CONFIDENTIAL

ASSESSMENT REPORT ON STS ELEMENTS

Nominated Vessel Photo:EagXXXXXX

PART B

CUSTOMER	: ATHEXXXXXX	
CONTACT PERSON	: CaptaiXXX	
PHONE/EMAIL	: +30 2106XXXXX, operatiXXXXXXXgroup.com	
CUSTOMER VESSEL	: AT · · · · · , IMO: 94XXX	VLCC
SCREENED VESSEL	: EagXXXXX, IMO: 92XXX	Aframax
LOCATION	: GALVESTON	
EXPECTED DATE OF STS	: 2014-01-26	
TYPE OF STS OPERATION	: NORMAL LIGHTERING	

Version OIL TANKER
ISSUED: 25-01-2014 14:00 UTC
DOCUMENT CONTROL NUMBER: PART B
REPORT REFERENCE: 023481

DYNAMARINE

This STS ASSESSMENT REPORT is confidential and is provided as a guideline to assist mariners in the encountered risks associated with the STS Operation as per OCIMF/ICS latest recommendations and approved STS PLAN policies and procedures. It is only intended to be used with considerable discretion based on knowledge and experience of this type of operation and to provide an indication of suitability under the conditions specified. Final decision is always subject to Master's approval and at his discretion. Should you have any queries regarding this report please contact your Managers and/or Dynamarine for further clarification.

DYNAMARINe
4 Vasili Tsitsani Str
Glyfada, 16675 Greece
+302109628379, +442071939853
info@onlinests.net, www.onlinests.net

All Units are in Metric Tonnes for DWT and Displacement, meter for length.

COMMENTS

All Units are in Metric Tonnes for DWT and Displacement, meters for length.

SHIP COMPATIBILITY

1 DIFFERENCE ON SHIPS ACCOMMODATION FRONT FROM VESSELS MANIFOLD IS 27.1 M

2 DIFFERENCE ON VESSELS' LOA IS 86.33 METERS

3 EAGLE TANKER HAS AN STS PLAN

4 EAGLE TANKER COMPLIES WITH RECOMMENDATIONS CONTAINED IN OCIMF/ICS SHIP TO SHIP TRANSFER GUIDE

5 TYPE OF MOORING LINES (ACCORDING TO OCIMF GUIDELINES): WIRES OR ROPES

6 THE COMBINATION OF CLOSED CHOCKS FOR BOTH PARTICIPATING VESSELS IS ACCORDING TO OCIMF GUIDELINES

7 THE MAXIMUM DIFFERENCE ON MANIFOLD HEIGHT BETWEEN VESSELS IS 14.671 M. ACTUAL DIFFERENCE MAY ALTER DEPENDING ON VESSEL ACTUAL DISPLACEMENTS AND CARGO QUANTITY

8 ON THE BASIS OF AVAILABLE VESSEL DISPLACEMENTS, MINIMUM LENGTH OF TRANSFER HOSES IS SUGGESTED TO BE GREATER/ EQUAL TO 16 METERS. HOWEVER WEATHER CONDITIONS AND HORIZONTAL SHIFTING OF VESSELS SHOULD BE TAKEN INTO ACCOUNT AND IF REQUESTED THE CARGO HOSES SHOULD BE ACCORDINGLY ADJUSTED.

9 ACCORDING TO OCIMF SIMPLIFIED FORMULA THE REQUIRED FENDERS FOR CALM WEATHER CONDITIONS ARE 5 FENDERS OF 3,30X6,50 METERS PNEUMATIC 50KPA. THIS FENDER SCHEME SHOULD BE UPGRATED FOR WEATHER CONDITIONS OTHER THAN CALM.. FOR FURTHER DETAILS PLEASE REFER TO SECTION 3 FOR REVERSE LIGHTERING OPERATIONS.

