWER HOUSE AND SUBSTATION AT BUSHROD ISLAND, MONROVIA.

Bore Hole No. BH 1 Sample No. 01/02

Depth of Sample 2.10 metres

Test No.	Load Kg	Normal Stress KN/m^2	Shear Stress KN/m^2
1	10	27.25	16.29
2	20	54.50	31.01
3	30	81.75	45.47

COHESION = 02.00 KN/m^2	ϕ = 28°	BULK DENSITY = 16.87 KN/m^3



Ref: BS 1377 (1990)

UNDRAINED TRIAXIAL TEST

B + T,Inc.

APPENDIX E

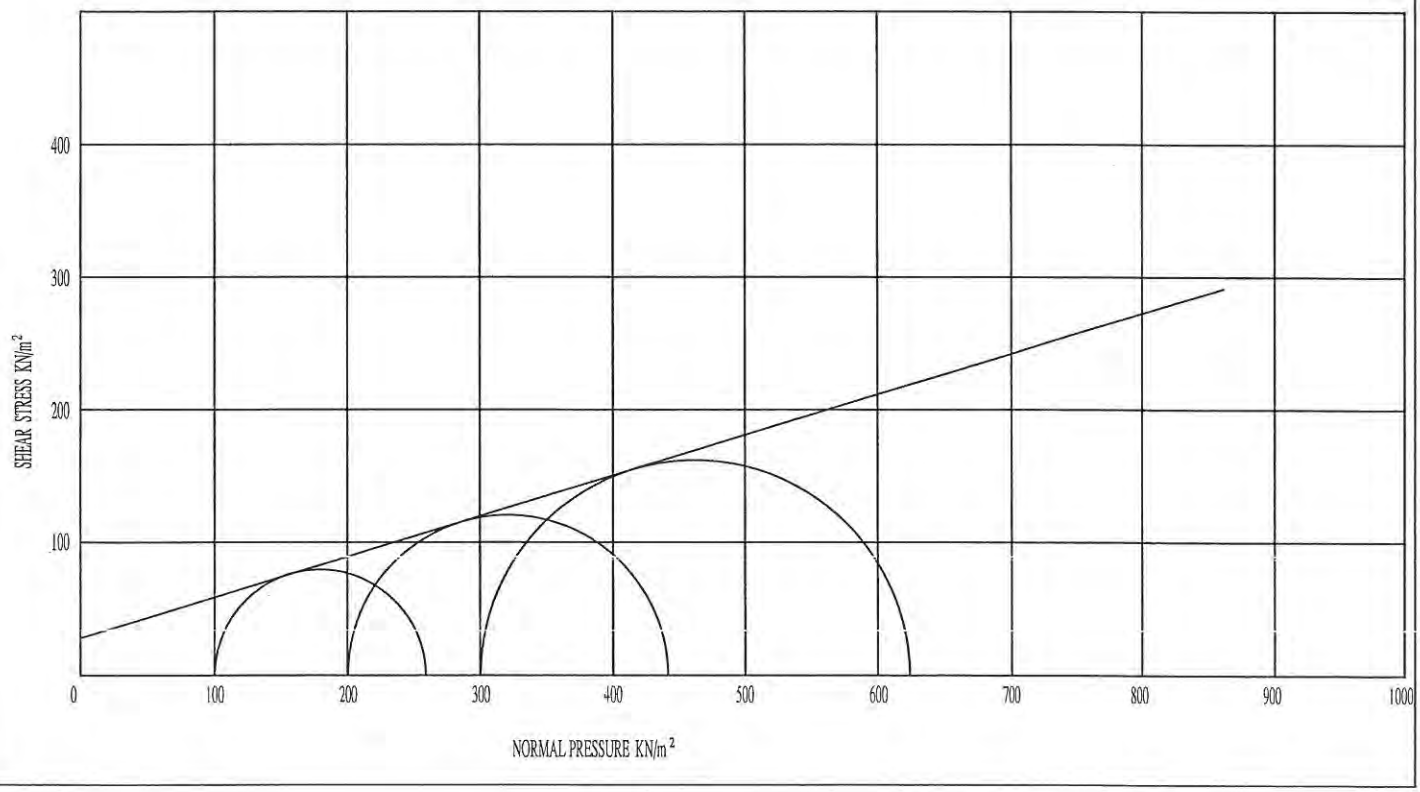
Project No. _____ Project Name: PROPOSED CONSTRUCTION OF NEW POWER HOUSE AND SUBSTATION AT BUSHROD ISLAND, MONROVIA.

Bore Hole No. BH 1 Sample No. 01/07

Depth of Sample 9.60 metres

Test No.	Normal pressure KN/m^2	Deviator Stress KN/m^2	Maximum Shear Stress KN/m^2
1	100	158.83	258.83
2	200	240.85	440.85
3	300	323.70	623.70

COHESION = 28.00 KN/m^2	ϕ = 17°	BULK DENSITY = 18.17KN/m^3



Ref: BS 1377 (1990)

UNDRAINED DIRECT SHEAR BOX TEST

B + T,Inc.

APPENDIX E

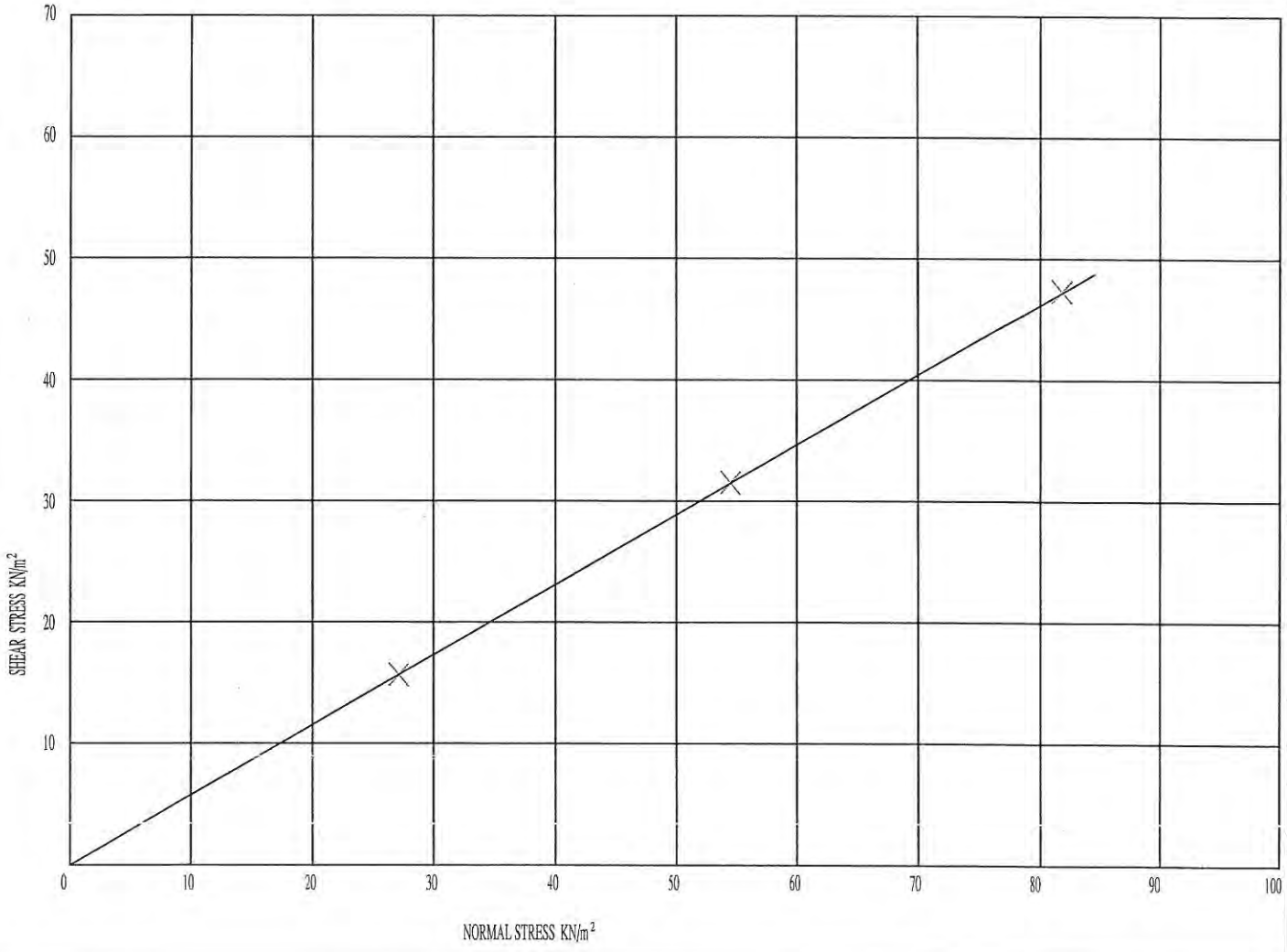
Project No. _____ Project Name: PROPOSED CONSTRUCTION OF NEW POWER HOUSE AND SUBSTATION AT BUSHROD ISLAND, MONROVIA.

Bore Hole No. BH 2 Sample No. 02/05

Depth of Sample 6.60 metres

Test No.	Load Kg	Normal Stress KN/m^2	Shear Stress KN/m^2
1	10	27.25	15.89
2	20	54.50	31.52
3	30	81.75	47.24

COHESION = 00.00 KN/m^2	ϕ = 30°	BULK DENSITY = 16.40 KN/m^3



Ref: BS 1377 (1990)

UNDRAINED TRIAXIAL TEST

B + T,Inc.

APPENDIX E

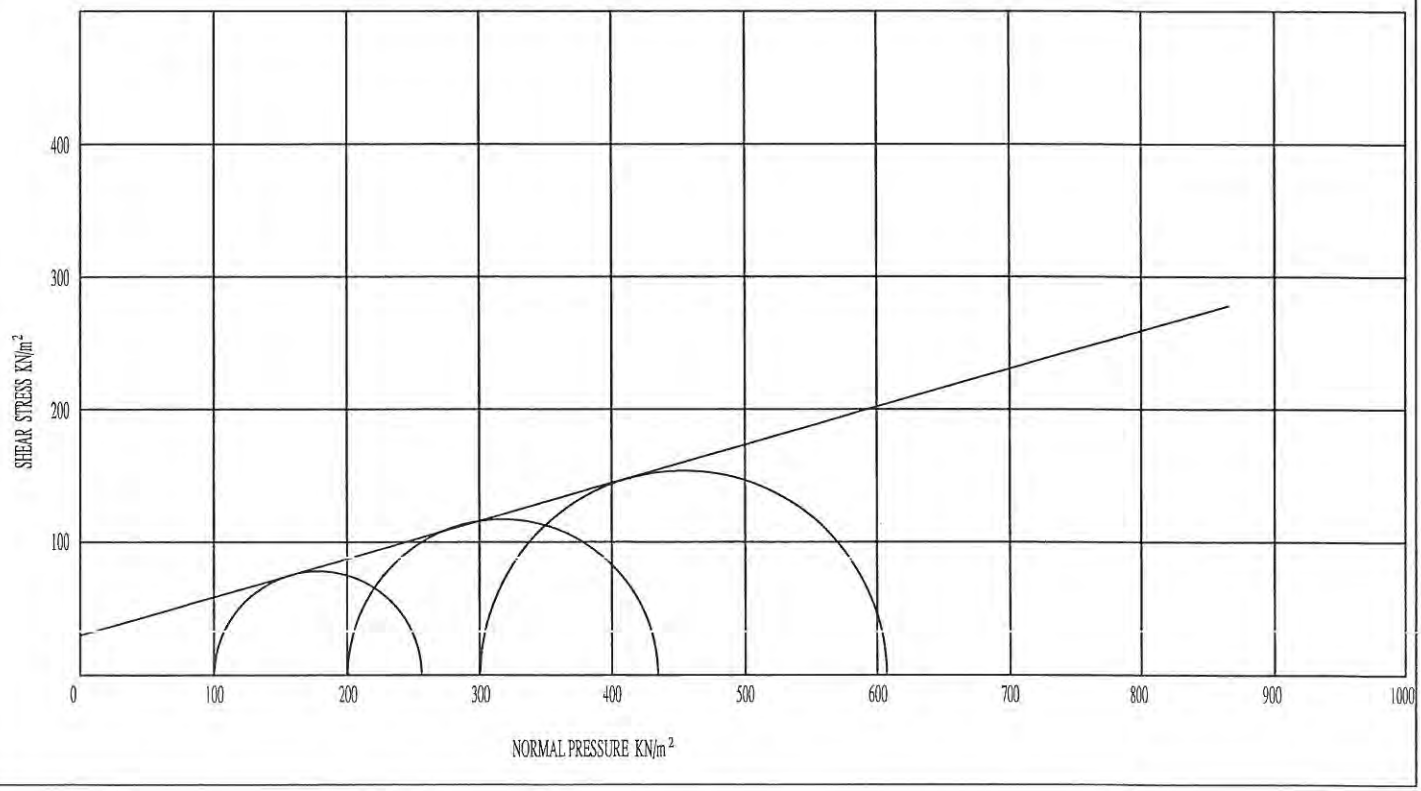
Project No. _____ Project Name: PROPOSED CONSTRUCTION OF NEW POWER HOUSE AND SUBSTATION AT BUSHROD ISLAND, MONROVIA.

