



Compliance Systems, Inc.

**Final Environmental Audit  
M/T Estia**

**Conducted May 21-25, 2011  
Underway Paldiski, Estonia to Skagen, Denmark**

In the matter of:

**United States of America**

**v.**

**Ionia Management, S.A.  
Case No. 3:07CR134 (JBA)**

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# Compliance Systems, Inc.

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June 15, 2011

**M/T ESTIA  
Final Environmental Audit  
Conducted Underway between Estonia and Denmark  
May 21-25, 2011**

**Preliminary**

The undersigned conducted a Final Environmental Audit aboard the M/T Estia, IMO No. 9327035, while the vessel was moored at Alexela Terminal Berth #7, Paldiski Lounasadam, Estonia and later underway from Paldiski to an anchorage off of Skagen, Denmark, enroute to West Africa. I joined the vessel at Paldiski, Estonia.

Upon boarding, the vessel was loading unleaded gasoline. I boarded the vessel at 1445 on 21 May 2011. The vessel was scheduled to depart the pier the following day. The opening meeting and documentation check and interviews with some staff were carried out on 21 May 2011. The physical inspections and testing of the equipment was carried out when the vessel was underway, while operating under normal conditions. The closing meeting was held prior to disembarkation with the CCM aboard. I, along with the Ionia shore side personnel disembarked the vessel at 1430 on May 25, 2011.

The MT Estia is a crude oil and product carrier of 42,048 gross tons, built by New Century Ship Building Co. Ltd., Xin Giang, China and delivered on April 12, 2007. The vessel has a total capacity of 84,497 m<sup>3</sup> at 98% load condition. The vessel is powered by MAN-B&W 5S60MC-C with an output of M.C.R. 11,300KW at 105 RPM giving a service speed of 14.5 knots. Vessel particulars are attached. This vessel is a sister ship of the MT Ploutos.

**Audit participants included:**

Evangelos Tournaris, Master  
Ionnis Varthalitis, Chief Engineer  
Rogelio Sari, Chief Officer  
Jaime Alibuyog, Second Engineer  
Dan Grafil, Third Engineer  
Nicanor Umali, Electrician

In addition to the above, George Karagiorgis, Corporate Compliance Manager (CCM) for the company, was present during the audit. Also, the company electrician was onboard the vessel. They both arrived onboard the vessel on May 16, 2011. Also, various crewmembers from all



departments were interviewed at different times with regard to their duties related to environmental aspects of ship operation and awareness.

The schedule of the initial audit was as follows:

May 21, 2011

1445	Arrive aboard vessel, moored at Paldiski Lounasadam, Estonia
1450-1500	Met with Captain. Set up meeting with senior officers
1500-1515	Opening Meeting with Master, Chief Officer (C/O), Chief Engineer (C/E), and Second Engineer (2/E) and CCM.
1515-1700	Review of Master Env Review (ENV 014), certificates, fleet engineering surveys (ENV 015), Internal Environmental Audit (ENV 016), SOPEP, and VRP.
1700-1730	Dinner with CCM: discussions about audit
1730-2000	Review of Ballast Water Management plan and documents.
2000	Retire for evening.

May 22, 2011

0730-0800	Breakfast.
0800-0900	Review safety committee minutes, observed Anonymous Reporting poster. Review of EMS
0900- 925	On bridge observing vessel underway from pier.
0925-1100	Reviewed ENV 024, ENV 003, ENV 004, Garbage Record Book (GRB) and Garbage Management Plan (GMP), garbage receipts, ENV 010, reviewed handover notes. Reviewed ENV 011, ENV 012, ENV 014, ENV 015, ENV 016, ENV 017, ENV 018A, ENV 018B, ENV 20, and ENV 21.
1100-1230	In engine room. Observed daily tank sounding. Inspected seals on piping in engine room, observed engine room while vessel under way. Inspected steering gear flat. Inspected OWS and associated piping.
1100	Completed maneuvers for departure from pier.
1230-1300	Lunch
1300-1800	In engine room. Observed attempt for monthly operational test of OWS using test fluid. Reviewed critical pollution prevention spare parts. Inspected STP and associated chemicals. Inspected opened Clean BHT and observed samples taken of BHT and bilge wells. Witnessed starting of incinerator burning sludge. Reviewed computer PMS for pollution prevention equipment. Reviewed ORB.
1800-1830	Dinner
1830-1930	Reviewed OWS/OCM/Incinerator/STP manuals. Reviewed Sounding Log.
1930	Retire for evening

May 23, 2011

0730-0800	Breakfast.
0800-1000	Observed incinerator being shut down and observed daily tank sounding. Observed test of OWS three way valve and alarm. OWS one hour operational test started.



**M/T Estia Report of Final Environmental Audit Conducted May 21-25, 2011**

1000-1040 Went into Cargo pump room with C/O to observe condition of space and to see ODME sampling line. C/O conducted satisfactory test of ODME.  
1040-1100 Observed shut down of OWS for hour operational test.  
1100-1130 Conducted deck with C/O including inspection of deck garbage storage, flexible hose storage and SOPEP locker.  
1130-1215 Review of EMS and notes  
1215 -1230 Lunch  
1230-1300 Review of notes  
1300-1400 Review of training and drill records.  
1400-1530 Review of EMS and began audit write up.  
1530-1600 Observed SOPEP drill on starboard side cargo manifold  
1600-1615 Went into Cargo pump room to observe installed ODME seals  
1615-1815 Continued audit review and write up.  
1815-1845 Dinner.  
1845-1915 Discussed list of deficiencies with CCM  
1915-2000 Reviewed VGP/NPDES weekly and quarterly inspections. Reviewed last internal environmental audit.  
2000 Retire for evening

**May 24, 2011**

0730-0800 Breakfast.  
0800-1000 In engine room. Observed sounding of the sludge tanks and compared this to SWOMS.  
1000-1200 Continued audit write up.  
1200-1230 Lunch  
1300-1430 Review of notes and EMM.  
1430-1830 Review of Cargo Record book and receipts. Review of PMS for BHT cleaning, Master Environmental Review meeting notes.  
1830-1900 Dinner  
1900-2000 Observed sounding of tanks. Entered data into report.  
2000 Retired for the evening.

**May 25, 2011**

0730-0800 Breakfast.  
0800-1000 In engine room. Observed sounding of the sludge tanks and compared this to SWOMS.  
1000-1200 Continued audit write up.  
1200-1230 Lunch  
1300-1430 Review of notes and EMM.  
1430 Departed vessel.

The audit was conducted in accordance with Attachment A, Section B of the Special Master Appointment and Scope of Work pursuant to the criminal case, United States of America v. Ionia Management S. A., Criminal No.3: CR134 (JBA). The audit process consisted of a review of Safety Management System (SMS) and Environmental Management System (EMS) documents; records and procedures related to environmental matters; MARPOL required logs and records; inspection and testing of vessel waste handling equipment, including the oily water



separator (OWS), incinerator, sewage treatment plant (STP); and interviews with vessel personnel.

To implement the EMS, Ionia Management has recently developed an Environmental Management Manual (EMM), which has been placed aboard. The EMM contains environmental policies and procedures in alignment with the Scope of Work, as well as additional environmental procedures, developed by Ionia Management. In addition, environmental procedures are also contained in the vessel's SMS Manual. Ionia Management is also certified for ISO 14001/2004, DNV certificate No. 24257-2008-AE-HRV-RvA, issued on April 08, 2008 with expiry on April 08, 2011.

Overall, I found the environmental procedures and requirements to be well implemented. I found the officers and crew to be very cooperative and positive throughout the audit. Senior officers, including the Master, C/E. and C/O were knowledgeable of the Scope of Work requirements and the EMM and appeared fully committed to the purpose and philosophy of the EMM. This was clearly demonstrated throughout my audit and during discussions with these officers. A previous ongoing audit on this vessel was conducted on December 3-4, 2010.

Following are my observations and comments. They are supported by the attached EMS Audit Checklist and the enclosures to this report. The observations are separated into two categories - those with recommendations and those without. Many of the recommendations relate to improvement of the existing EMS and do not necessarily reflect deficiencies or non-conformities with the requirements of the Scope of Work. The second category of Observations is primarily included in the audit report to provide an understanding of the functionality of the EMS aboard.

#### **Observations with Recommendations**

1. Section 5.16 of the EMM states that the OCM sampling line must be painted orange. Some of this piping was not painted orange. See photos.
2. Section 5.17 of the EMM has a very thorough explanation of how the OWS is to be tested on a monthly basis. There have been entries in the ORB stating these tests have been conducted on a monthly basis. While onboard the vessel it was identified that the engineers cannot do the test as described in the EMM. It is recommended the EMM be modified to describe how this test can be successfully accomplished on this vessel. This vessel does not have the proper piping arrangement to allow for in port testing. See photos.
3. The ongoing audit found that "all the staff on board did not go through the pre-joining training in Environmental Awareness. It is recommended that the management develop specific training programs for the manning centers in Philippines with copies of training material on board and copies of certificates for the crew trained prior joining the vessel." During this audit the pre joining Environmental Awareness training stated it covered ISO 14001. It did not state that training was conducted specific to Ionia's EMM. It is recommended that such training specifically state it addresses Ionia's EMM. See attached.