10 THE SUGGESTED FENDER SIZE IS 3,30X6,50 AS PER LATEST OCIMF/ICS QUICK SELECTION FORMULA. THE MINIMUM FREEBOARD OF BOTH PARTICIPATING VESSELS MIGHT BECOME EQUAL TO 5.22 M. THUS THE MINIMUM FREEBOARD OF VESSELS' IS 1.6 TIMES COMPARED TO THE DIAMETER 3.3 M. OF THE FENDER. PLEASE ENSURE THAT DECK CREW IS VIGILANT WITH THE FENDER POSITION WITH RESPECT TO VESSEL ROLLING.

OTHER COMMENTS

1 EAGLE TANKER HAS MULTINATIONAL CREW

2 PROVIDED Q88 WAS INCOMPLETE WITH RESPECT TO THE FOLLOWING:
DATE OF NEXT DD WAS NOT THE SAME AS PER CLASS DATA

PROPOSED ACTIONS

1 EAGLE TANKER HAS MULTINATIONAL CREW. MASTER OF MT CUSTOMER VESSEL HAS TO CONFIRM PRIOR MOORING THAT THE CREW OF EAGLE TRENTON IS TRAINNED WITH THE PROCEDURES IN STS OPERATIONS, AND THAT SHIP'S COMMON LANGUAGE IS ENGLISH.

2 AN UPDATED Q88 SHOULD BE REQUESTED FROM MESSRS PARTICIPATING VESSEL MANAGERS.

EAGLE TANKER AND PSC RISK INDICATORS

1	FLAG LIST ACCORDING TO PARIS MOU	WHITE
2	CLASSIFICATION SOCIETY PERFORMANCE LEVEL ACCORDING TO PARIS MOU	HIGH
3	HULL TYPE	DOUBLE HULL
4	AGE (**Date deliverd:2003-05-09**	10 Years and 8 Months
5	DURATION OF MANAGEMENT FOR THIS VESSEL SINCE	29/03/2003
6	PSC PERFORMANCE (DETENTIONS / INSPECTIONS) FOR THE LAST 36 MONTHS	100%
7	PSC PERFORMANCE (DEFICIENCIES / INSPECTIONS) FOR THE LAST 36 MONTHS	100%
8	PSC PERFORMANCE (ISM DEFICIENCIES / INSPECTIONS) FOR THE LAST 36 MONTHS	100%
9	HIGH RISK SHIP ACCORDING TO PARIS MOU	NO
10	HAS THE VESSEL BEEN BANNED BY US COAST GUARD OR PARIS MOU?	NO

PREVIOUS STS RECORDS FOR NOMINATED VESSEL TANKER OPERATOR

1	SAMPLE OF AVAILABLE STS ASSESSMENTS AT OSIS FOR AXXXXXXXXXXX	SIGNIFICANT
2	AXXX ShXXXXXXX STS PERMORMANCE INDICATORS	100%
3	AEXXXShXXXXXXX STS DEFICIENCY INDICATORS	100%

PAST OSIS STS PERFORMANCE RECORDS FOR EAGLE TANKER

1	SAMPLE OF AVAILABLE STS ASSESSMENT RECORDS AT OSIS DATABASE	SMALL
2	EAGLE TANKER STS PERFORMANCE INDICATOR	100%
3	EAGLE TANKER STS DEFICIENCY INDICATOR	100%
3.1	% OF POSISTIVE ASSESSMENT ON MANOEUVRABILITY	100%
3.2	% OF POSITIVE ASSESSMENT ON MOORING LINES	100%
3.3	% OF POSITIVE ASSESSMENT ON CHOCKS / FAIRLEADERS / WINDLASSES	100%
3.4	% OF POSITIVE ASSESSMENT ON MANIFOLD ARRANGEMENT	100%
3.5	% OF POSITIVE ASSESSMENT ON CREW PERFORMANCE	100%
3.6	% OF POSITIVE ASSESSMENT ON ENGINE PERFORMANCE	100%