Bore Hole No. BH 2 Sample No. 02/14

Depth of Sample 20.10 metres

Test No.	Normal pressure KN/m^2	Deviator Stress KN/m^2	Maximum Shear Stress KN/m^2
1	100	156.04	256.04
2	200	233.86	433.86
3	300	307.23	607.23

COHESION = 30.00 KN/m^2	ϕ = 16°	BULK DENSITY = 18.26KN/m^3



Ref: BS 1377 (1990)

UNDRAINED DIRECT SHEAR BOX TEST

BEZALEEL

APPENDIX E

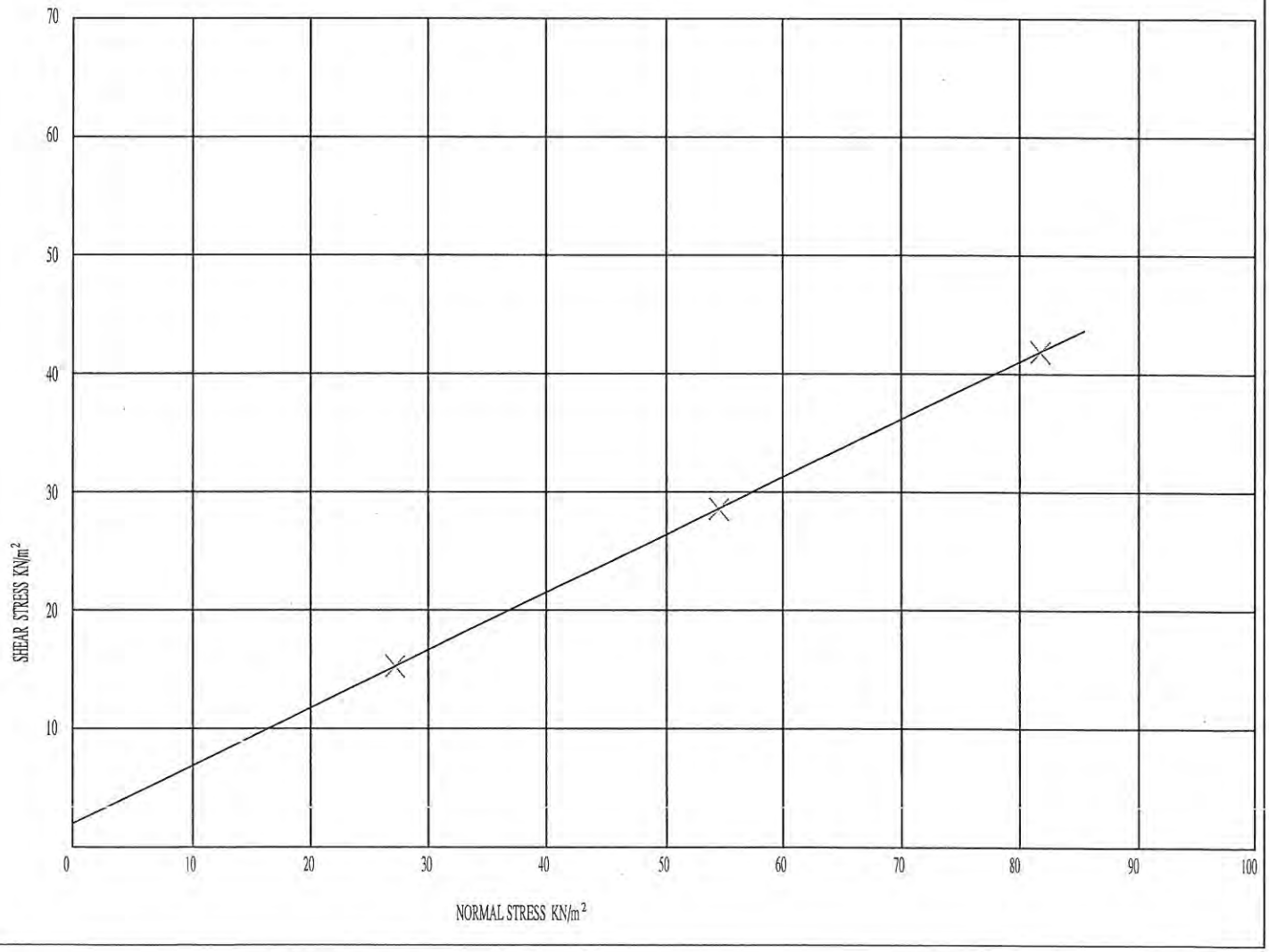
Project No. _____ Project Name: PROPOSED CONSTRUCTION OF NEW POWER HOUSE AND SUBSTATION AT BUSHROD ISLAND, MONROVIA.

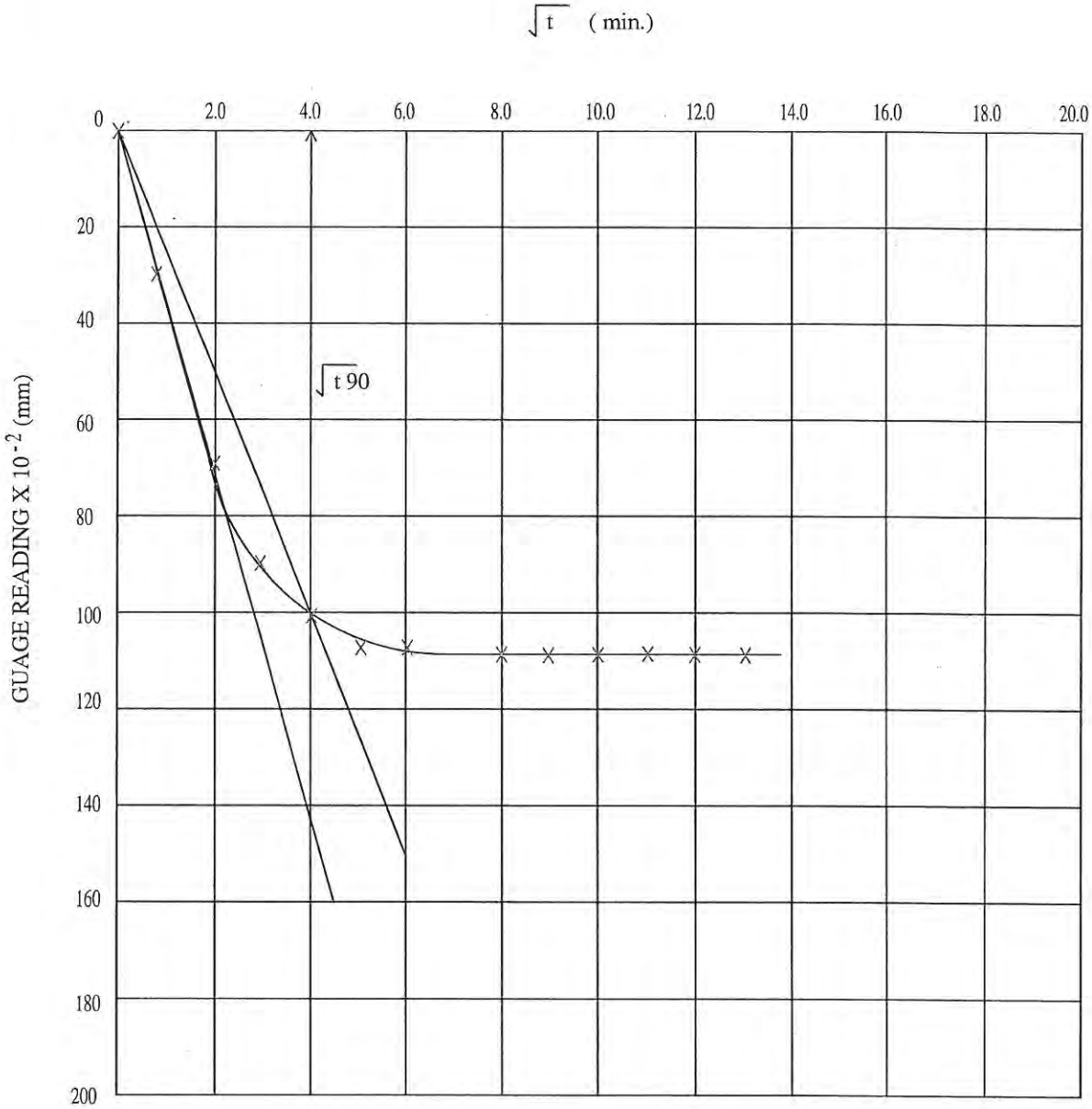
Bore Hole No. BH 3 Sample No. 03/02

Depth of Sample 2.10 metres

Test No.	Load Kg	Normal Stress KN/m^2	Shear Stress KN/m^2
1	10	27.25	15.28
2	20	54.50	28.66
3	30	81.75	41.91

