

STIP 3725

9719 Lincoln Village Drive, Suite 310 Sacramento, CA 95827 916/369-8971 FAX 916/369-8370

March 6, 1992

3775 54 St. & Kirkham 3748 SP 54 AV + 745t.

Mr. Dennis Byrne
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, California 94621

Subject:

First Quarter 1992 Groundwater Monitoring Report

Southern Pacific Transportation Company

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Oakland, California IC Project No. 05032

Dear Mr. Byrne:

Industrial Compliance (IC), on behalf of Southern Pacific Transportation Company (SPTCo), is submitting the first quarter 1992 groundwater monitoring report for the SPTCo property located at 5th and Kirkham Streets in Oakland, California (see Figure 1). Work was performed in accordance with the guidelines presented in the Alameda County Health Care Services Agency (ACHCSA) letter dated June 21, 1991, requiring groundwater monitoring at this site. Previous work at this site is described in IC's report dated March 1, 1991 (report entitled: Phase II Environmental Site Assessment, Southern Pacific Transportation Company, 5th and Kirkham Streets, Oakland, California). Quarterly groundwater sampling of these wells began in the third quarter of 1991.

Groundwater Sampling

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There are currently four wells onsite (MW-1, MW-3, MW-4 and MW-6). Well locations are shown on Figure 2. Wells MW-1, MW-3 and MW-4 were installed adjacent to former underground storage tank (UST) locations. The monitoring well MW-6 is an upgradient well not associated with the UST's, and was therefore not included in the quarterly sampling.

Groundwater samples were collected on February 7, 1992. Prior to sampling, groundwater elevations were measured with an electronic water level probe to calculate saturated well volumes. This data is included in the Purge Characterization and Sample Logs presented as Appendix A. Approximately 3 well volumes were purged from each well using a submersible formular to initial use and between each well. During purging, the groundwater parameters; pH, temperature, and electrical

NA SP

March 6, 1992
Alameda County Health Care Services Agency (05032)
Mr. Dennis Byrne
Page 2

conductivity, were measured at approximately every well volume. The groundwater parameter data is presented in the Purge Characterization and Sample Logs presented as Appendix A.

Samples were collected with disposable polyethylene bailers and transferred into laboratory supplied containers. Samples were analyzed for Total Petroleum Hydrocarbons (TPH)-Gasoline and benzene, toluene, ethylbenzene, and xylenes (BTEX) using Method P/T-GBX-Triregional, and TPH-Diesel using Method TPH-D-Triregional. Analytical results are summarized in Table 1.

Analytical Results

Results of analyses of samples from MW-1 and MW-4 indicate TPH and BTEX were not present at concentrations at or above the method detection limits. The results of analyses on samples collected from MW-3 indicated 1200 μ g/L TPH diesel and 0.71 μ g/l benzene. TPH gasoline, toluene, ethylbenzene, and xylenes were not detected above the method detection limits in the sample collected from MW-3. Laboratory reports are attached as Appendix B.

The next quarterly sampling event is currently scheduled for April, 1992.

If you have any questions concerning this report, please contact Mr. Walter Floyd at (916) 369-8971.

Sincerely,

Walter D. Floyd

Project Geologist

Mark S. Dockum, C.E.G.