PAST STS STATISTICS FOR OSIS FOR GALVESTON

		LAST 12 MONTHS	LAST 24 MONTHS	LAST 36 MONTHS
1	No. OF STS OPERATIONS	47	67	87
2	No. OF REVERSE LIGHTERING OPERATIONS	1	3	16
3	No. OF STS WITH SAME VESSEL COMBINATION (VLCC-Aframax)	33	45	47

OBSERVED INCIDENTS FOR GALVESTON

4	No. OF TOTAL OBSERVED MAJOR INCIDENTS FOR ALL VESSELS TYPES	0	0	0
5	No. OF TOTAL OBSERVED MINOR INCIDENTS FOR ALL VESSELS TYPES	0	0	0
6	No. OF TOTAL OBSERVED MAJOR INCIDENTS FOR (VLCC-Aframax)	0	0	0
7	No. OF TOTAL OBSERVED MINOR INCIDENTS FOR (VLCC-Aframax)	0	0	0
8	TOTAL NUMBER OF REPORTED NEAR MISSES	0	0	0

VESSEL PERFORMANCE STATISTICS FOR GALVESTON

9	AVERAGE STS PERFORMANCE INDICATOR FOR ALL PAST PARTICIPATING VESSELS	98%
10	AVERAGE POSITIVE ASSESSMENTS FOR FENDERS FOR ALL SERVICE PROVIDERS	100%
11	AVERAGE POSITIVE ASSESSMENTS FOR HOSES FOR ALL SERVICE PROVIDERS	100%

WEATHER STATISTICS FOR GALVESTON

12	AVERAGE MEAN WAVE HEIGHT FOR THIS PERIOD	0.9
13	WORST WAVE HEIGHT	2.5

Vessel Particulars

Vessel Name / (IMO number)	ALxx xxxR / (929xxx0)	NSxxxxO / (941xx59)
Vessel Type	OIL	OIL
Loa / Beam / Depth [m]	249.9 / 44 / 21	274.5 / 48.04 / 23.7
Displacement (Ballast / Summer) [mt]	59257 / 133356.1	79974 / 182568
Freeboard (Ballast / Summer) [m]	12.908 / 5.216	15.74 / 6.72
Parallel body (Ballast / Summer) [m]	116 / 141.45	124 / 145
Distance (Bridge front to center of manifold) [m]	81.54	91.5
Distance (Manifold to ship side) [m]	4600	4600
Manifold height above BL (Ballast / Summer) [m]	16.115 / 8.316	17.84 / 8.82

Fender Selection (condition during approaching)

Manoeuvring Vessel	ALxxxxxR / 9291250
Discharging Vessel	NSxxxxxO / 9412359
Displacement of NS BRAVO [mt]	182568 (FULLY LOADED CONDITION)
Displacement of ALMI STAR [mt]	59257 (BALLAST CONDITION)
Parallel body of NS BRAVO [m]	145
Parallel body of ALMI STAR [m]	116
Type of STS operation	Normal Lightering (Same Size Vessels)

OCIMF simplified formula * According to Table 9.1 of OCIMF STS Guidelines (2013 Edition) | 1 tonne m = 9.8066 kNm

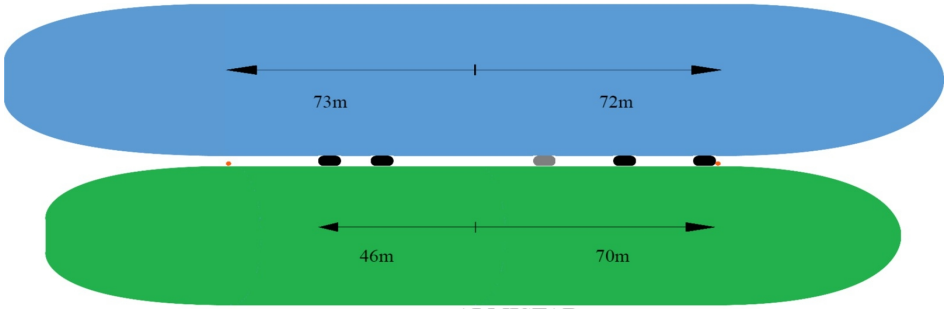
Coefficient C	89473
Proposed Fendering System [m]	4 Pneumatic 50KPa, 3.3 x 6.5
Maximum berthing velocity [m/s]	0.15
Berthing Energy (BE) * / Guarantied Energy Absorption (GEA) [kNm]	530 / 1814
Safety Factor (GEA / BE)	3.4