4. SWOMS data for tank soundings was compared against manual tank soundings which I observed while I was on board the vessel. Please note that the F.O. Purifier Sludge tank had a difference between the SWOMS and manual soundings of between 10-11%. It is recommended this be investigated. The following table shows the results:

Tank	Cap. (m <sup>3</sup> )	Manual (cm)	Manual (m <sup>3</sup> )	SWOMS (cm)	SWOMS (m <sup>3</sup> )	% Diff. (m <sup>3</sup> )
Clean Bilge	32.21	95	10.22	91	9.81	1.27
Dirty Bilge	32.49	103	12.17	97	11.41	2.34
Bilge Oil	11.89	5	0.035	8	0.05	0.13
Incinerator	2.14	144	1.91	143	1.94	1.40
FO Sludge	11.89	37	0.68	25	0.36	2.69
LO Purif. Sludge	4.56	6	0.38	9	0.55	3.73
FO Purif. Sludge	7.98	18	1.76	9	0.97	9.90

Tank	Cap. (m <sup>3</sup> )	Manual (cm)	Manual (m <sup>3</sup> )	SWOMS (cm)	SWOMS (m <sup>3</sup> )	% Diff. (m <sup>3</sup> )
Clean Bilge	32.21	106	12.13	113	12.92	2.45
Dirty Bilge	32.49	104	12.33	96	11.23	3.39
Bilge Oil	11.89	6	0.04	8	0.05	0.08
Incinerator	2.14	101	1.38	114	1.49	5.12
FO Sludge	11.89	36	0.65	24	0.34	3.11
LO Purif. Sludge	4.56	5	0.33	9	0.55	4.82
FO Purif. Sludge	7.98	19	1.85	9	0.96	11.15

Tank	Cap. (m <sup>3</sup> )	Manual (cm)	Manual (m <sup>3</sup> )	SWOMS (cm)	SWOMS (m <sup>3</sup> )	% Diff. (m <sup>3</sup> )
Clean Bilge	32.21	76	7.64	78	7.71	0.22
Dirty Bilge	32.49	105	12.49	98	11.60	2.74
Bilge Oil	11.89	7	0.045	9	0.05	0.04
Incinerator	2.14	107	1.40	115	1.52	5.59
FO Sludge	11.89	124	4.53	114	4.09	3.70
LO Purif. Sludge	4.56	5	0.33	9	0.55	4.82
FO Purif. Sludge	7.98	20	1.93	10	1.05	11.03



Tank	Cap. (m <sup>3</sup> )	Manual (cm)	Manual (m <sup>3</sup> )	SWOM S (cm)	SWOMS (m <sup>3</sup> )	% Diff. (m <sup>3</sup> )
Clean Bilge	32.21	75	7.50	78	7.63	0.40
Dirty Bilge	32.49	106	12.65	99	11.67	3.02%
Bilge Oil	11.89	7	0.045	8	0.05	0.04
Incinerator	2.14	107	1.40	116	1.52	5.59
FO Sludge	11.89	126	4.65	114	4.10	4.63
LO Purif. Sludge	4.56	6	0.38	9	0.55	3.73
FO Purif. Sludge	7.98	20	1.93	11	1.10	10.40

Tank	Cap. (m <sup>3</sup> )	Manual (cm)	Manual (m <sup>3</sup> )	SWOM S (cm)	SWOMS (m <sup>3</sup> )	% Diff. (m <sup>3</sup> )
Clean Bilge	32.21	74	7.37	78	7.69	0.99
Dirty Bilge	32.49	106	12.65	99	11.64	3.11
Bilge Oil	11.89	6	0.04	8	0.05	0.08
Incinerator	2.14	112	1.47	119	1.58	5.12
FO Sludge	11.89	123	4.47	114	4.11	3.11
LO Purif. Sludge	4.56	6	0.43	9	0.55	2.63
FO Purif. Sludge	7.98	19	1.84	9	0.98	10.78

5. The previous ongoing audit suggested that for form ENV 023 since information is available daily, *"consideration should be given to amending the form to require daily comparisons and if discrepancies found are large, Ionia Management should be informed. (The daily sounding book forms are sent to management on a monthly basis)."* This recommendation does not appear to have been enacted by this vessel. Furthermore, this form is being filled out daily; however, all of the tanks being recorded by the enviro-logger are not being entered into the form. There are a total of seven tanks and three bilge wells being recorded in the SWOMS. Only four tanks and three bilge wells are being recorded on this form. It is recommended the C/E include all seven tanks being recorded in the SWOMS be placed on the form. See attached.
6. The Master's Handover Notes (ENV 23 A) did not have an inventory of the spare seals on board the vessel. Item A4 of the form requires such an inventory. It is recommended this be done.
7. Section 5.21 of the EMM states that "Seals with unique identification numbers shall be placed on the flanges on the vessel's ODME sample lines and flow connections." Only one seal was placed on one flange. All of the other flanges did not have seals. This was resolved before I left the vessel. See photos.



8. The EMM states that the OWS source tank be cleaned every six months and logged in the Oil Record Book. The latest entry in the ORB related to cleaning of the BHT was on October 19, 2010. There is no entry in the ORB for March, April or May 2010 related to the cleaning of the ORB.
9. The Fleet Engineering Surveys (form ENV 015) were reviewed. Most of them said the exact same thing with very little change. It is highly recommended the engineers be reminded and encouraged to submit thoughtful and original ideas, which provide helpful and constructive information to the company management.
10. Section 5.4 of the EMM states that "A brightly colored sign with three inch letters shall be permanently fixed nearby. The sign shall read: "Bilge System Piping Crossover – Emergency Use Only" There is such a sign but the letters are not three inches in height. They are about 1 to 1.5 inches in height. It is recommended a sign be installed near the valves with the proper size letters. See photos.
11. One flexible hoses larger than 40 mm in diameter without labels were found above the chemical store in the steering gear room. The hose was added to the flexible hose inventory. A flexible hose inventory is kept, with hoses stored in the mid-ship house and forecabin. There are labels to identify each hose. The flexible hose inventory was last done on May 18, 2011. It was signed by the C/O and Master, but was not signed by the C/E. Section 5.15 of the EMM requires both the C/O and C/E to maintain the inventory. It is recommended all flexible hoses over 40 mm in diameter on board the vessel be entered into this inventory and signed by both the C/O and C/E, as required by the EMM. See attached and photos.
12. On the inlet line to the OWS and on the discharge side of the OWS there were several pipe unions which did not have seals on them. Also, there was a blank flange after the OWS, but before the three way valve. This did not have a seal on it. Before I departed the vessel all of above had seals installed on them, as required by Section 5.6 of the EMM. See photos.
13. I observed various engine room pumps and machinery in operation during the period of time the vessel was underway. The engine room was noted to have several leaks on pumps and on the main engine. Some oil or oily residue was noted in the bilges or bilge wells. The bilge wells contained a decent quantity of water. Although it appeared the engineers were trying to keep the engine room clean, it was obvious there were many leaks throughout the engine room. I observed a leak on the #2 Main SW Pump packing gland. I also saw a fuel leak on the fuel oil transfer pump. For such a new vessel the condition of the engine room suggested it was an older vessel. See photos.
14. While inspecting the sewage treatment plant (STP) it was determined the vessel only had enough chlorine tablets (Cloro 90) for less than a month, which would not get the vessel to the next port in West Africa. According to the CCM the vessel was to receive more such tablets at Skagen, Denmark. It is recommended the vessel have the necessary quantity of chemicals for the STP at all times.



15. According to documentation on board the vessel the SWOMS had a broken data card and was unable to do automatic transmissions from Jan 2011 to 25 Mar 2011 when it was repaired. See attached.
16. On 19 May 2011 the manufacturer of the SWOMS came on board the vessel and updated software and fixed some issues onboard. In his report he states "Attended to troubleshoot the problem with the overboard valve function, which was said to position the valve in the open/overboard position when above 15-ppm." When I asked the CCM about this he told me the technician did not understand and put the wrong information in the report. The CCM sent an email to resolve this and the technician resent a new message which still had similar meaning/statements in the message. Print outs of the SWOMS before 19 May 2011 were reviewed and the printouts shows the OCM going above 15ppm and the OWS valves closing as required. Recommend this issue be further investigated and the proper operation of the three-way valve be verified. See attached.
17. The capacity of the OWS is 5 m3/hour, which appears more than adequate for the currently generated machinery space effluents. According to the ORB, the last three operations of the OWS were as follows:

05/18/11	1.26 m3 processed	1146- 1156	7.59 m3/hr
05/13/11	1.5 m3 processed	0809- 0924	1.2 m3/hr
04/22/11	13.35 m3 processed	0745- 1532	1.72 m3/hr

When asked why the OWS operated above its 5.0 m3/hr rating the C/E and CCM stated it was related to the draft of the vessel. This did not seem to make sense to me. The vessel is equipped with a means to transfer E/R bilge water and sludge to cargo slop tanks. Section 3.2.4 of the Supplement to the IOPP Certificate allows this. See attached ORB excerpts. Recommend the disparity in thru-put and the low thru-put be further investigated to ensure the OWS is properly functioning.

#### Observations Without Recommendations

1. A previous audit on a vessel in the Ionia fleet was found to have steam lines which are on the high and low sea chest. These flanges could be removed to install a "magic pipe." During this past audit it was recommended these steam lines have seals installed to ensure they are not used improperly. Similar lines were found on this vessel with the seals already installed. See photos.
2. As per EMS Section 5.16 it is required that "An entry is made in the Engine Room Log Book stating that the Officer has been properly trained in the operation of the Oily Water Separator." A similar entry is required concerning the incinerator. Such entries were seen made for the 2/E in the E/R log book.
3. The vessel maintains a Sounding Log as required by Section IV and Attachment B to the Scope of Work and Section 13.3 of the EMM. Excerpts of the Log for part of March, April, and part of May 2011 are attached. The remarks section of the sounding log has been returned to the form. I observed the morning soundings on four of the days I was



onboard the vessel. The 3/O went with the oiler and appeared to know what he was doing. Furthermore, the oiler is taking three soundings of each tank to ensure a proper sounding has been conducted as required by the EMM. See attached.