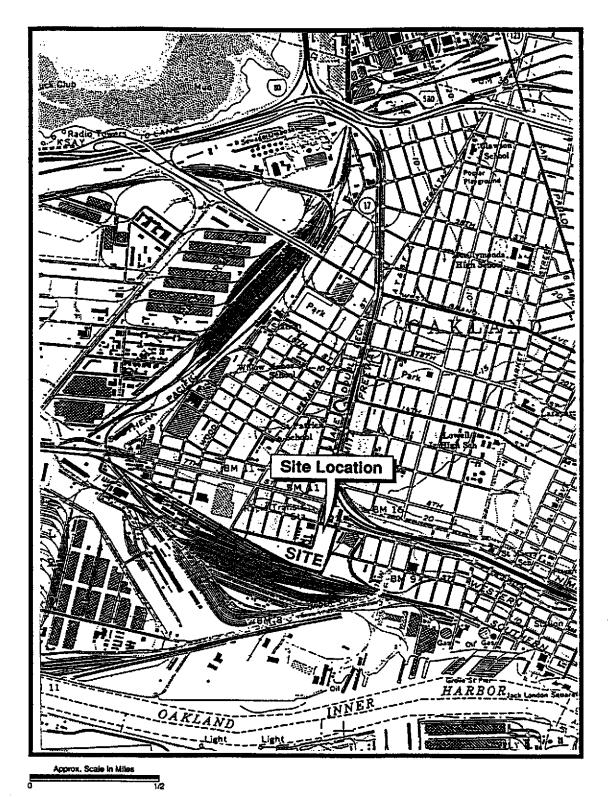
Walter Floyd

Project Manager

Attachment

cc: Mr. Lester Feldman

Mr. Rafat Shahid



Reference: USGS 7.5 Minute Series Topographic Map Oakland California



SP ENVIRONMENTAL SYSTEMS, INC.

PROJECT NO:

05032

DATE: 11/14/91

DRAWN BY:

CHECKED BY: WF

SITE LOCATION MAP SOUTHERN PACIFIC TRANSPORTATION CO. **5TH & KIRKHAM STREETS PROPERTY** OAKLAND, CALIFORNIA

FIGURE:

1

SCALE:

as shown

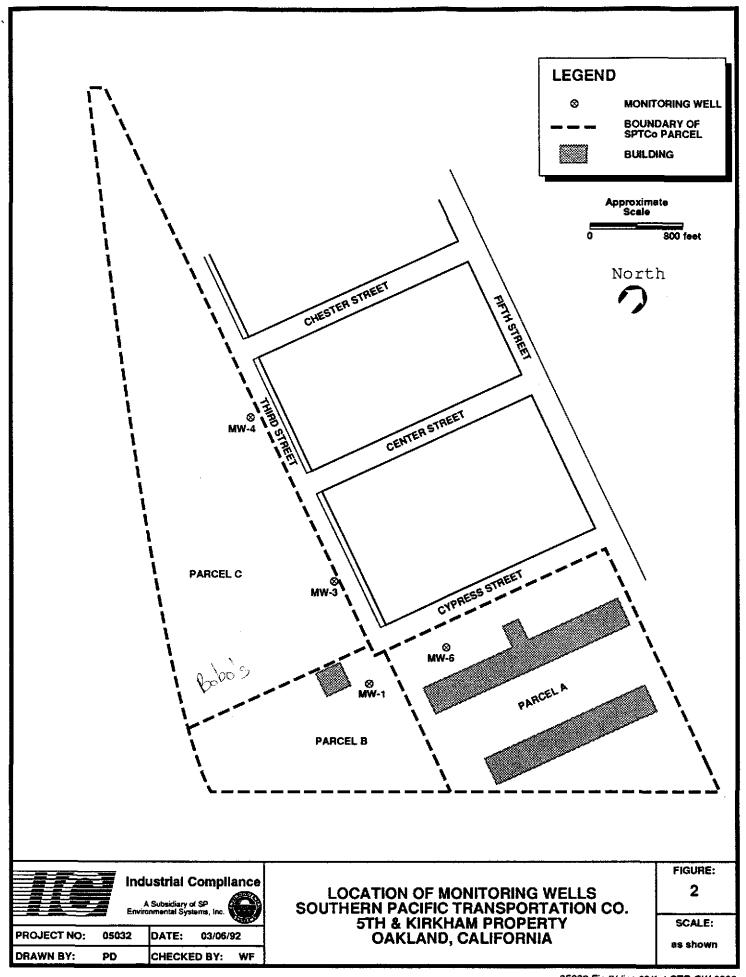


Table 1

First Quarter 1992 Groundwater Monitoring Report Southern Pacific Transportation Company 5th & Kirkham Streets Oakland, California Samples Collected February 1992 IC Project No. 05032

Well*	Sample 1.D,	TPH- Gasoline ^b range (µg/L)	TPH-° Diesel range (µg/L)	BTEX ⁴ (μg/L)
MW-1	21666	ND	ND	ND
MW-3	21663	ND	1200	0.71 (Benzene) ND (TEX)
MW-4	21660	ND	ND.	ND
Detection Limit		50	50	0.50