YOKOHAMA Guidelines for PNEUMATIC 50 KPa (berthing energy method)

Weather Condition	Calm	Moderate	Heavy
Wave Height [m] / Sea State	0 - 1.25m / 0 - 3	1.25 - 2.5m / 4	2.5 - 4.0m / 5
Proposed Fendering System [m]	4 of 3.3 x 6.5	5 of 3.3 x 6.5	4 of 4.5 x 9
Maximum Berthing Velocity [m/s]	0.207	0.26	0.313
Berthing Energy (BE) / (GEA) [kNm]	991 / 1814	1564 / 1814	2266 / 4752
Safety Factor (GEA / BE)	1.4	1.2	2.1

Notice: For in port operations, POAC may propose alternative fender configurations.

Parallel bodies of vessels during approaching

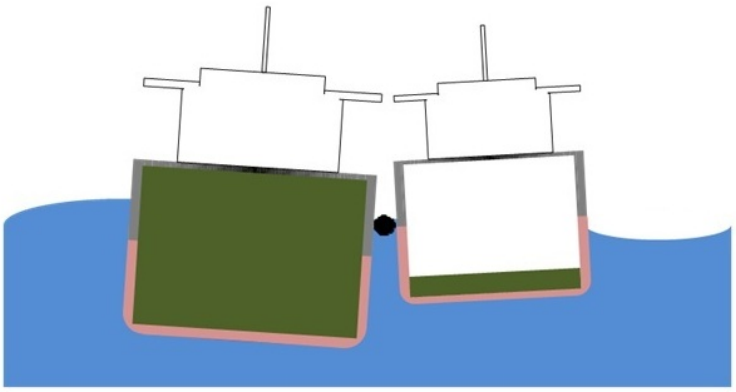


Notes for positioning of primary and secondary fenders:

1. Paragraph 9.1.1 of OCIMF STS guidelines (2013 edition) should be considered.
2. Fender positioning should always be agreed between the POAC and the masters, on the basis of OCIMF STS guidelines.
3. The height of secondary fenders should be monitored and adjusted accordingly.
4. The alignment or not of the centers of manifolds should be taken into account.

ROLLING ANALYSIS

DURING THE STS OPERATION IT IS ESSENTIAL FOR THE MASTER TO BE AWARE OF THE CRITICAL ROLLING ANGLES WHERE THE PROBABILITY OF VESSEL CONTACT IS INCREASED AS SHOWN IN THE FOLLOWING FIGURE



THE FOLLOWING TABLES DEPICT ROLLING ANGLES AT WHICH THE PROBABILITY OF VESSEL CONTACT IS INCREASED

CUSTOMER TANKER

		SWELL[m]				
		0	1	2	3	4
1	5.22	-	-	-	-	-
2	7.4	-	-	-	-	-
3	9.58	-	-	-	-	8°
4	11.76	-	-	11°	7°	6°
5	13.94	-	9°	7°	6°	5°
6	16.12	8°	7°	6°	5°	4°
7	18.3	7°	6°	5°	4°	4°

Eagle TANKER

		SWELL[m]				
		0	1	2	3	4
1	6.54	-	-	-	-	-
2	7.66	-	-	-	-	9°
3	8.78	-	-	-	11°	7°
4	9.9	-	-	12°	8°	6°
5	11.02	-	13°	9°	7°	6°
6	12.14	14°	10°	8°	6°	5°
7	13.26	10°	8°	7°	6°	5°