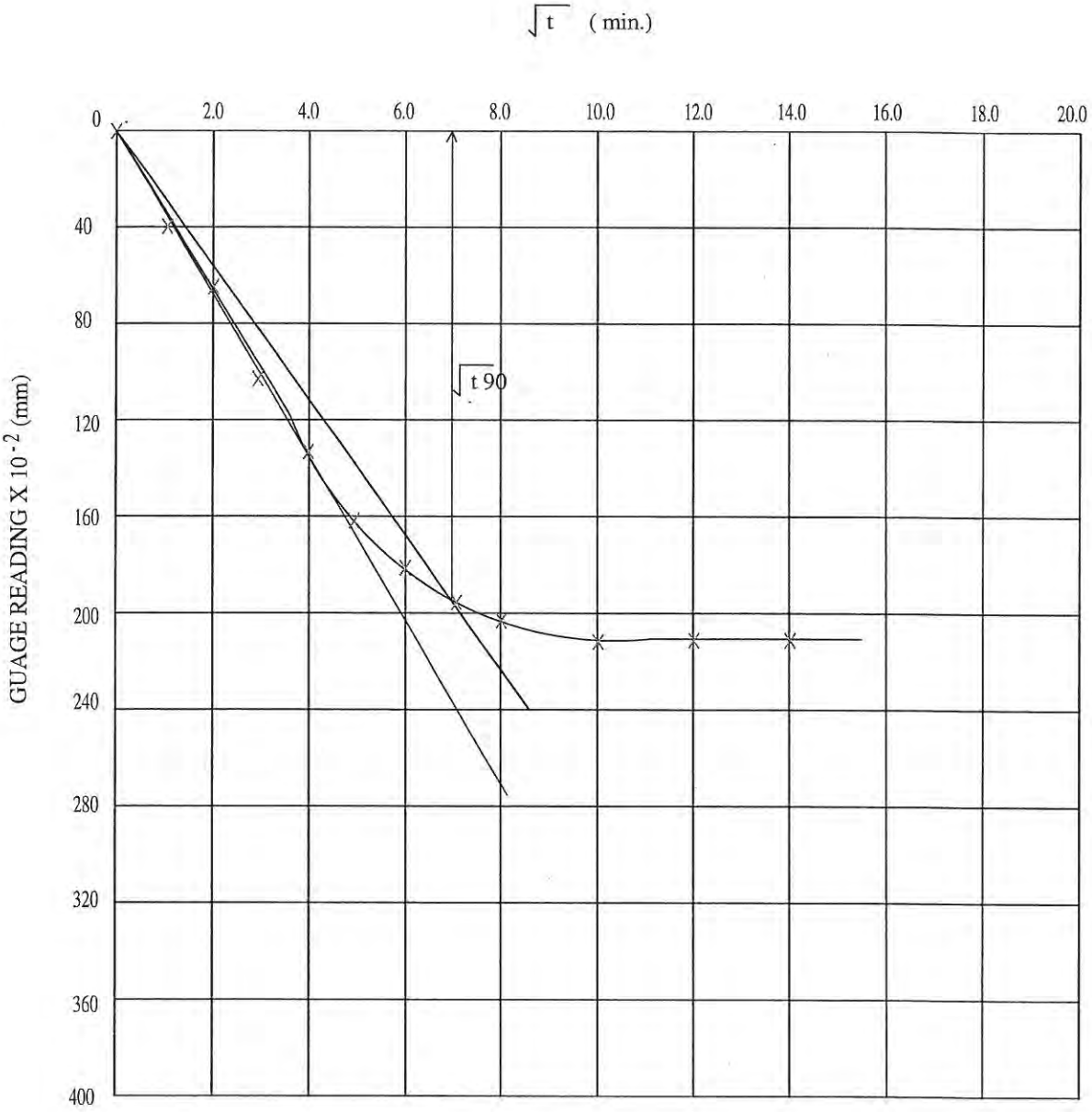
COHESION = 02.00 KN/m^2	ϕ = 26°	BULK DENSITY = 15.68 KN/m^3





Height of sample	2.00	cm	Soil description: GREYISH STIFF CLAY	
Compression area	44.18	cm		
Coefficient of Consolidation, Cv	$1.40x10^{-2}$	m^2/yr	Boring No: BH 1	Location.:
Coefficient of Compressibility, Mv	$3.84x10^{-4}$	m^2/KN	Level:	Depth 9.6m
Unit weight before consolidation	18.17	KN/m^3	P_o = vertical, effective stress in situ	10 - 100 KN/m^2

Bezaleel + Turnkey Contractors,Inc.		CONSOLIDATION TEST	
Test: SITECH	Drawn: A. DARAMOLA	Project: PROPOSED NEW POWER HOUSE & SUBSTATION, BUSHROD ISLAND, MONROVIA.	
Check: SITECH	Appr. M. SHITTU	Date: MAY, 2012	Figure No.: APPENDIX F



Height of sample	2.00	cm	Soil Description: GREYISH VERY STIFF CLAY	
Compression area	44.18	cm		
Coefficient of Compressibility, Cv	$1.89x10^{-2}$	m^2/yr	Boring No: BH 2	Location.:
Coefficient of Consolidation, Mv	$3.86x10^{-3}$	m^2/KN	Level:	Depth: 20.10m
Unit weight before consolidation	18.26	KN/m^3	P_o = vertical, effective stress in situ	10 - 100 KN/m^2

Bezaleel + Turnkey Contractors,Inc.		CONSOLIDATION TEST	
Test: SITECH	Drawn: A. DARAMOLA	Project: PROPOSED NEW POWER HOUSE & SUBSTATION, BUSHROD ISLAND, MONROVIA.	
Check: SITECH	Appr. M. SHITTU	Date: MAY, 2012	Figure No.: APPENDIX F

APPENDIX G

BEZALEEL + TURNKEY CONTRACTORS INC. (Page 1of 3)

DETAILED LABORATORY TEST RESULTS

Sample No.	Sample No.	Sample Depth (m)	Description of Sample	INDEX PROPERTIES				PARTICLE SIZE ANALYSIS										Direct Shear Strength		TRIAXIAL Shear Strength parameters		Bulk Density kN/m³	Specific Gravity	Consolidation	
				EMC (%)	LL (%)	PL (%)	PI (%)	5 (5mm)	#.7 (3.35mm)	#.10 (2mm)	#.14 (1.18mm)	#.25 (600μm)	#.36 (425μm)	#.52 (300μm)	#.72 (212μm)	#.100 (150μm)	#.200 (75μm)	C KN/m²	ø	C KN/m²	ø			Cv m²/yrs	Mv m²/KN
BH1	2	2.1	Greyish medium dense SAND	17	Non - plastic			-	-	-	99.53	61.47	25.9	4.90	3.43	1.40	1.37	2	28	-	-	16.87	2.70	-	-
BH1	3	3.6	Brownish medium dense fine SAND	21	Non - plastic			-	-	-	99.93	97.13	86.4	14.1	11.80	4.87	2.20	1	26	-	-	16.48	2.68	-	-
BH1	5	6.6	Brownish medium dense coarse SAND	16	Non - plastic			95.13	92.53	85.43	70.73	59.73	55.10	40.33	35.63	19.03	16.47	0	30	-	-	16.26	2.67	-	-
BH1	7	9.6	Greyish stiff CLAY	36	32	16	16	-	-	99.89	81.38	76.00	73.49	70.25	68.19	61.87	50.89	-	-	28	17	18.17	2.72	$1.40x10^{-2}$	$3.84x10^{-4}$
BH1	8	11.1	Brownish dense coarse SAND	9	Non - plastic			98.17	97.49	92.70	87.96	24.96	9.38	6.8	5.49	2.65	1.89	0	31	-	-	16.05	2.69	-	-
BH1	10	14.1	Brownish very dense coarse SAND	11	Non - plastic			96.86	94.00	87.4	76.89	38.96	9.40	7.96	6.50	5.78	2.96	1	31	-	-	16.49	2.65	-	-
BH1	11	15.6	Brownish very dense fine SAND	16	Non - plastic			-	-	99.89	98.6	79.00	74.96	49.6	47.89	24.96	22.49	1	27	-	-	16.78	2.69	-	-
BH1	13	18.6	Brownish very dense coarse SAND	13	Non - plastic			-	99.53	97.8	94.83	21.80	8.97	5.47	4.90	3.90	2.43	0	30	-	-	16.54	2.67	-	-
BH1	14	20.1	Brownish dense fine coarse SAND	12	Non - plastic			-	99.87	95.8	93.78	22.89	10.49	6.96	5.89	4.20	3.60	1	31	-	-	16.70	2.70	-	-
BH1	15	21.6	Brownish very dense fine grained SAND	14	Non - plastic			-	-	99.9	91.49	83.35	28.96	22.49	20.87	19.49	18.96	2	26	-	-	17.89	2.62	-	-
BH1	17	24.6	Brownish dense grained SAND	16	Non - plastic			-	-	-	99.86	80.11	76.40	26.49	25.48	23.49	19.40	2	27	-	-	17.40	2.69	-	-
BH1	19	27.6	Brownish very dense fine SAND	18	Non - plastic			-	-	-	99.27	84.5	78.19	52.38	48.57	30.96	24.87	1	25	-	-	17.60	2.70	-	-
BH1	21	30.6	Brownish very dense fine SAND	16	Non - plastic			-	-	-	99.38	74.96	68.90	41.89	34.96	27.96	23.46	0	28	-	-	17.90	2.74	-	-
BH2	2	2.1	Greyish medium dense fine grained SAND	17	Non - plastic			-	99.97	99.2	98.78	86.38	70.98	39.80	34.6	18.96	11.87	1	28	-	-	16.87	2.60	-	-
BH2	4	5.1	Brownish grey medium dense fine SAND	14	Non - plastic			-	-	100.0	98.19	89.38	81.40	50.38	30.19	14.86	10.96	2	27	-	-	16.49	2.61	-	-
BH2	5	6.6	Brownish medium dense coarse SAND	16	Non - plastic			98.68	98.34	97.2	81.16	31.68	20.5	12.02	7.96	5.09	3.01	0	30	-	-	15.98	2.70		
BH2	7	9.6	Reddish medium dense fine SAND	18	Non - plastic			-	-	-	99.17	74.41	72.57	48.17	44.92	18.19	10.14	1	29	-	-	16.86	2.65	-	-

APPENDIX G

Sample No.	Sample No.	Sample Depth (m)	Description of Sample	INDEX PROPERTIES				PARTICLE SIZE ANALYSIS										Direct Shear Strength		TRIAXIAL Shear Strength parameters		Bulk Density kN/m³	Specific Gravity	Consolidation	
				EMC (%)	LL (%)	PL (%)	PI (%)	5 (5mm)	#.7 (3.35mm)	#.10 (2mm)	#.14 (1.18mm)	#.25 (600µm)	#.36 (425µm)	#.52 (300µm)	#.72 (212µm)	#.100 (150µm)	#.200 (75µm)	C KN/m²	ø	C KN/m²	ø			Cv m²/yrs	Mv m²/KN
BH2	8	11.1	Brownish red dense fine SAND	22	Non - plastic			-	-	99.1	98.7	94.67	89.13	38.5	28.37	4.9	1.53	1	29	-	-	16.10	2.69	-	-
BH2	10	14.1	Brownish red dense fine SAND	19	Non - plastic			-	-	-	99.29	81.0	72.39	55.91	15.28	8.61	3.45	0	30	-	-	16.40	2.67	-	-
BH2	12	17.1	Brownish dense fine SAND	23	Non - plastic			-	99.83	99.73	99.6	98.7	96.17	34.53	29.93	5.60	2.97	0	29	-	-	16.38	2.71	-	-
BH2	14	20.1	Greyish very stiff CLAY	32	34	17	17	-	-	96.38	90.41	87.95	82.30	68.95	57.61	50.15	46.39	-	-	30	16	18.26	2.75	$1.89x10^{-2}$	$3.86x10^{-3}$
BH2	15	21.6	Brownish dense coarse SAND	11	Non - plastic			-	95.61	81.15	70.29	58.4	36.45	16.19	11.59	8.56	2.78	0	31	-	-	17.8	2.70	-	-
BH2	17	24.6	Brownish very dense fine grained SAND	20	Non - plastic			-	-	-	97.11	90.6	69.51	47.82	25.61	4.56	1.95	2	28	-	-	17.59	2.69	-	-
BH2	19	27.6	Brownish dense fine SAND	17	Non - plastic			-	-	-	99.9	88.4	67.20	32.30	28.77	7.86	5.10	0	29	-	-	17.6	2.72	-	-
BH2	21	30.6	Brownish very dense fine SAND	21	Non - plastic			-	-	-	98.41	82.39	52.15	46.78	20.38	9.64	3.45	1	30	-	-	17.96	2.74	-	-
BH3	2	2.1	Dark brownish loose fine SAND	16	Non - plastic			-	-	99.15	96.89	79.48	56.51	27.95	13.48	11.61	5.61	2	26	-	-	15.68	2.59	-	-
BH3	3	3.6	Dark brownish medium dense fine grained SAND	18	Non - plastic			-	-	-	99.1	62.93	34.23	7.89	5.80	3.13	1.87	2	27	-	-	16.4	2.70	-	-
BH3	5	6.6	Brownish medium dense coarse SAND	4	Non - plastic			-	98.93	88.73	39.23	8.77	4.77	1.77	1.40	0.90	0.53	0	30	-	-	15.96	2.63	-	-
BH3	7	9.6	Brownish medium dense fine SAND	18	Non - plastic			-	-	-	99.93	95.00	50.5	12.7	10.77	4.70	4.23	0	29	-	-	16.87	2.68	-	-
BH3	9	12.6	Brownish dense fine SAND	20	Non - plastic			-	-	98.78	95.14	79.96	65.2	20.33	18.53	4.38	2.98	1	27	-	-	17.40	2.70	-	-
BH3	11	15.6	Brownish dense fine SAND	22	Non - plastic			-	-	99.78	98.70	94.90	68.1	20.4	16.17	8.40	7.83	0	28	-	-	17.00	2.68	-	-
BH3	13	18.6	Brownish red dense fine SAND	21	Non - plastic			-	-	-	99.34	97.33	80.06	44.9	38.92	8.47	4.71	1	28	-	-	17.18	2.60	-	-
BH3	15	21.6	Brownish dense fine SAND	19	Non - plastic			-	-	98.99	95.61	90.11	86.38	56.26	32.61	9.58	6.69	1	30	-	-	17.01	2.64	-	-
BH3	17	24.6	Brownish dense fine SAND	23	Non - plastic			-	-	-	99.58	92.38	77.98	47.56	27.81	5.65	3.45	0	30	-	-	16.89	2.66	-	-