Notes:	а	See Figur	e 2 for ap	proximate	well locations.
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- b TPH-Gasoline Total Petroleum Hydrocarbons as gasoline analyzed using Method P/T-GBX-Triregional.
- c TPH-Diesel Total Petroleum Hydrocarbons as diesel analyzed using Method TPH-D-
 - Triregional.
- d BTEX Benzene, Toluene, Ethylbenzene, Xylenes analyzed using Method P/T-GBX-Triregional.
- ND Not detected above method detection limit
- μg/I Micrograms per liter

APPENDIX A PURGE CHARACTERIZATION AND SAMPLE LOGS



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Project Number: 05082

Project Name: RoRSo

Date: 2/3/92

Well Number: पिटार्स

Sampler: BMC

Weather: COCHEST

Military Time	546	414	क्षेत्र	187	786	955	
Gallons Purged	1 - 24 -	2	2.0	30	35	S	Depth to bottom (DB):
Purge Rate						A	Depth to water: $(5.4\circ)$
ЬН	5۴. مار	2 b. at	१६ भ	00121 00.51	17,00	Z	Height of water column (H) ≈ DB - BW:
Conductivity	မွတ	215	459	<i>†</i> 99	553	Ь	One casing volume (CV) a H x multiplier:
Temperature (C)	p 10	p. 29	1.6 ما	0.40 0.40	0.40	٦	Three casing volumes (3CV):
Sallnity (0/00)						ι'n	Multipliers = 2" well = 0.16 gallons/foot
Turbidity							4" well = 0.65 gallons/foot
Color						hann	6" well = 1.47 gallons/loot
Water Level Casing							8" well = 2.61 gallons/foot
Calibration	pH: ⊋	0.01 - 0 £	০				S.C.:

Sampler's Signature: _



PURGE CHARACTERIZATION AND SAMPLE LOG

A Subsidiary of SP Environmental Systems, Inc.		
Project Number: 2522	Project Name: RoBo	Date: 2(4)92
Well Number: MW3	Sampler: RMC	Weather: SOS (COR)

Military Time	10.30	10 35	10 35 10 50	0211 5/ 1/	1120	
Gallons Purged	stand	5	25	35	n	Depth to bottom (DB): $^{-1}$
Purge Rate					A	Depth to water: 3,94
Ή	€1'LI	17.15	31.81	27.FJ	N	Height of water column (H) = DB - BW:
Conductivity	385	403	4३8	82	Ь	One casing volume (CV) = H x multiplier:
Temperature (C)	(23.3	102.4	1.20	8.10	١	Three casing volumes (3CV):
Satinity (0/00)					۵	Mulipliers = 2" well = 0.16 gallons/foot
Turbidity						4" well = 0.65 gallons/foot
Color					S(UM)	6" well = 1.47 gallons/foot
Water Level Casing						8" well = 2.61 gallons/foot
Calibration	pH;					S.C.:

Fleid Comments									-
Purge Equip.	241/erc								
Sample Equip.	BAILENC								
Lab	CHÍ								
Analysis	SKH IPAG								
Preserv.	いくし								
Туре	VOA								
Volume	HOML								
Quantity	છ			,					
Sample # Quantity	21663						Cleaning:	Comments:	

Sampler's Signature: __



PURGE CHARACTERIZATION AND SAMPLE LOG

	Project Nan
A Subaldary of SP Environmental Systems, Inc.	ber: 05032
	Project Number

Project Name: පිං යිං

2/9/92

A CO Well Number: __

Sampler: RMC

Weather: CKNEW 178-31

S.C.:					ij	Callbration
8" well = 2.61 gallons/foot						Water Level Casing
6" well = 1.47 gallons/foot	plan					Cotor
4" well = 0.65 gallons/foot						Turbidity
Multipliers = 2" well = 0.16 gallons/foot	4.					Salinity (0/00)
Three casing volumes (3CV):	r l	62.5	6 3.6	627	عنان	Temperature (C)
One casing volume (CV) = H x multiplier: (L)	р	237	242	244	ପ୍ରକ ଧ	Conductivity
Height of water column (H) = DB - BW: 19.142.	14	17.19	17.23	17.26 17.23	03.60	Hď
Depth to water: (3.58)	٧					Purge Rate
Depth to bottom (DB): $\imath \imath$	v	4.7	0.7	Ŋ	5,400.4	Gallons Purged
	1155	hS 11	5h II	1137	11 30	Willtary Time