4. A Master's Environmental Review must be conducted with a meeting of the officers on board. It is clear that such a meeting was conducted on 07 May 2011 to discuss the Master's Environmental Review conducted on 25 Apr 11. This was incorporated into the Onboard Safety Meeting Minutes. See attached.
5. As per the Scope of Work and Section 13.3 of the EMM it is preferable to have sample bottles provided by the laboratory on board for taking samples of the BHT, OWS and bilge wells while an external auditor is on board. These sample bottles were on board during this audit. Samples were taken in the presence of the IEC auditor and placed in the proper containers.
6. The ODME is tested monthly by the C/O and recorded in the Cargo Record Book as required by the EMM. During the audit, the ODME was tested by the C/O in my presence. Instructions contained in the manufacturer's manual were used to perform the tests, with values for ship speed, PPM, and flow rate manually entered. Since a blank flange is installed in the ODME discharge line, an actual discharge test could not be performed. It should be noted that the vessel does not discharge its slop tanks at sea. All slops from tank cleaning are sent ashore. The ORB Part II verified this. Accordingly, the ODME was tested based on the manual value input. The high PPM and 30 liters/nm exceeded were tested. The C/O was very competent in the ODME operation and knowledgeable of the discharge requirements.
7. A test of the OWS was conducted while the vessel was underway. The test was begun at 0946 LT (0746 GMT) on 23 May 2011. The sounding of the Clean BHT (CBHT) was 105 cm which equates to 11.97 m<sup>3</sup>. The envirollogger recorded the sounding as 112 cm and 12.78 m<sup>3</sup>. The OWS ran from 0946 to 1046. The ending sounding of the CBHT was 72 cm which equates to 7.10 m<sup>3</sup>. The difference between the CBHT soundings was 4.87 m<sup>3</sup>. Therefore the hourly rate was 4.87 m<sup>3</sup>/hr. The envirollogger's reading was 77 cm and 7.51 m<sup>3</sup>. This would be an hourly rate of 5.27 m<sup>3</sup>/hr. See attached.
8. An Environmental Performance Report, Form ENV 004, is submitted to the Ionia office on a monthly basis. Included on the form are garbage and hazardous waste disposal quantities. See attached sample report.
9. Vessel personnel are carrying out weekly and quarterly inspections to comply with the requirements of the EPA's recently adopted National Pollutant Discharge Elimination System (NPDES) Vessel General Permit. There is evidence aboard indicating the Notice of Intent (NOI) was filed with the EPA and there is a copy of the EPA letter acknowledging coverage under the VGP.
10. The vessel has a Deckma OCM, model OMD 2005, which conforms to requirements of MEPC 107(49). The OCM was last calibrated on 30 March 2011 (copy of certificate attached). The Scope of Work requires recalibration at least annually, with copies of the certificates maintained on board. See attached.



11. The vessel had all the manuals of equipment related to waste stream and type test certificates. Schematic diagrams and pipeline diagrams were on board. Attached is a copy of the bilge piping diagram.

Overall condition of the vessel and waste management equipment is very good. As noted previously, despite the number of Observations with Recommendations noted above, the Scope of Work and EMM requirements are well implemented on board. All the personnel on board cooperated fully during the audit and were sincerely interested and very positive in complying with the environmental procedures.

Respectfully submitted by:

Bradford J. Crowley  
Auditor

**Enclosures:**

1. Completed Environmental Checklist
2. Ship's Particulars
3. Crew List
4. Oil Record Book Part I Excerpt (10 pages)
5. Oil Record Book Part II Excerpts (7 pages)
6. OCM Calibration Certificate dated 30 Mar 2011
7. Enviro-Logger Service Report dated 19 May 2011
8. Sounding Log Excerpt (6 pages)
9. Training Program 2011
10. Safety Committee Meeting Minutes 07 May 2011 (5 pages)
11. Bilge Water Piping System
12. EMS familiarization form for C/E ENV 18B (2 pages)
13. Garbage Record Book (3 pages)
14. Garbage receipt dated 20 Mar 2011 (3 pages)
15. Vessel's Monthly Environmental report ENV 004 for March 2011
16. Shore side EMS training for C/O Rogelio Sari dtd 15 Apr 2009
17. Inventory of Deck and E/R Flexible Hoses dated 18 May 2011
18. C/E Weekly Report (ENV 009) for 15 May 2011 (2 pages)
19. EEOI Calculation (ENV 024)
20. Envirologger printout for OWS operation on 23 May 2011 (3 pages)
21. Work report from Vigilant Marine Systems, LLC dated 19 May 2011
22. Photos



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## Environmental Audit Checklist

This document and all of its contents is confidential. It should not be copied, retained, or distributed unless authorized by Compliance Systems, Inc.

### Contents:

<input checked="" type="checkbox"/> 1. Vessel Details	<input checked="" type="checkbox"/> 9. Oil Water Separator	<input type="checkbox"/> 17. Waste /Sludge Oil Incineration
<input checked="" type="checkbox"/> 2. Audits	<input checked="" type="checkbox"/> 10. Sounding Log	<input type="checkbox"/> 18. Sewage Waste Stream
<input checked="" type="checkbox"/> 3. Certificates	<input checked="" type="checkbox"/> 11. Oil Transfer Procedures	<input type="checkbox"/> 19. Fuel Oil / Lube Oil Purifier
<input checked="" type="checkbox"/> 4. SOPEP Manual	<input type="checkbox"/> 12. Standard Discharge Connection	<input type="checkbox"/> 19. Hazardous Waste
<input type="checkbox"/> 5. VRP's	<input type="checkbox"/> 13. Overflow Discharge Containment	<input checked="" type="checkbox"/> 20. SOPEP Gear
<input checked="" type="checkbox"/> 6. Drills, Training & Familiarization	<input checked="" type="checkbox"/> 14. Prohibited Oil Spaces & Oil Accumulation Spaces	<input type="checkbox"/> 21. Ballast Water Management
<input type="checkbox"/> 7. Oil Record Book	<input checked="" type="checkbox"/> 15. Bilge Water Management	<input type="checkbox"/> 22. Additional Environmental Items
<input checked="" type="checkbox"/> 8. Garbage Management Plan	<input checked="" type="checkbox"/> 16. Seal Management Program	<input type="checkbox"/> 23. General Comments and Observations

### 1. Vessel Details:

Vessel Name	ESTIA	IMO#:	
Ports/Voyage	Peldiski Louisaalom	Alexele Terminal	Berth #7
Dates of Audit	5/21 -		
Master			
Auditor(s)	BRAD CROWLEY		
Agent			
Cargo	Unneeded Gasoline - loading.		
Time Arrive	1445	21 May/11	
Time Depart			

- U/W fm term at 22 May 11 @ 1100

# Compliance Systems, Inc.



2. Audits

Type of EMS audit: Initial/Internal  Ongoing  Final Audit

Yes (Y); No (N); Not Applicable (N/A); Not Observed (N/O)

Date of last ISM Internal Audit	29 APR 10
Were any non-conformities issued related to environmental aspects? Has the vessel ever had an environmental audit? If so, list date and indicate by whom::	✓
Date of last ISM External Audit?	29/SEP 10
Were any non-conformities issued related to environmental aspects?	NO
Did the review of the vessel's Safety Management System (SMS) reveal any unresolved occurrence reports relating to environmental systems? If so, explain.	
Is this audit being conducted during a probationary period?	Yes
Last EMS internal 30 APR 10	

3. Certificates

International Oil Pollution Prevention (IOPP) Certificate					
Date of Expiry	11 APR 12	Issuing Authority	BV	Bitge Tank Capacity	54.7
Incinerator Capacity	652/hr	OWS Capacity	5.0m <sup>3</sup> /hr	Sludge Tank Capacity	54.466

International Sewage Pollution Certificate					
Date of Expiry	11 APR 12	Issuing Authority	BV	Holding Tank Capacity	6.0m <sup>3</sup>
Type of STP	23 May 07	Manufacturer	Homworth / VSC Limited	Daily Person Capacity	30

Safety equipment in place 30 APR 10

International Air Pollution Prevention Certificate					
Date of Issue	23 May 07	Date of Expiry	11 APR 12	Issuing Authority	BV

CA COFR Mar 13, 2013 USCG COFR exp 4/8/13

In addition to the above certificates, identify copies of certificates and records collected during the course of the audit: Registry , Document of Compliance (DOC) , Safety Management System Certificate , USCG Certificate of Water Pollution Prevention (COFR) , Familiarization checklist , Training Schedule , SOPEP Approval Letter , OWS Manual , Incinerator Manual , Sewage Treatment Plant Manual , Master's Standing Orders , Chief Engineers Standing Order's , Oil

ISO 14001: 2004 exp 11 APR 11 - at the office - new one.

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CA California - Does not have COE - never been to USA



Waste Piping Diagram , Certificate Status Sheet , Crew List , Others:

4. **SOPEP - Shipboard Oil Pollution Emergency Plan** / Ref: MARPOL Annex I/26.1, 33 CFR 151.26

Date SOPEP approved by Administration or Class Society	Yes BY 09/05/07
List date of latest Annex II Contact List	31 MAR 11
What is the official working language of the crew?	English
Correct contact numbers for Company, National, and Local authorities	✓
Comments:	

5. **Vessel Response Plans (VRP)** - Ref: 33 CFR 151.26, 29a; 33 CFR 155.210, 205, 235, 430

Is the OPA-90 tank vessel/non-tank vessel VRP current and USCG approved?	✓
Date of approval: 9 FEB 11	
Is the Company Certification Statement included in the Plan	✓
Date of last Q1 Drill	Do not have - donot go to us.
Date of last emergency procedures drill	
Date of last SMT Tabletop Drill	19 NOV 10.
Is Regular Training being carried out according to VRP	
Does vessel have any State issued Oil Spill Contingency Plans?	✓
State(s): CA	
Date(s) of approval: 28 MAR 08	
Comments:	

6. **Pollution Drills and Training Records, and Familiarization** - Ref: 33 CFR 155.1055 and .1060

Have all crewmembers received environmental awareness training by a qualified instructor at a training facility prior to joining the vessel?	Some of them Not free-
Did the shore-based training consist of the ECP, EMS and existing marine environmental protection requirements and shipboard related technical practical information including the maintenance and repair of pollution prevention equipment?	No long cert Not Iowa spec.
Is annual refresher training being conducted ashore and or onboard?	CBT
Has the crew, upon joining the vessel, been provided with instructions or details on how to provided anonymous reports to the Company, Designated Person Ashore, or the Environmental Compliance Manager?	Yes - formal form

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Are notices posted throughout the vessel to inform the crew on how to report issues of Environmental non-compliances with the EMS or ECP?	Yes
Does the familiarization checklist onboard identify: Environmental Policies <input checked="" type="checkbox"/> , Awareness <input checked="" type="checkbox"/> , Reporting Procedures <input checked="" type="checkbox"/>	
Does the engineering crew have documentation of environmental training on a regular basis: Monthly <input type="checkbox"/> , Semi-annually <input type="checkbox"/> , Annually <input type="checkbox"/>	every month Safety Comm. Meeting
Date of last bunker spill drill?	30 JUL 10
Date of last environmental drill other than bunker spill? Location:	SOPEP 12 MAR 11
Is pollution prevention training conducted before bunker transfer?	Yes
Are pollution drills being conducted according to drill schedule?	Yes
Does the SOPEP drills include evaluation of personnel performing such duties?	Yes
Are QI notification drills conducted according to Federal, and State regulations?	N/A
How long are training records being kept?	3 yrs.