Sample No.	Sample No.	Sample Depth (m)	Description of Sample	INDEX PROPERTIES				PARTICLE SIZE ANALYSIS										Direct Shear Strength		TRIAXIAL Shear Strength parameters		Bulk Density kN/m^3	Specific Gravity	Consolidation	
				EMC (%)	LL (%)	PL (%)	PI (%)	5 (5mm)	#.7 (3.35mm)	#.10 (2mm)	#.14 (1.18mm)	#.25 (600μm)	#.36 (425μm)	#.52 (300μm)	#.72 (212μm)	#.100 (150μm)	#.200 (75μm)	C KN/m^2	ø	C KN/m^2	ø			Cv m^2/yrs	Mv m^2/KN
BH3	20	29.1	Brownish very dense fine SAND	21	Non - plastic			-	-	-	99.85	83.45	81.68	33.41	9.25	6.58	4.16	0	30.00	-	-	17.67	2.69	-	-
BH3	21	30.6	Brownish very dense fine SAND	24	Non - plastic			-	-	-	99.01	80.2	69.15	46.28	14.39	9.35	2.09	1	29.00	-	-	17.98	2.71	-	-

添付資料　A-6　参考資料／入手資料リスト

6. 参考資料･入手資料リスト/ Appendices-6 List of Reference Documents and Collecting Documents

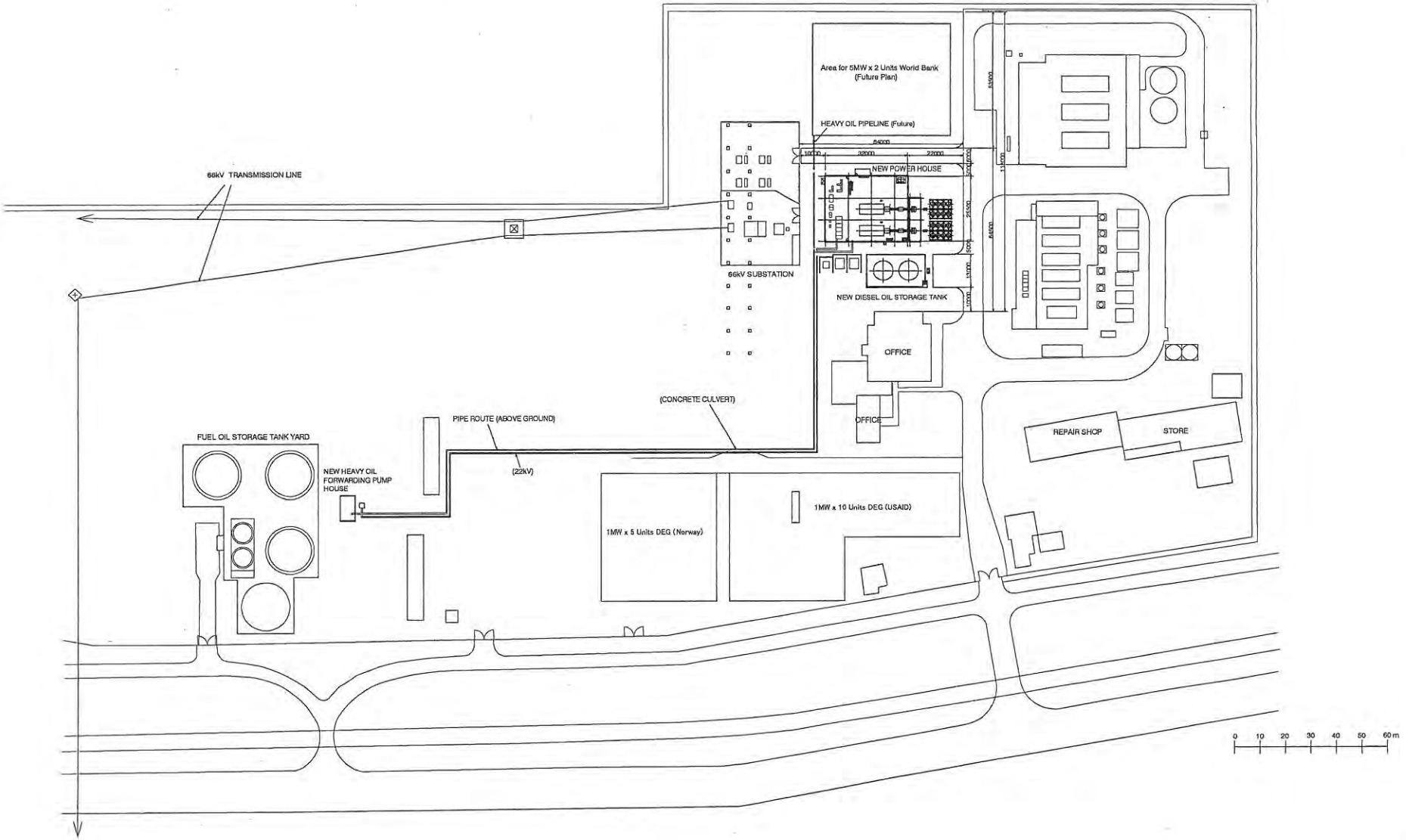
調査名： リベリア国 モンロビア市緊急電力復旧計画準備調査

On the Preparatory Survey on the Project for Rehabilitation of Monrovia Power System in the Republic of Liberia

番号 No.	.名 称 Title	形態/Shape 図書･文書･等/ Book, Document	ｵﾘｼﾞﾅﾙ･ｺﾋﾟｰ/ Original, Copy	発 行 機 関/ Issued Organization	発行年 Year
1	Poverty Reduction Strategy	図書/ Book	オリジナル/ Original	The Government of the Republic of Liberia	2008
2	National Energy Policy an Agenda for Action and Economic and Social Development	図書/ Book	オリジナル/ Original	Ministry of Lands, Mines and Energy Monrovia, Liberia	2009
3	Feasibility Study for the Supply of Heavy fuel Oil from Monrovia Port to the Liberia Electricity Corporation Facility on Bushrod Island, Monrovia, and Rehabilitation of HFO Storage Tanks.	図書/ Book	オリジナル/ Original	Optec Energy Services (OPTEC-JV) A subsidiary of Johnston-Vermette Consulting Group Inc.	2011
4	Options for the Development of Liberia's Energy Sector	図書/ Book	オリジナル/ Original	The World Bank	2011
5	Emergency Project Paper on a Proposed Credit in the Amount of SDR 6.5 million to the Republic of Liberia for an Electricity System Enhancement Project	図書/ Book	オリジナル/ Original	The World Bank	2010
6	Electric Master Plan	文書/ Document	オリジナル/ Original	Liberia Electricity Corporation	2011
7	Minutes of Discussion on the Preparatory Survey on the Project for the Rehabilitation of the Monrovia Power System in the Republic of Liberia	文書/ Document	オリジナル/ Original	Liberia Electricity Corporation	2011
8	Annual Report-2009	文書/ Document	オリジナル/ Original	Liberia Electricity Corporation	2009
9	Ground Floor Plan of Generator Sets Monrovia, Liberia	文書/ Document	オリジナル/ Original	Liberia Electricity Corporation	2011
10	Generation Department-Monthly Data Summary (July 2010-April 2011)	文書/ Document	オリジナル/ Original	Liberia Electricity Corporation	2011
11	66 kV and 226 V Network Diagram	文書/ Document	オリジナル/ Original	Liberia Electricity Corporation	2010
12	Requested 22 kV Distribution Line for the Project	文書/ Document	オリジナル/ Original	Liberia Electricity Corporation	2011

番号 No.	名 称 Title	形態/Shape 図書・文書・等/ Book, Document	オリジナル・コピー/ Original, Copy	発 行 機 関/ Issued Organization	発行年 Year
13	Sales Record from 2006 to 2011	文書/ Document	オリジナル/ Original	Liberia Electricity Corporation	2011
14	Feasibility Study on the Man (Côte d'lovire) - Yekepa (Liberia) – Nzerekore (Guinea) – Buchanan (Liberia) – Monrovia (Liberia) – Bumbuna (Sierra Leone) – Linsan (Guinea) Interconnection Project	図書/ Book	オリジナル/ Original	West African Power Pool	2009
15	Environmental Impact Assessment Procedural Guidelines	図書/ Book	ソフトコピー/ Soft Copy	Republic of Liberia Environmental Protection Agency	2006
16	An Act Creating the Environment Protection Agency of the Republic of Liberia	図書/ Book	ソフトコピー/ Soft Copy	Ministry of Foreign Affairs	2002
17	The National Environmental Policy of the Republic of Liberia	図書/ Book	ソフトコピー/ Soft Copy	Ministry of Foreign Affairs	2002
18	Resettlement Policy Framework for the Energy Programs of the World Bank in Liberia	図書/ Book	ソフトコピー/ Soft Copy	The World Bank	NA
19	Fuel Consumption of Diesel Engine Generator	文書/ Doumentc	ソフトコピー/ Soft Copy	Liberia Electricity Corporation	2011
20	Environmental & Social Management Framework Energy & Electricity Distribution in Liberia	文書/ Document	ソフトコピー/ Soft Copy	Government of Liberia	2010
21	P ID Bushrod	文書/ Document	ソフトコピー/ Soft Copy	Liberia Electricity Corporation	2010
22	P ID Kru Town	文書/ Document	ソフトコピー/ Soft Copy	Liberia Electricity Corporation	2010
23	Power Plant Single Line Diagram	文書/ Document	ソフトコピー/ Soft Copy	Liberia Electricity Corporation	2010
24	Liberia Site Drawing with Ground Grid	文書/ Document	ソフトコピー/ Soft Copy	Liberia Electricity Corporation	2010