- HIGHLY UNLIKELY TO HAVE VESSEL CONTACT
- POSSIBLE CONTACT IN HIGH ROLL ANGLES
- POSSIBLE CONTACT IN SMALL ROLL ANGLES

NOTE

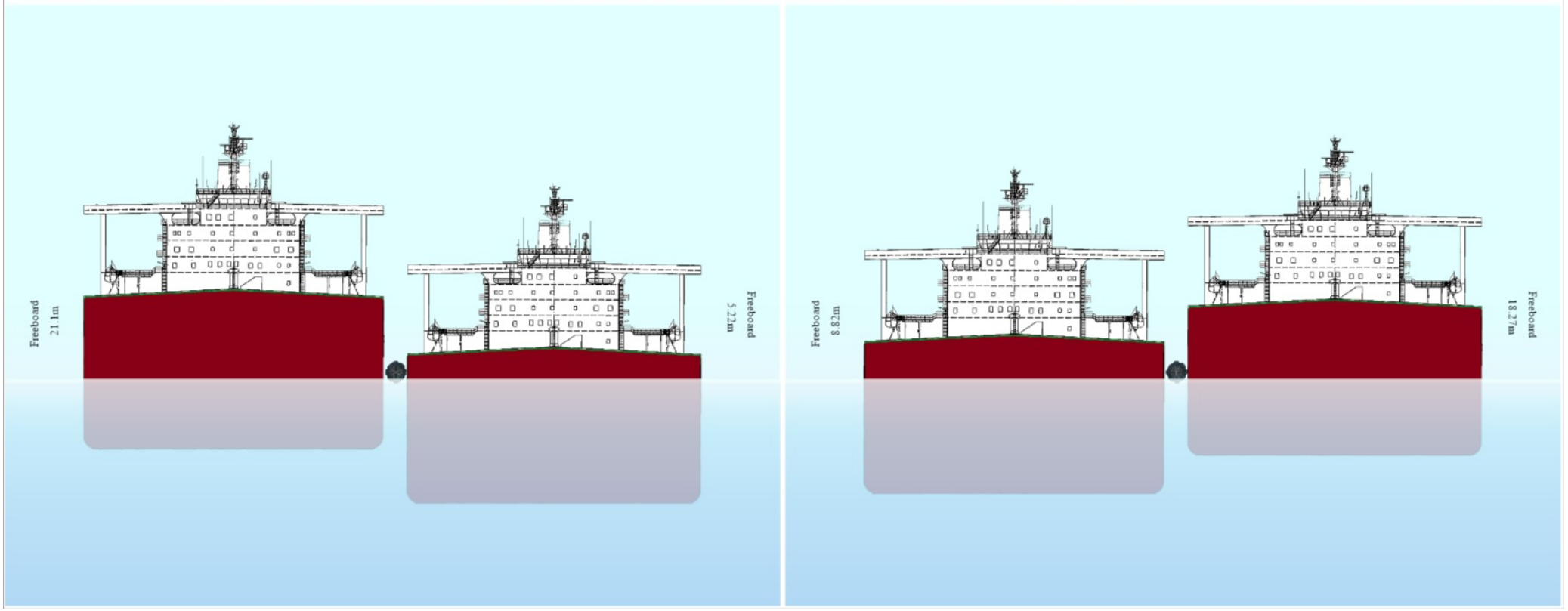
1 MASTER OF MT ATHENIAN HARMONY HAS TO ENSURE THAT ROLLING ANGLES WILL REMAIN BELOW THE ONES SHOWN ON ABOVE TABLES. IN CASE ROLLING ANGLES WITH RESPECT TO SWELL CONDITIONS ARE WITHIN THE RED AREA, THEN CAREFUL CONSIDERATION SHOULD BE GIVEN IN SUSPENDING THE STS OPERATION.