## Comments:

Did Master's ENV RV EMS 014 - 25/04/11 - senior officer  
attended

★ Shore side Trng for C/O - does not state Ionize - EMS just 15014001  
★ Captain does not have shore side trng cert. just have ENV DRD rec'd of  
ENV commitment

7. Oil Record Book (ORB) - Ref: MARPOL Annex I/20, 33 CFR 151.25

Are all entries legible and signed by the certified engineers or rating who performed the specific task?	Yes
Each completed page signed by the Master and Chief Engineer (after page is filled)	Yes
Book maintained on board for 3 years, or as required by the ECP. List dates of ORBs maintained on board	14-04-07
Do all entries contain at least the information required by the category code under which the entry was made	Yes
Is the quantity of sludge being incinerated equal to or less than the rated capacity of the incinerator for the time the incinerator was operated	Yes
Compare the tank size to the amount transferred with the amount of waste stream treated. Is this consistent with the actual operation of the OWS?	Yes
When bilge water is removed from a holding tank, do the recorded quantities match the quantities previously recorded as being pumped into the tank	Yes
Do all bilge water movements that are recorded tally correctly?	Yes
If bilge water has been transferred to a shore-side facility or to a stop barge, does the quantity and date recorded on the receipt match the information in the ORB?	Yes
Are receipts for bilge stops transferred ashore or to a stop barge attached to the ORB page where the entry is recorded?	Yes
Are there identical entries or similar entries for recorded operations of the OWS or incinerator that cause suspicion	



Environment Audit Checklist

Apr 22 1355 - 1449 50 min

7-7:41 - 9 Alarm 9-9:35 OK

Is evaporation or draining of water from the incinerator waste oil tank being recorded in ORB 12.4	YES ✓
Are weekly ROBs for sludge tanks being recorded?	YES ✓

9:35-1342 Alarm 1342-1436 OK

H 26. Date, location, and amount of bunkers taken	17 May 11 Skagen 250 MT
H 26. Date, location, and amount of bunkers taken	06 APR 11 Skagen 4 f0380 1150.8 MT
H 26. Date, location, and amount of bunkers taken	20 May 11 Las Palmas 11 f0380 250 MT + 250 MT f0380. M60

D 15.1 Date, total time or operation, and quantity of OWS discharged.	18 May 11 1.26 m <sup>3</sup> 1146-1156
D 15.1 Date, total time or operation, and quantity of OWS discharged.	13 May 11 1.5 m <sup>3</sup> 0909-0924
D 15.1 Date, total time or operation, and quantity of OWS discharged.	22 APR 11 13.35 m <sup>3</sup> 0745-1522

7.59 m<sup>3</sup>/hr rate 6.0 m<sup>3</sup>/hr 18AP

D 15.3 Bilge water transferred to holding tank.	18 May 11 0.630 m <sup>3</sup> Bilge well to CBHT.
D 15.3 Bilge water transferred to holding tank.	17 May 11 0.630 m <sup>3</sup> Bilge well to CBHT
D 15.3 Bilge water transferred to holding tank.	13 May 8 m <sup>3</sup> bilge to CBHT

- Led

C 12 Date, location and quantity of oil disposal if incinerated list time and quantity	12 May 11 0.910 m <sup>3</sup> inc. 15 hrs / 60.66 hrs
C 12 Date, location and quantity of oil disposal if incinerated list time and quantity	11 May 11 0.170 m <sup>3</sup> inc. 9.5 hrs. 17.89 hrs
C 12 Date, location and quantity of oil disposal if incinerated list time and quantity	10 May 0.240 m <sup>3</sup> inc. 10 hrs

Are there any additional Codes in the ORB:	I 19 May 11 Envirolog 50 insp by mannt.
F: Condition of Oil Discharge Monitoring and Control System	I 16 May 11 OCM replaced
G: Accidental or other exceptional discharges of Oil	I 11 May 11 Insp + cleaned Bilge Holding TK
I: Additional Operational Procedures and general Remarks.	I 10 May 11 Insp + cleaned dirty Bilge TK.

05 May 11 25 l cooking oil disposed into incin sludge TK.

04 May 11 pws sep stopped due to hi ppm alarm

18?

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16 Apr 11 - I - "Carried out test of 15 ppm alarm OWS with satisfactory results."



Environment Audit Checklist

Are there any Codes: Are there any remarks or entries that are not normally identified in the ORB?	
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8. Garbage Management Plan (GMP) , -Ref: 33 CFR 151.63; MARPOL Annex V/9, V/3; 7 CFR 330.400

Is there a Garbage Management Plan (GMP) on board?	Yes
Who is listed as the Garbage Management Officer?	C/O.
Are designated crewmembers familiar with Plan?	
Is there documented evidence of Garbage Management training?	Yes
Is shipboard garbage properly handled IAW Garbage Management Plan?	may 2011 (2011)
Is the GMP Ship specific?	Yes
Are plastics segregated from other waste?	Yes
Are waste containers provided, securely covered, and leak proof?	Yes
Garbage containers located within the vessel with non-combustible sides and bottom? (SOLAS requirement)	Yes
Garbage Record Book entries correct: Type, amount, location, date/time <input checked="" type="checkbox"/> Errors lined thru, initialed, corrected - no white out used <input checked="" type="checkbox"/> Each entry signed by PIC and each page by Master <input checked="" type="checkbox"/> Reports of inadequacy of port reception facilities for garbage on file <input checked="" type="checkbox"/>	✓
Is the Garbage Record Books maintained onboard for the past 2 years?	✓ Yes
List dates of GRB on board	16/04/07 - Present
Is the incinerator being used to burn garbage?	✓
If so, what categories?	Regs
Are plastics being burned in the incinerator? If so, is the incinerator rated for the burning of plastics?	NO
Is there any evidence that plastics or synthetics have been discharged overboard?	NO
Is waste sorted to prevent hazardous waste entering non-hazardous waste streams or?	Yes
Are there separate defined storage areas doe hazardous /non-hazardous - no commingled waste?	
Signage/placards in working areas of crew in the official working language?	✓
Incinerator ash if discharged overboard free of plastic residue or free of unburned food wastes if landed ashore.	✓
Are trash chutes clean, free from oil residue (no oil stains on decks, side of hull adjacent to trash chutes)?	
Are foreign food wastes handled per APHIS regulations?	

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Are medical wastes incinerated or manifested as bio-hazardous waste?	Yes
Garbage discharged outside special areas.	
Incinerator operation observed? Provide details:	Yes
Garbage Pollution Placards posted?	✓
Procedures to minimize amount of potential garbage in place	
• Is vessel encouraging ship suppliers to consider alternate means of packing -- use of other than plastic	✓
• Is vessel reusing packing (examine stockpiles)	✓
• Is waste generated in port disposed to shore reception facilities prior to sailing	
Is there a recycling program onboard?	NO
Does the vessel have procedures/policy for recycling?	NO
Is ship's crew following recycling procedures/policy?	NO
Is maintenance being carried out on equipment -- e.g. incinerator, grinders	✓
Are records maintained and manifests completed for potential hazardous waste streams: used solvents <input type="checkbox"/> , paints and thinners <input type="checkbox"/> ; fluorescent/mercury vapor bulbs <input type="checkbox"/> ; batteries (NiCad, Lead Acid, Lithium, Alkaline) <input type="checkbox"/> ; pharmaceuticals/narcotics <input type="checkbox"/> ; aerosol cans <input type="checkbox"/> ; expired pyrotechnics <input type="checkbox"/> ; incinerator ash if contaminated with toxic/hazardous substances (plastics containing heavy metals) <input type="checkbox"/>	✓
Is there evidence that hazardous wastes are being incinerated, diluted, neutralized, or evaporated as a means of disposal	NO
Comments:	



9. Oily Water Separator (OWS) – Ref: MARPOL Annex I /16; 33 CFR 155.380(b)

Request the Chief Engineer to provide a line drawing of the oil waste stream system which includes the OWS, bilge piping, bilge main cross connections and holding tanks. Compare drawing to installation and attach drawing to report.