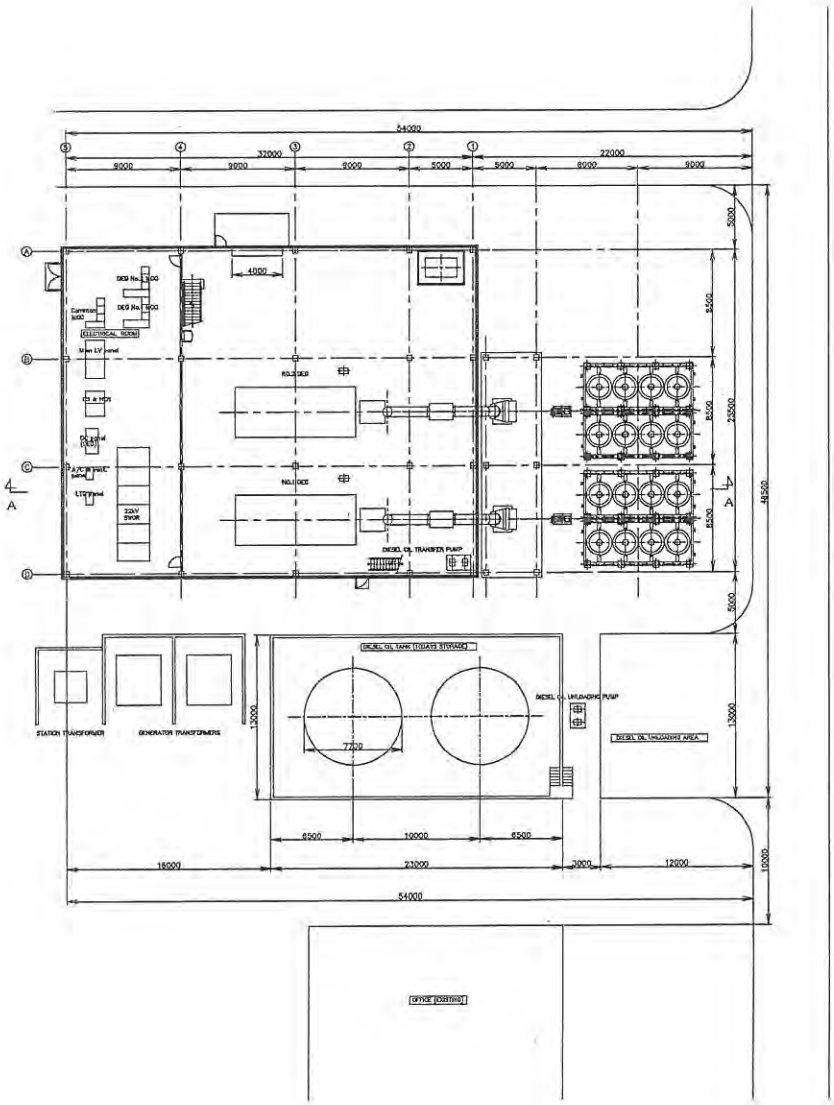
図 面 集



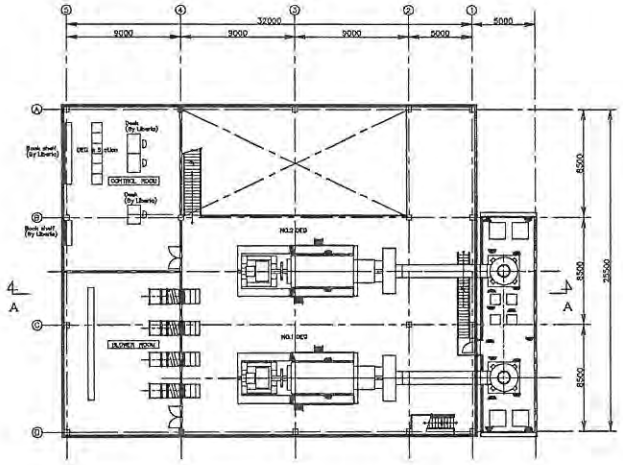
1:1500
(Only if A3)

全体配置図
GENERAL LAYOUT IN BUSHROD POWER STATION

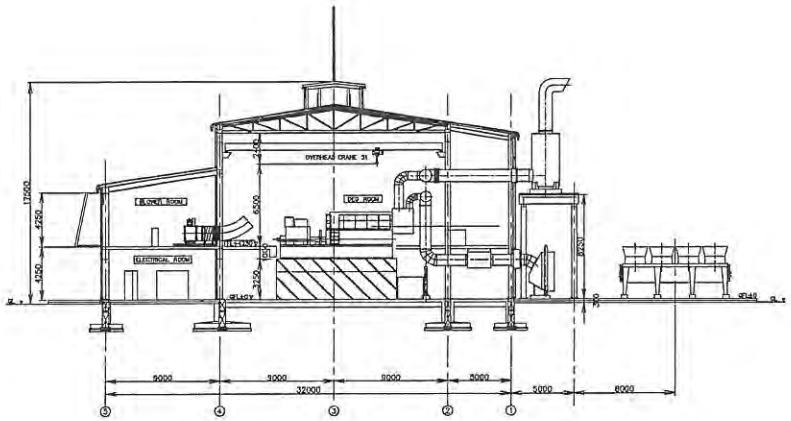
G-01



GROUND FLOOR PLAN



FIRST FLOOR PLAN

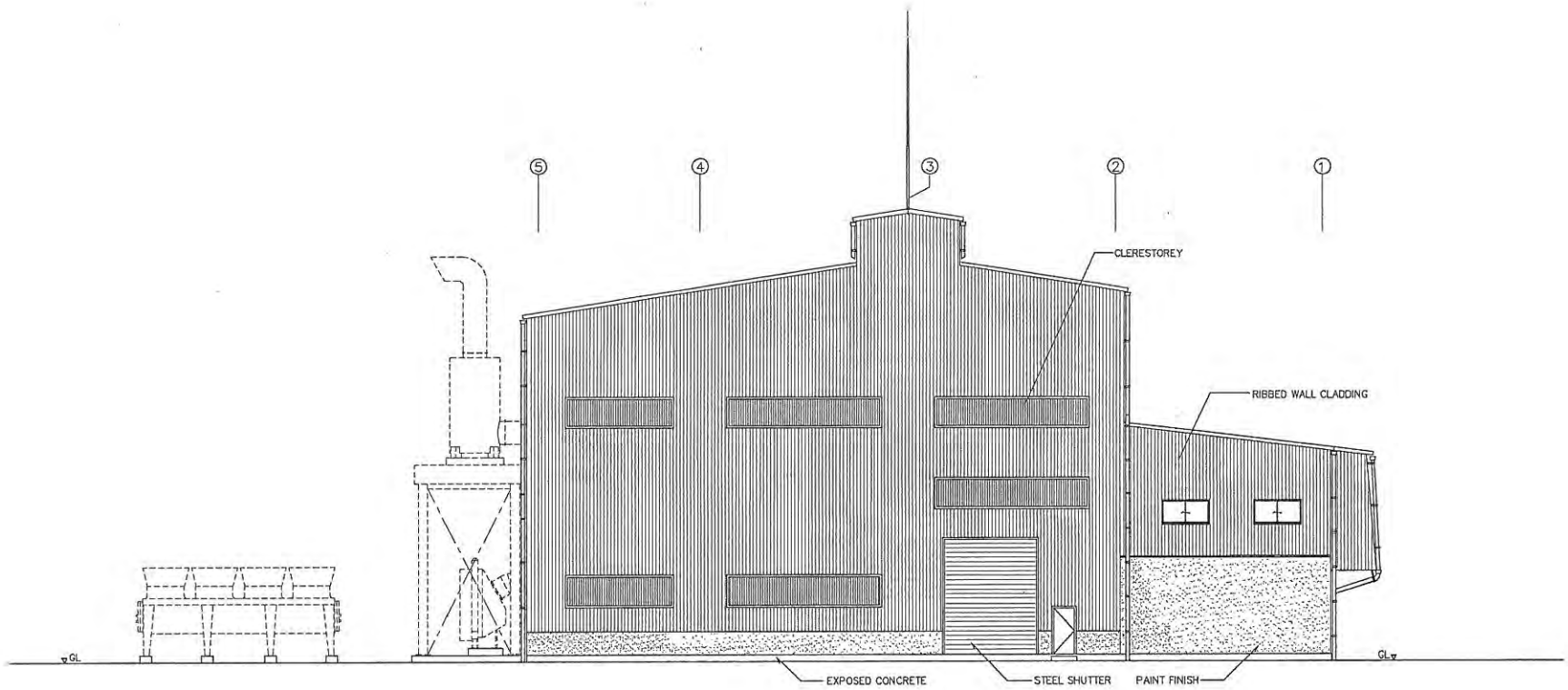


A–A SECTION

1:400
(Only if A3)

発電設備配置図
POWER HOUSE LAYOUT

G-02



NORTH ELEVATION 1/200

1/200

発電建屋立面図
POWERHOUSE ELEVATION

A-01

GENERAL

BUILDING AREA	867m2
TOTAL FLOOR AREA	1.581m2
UNDER GROUND STRUCTURE	REINFORCED CONCRETE CONSTRUCTION
UPPER GROUND STRUCTURE	STEEL STRUCTURE (hot dip galvanizing)