Field Comments									-
Purge Equip.	18. Cr.								
Sample Equip.	Partitur								
lab	7 4 3								
Analyeis Lab	DRX PPHS								
Preserv.	HEL								
Туре	VCM								
Volume	HOME								
Quantity	8								
Sample # Quantity	21006						Cleaning:	Comments:	

Sampler's Signature:_

APPENDIX B

ANALYTICAL LABORATORY REPORTS



February 28, 1992 Lab ID: 062713

Walt Floyd S.P. Environmental 9719 Lincoln Village Dr. Suite 310 Sacramento, CA 95827

Dear Mr. Floyd:

Enclosed is the report for the three aqueous samples for your Bobo Project, #05032, which were received at Enseco Cal Lab on 8 February 1992.

The report consists of the following sections:

Sample Description

ΙI Analysis Request

III Quality Control Report IV Analysis Results

If you have any questions, please feel free to call.

Sincerely,

Douglas Baker

Program Administrator

mbw

Enseco

I Sample Description

See the attached Sample Description Information.

The samples were received under chain-of-custody.

II Analysis Request

The following analytical tests were requested.

<u>Lab ID</u> 062713-1 through 3 Analysis Description
Total Petroleum Hydrocarbons (Gasoline) & BTEX
Total Petroleum Hydrocarbons (Triregional)

III Quality Control

- A. <u>Project Specific QC.</u> No project specific QC (i.e., spikes and/or duplicates) was requested.
- B. <u>Method Blank Results</u>. A method blank is a laboratory-generated sample which assesses the degree to which laboratory operations and procedures cause false-positive analytical results for your samples.

No target parameters were detected in the method blanks associated with your samples at the reporting limit levels noted on the attached Method Blank Report.

C. Laboratory Control Samples - The LCS Program

<u>Duplicate Control Samples.</u> A DCS is a well-characterized matrix (blank water, sand or celite) which is spiked with certain target parameters and analyzed at approximately 10% of the sample load in order to establish method-specific control limits. The DCS results associated with your samples are on the attached Duplicate Control Sample Report.

Accuracy is measured by Percent Recovery as in:

% recovery = $\frac{\text{(measured concentration)}}{\text{(actual concentration)}} \times 100$

Precision is measured using duplicate tests by Relative Percent Difference (RPD) as in:

RPD = $\frac{(\% \text{ recovery test } 1 - \% \text{ recovery test } 2)}{(\% \text{ recovery test } 1 + \% \text{ recovery test } 2)/2} \times 100$

Enseco A Coming Company

Control limits for accuracy (percent recovery) are based on the average, historical percent recovery +/-3 standard deviation units. Control limits for precision (relative percent difference) range from 0 (identical duplicate DCS results) to the average, historical relative percent difference + 3 standard deviation units. In cases where there is not enough historical data, EPA limits or advisory limits are set, with the approval of the Quality Assurance department.

IV Analysis Results

Test methods may include minor modifications of published EPA Methods such as reporting limits or parameter lists. Reporting limits are adjusted to reflect dilution of the sample, when appropriate. Solid and waste samples are reported on an "as received" basis; i.e., no correction is made for moisture content, unless the method requires or the client requests that such correction be made.

Results are on the attached data sheets.



SAMPLE DESCRIPTION INFORMATION for SP Environmental

Lab ID	Client ID	Matrix	Samp] Date	ed Time	Received Date
062713-0001-SA 062713-0002-SA 062713-0003-SA	21663	AQUEOUS AQUEOUS AQUEOUS	07 FEB 92	11:20	07 FEB 92 07 FEB 92 07 FEB 92



QC LOT ASSIGNMENT REPORT Hydrocarbon Work Cell

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
062713-0001-SA	AQUEOUS	TPH-BTEX-A	11 FEB 92-20A	13 FEB 92-20A
062713-0002-SA	AQUEOUS	TPH-BTEX-A	11 FEB 92-20A	13 FEB 92-20A
062713-0003-SA	AQUEOUS	TPH-BTEX-A	11 FEB 92-20A	13 FEB 92-20A