Is the OWS operational?	Yes
OWS Capacity: <u>510 m<sup>3</sup>/hr</u> Approval number & date: MEPC Resolution compliant with:	
Are the manufacturer's manual and schematics for the OWS and OCM correct and readily available?	Yes
List locations:	
If time permits, perform an operational test of the OWS under actual operational conditions, with considerations of the manufacturers' recommendations. The test shall process the contents of the Bilge Holding Tank without dilution. Time of operation from: <u>0946</u> to <u>1046</u> . Lat./Long.	<u>Lat 0946 L (0746 GMT)</u> <u>Lat 56 2.516 N</u> <u>Long 17 50.436 E</u> <u>Lat 55.51 067 E</u> <u>170 34</u>
Are there records to indicate the OCM is periodically calibrated?	Yes
Was the OCM calibrated by a <u>shore facility</u> or onboard by the ship's crew?	(0816 GMT) 700
Date the OWS was last opened for inspection and/or cleaning	
Is there documentation the person operating the OWS has received familiarization and operation training?	Yes in ECR Logbook
How often is the OWS training being conducted and by whom?	
Are there clear and precise operating instructions posted for: valve alignment, pressure settings, heating, resetting, accidental discharge and securing?	Yes
Does the OWS automatically re-circulate ( <u>3 way valve</u> ) or shut down when the 15ppm level is reached?	2 solenoid valves
Are there any modifications to bilge piping, not approved by Class and nit IAW approved plans?	enforced by mods no not have class approval
Has the OWS overboard pipe been previously removed for inspection or cleaning? Dates: <u>25th 16 May 11 by George LCM</u>	Yes
What is the company policy regarding periodic cleaning of the OWS? <u>every 6 mos.</u>	
Has the coaleser filter been cleaned and or/replaced? Dates:	Yes
How many spare coaleser filter sets are onboard?	2
Operator competent and knowledgeable of operation (CE and 2AE)	Yes

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15 PPM Oil Content Meter and alarm tested satisfactory	Yes
Does unit have multiple Oil Content Meters? if so, are reading consistent?	NO
Sample analyzed by meter is OWS output (Trace sample line for presence of unacceptable clean water connection)	Yes
Are there any electrical bypasses, jumpers, extra switches on or within unit or Meter control panel	NO
If the flushing line is left open position will the OWS continue to operate?	NO
System back flush or oil purge cycle operates properly	Yes
Is the flushing system on the OWS fitted with a Key switch that will allow the flushing or cleaning water to be supplied to the OCM?	Yes
When the flushing line key switch is activated, does the OWS output divert back to the holding tank or bilge?	Yes
Is the sample line to the Oil Content Monitor painted a bright color to distinguish it from other piping and tubing in the area?	NO
Seal at the end of the flushing line tube ends and fitting.	Yes
Is there any evidence of tampering or additional connections to the flushing line?	NO
Is the OWS overboard valve secured by seal or lock? If locked, who has possession of the key?	Yes
Is there a list of chemicals approved by the OWS manufacturer for use in the OWS? <i>based on ECR</i>	Yes
Is there a record of OWS alarms kept? If so, how?	
What is the company/ship policy regarding cleaning of the OWS source tank (Bilge Holding Tank)? <i>every 6 mos</i>	
When was the OWS Source tank last cleaned:	
What is company/ship policy regarding the maintenance of a minimal level in the OWS source tank to avoid contamination of the OWS? <i>DDI not have policy</i>	
<ul style="list-style-type: none"> <li>• Visually sample processed water for gross contamination (sheen or visible oil) <input type="checkbox"/></li> <li>• Compare ship's operational maintenance routine with actual preventative maintenance conducted <input type="checkbox"/></li> <li>• Request proof /documentation of maintenance completed (used consumables from OWS, receipts service, technician reports, contractor disposal records) <input type="checkbox"/></li> <li>• Review meter calibration records <input type="checkbox"/></li> <li>• Review strip charts if fitted <input type="checkbox"/></li> <li>• Examine other machinery pace overboard piping for unusual connections <input checked="" type="checkbox"/></li> <li>• Review records pertaining to system repairs <input type="checkbox"/></li> <li>• Consider opening access cover to first and second stage chamber for inspection in internal condition <input type="checkbox"/></li> <li>• Consider removing first section of piping upstream of OWS overboard valve - inspect for oil residue <input type="checkbox"/></li> </ul>	

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Environment Audit Checklist

- Look for piping modifications that are not shown on original vessel drawings that would facilitate discharge of bilge water around Oil Content Meter
- Check zero and calibration function & last dates of service for the OCM or OCD
- Test operate OCM/OCD
- Test Oil Detection Probe & auto/manual drainage of oil in OWS chamber

Comments:

10 Sounding Log

Are the sounding logs completed daily and initialed by the certifying engineer who obtained the sounding?	Yes
Is the Sounding Log maintained in the ECR and is it readily available?	Yes
Are entries written ink, pencil, or both?	✓
Is the Sounding Log bound with numbered pages	NO
Is the Sounding log maintained onboard for 3 years?	NO <i>goes back to 23 JAN 10</i>
Is it documented at what times of day soundings are to be taken?	NO
Who is designated to take the soundings?	<i>monthly</i>
Does the Master sign the Sounding log on a weekly basis?	✓
Does the Sounding Log contain the statement "written under the penalty of perjury or dismissal that the soundings taken and corresponding reading are accurate by the engineers involved to the individual's best belief and understanding"	NO

11. Oil Transfer Procedures and Operations (Bunker Procedures) - Ref: 33 CFR 154.500, 155.700-.720, 155.750, 155.785, 155.790, 155.800, 155.805, 155.820, 155.1010, 155.1030, and 156.170

Oil Transfer Procedures posted and available in crew's language	Yes
Description of transfer system, including a line diagram of piping system (pumps, vents, valves, alarms, shutoffs, etc.)	Yes
Person in Charge fluent in English or language mutually agreed upon w/ shore side PIC	
Format in CFR order or cross reference index page	Yes
List/description of products carried by vessel	Yes

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Declaration of Inspection (DOI) available and retained for at least one month 33 CFR 156.50	N/A
Number of persons required on duty during transfer	✓
Duties listed by title of each person	✓
Two-way means of communication available	✓
Procedures to top off tanks and disconnect	✓
Procedures to report oil discharges	✓
Emergency response procedures outlined	✓
Is lighting at each transfer operations work area adequate and properly shielded	✓
Oil Pollution Placard posted (most recent U.S. placard) 33 CFR 155.450	Yes
Has the pollution prevention equipment prepared in advance and is the portable pump rigged for operation?	
Has the bunker line been tested in accordance with 33CFR 156.170(c)(4)	Yes
Has a pre loading plan been completed (Washington)	N/A
Is condition of oil transfer hoses on board satisfactory	N/A
Are shipboard hoses marked with MAWP, Mfg. Date, test date)	N/A
Are hoses blanked off when not in use	N/A
Is there a record of tests and inspections	Yes 19 Mar 11
Comments	

defect - loss bunker 16 May 11  
 monitors pump not hydro

12. Standard Discharge Ship/Shore Connection - Ref: MARPOL Annex I/19; 33 CFR 155.430

Properly fitted	✓
Is the blank flange securing the bilge and sludge transfer system shore connection discharge valve at the discharge stations sealed?	✓
Comments:	

13. Overflow Discharge Containment - Ref: 33 CFR 155.320

Size adequate (<1600GT 1/2 bbl, >1600GT 1 bbl)	✓
Fixed around fuel/lube/sludge lines and vents	✓
Fitted with drains and plugs	✓
Mechanical type scupper closures fitted on deck drains	✓
Comments:	

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Environment Audit Checklist

14. Prohibited Oil Spaces & Oil Accumulation Spaces - Ref: 33 CFR 155.470

No oil or hazardous substances carried in a forepeak tank or tank forward of collision bulkhead	
Are the following spaces clean and free of oil?	
<ul style="list-style-type: none"> <li>• Tail shaft recess <input checked="" type="checkbox"/></li> <li>• Purifier room <input checked="" type="checkbox"/></li> <li>• Below boiler <input checked="" type="checkbox"/></li> <li>• Hydraulic pump rooms <input checked="" type="checkbox"/></li> <li>• Steering flat <input checked="" type="checkbox"/></li> </ul>	
Comments:	

15. Bilge Water Management - Ref: MARPOL Annex I

Is there contamination/oily residue in bilges on bulkheads, piping, structures, main engine casing, rose boxes? Detail below:	/
Is there leakage from systems and engines into machinery spaces? Detail below: <i>Some condensation by cargo pumps</i>	
Is there evidence of recent cleaning of systems, equipment, and components?	<i>NO</i>
Is there adequate tank capacity to store bilge waste?	<i>YES</i>
Is there evidence of detergent usage (emulsions cannot separate in gravity separator and are likely to result in discharges over 15 ppm)?	<i>NO</i>

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Environment Audit Checklist

Is there evidence of excessive water ingress from pump glands, seals, and valve glands?	NO
List the quantity and location of any portable diaphragm or other portable pumps onboard?	3 in E/R
Are there hoses, fitting, and connections in areas where usage is unknown?	Yes
6 above chem store r/m \$ in steering g/m	
Are overboard bilge, bilge & ballast, and salt-water service valves locked or sealed?	Yes
Are blank flange assemblies associated with piping leading overboard (saltwater service, main engine raw water cooling and other systems) permanently secured, removed or fitted with numbered seals through the flange bolts?	Yes
Is the bilge main cross connections valves labeled, numbered and sealed?	Yes
less than 3 in.	* 1

Are there any blank flanges, pipe caps, or dead-ended valves or tees on inlet or outlet piping.	
Evidence of bolting/unbolting of associated piping segments	ND
Recent paint on pipe segments to indicate illegal removal	ND
<ul style="list-style-type: none"> <li>• Examine machinery space bilges completely <input checked="" type="checkbox"/></li> <li>• Check records for engine oil usage, quantities – where lost, consumed, in bilge <input type="checkbox"/></li> <li>• Check status of oily bilge water tanks – last cleaned, at capacity? <input checked="" type="checkbox"/></li> <li>• Levels of tanks during inspection – high or low? <input checked="" type="checkbox"/></li> <li>• If tanks near full, what are the vessel's processing plans <input type="checkbox"/></li> </ul>	
Comments:	



**16. Seal Management Program**

Is there a seal management program onboard?	Yes
Review the Chief Engineers official seal log book and the Master's additional seal log documenting when seals are replaced along with their respective numbers.	Yes
Is there a seal number logbook identifying the seals in use and explanations provided when a seal is broken or removed?	Yes
Where seals are used are there more than one seal to secure the valve or flange?	NO
Are the replacement seals stored in the Masters safe or in a secure area in the Master's office?	Yes
Is there any duplication of seal numbers?	
Are the seals in use capable of being removed during an emergency?	Yes
Comments:	