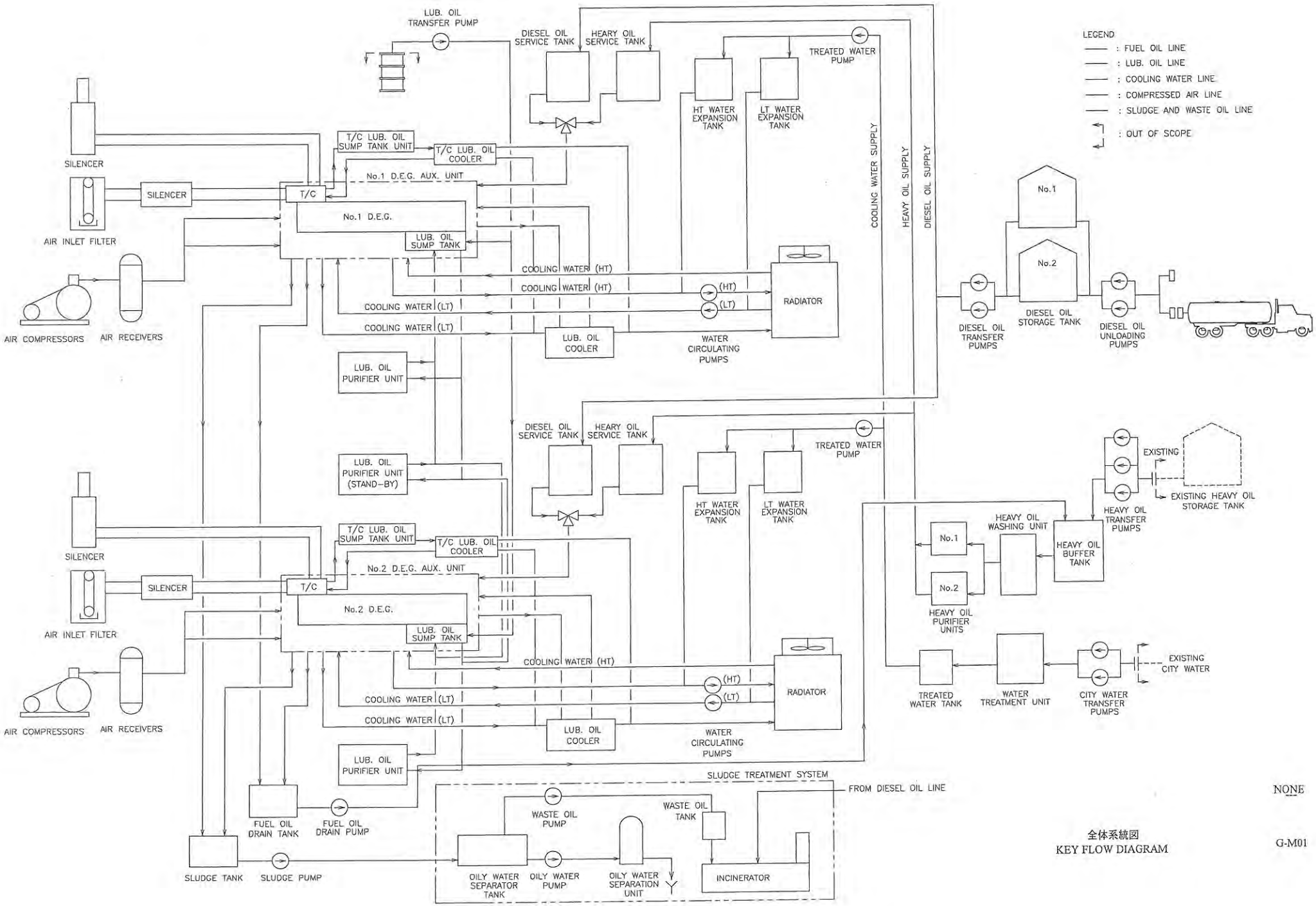
EXTERIOR FINISHING SCHEDULE

LOCATION	SPECIFICATION
ROOF	FLUORIDE RESIN PAINTING GAL BARIUM STEEL SHEET 0.8THK RIBBED METAL ROOF H=170 WITH INSULATION : URETHANE TYPEt=4
WALL	FLUORIDE RESIN PAINTING GAL BARIUM CLAD STEEL SHEET 0.6THK RIBBED WALL CLADDING D=38 (ELECTRICAL ROOM) PAINT FINISH (E.P) ON 150THK CONCRETE BLOCK WITH MORTAR
CLERESTOREY	1.5 THK FIBER REINFORCED PLASTIC TRANSLUCENT SHEET D=38
WAINSCOT	(DEG ROOM) PAINT FINISH(E.P) ON 100THK CONCRETE BLOCK WITH MORTAR
BASEBOARD	EXPOSED CONCRETE

INTERIOR FINISHING SCHEDULE

ROOM NAME	FLOOR	BASEBOARD	WALL	CEILING	REMARKS
ELECTRICAL ROOM	CONCRETE STEEL TROWEL DUSTPROOF PAINT FINISH	MORTAR FINISH H=100	PAINT FINISH(E.P) ON MORTAR	EXPOSED GALVANIZED STEEL DECK PLATE	AIR-CONDITINOR,VENTILATION FAN CABLE PIT
DEG ROOM LOWER FLOOR	CONCRETE STEEL TROWEL DUSTPROOF PAINT FINISH	MORTAR FINISH H=100	EXPOSED STEEL STRUCTURE & EXPOSED CLADDING CONCRETE BLOCK WITH MORTAR	EXPOSED GALVANIZED STEEL DECK PLATE	
DEG ROOM UPPER FLOOR	CONCRETE STEEL TROWEL OILPROOF PAINT FINISH	VINYL TILE H=60 LINE 2 ONLY	EXPOSED STEEL STRUCTURE & EXPOSED CLADDING 8THK PERFORATED FIBER-REINFORCED SILICON DIOXIDE CALCIUM BOARD WITH PAINT(EP) FINISH	EXPOSED STEEL STRUCTURE & EXPOSED ROOFING	ANTI BIRD BED MESH WIRE(STAINLESS)
CONTROL ROOM	FREE ACCESS FLOOR H=300 CHARGING WITH ELECTRICITY PREVENTION VINYL TILE	VINYL TILE H=60	8THK PERFORATED FIBER-REINFORCED SILICON DIOXIDE CALCIUM BOARD WITH PAINT(EP) FINISH LIGHT IRON WALL FRAME	MAKEUP PLASTERBOARD t=9.5 LIGHT IRON SUSPENDED FRAME CEILING SYSTEM CH=3000	AIR-CONDITINOR,VENTILATION FAN 50THK WALL AND CEILING GLASSWOOL INSULATION
BLOWER ROOM	CONCRETE STEEL TROWEL FINISH	VINYL TILE H=60	8THK PERFORATED FIBER-REINFORCED SILICON DIOXIDE CALCIUM BOARD WITH PAINT(EP) FINISH	EXPOSED STEEL STRUCTURE & EXPOSED ROOFING	ANTI BIRD BED MESH WIRE(STAINLESS)

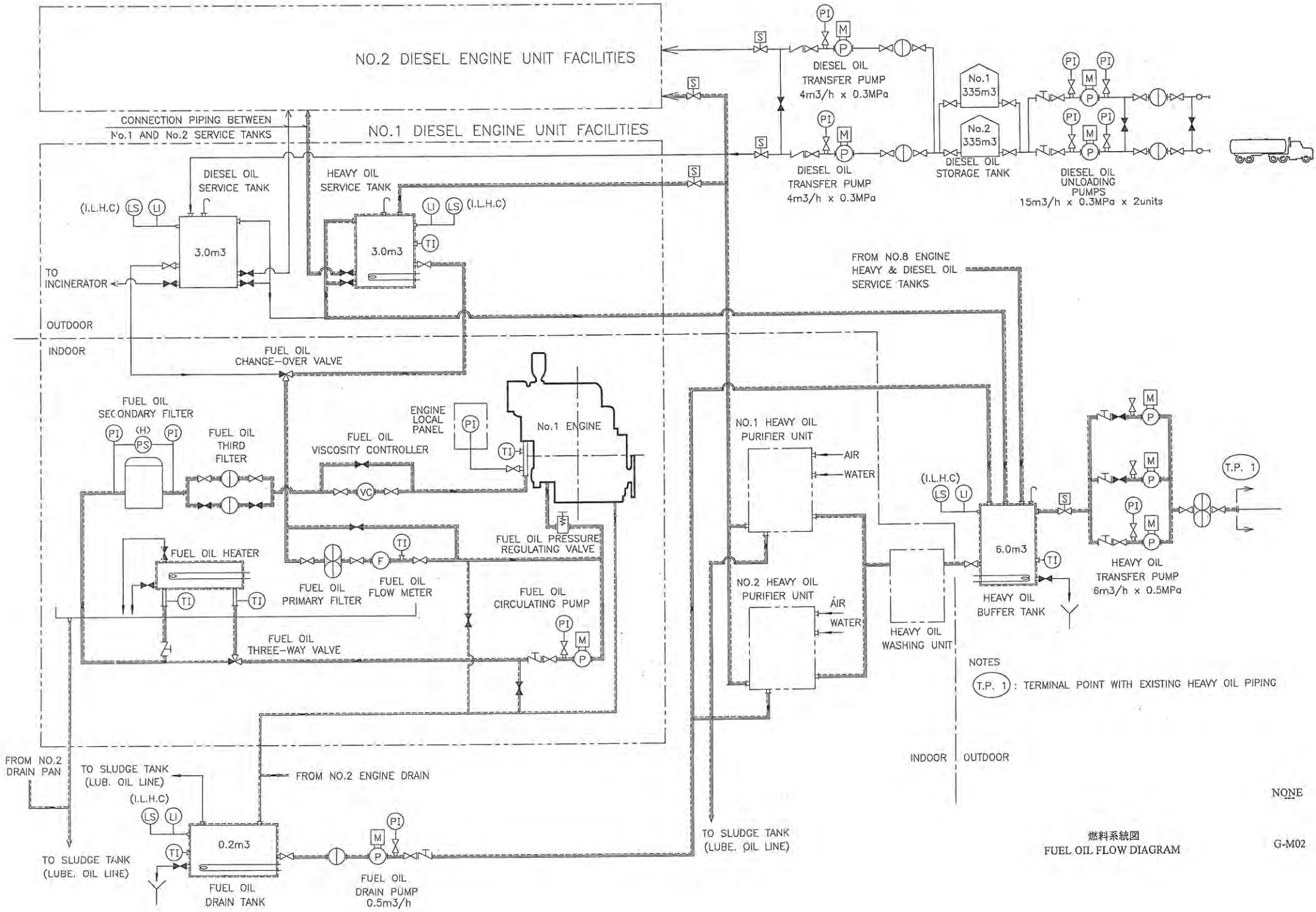
発電建屋仕上表
NEW POWER HOUSE FINISHING SCHEDULE