FREEBOARD ASSESSMENT

BEFORE OPERATION (vessel 1 - vessel 2)

AFTER OPERATION (vessel 1 - vessel 2)

** Actual displacement for both vessels are unknown. In order to receive accurate assessment, please provide: actual displacement before STS operation, cargo to be transferred and discharging vessel.*



PARTICIPATING VESSEL DETAILS

GENERAL DATA FOR EaXXXXn IMO No: 9250XXXXXX

1	TYPE OF VESSEL / TYPE OF HULL	OIL TANKER / DOUBLE HULL
2	DATE DELIVERED / VESSEL'S AGE	09-05-2003 / 10 YEARS AND 8 MONTHS
3	BUILDER	IMABARI SHIPBUILDING CO. LTD.
4	NATIONALITY OF MASTER	UKRAINIAN
5	NATIONALITY OF OFFICERS	UKRAINIAN, FILIPINO, MALAYSIAN, BANGLADESHI, INDIAN
6	NATIONALITY OF CREW	INDIAN, FILIPINO, MALAYSIAN

CLASSIFICATION DETAILS

1	CLASSIFICATION SOCIETY	AMERICAN BUREAU OF SHIPPING (USA)
2	MEMBERS OF IACS?	YES
3	PERFORMANCE LEVEL ACCORDING TO PARIS MOU	HIGH
4	CERTIFICATE OF CLASS EXPIRES, FROM CLASS RECORDS	2018-05-08
5	DATE NEXT SPECIAL SURVEY DUE, FROM CLASS RECORDS	2018-05-08 (4 YEARS AND 3 MONTHS)
6	DATE NEXT DRYDOCK DUE, FROM CLASS RECORDS	2016-06-03 (2 YEARS AND 4 MONTHS)
7	CLASS CONDITION / RECOMMENDATIONS (IF ANY)	NO
8	STATUTORY CONDITION	NO
9	DOES ANY OF THE CONDITIONS AS ABOVE 7,8 AFFECT THE STS PERFORMANCE OF Eagle Trenton	NO

INSURANCE DATA

1	P&I CLUB	UK P&I CLUB
2	MEMBER OF THE IG P&I CLUBS	YES
2	COVERAGE (POLLUTION LIABILITY)	1000000000 USD

STS COMPATIBILITY DATA

1	MOORING WIRES	FORECASTLE: **4** MAIN DECK: **6** POOP DECK: **6**
2	WIRE TAILS	FORECASTLE: **4** MAIN DECK: **6** POOP DECK: **6**
3	MOORING ROPES	FORECASTLE: **0** MAIN DECK: **0** POOP DECK: **0**
4	OTHER MOORING LINES	FORECASTLE: **2** MAIN DECK: **4** POOP DECK: **2**
5	CLOSED CHOCKS / FAIRLEADS	FORECASTLE: **18** MAIN DECK: **28** POOP DECK: **11**

PORT STATE CONTROL DATA

1	DATE AND PORT OF LAST PSC INSPECTION	30-05-2013, Setubal, Portugal
2	OUTSTANDING DEFICIENCIES	NONE
3	TOTAL PSC INSPECTIONS DURING THE LAST 36 MONTHS*	6
4	TOTAL DEFICIENCIES / ISM RELATED DEFICIENCIES*	0 / 0
5	TOTAL DETENTIONS*	0
6	SIGNIFICANT INCIDENT DURING THE PAST 12 MONTHS	POLLUTION: NO, NONE GROUNDING: NO , NONE SERIOUS CASUALTY: NO , NONE COLLISION: NO , NONE

AET SHIPMANAGEMENT PTE LTD PAST PSC DATA

1	DOC COMPANY IS	AEXXXXXXXXX
2	TOTAL FLEET PSC INSPECTIONS DURING THE LAST 36 MONTHS	170
3	FLEET PSC DETENTIONS/INSPECTIONS FOR THE LAST 36 MONTHS	0%
4	TOTAL DETENTIONS	0