**17. Waste /Sludge Oil Incineration**

Is the Incinerator onboard and operational?	Yes
Incinerator Capacity: _____, Approval number & date: _____	
Is the manufacturers manual and schematics for the Incinerator correct and readily available?	✓
List locations:	✓
Is there a record of tests, maintenance, and inspection of the incinerator?	✓
Who is designated to operate the shipboard incinerator?	
Is it documented?	Yes - ECR logbk 2/E
Are there operating instructions for the complete operation of the incinerator, including the valve alignment, temperature settings, reporting and documenting?	✓
Incinerator operates with sludge/waste oils?	✓
Is there evidence of use (clean or dirty firebox)?	
List the holding capacity of the Waste oil tank	2.147 m <sup>3</sup>
Transfer pumps operable? Test.	✓

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Transfer pump to sludge system, ashore or incinerator settling tank only; receipts.	
Do the waste oil connections on deck meet 33 CFR 155.430?	yes
<ul style="list-style-type: none"> <li>• Check status of sludge tanks – full/empty ✓</li> <li>• Check to see if there are connections to bilge main or other areas ✓</li> <li>• Review estimated quantities of sludge produced – normal or excessive (fuel sludge production can exceed 2% of total fuel used) ✓</li> <li>• Inspect incinerator main burner, pilot burner &amp; igniter for overall operational condition ✓</li> <li>• Inspect condition of refractory. Look for signs of overheating ✓</li> <li>• Test operate incinerator using waste oil if sludge temperature permit. Test safety cutouts, verify pressure gauges and thermocouples ✓</li> <li>• At minimum, test unit on D.O. ✓</li> <li>• Determine incinerator ash disposal plan ✓</li> <li>• Check C/E incinerator log book for operational hours and maintenance ✓</li> <li>• Inspect waste oil tank – drain, heating coil, level gauge, thermometer, date last cleaned ✓</li> </ul>	
Comments:	

18. Sewage Waste Stream – Ref: MARPOL Annex IV; 33 CFR 159.57, Ref: 33 CFR 159.65, NVIC 9-82, Ship's Safety Management System

Is the Sewage Treatment Plant (STP) operational?	yes
Sewage System rated capacity: <u>30</u> Persons. Maximum crew capacity <u>30</u> Persons IMO and/or USCG Approval number: & date:	
Is the manufacturers manual and schematics for the Sewage Treatment Plant correct and readily available? List locations:	✓
Is the system rated for more than the maximum allowed on the Safety Equipment Certificate?	yes
Are toilets, urinals, scuppers piped to sewage plant?	yes
Is all drainage from medical (hospital) areas piped to sewage system	yes
Is system installed, maintained and operated IAW approved plans and mfg. specs <u>ND</u>	yes
If a gray water holding tank is onboard, list the holding capacity. <u>Sewage W/ing</u>	<u>6</u> m <sup>3</sup>
Is the STP direct overboard valve locked?	yes

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Are there SMS procedures for maintenance available? If so, are they being followed?	
Does the unit contain proper level of chemicals?	Yes
Are the chemicals used in the STP approved by the manufacturer?	Yes
Are their sufficient chemicals on board?	NO - getting more in 5 days
Is the unit operating within the manufacturers design specifications? (Records)	
Are their clear and simple operating instructions/manual available?	Yes
Are their records of maintenance and cleaning of unit?	Yes
Is there a nameplate with approval data posted on the unit?	Yes
As there been any shore disposal, if so, reason. i.e.: dry dock	
Are there bypass piping arrangements fitted	NO
Does company have any procedures requiring record of discharge at sea, e.g. logbook with Lat/Long when system is in operation	NO
Are period tests of effluent conducted iaw manufacturers instructions?	
Is a logbook maintained for the recording of chemicals added and maintenance performed?	
Comments:	

19. Fuel Oil / Lube Oil Purifier Settings and Line Breaks

Is there a logbook relating to fuel oil and lube oil management and to the operation of the fuel oil and lube oil purifiers and for line or piping failures?	NO
Is the shoot interval settings for each purifier documented at all times	NO
Have there been any incidents involving the vessel receiving poor quality fuels? Provide details:	NO
Have there been any extraordinary operations such as frequent draining of fuel oil service and settling tanks, lube oil sump tanks, excessive water, etc. Provide details:	NO

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Any incidents occurred and recorded of fuel, lube or waste oil system failures including high-pressure lines of diesel engines due to operational error? Provide details:	NO
Any incidents occurred and recorded of accidental or unintended releases of quantities of water: salt, fresh, condensate, or cooling? Provide details:	NO

20. Hazardous Waste - Ref: 40 CFR 262 and 264; 49 CFR 176: RCRA; ISM Code; Safety Management System

Has there been training of responsible persons in hazardous waste disposal?	NO
Is there evidence (e.g. lack of disposal records) of hazardous waste being discharged overboard	NO
Are hazardous wastes being properly stored, maintained, labeled, and placarded	Yes
Is hazardous waste being commingled with non-hazardous waste	NO
Does the crew have ready access to spill control and decontamination equipment?	Yes
Are MSDS sheets available for hazardous materials, e.g. cleaning chemicals	
Review the policy, procedures and current practices used to store or dispose of the following: Solvents <input type="checkbox"/> , Degreasers <input type="checkbox"/> , Cleaning wastes <input type="checkbox"/> , Batteries <input type="checkbox"/> , Paints <input type="checkbox"/> , Oily rags <input type="checkbox"/> , Fluorescent and incandescent bulbs <input type="checkbox"/> , Expired boiler and engine chemicals <input type="checkbox"/> , Used boiler and engine chemicals <input type="checkbox"/> , Galley greases <input type="checkbox"/> , Pyrotechnics <input type="checkbox"/> , Medical supplies <input type="checkbox"/> , Contaminated fuels <input type="checkbox"/> , Used Oils and greases <input type="checkbox"/> , Incinerator ash <input type="checkbox"/> , Transformer oils <input type="checkbox"/> , Contaminated refrigerants <input type="checkbox"/> , Hazardous materials <input type="checkbox"/>	✓
Comments:	

21. SOPEP Gear

Is the onboard oil spill gear identified and inventoried? Sorbents <input checked="" type="checkbox"/> , Non-sparking hand scoops <input checked="" type="checkbox"/> , Shovels <input checked="" type="checkbox"/> , Buckets <input checked="" type="checkbox"/> , Containers suitable for holding recovered waste (12bbbls) <input checked="" type="checkbox"/> , Emulsifiers for deck cleaning <input type="checkbox"/> , Protective clothing <input checked="" type="checkbox"/> , Non-sparking portable pump with hose <input checked="" type="checkbox"/> , Scupper plugs <input checked="" type="checkbox"/>		✓
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x2

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Environment Audit Checklist

Is an inventory kept? How often and by whom?	John monthly
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22. Ballast Water Management - Ref: 33 CFR 151.2045 and NVIC 7-04 (Change 1) *from ship yet*

Is the Ballast Water Management Plan (BWMP) approved by Class? Name of Class: <i>BV 06 APR 07</i>	Yes
Does the BWMP identify: Particulars <input type="checkbox"/> , Piping Plan <input checked="" type="checkbox"/> , Ballast Pump Details <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Sampling Points <input checked="" type="checkbox"/> Training <input checked="" type="checkbox"/> Exchange Procedures <input checked="" type="checkbox"/> Safety Precautions <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> IMO Guidelines <input checked="" type="checkbox"/> Handling Log <input type="checkbox"/> BWM Officer <input type="checkbox"/>	Trng May 2011
Where is the BWMP kept onboard? <i>Capt office</i>	✓
Is the BWM officer familiar with the BWMP?	Yes
Does the vessel maintain an updated and accurate BW Log?	Yes
For the port of arrival, was a Ballast Water Report completed and submitted to the proper agencies?	NO - not reg'd.
Are the BW Reporting Forms being properly completed?	Yes
Are the BW Reports from previous ports kept onboard for two years?	Yes (Since 07 May 07)
Has the vessel recently undergone a Ballast Water exam by Port State Control?	NO
Is the vessel equipped to treat ballast water or transfer ballast ashore?	NO
How often are ballast tanks required to be inspected by SMS procedures	annually
During ballast tank inspections, is the amount of sediment being recorded?	Yes
Comments: <i>Just master + 1st sign for trng lost crew trng in front of BWMP in 5 09/09/10 - ch off. Master not done trng Not doing BW exchange from UK to Lat via? or Taiwan to Malaysia? France BW Holding Log shows 5 hrs 1d bw - 5 P+S, 6 P+S APT (25 MMR) at port UK does not show these hrs have BW, two ports later a letter does not list APT as having BW (02 APR 11)</i>	

23. Additional Environmental Items (Check Company Specific ECP)




Environment Audit Checklist


24. General Comments, Observations, Recommendations

21 May  
14 May  
1500-15  
515-  
ENV 014  
ENV 15  
1  
ENV 014  
21740-  
7  
-2000  
10-2000  
22 May  
0730-0800  
RV safety commit notes - folder in off Miss Rm -  
Missing Sept 2010 - not always called safety/env.  
OCT 2010 - in conform #1 - vsl pas v/o entry in ORB  
discussing drills.  
Anon Rating poster does not mention CEM. Just Techn Man - Some  
ENV 014 Master Env Mgt Rv (EMS 8.4) - Agenda not - No  
listed in safety mtg notes. as req'd by EMS - OK  
minutes maintained  
EMS 8.6 - Env Internal Audit conducted annually - last one was 1  
30 April 10 - over due now - 14 NOV 10  
on Bridge - observ vsl NW fm pier  
RV ENV 024 EOE role - last entry 1st of year (2 mas exp?) new one  
Anti pollution Policy - sludge & barbs mgt at Chinese Parks ENV 001, ENV 002  
ENV 003 (env planning) Recycling to disk of PPR - completed on 1/7/09  
Many ENV 003 due 31 July 2011  
ENV 005?