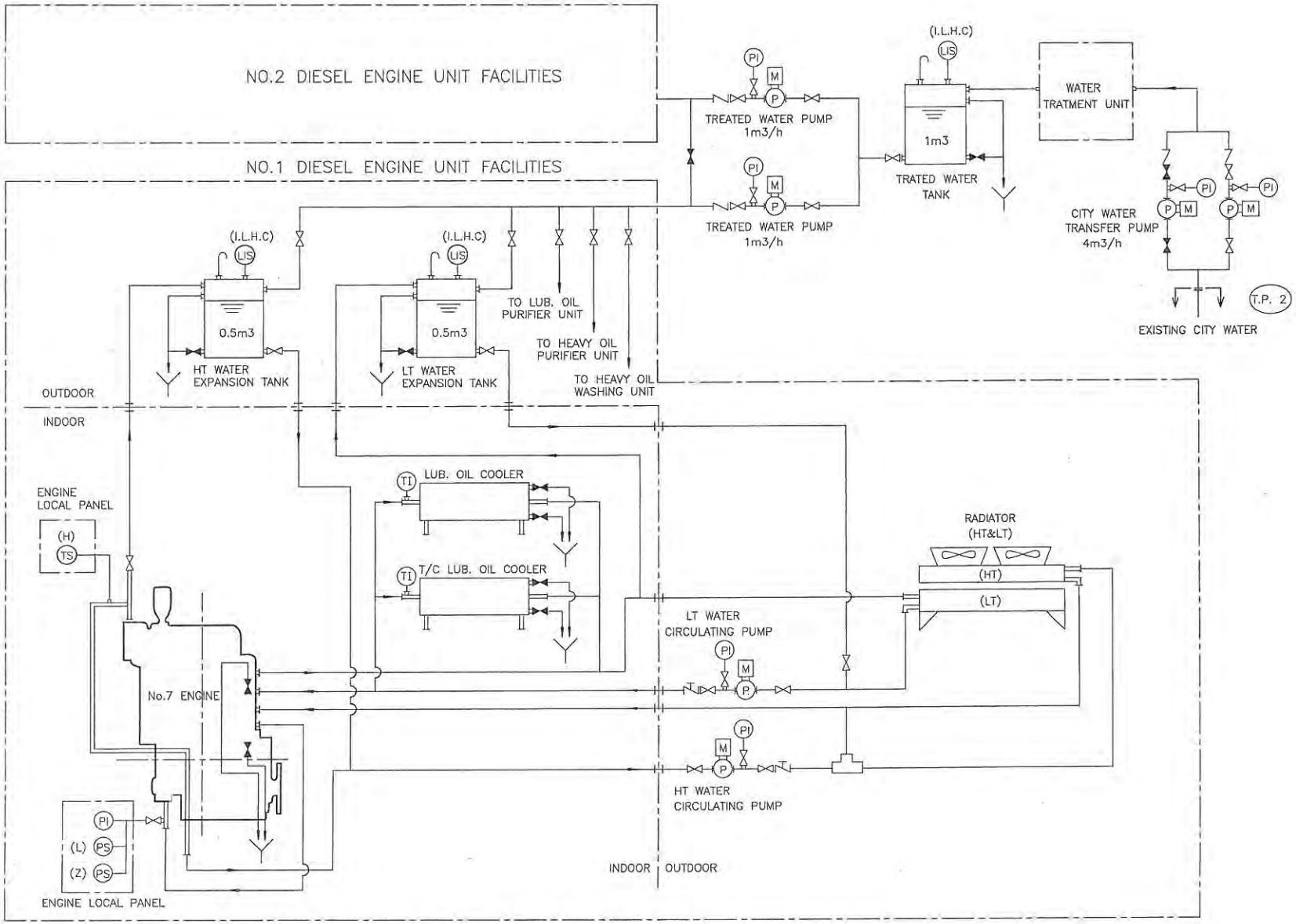


NONE

全体系統図
KEY FLOW DIAGRAM

G-M01


NO.2 DIESEL ENGINE UNIT FACILITIES
NO.1 DIESEL ENGINE UNIT FACILITIES
CONNECTION PIPING BETWEEN
No.1 AND No.2 SERVICE TANKS
DIESEL OIL
TRANSFER PUMP
4m3/h x 0.3MPa
DIESEL OIL
TRANSFER PUMP
4m3/h x 0.3MPa
No.1
335m3
No.2
335m3
DIESEL OIL
STORAGE TANK
DIESEL OIL
UNLOADING
PUMPS
15m3/h x 0.3MPa x 2units
DIESEL OIL
SERVICE TANK
HEAVY OIL
SERVICE TANK
(I.L.H.C)
3.0m3
3.0m3
TO
INCINERATOR
OUTDOOR
INDOOR
FUEL OIL
CHANGE-OVER VALVE
FROM NO.8 ENGINE
HEAVY & DIESEL OIL
SERVICE TANKS
FUEL OIL
SECONDARY FILTER
FUEL OIL
THIRD
FILTER
FUEL OIL
VISCOSITY CONTROLLER
ENGINE
LOCAL
PANEL
No.1 ENGINE
FUEL OIL HEATER
FUEL OIL
PRIMARY FILTER
FUEL OIL
FLOW METER
FUEL OIL PRESSURE
REGULATING VALVE
FUEL OIL
CIRCULATING PUMP
FUEL OIL
THREE-WAY VALVE
NO.1 HEAVY OIL
PURIFIER UNIT
NO.2 HEAVY OIL
PURIFIER UNIT
AIR
WATER
HEAVY OIL
WASHING UNIT
6.0m3
HEAVY OIL
BUFFER TANK
HEAVY OIL
TRANSFER PUMP
6m3/h x 0.5MPa
T.P. 1
NOTES
T.P. 1 : TERMINAL POINT WITH EXISTING HEAVY OIL PIPING
INDOOR
OUTDOOR
FROM NO.2
DRAIN PAN
TO SLUDGE TANK
(LUB. OIL LINE)
FROM NO.2 ENGINE DRAIN
0.2m3
FUEL OIL
DRAIN TANK
FUEL OIL
DRAIN PUMP
0.5m3/h
TO SLUDGE TANK
(LUBE. OIL LINE)
TO SLUDGE TANK
(LUBE. OIL LINE)
NONE
燃料系統図
FUEL OIL FLOW DIAGRAM
G-M02