METHOD BLANK REPORT Hydrocarbon Work Cell

Analyte	Result	Units	Reporting Limit
Test: TPH-G-BTEX-TR-A Matrix: AQUEOUS QC Lot: 11 FEB 92-20A QC Run:	13 FEB 92-20A		
Benzene Toluene Ethylbenzene Xylenes (total) Gasoline Unknown hydrocarbon	ND ND ND ND ND ND	ug/L ug/L ug/L ug/L ug/L ug/L	0.50 0.50 0.50 0.50 50



DUPLICATE CONTROL SAMPLE REPORT Hydrocarbon Work Cell

Analyte	Conc∈ Spiked	entration DCS1	Measured DCS2	AVG		uracy age(%) Limits	Precision (RPD) DCS Limit		
Category: TPH-BTEX-A Matrix: AQUEOUS QC Lot: 11 FEB 92-20A Concentration Units: ug/L									
Benzene Toluene Gasoline	5.00 5.00 1000	4.54 4.59 1060	4.70 4.71 1040	4.62 4.65 1050	92 93 105	78-116 78-113 76-125	3.5 2.6 1.9	9 10 15	

Calculations are performed before rounding to avoid round-off errors in calculated results.



QC LOT ASSIGNMENT REPORT Hydrocarbon Work Cell

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
062713-0001-SA	AQUEOUS	TPH-D-TR-A	11 FEB 92-A	11 FEB 92-A
062713-0002-SA	AQUEOUS	TPH-D-TR-A	11 FEB 92-A	11 FEB 92-A
062713-0003-SA	AQUEOUS	TPH-D-TR-A	11 FEB 92-A	11 FEB 92-A

METHOD BLANK REPORT Hydrocarbon Work Cell



Analyte		Res	ult	Units	Reporting Limit
Test: TPH-D-TR-A Matrix: AQUEOUS QC Lot: 11 FEB 92-A	QC Run:	11 FEB 92-A			
Diesel Fuel Unknown hydrocarbon		•	ND ND	ug/L ug/L	50 50

Enseco

DUPLICATE CONTROL SAMPLE REPORT Hydrocarbon Work Cell

		Concentrat		uracy	Precision			
Analyte	Spi	ked DCS	Measured 1 DCS2	AVG	Aver DCS	age(%) Limits	(RPD) DCS Li	mit
Category: TPH-D-TR-A Matrix: AQUEOUS QC Lot: 11 FEB 92-A Concentration Units:	ug/L							
Diesel Fuel		300 304	261	282	94	34-147	15	28

Calculations are performed before rounding to avoid round-off errors in calculated results.

Total Petroleum Hydrocarbons (Gasoline) and BIEX



Method P/T-GBX-TRIREGIONAL

Client Name: SP Environmental Client ID: 21660 - MW-4 Client ID: 062713-0001-SA AUTONIC AUTONIC 08 FEB 92

Matrix: AQUEOUS Sampled: 07 FEB 92 Received: 07 FEB 92 Authorized: 08 FEB 92 Prepared: NA Analyzed: 13 FEB 92

Parameter	Result	Units	Reporting Limit
Benzene Toluene Ethylbenzene Xylenes (total) Gasoline Unknown hydrocarbon	ND ND ND ND ND ND	ug/L ug/L ug/L ug/L ug/L ug/L	0.50 0.50 0.50 0.50 50

ND = Not detected NA = Not applicable

Reported By: Pat Trinidad

Approved By: Lisa Stafford

Total Petroleum Hydrocarbons (Gasoline) and BTEX



Method P/T-GBX-TRIREGIONAL

Client Name: SP Environmental Client ID: 21663 = W.W.-3 Lab ID: 062713-0002-SA Matrix: AQUEOUS Authorized: 08 FEB 92

Matrix: AQUEOUS Sampled: 07 FEB 92 Received: 07 FEB 92 Authorized: 08 FEB 92 Prepared: NA Analyzed: 13 FEB 92