# Compliance Systems, Inc.

ENV 001 Env Performance Rpts - Mgmt Rpt - Apr 11 showing 1 gen 3m<sup>3</sup> disposed 0.6 m<sup>3</sup>, 16 lbs used Fluoro lamps on bd listing if disposed to recyl fee. - now know packets of PPR consumed now documented (Macin Prof going since APR 2007 recycling fee. MAR 11 - CAT 1 - disposal 8 m<sup>3</sup> - PRB 5+3 = 8 Done in env 11-15





Environment Audit Checklist

1430 Why have 4 more choro 91 tablets left  
7 not enough for 1 month (and 5 per men)  
missed more in Jkegen George told me this  
when I came on sd.

E30 seals for 2 samples Clean Bldg TK DANPS 4043349  
FWB BW DANPS 4043349 FWB BW DANPS 4043350

1610 \* Inconceivable nozzle clogged - cleaned it -  
\* central gear parts - short list - OWS filter heads  
\* 3 w/iden pumps in my workshop - not labeled -

still working on fixing nozzle for incinerator  
C/E showed me PCB logs w/ alk tray + assigned for 470 g/s of OWS  
of 25 Jan 11 - '04 Feb 11 alk  
had daily envelopes OWS 11/02/23  
mt signing pg everyday by C/E + eng v/f. (not req'd but  
C/E write it in)

no inc began reading 99.49 m<sup>3</sup> starting 02 APR 11  
fixed up. 20 May 11 by technician

1620 Rvd seal log  
1630 PMS comp maint  
envelopes had dmsd PCB data card.  
replaced on 25 MAR 11

oves rptd to C/E w/issue -  
into transmit does not work - started in Jan 11 fixed 25 MAR 11

last envs 11 MAR 11 in ORB is req'd  
As per comp PMS - req. every 13 SEP 11

but C/E did not put any of filter in PMS when  
he Ad them on 12 MAR 11

1710 started incn burning sludge at 7:00 PM 1.43 m  
Rvd envs - monthly test / 6 mos envs cleaning /

Annual replacement of filter  
BMT cleaning 11 May 11 - in ORB

1909 ID in ORB  
cannot find any ORB entry in MART APR/May 2011  
to be done every

incin maint 6 mos incin insp/cleaned - filter grease  
03 May 11

- test alarm 23 APR 11 - 6 mos  
- monthly - test fan/belt/P.O./sludge burner 03 APR 11  
Annual 03 May 11

5 envs 6 mos filter / OK non rtm valve 23 APR 11  
test alarms  
3 mos - clean chlorinator

2 yr O ring replace 11 APR 11 - comp sys =ullyses)  
OCM - replace 31 Mar 11

Compliance Systems, Inc.  
Clean Edge Pump Maint. cannot find in comp PMS

1400-1430 Dinner



Environment Audit Checklist

02/11  
0

1 secured  
NAWII

8/11

1809L

1940  
WRIBED

5 046

1035

246

100-

1130

OCIM Maint	of manual - doing this now
main man maint	& RMS comp
STP	21 22 23 24
SDNB LOS RV	
scope of work	MT B states Bilge Main Cross Connections must have sign
3 in letters	- only want 1 in.
enviro	
enviro	26m = 11.23m <sup>3</sup>
stopped acid on sludge	96/m <sup>3</sup>
Dr. B tray under main	thru xfr pump
main in	1024 = 1.35m <sup>3</sup>
(ob=09 GMT)	is dark
enviro	
DRYHT	0.96m = 11.23m <sup>3</sup>
F.O Pur STK	0.09m = 0.96m <sup>3</sup>
L.O Pur STK	0.09m = 0.55m <sup>3</sup>
main TK	1.14m = 1.49m <sup>3</sup>
Duty Bilge TK	0.08m = 0.05m <sup>3</sup>
F.O STK	0.24 = 0.34m <sup>3</sup>
CIN BHT	11.3m = 12.92m <sup>3</sup>
Duty L.O TK	
Duty F.O TK	
Fast water TK on STPD	but part of M/E - FM #1 Piston gasket
This VSI	does not have in port test arrangement to test
3 way valve	- this VSI does not - Read
placed seals on flanges	on OWS discharge which yesterday did
not have seals	- corroded
Open flange on OWS	from 1 to 2nd stage - does not have seal
on it	- shared remote
Did test of 3 way valve	w/ overhd pipe off - test SAT.
CBHT SDNB	103 / 106 / 106 = 105 = 11.97 enviro 117 = 12.78m <sup>3</sup>
0946 OWS	stopped -
DDIME test	of C/O - went in cargo pump room.
Most DDIME	lines/flanges do not have seals -
did DDIME test	of C/O - test SAT
stopped OWS	7 BHT doing 79/71/71 = 72 = 7.11m <sup>3</sup> enviro 77 = 7.51m <sup>3</sup>
OWS rate	of 4.87m <sup>3</sup> /hr Rate 5.27m <sup>3</sup> /hr
seals	walk w/ C/O -
5 million pump	- not in inventory
7.5 pressure	- most + stored in steering qv - OWS handle?

\* remove says 1001  
needs only  
with 1.76 1.76  
monthly 21.7 8.3 1.85

11.15%

0.65m<sup>3</sup>

1.00m<sup>3</sup>



Diesel emg Mon - 31W 5560 MC-C  
Environment Audit Checklist

1300- Dirty LO TK + Dirty FO TK on IOPP 3.1 - not in SWMS  
- sent bk to Fuel/LO TK - not sure why on this.  
Rv Dalls/Tray  
1530 Rv ems/ Audit write up  
1600 SOPS drill - obscured - by SOPS cargo manifest  
- went into cargo pump rm of garage - still a few seals  
needed for ODME sampling line

1815-1945 Dinner  
1845-1915 List of det of garage  
195- Rvd ✓ P1 NIDES test only 21 May 11 last 14/130 APR 11  
do not have annual yet NIP NOT LTR 11/03/2010 (NOV)  
Dist PEOT calc ENV 24 - has latest no year on it  
last internal env audit 14 NOV 10  
Honey energy cping not known by all crew did thing  
good audit -  
SWMS commission DT NOV 10

✓ Vigilant Marine Svcs - tech rpt for envrolonger states  
the OWS needed staying open when 15 ppm - George says  
this is not correct

24 May 11 0730-800 Breakfast  
0800 ECR - S DAB  
0900 Envrolonger  
822- Manual  
Dirty BHT 0.99 = 11.60 m<sup>3</sup> 107/105/105 = 12.49 m<sup>3</sup> ✓ 1.93 m<sup>3</sup>  
F.O. Pur S TK 0.10 = 1.05 m<sup>3</sup> 20/20/20 = 1.35 m<sup>3</sup>  
L.O. Pur S TK 0.09 = 0.55 m<sup>3</sup> 24/24/24 = 0.33 m<sup>3</sup>  
Trin S TK 1.15 = 1.52 m<sup>3</sup> 107/107/107 = 1.40 m<sup>3</sup>  
O.V.B TK 0.09 m = 0.05 m<sup>3</sup> 7/7/7 = 0.045 m<sup>3</sup>  
F.O. S TK 1.14 m = 4.09 m<sup>3</sup> 125/122/125 = 4.53  
C BHT 0.78 = 7.71 m<sup>3</sup> 76/76/76.5 = 7.64 m<sup>3</sup>

★ Sige pump running - according to over + envrolonger indicator  
in ECR not lighting up. Qty PD TA = 98/87/88 = 1.35 m<sup>3</sup> Qty LO = 98  
Seals still not put in OWS overal piping - remove rest overhead - Non installed 52  
Clean BHT - has drr fm M/G going out - HOT?  
Took sample fm OWS INV 3 10243343  
Rvd cam/notes  
1205-1245 Lunch  
1430- Rvd Cargo record VIK  
see ~~correct~~ stop receipts for 03 APR 11 - Ltruc/03 APR 11  
on 24 NOV 10 - m 70/71/72 entry stating ODME map  
CLB since 04 APR 07  
ENV 23 - envrolonger CK list - does not have all yrs listed on envrolonger  
New ODME installed on 18 May 11 according to ECR log  
★ OWS/OCM monthly test - in ECR log bk - aust'n test of OCM  
carried out 03 May 11  
- ODME calibration cert - 17 DEC 10.

Compliance Systems, Inc.



Environment Audit Checklist

To see:

Fm Sup of wk	
✓ E/R alarm present and weekly or compared to ORB - initiated by C/E	
✓ Fleet Eng survey - "asking trunk opinions of usl eng." - another way noted	
Fm EMS	
✓ S.6 "All pipe + sludge flanges fitted w/ seals"	
✓ S.12 SDNCS taken 3 times. - avg taken. - YES	
Does not state deck off must sign log - does it?	
Shoreside EMS form for Capt + C/E - not clear in EMS	
✓ S.13 C/E weekly rpt	
✓ S.14 list of accepted OWS chem posted in E/R - YES	
✓ S.16 Design of OWS operator in E/R log bk S.19 min. - YES	
✓ S.17 monthly test - appropriate test fluid used? 20 ppm - not done it	
✓ S.18 Transferring OCM data - see if done?	
✓ S.22 end of ea voyage - fill out ENV 024	
✓ S.3 vsl Env. Performance Rpt - C/O monthly	
Scope of work 4 onbd	
✓ Analysis of test yrs pipe/OWS sampling yes saw it.	
<del>Copy</del>	
ENV 004 - Mar 11	
Sludge piping dia - 1.0/1.0 Dirty 1/2" <span style="float: right;">Strengths;</span>	
Need to do take OWS Sample location of Sludge Tank.	
OCM - 3/11/11 - Skagen	
ENV 024 test	
✓ E/R log	
ORB 23 24 Mar FOSTER (V 4 m <sup>3</sup> in Dirty) ORB V ~ 5 m <sup>3</sup> (OWS)	
→ EMS out Spare Parts list - OCM	
✓ E/R PMS for BHT cleaning - has reported 3 OK	
Annual ODM cert. - in ORB - Annual ODM cert	
OWS flushed w/ SW after ops	
✓ E/R log showing installed seals for ODM - OK	
Master Env Rpt agenda did not use template for ERM (C. 3)	
✓ OWS (OCM) logged in E/R log bk? (ERM 9.5) yes - not exact index	
Monthly Env Rpt, does not include all info for agenda listed ERM 10.8	
List of on board spare parts Annex to EMS 0 - OCM	
OWS ops for 23 May 11 - 4.76 - should be 4.87 m <sup>3</sup> - changed	
✓ Look at OWS for 22 APR 11	
✓ Need to see Env. log for 13 May 11 OWS ops	