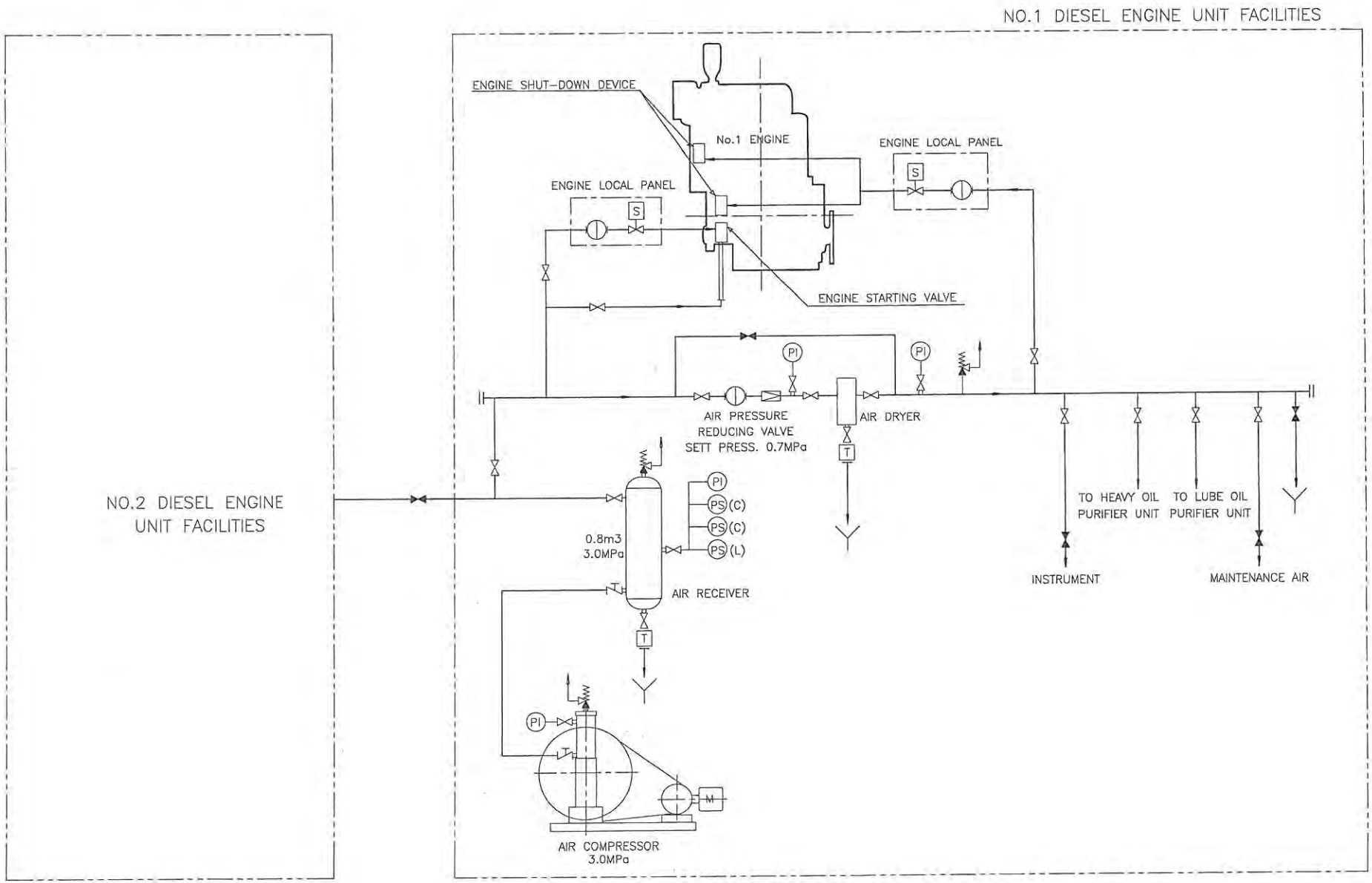
NOTE

(T.P. 2) : TERMINAL POINT WITH EXISTING CITY WATER PIPING

NONE

冷却水系統図
COOLING WATER FLOW DIAGRAM

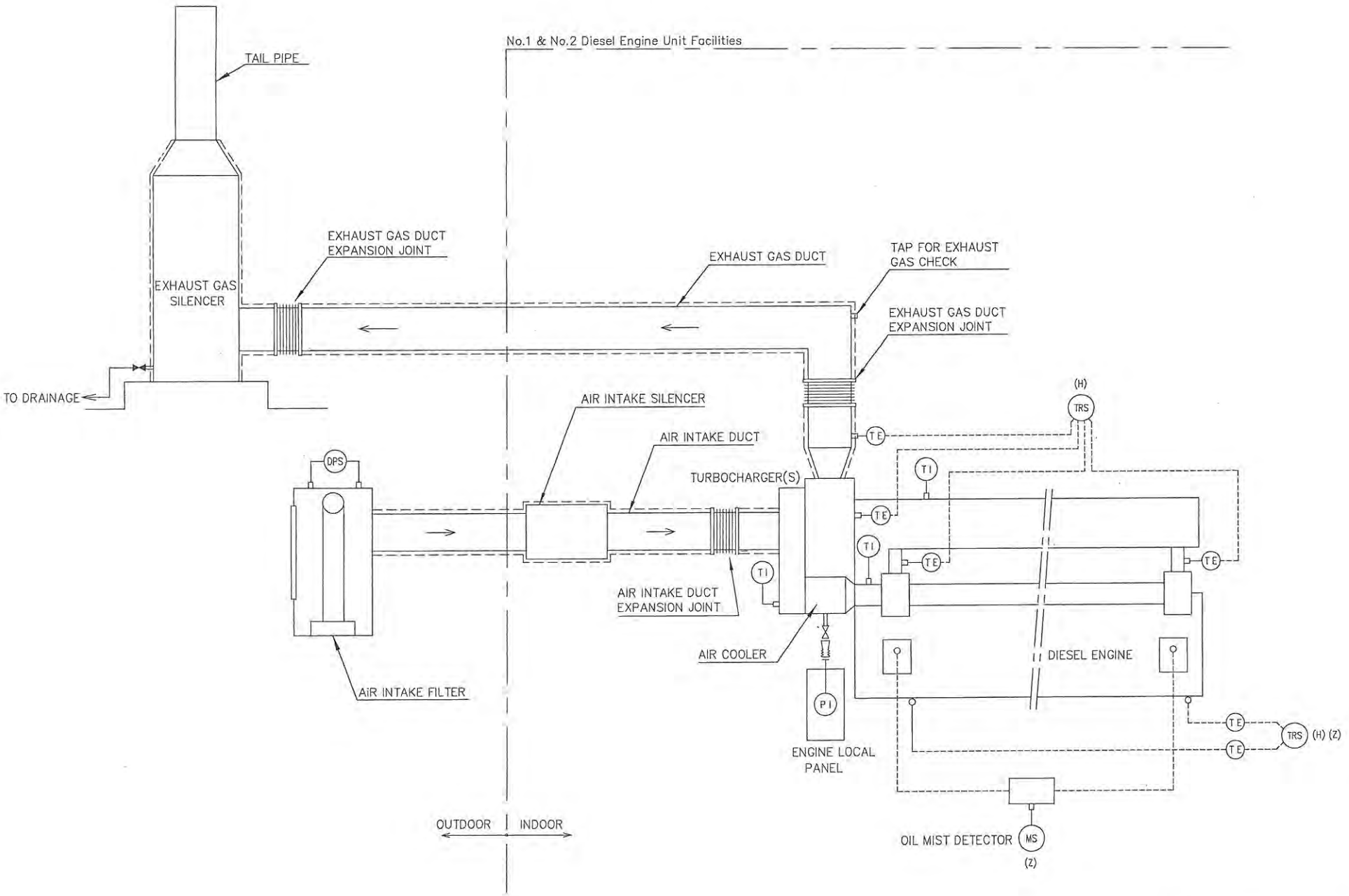
G-M04



NONE

圧縮空気系統図
COMPRESSED AIR FLOW DIAGRAM

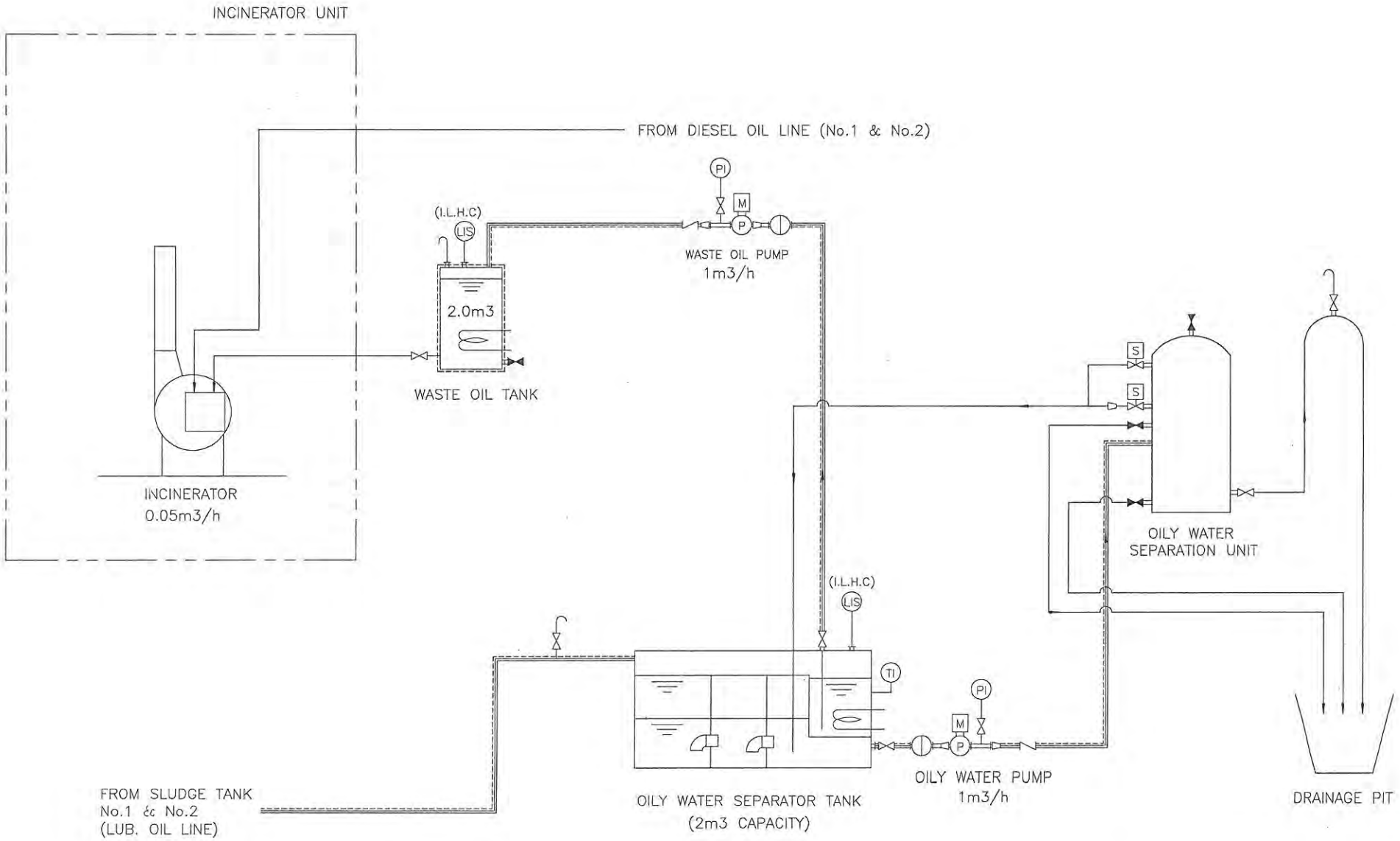
G-M05



NONE

吸気・排気系統図
AIR INTAKE AND EXHAUST GAS FLOW DIAGRAM

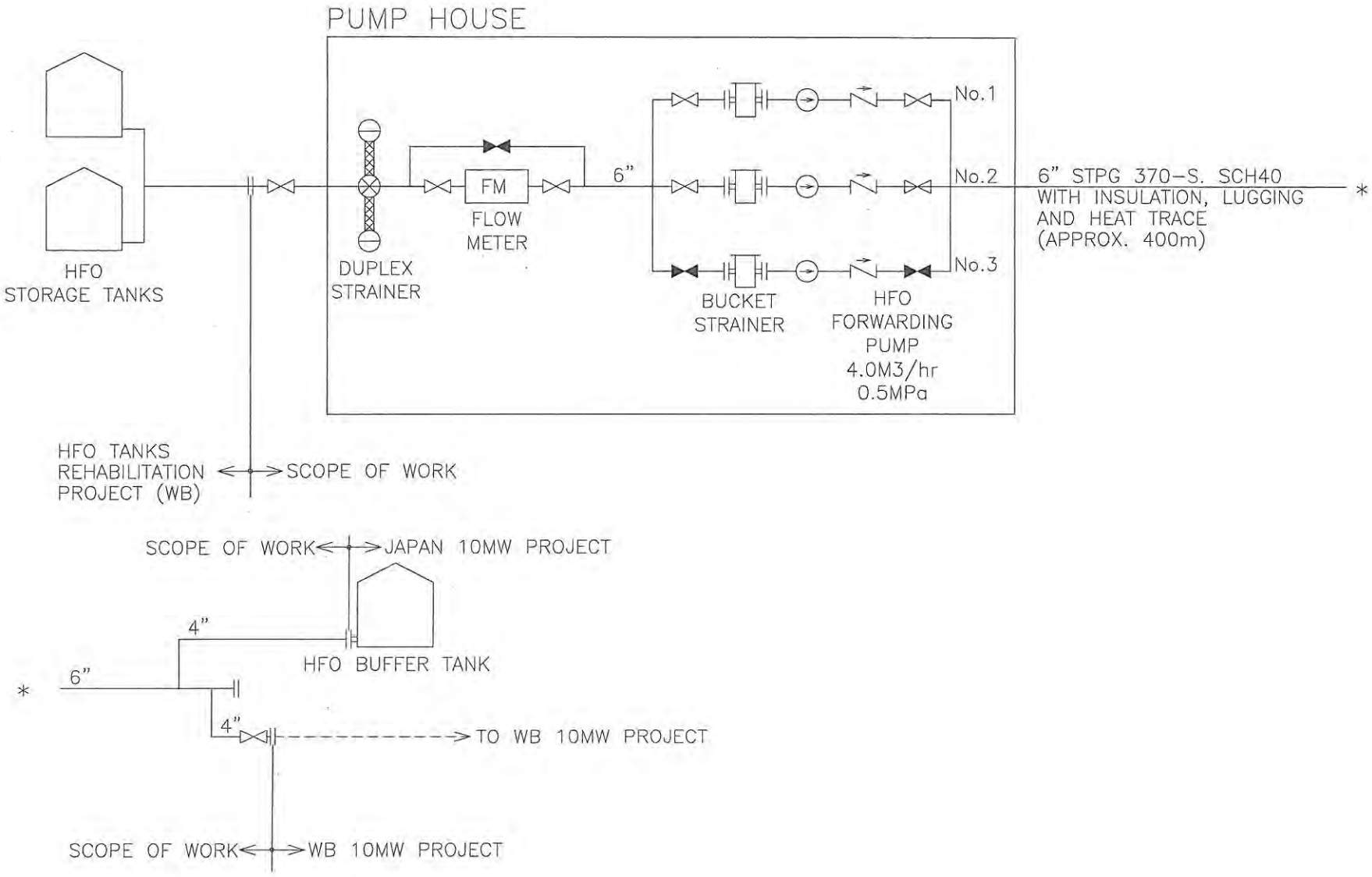
G-M06



NONE

廃油処理系統図
SLUDGE TREATMENT FLOW DIAGRAM

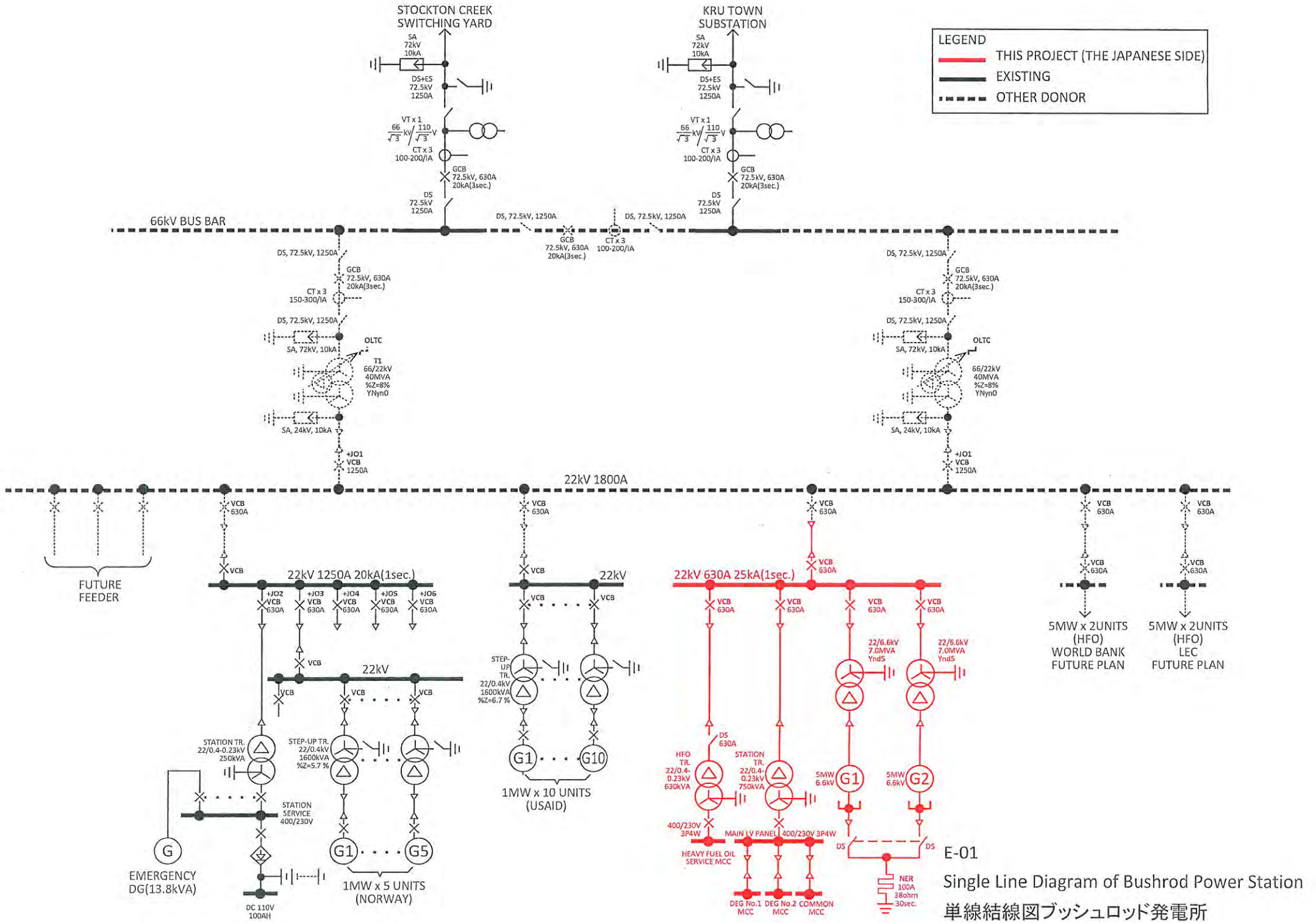
G-M07



NONE

重油供給系統図
HFO SUPPLY FLOW DIAGRAM

G-M08



E-01

Single Line Diagram of Bushrod Power Station

単線結線図ブッシュロッド発電所