Parameter	Result	Units	Reporting Limit
Benzene Toluene Ethylbenzene Xylenes (total) Gasoline Unknown hydrocarbon	0.71 ND ND ND ND ND	ug/L ug/L ug/L ug/L ug/L ug/L	0.50 0.50 0.50 0.50 50

ND = Not detected NA = Not applicable

Reported By: Pat Trinidad

Approved By: Lisa Stafford

lotal Petroleum Hydrocarbons (Gasoline) and BTEX



Method P/T-GBX-TRIREGIONAL

Client Name: SP Environmental Client ID: 21666 > WW L Lab ID: 062713-0003-SA Matrix: AQUEOUS

Matrix: AQUEOUS Sampled: 07 FEB 92 Received: 07 FEB 92 Authorized: 08 FEB 92 Prepared: NA Analyzed: 13 FEB 92

Parameter	Result	Units	Reporting Limit
Benzene Toluene Ethylbenzene Xylenes (total) Gasoline Unknown hydrocarbon	ND ND ND ND ND ND	ug/L ug/L ug/L ug/L ug/L ug/L	0.50 0.50 0.50 0.50 50

ND = Not detected NA = Not applicable

Reported By: Pat Trinidad

Approved By: Lisa Stafford

Total Petroleum Hydrocarbons by GC/FID (Triregional)



Method TPH-D-TRIREGIONAL

Client Name: SP Environmental Client ID: 21660 = WW W OCCUPATION OF THE CONTROL O

Authorized: 08 FEB 92

Sampled: 07 FEB 92 Prepared: 11 FEB 92

Received: 07 FEB 92 Analyzed: 17 FEB 92

Parameter	Result	Units	Reporting Limit
Diesel Fuel	ND	ug/L	50
Unknown hydrocarbon	ND	ug/L	50

ND = Not detected NA = Not applicable

Reported By: Jon Edmondson

Approved By: Kirby Garrett

Total Petroleum Hydrocarbons by GC/FID (Triregional)



Method TPH-D-TRIREGIONAL

Client Name: SP Environmental Client ID: 21663 > WW. 21663 - WW 3 062713-0002-SA AQUEOUS

Lab ID:

Received: 07 FEB 92 Analyzed: 17 FEB 92 Matrix: Sampled: 07 FEB 92 Authorized: 08 FEB 92 Prepared: 11 FEB 92

Reporting Parameter Result Units Limit Diesel Fuel ND 50

Unknown hydrocarbon

ug/L ug/L 1200 50 1

Note 1: The hydrocarbon pattern present in this sample represents an unknown mixture in the range of about C-10 to greater than C-30. Quantitation is based on a diesel reference between C-10 and C-24 only.

ND = Not detected NA = Not applicable

Reported By: Jon Edmondson Approved By: Kirby Garrett

Total Petroleum Hydrocarbons by GC/FID (Triregional)



Method TPH-D-TRIREGIONAL

Client Name: SP Environmental Client ID: 21666 = MW-(Lab ID: 062713-0003-SA AQUEOUS

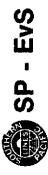
Sampled: 07 FEB 92 Prepared: 11 FEB 92 Received: 07 FEB 92 Authorized: 08 FEB 92 Analyzed: 17 FEB 92

Parameter	Result	Units	Reporting Limit
Diesel Fuel	ND	ug/L	50
Unknown hydrocarbon	ND	ug/L	50

ND = Not detected NA = Not applicable

Reported By: Jon Edmondson

Approved By: Kirby Garrett



CHAIN-OF-CUSTODY RECORD

No. 11405

Ste. 310 • Sacramento, CA 95827 • Phone 916-369-8971 • FAX 916-369-8370	ANALYSIS DESIRED (INDICATE SEPANATE CONTAINERS)	PACIFICATION	× ×	X								REMARKS O T T T T T T T T T T T T			·	BRIGITTE LIEVENS SAMPLERS SIGNATURE BRIGITTE LIEVENS
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SP -	PROJECT NAME PROJ. NO. CCC) CLIENT'S REPRI	ON METI	5 - a	3)(4	· 1 21	ဖ	7	60	o	ō.	ABROWART RESIDENCE	-	2	က	4