24 May 11 cont'd  
 1900 LT ENVOLAGER (1700 G.M.T)

Dirty BHT  $\Phi.99 = 11.67$   
 FO Pur STK  $0.11 = 1.10$   
 LO Pur STK  $0.09 = 0.55$   
 O. Bilge TK  $0.08 = 0.05 m^3$   
 FO Sludge  $1.14 = 4.10$   
 CBHT  $0.78 = 7.63$   
 Incin TK  $1.16 = 1.52$

Manual  
 $006/106/112 = 106 = 12.65$   
 $2060/20 = 1.93 m^3$   
 $6/6/6 = 0.34 m^3$   
~~7/7/7~~  $0.045 m^3$   
 $124/127/127 = 126 = 4.65$   
 $75/75/75 = 7.505 m^3$   
 $107/107/106 = 1.30 = 1.40 m^3$

Leak on FO Trans pump - 01  
 25 May 11

0740-0800 sunset

ENV SONG

envolager (10600 G.M.T)

D BHT  $.99 = 11.64$   $106/104/105 = 12.65 m^3$   
 incin  $1.19 = 1.58$   $112/113/112 = 1.47$   
 FO Pur STK  $.09 = 0.98$   $19/19/19 = 0.46 m^3$   $1.84 m^3$   
 LO Pur STK  $.09 = 0.55$   $7/7/6 = 0.46 m^3$   $0.43 m^3$   
 O. Bilge  $.08 = 0.05$   $7/6/6 = 0.04 m^3$   
 FO Sludge  $1.14 = 4.11$   
 CBHT  $.78 = 7.69$   $74/74/73 = 7.37 m^3$   $124/123/123 = 4.47 m^3$   
 Dirty FO  $40/40/40 = 1.41 m^3$   
 Dirty LO  $57/58/57 = 0.68 m^3$

? Time/Location anchored.

NAME		ESTIA		①	
OWNER // TECHNICAL OPERATOR		FRED MARITIME // IONIA MANAGEMENT S.A.			
DISPONENT OWNERS		HEIDMAR			
CALL SIGN : C 6 V Z 9		FLAG : BAHAMAS PORT OF REGISTRY : NASSAU			
CLASSIFICATION		BUREAU VERITAS - 100 A1 OIL TANKER, LMC, COW, ESP, UMS, VCS, IGS			
SHIPYARD		NEW CENTURY SHIPBUILDING CO. LTD.			
KEEL LAID: 10/JUNE/2006		LAUNCHED: OCT/2006		DELIVERED: 12 APR. 07	
HULL STRUCTURE		DOUBLE HULL			
IMO No : 9327035		MMSI No. : 311044000		OFFICIAL No. 8001330	
<b>PRINCIPAL PARTICULARS</b>					
LOA=228.6 m		LBP=219.70 m		DEPTH MLD= 20.80 m	
LIGHT SHIP= 15,670 m/t		TPC= 67.01 m/t		FWA=333 mm	
TONNAGE		REGISTERED		SUEZ	
GROSS		42,048.00		44,162.54	
NET		22,309.00		39,772.24	
<b>INTERNATIONAL LOADLINE</b>					
SEASON	DRAFT	FREEBOARD	DISPLACEMENT	DEADWEIGHT	AIR DRAFT
TROPICAL F.W	15.153 Mtrs	5.481 Mtrs	91,371.93 M/T	75,701.45 M/T	36.647 M 120.23 F
FRESH WATER	14.851 Mtrs	5.783 Mtrs	89,388.09 M/T	73,718.21 M/T	36.949 M 121.22 F
SUMMER	14.518 Mtrs	6.116 Mtrs	89,381.24 M/T	73,711.36 M/T	37.282 M 122.32 F
TROPICAL	14.820 Mtrs	5.814 Mtrs	91,414.13 M/T	75,744.25 M/T	36.980 M 121.33 F
WINTER	14.216 Mtrs	6.418 Mtrs	87,350.71 M/T	71,680.83 M/T	37.584 M 123.31 F
CARGO OIL TANK CAPACITY		100% 86,222.261 M3		98% 84,497.816 M3	
BALLAST TANK CAPACITY		100% 25381.49 M3			
PROPELLER IMMERSION		07.40 Mtrs			
<b>DECK LEVELS</b>					
BRIDGE TO BOW		187.40 Mtrs		BOW TO MANIFOLDS	
BRIDGE TO STERN		41.20 Mtrs		STERN TO MANIFOLDS	
BRIDGE TO MANIFOLD		76.10 Mtrs		KEEL TO HIGHEST POINT	
SHIPS SIDE TO MANIF. FACE		04.80 Mtrs		DISTANCES BETWEEN MANIFOLDS	
KEEL TO MAIN DECK		20.80 Mtrs		DECK TO CENTR OF MANIFOLDS	
PARALLEL BODY SDW		154.80 Mtrs		PARALLEL BODY SBT	
<b>CARGO GEAR</b>					
CARGO OIL PUMPS		3 SET STEAM TURBINE VERTICAL 2,300 M3 / 130 M HEAD EACH			
CARGO EDUCTOR		3 SET COLAR STRIPPING EDUCTOR 250 M3 / 25 M HEAD			
STRIPPING PUMP		1 SET VERTICAL RECIPROCATING 250 M3 / 130 M HEAD			
BALLAST PUMP		2 SET ELECTRIC DRIVEN HORIZONTAL 1500 M3 / 30 M HEAD			
BALLAST EDUCTOR		2 SET COLAR STRIPPING EDUCTOR 200 M3 / 21 M HEAD			
I.G.S. FAN CAPACITY		2 X 8,700 M3 / HR			
HOSE HANDLING DERRICKS		1 X 15T S.W.L // PROVISION TRAVELLING CRANE 5.0 T S.W.L.			
<b>ENGINE PARTICULARS</b>					
MAIN ENGINE		MAIN B & W 5S60MC-C X 1 SET			
		OUTPUT M.C.R. 11300 KW AT 105 RPM - C.S.R. 10,170 KW AT 101.4 RPM			
OPERATION SEA SPEED		14.50 KNOTS		ECONOMIC SPEED 12.00 KNOTS	
PROPELLER		DIA: 7.600 MM PITCH: 4,672.8 MM PITCH RATIO : 4 BLADES			
PROPELLER IMERTION: 7.40 Mtrs					
<b>CONTACT INFORMATION</b>					
MMSI ID No.		311044000		TELEPHONE - C : TEL: 431104410	
GLOBE WIRELESS		TEL: 773206254, FAX : 783972131 E-Mail: estia@rmx2.rydex.co.uk			
FLEET 77		TEL: 761115668 - 764609750, FAX : 761115670 E-Mail: Estia@SkyFile.com			
LAST DRY DOCK : NEW BUILDING					
LIFEBOAT WINCH TYPE :		JYW 50		HULL No: 0307326	
Reducers: 16" x 12" : 6 Pcs // 16" x 10" : 6 Pcs // 16" x 8" : 6 Pcs // 10" x 18" : 6 Pcs // 12 x 18" : 6 Pcs					
HOSE HANDLING CRANE: 1 x 15 T ELECTROHYDRAULIC CRANE AT MIDSHIP					

2

# IMO CREW LIST

1. Name of ship		2. Port of Departure		3. Date of arrival							
M/T ESTIA		PALDISKI, ESTONIA		22 MAY 2011							
4. Nationality of ship		5. Next Port of Call		6. Nature and No. of Identity document							
BAHAMAS		FOR ORDERS									
No	8. Family name	Given Name	9. Rank	10. Nationality	11. Date and place of birth	12. SEAMAN BOOK			13. PASSPORT		
						ISSUE	EXPIRE	NUMBER	ISSUE	EXPIRE	NUMBER
1	TOURNARIS	EVANGELOS	Master	HELLENIC	23/10/59 Piraeus Greece	04/10/10	03/10/20	CY162950	05/10/10	04/10/15	AH2485982
2	SARI	ROGELIO V.	Chief Off.	FILIPINO	01/03/56 Occ. Mindoro, Phil.	21/04/09	20/04/14	B0714517	09/08/06	09/08/11	TT0681325
3	SAZON	ARIEL S.	2nd/Off.	FILIPINO	06/02/74 Albay, Phil.	31/07/09	30/07/14	B0761315	30/05/07	30/05/12	VV0364465
4	EPIS	MYAN S.	3rd/Off.	FILIPINO	28/04/81 Cebu, Phil.	15/05/09	14/05/14	B0723794	20/06/07	20/06/12	VV0507876
5	GARGAR.	LLYOD G.	3rd/Off.	FILIPINO	17/10/76 Pagadian, City Phil.	23/08/10	22/08/15	B0912409	06/08/09	05/08/14	XX4314693
6	VARTHALITIS	IOANNIS	CH. Engr.	HELLENIC	16/03/56 Varf Greece	14/12/10	13/12/20	CY167872	18/12/10	17/12/15	AH2858403
7	ALIBUYOG	JAIME G.	2nd/Engr	FILIPINO	22/08/54 Isabela, Phil.	23/11/09	22/11/14	B0795808	21/08/10	20/08/15	EB0809340
8	GRAFIL	DAN E.	3rd/Engr	FILIPINO	08/07/55 Balangayan Esmr. Phil.	24/03/08	23/04/13	B061763	13/05/09	12/05/14	XX3666799
9	BUSTO	EDMUND F.	4th/Engr	FILIPINO	12/10/54 Zambales, Phil.	18/10/06	17/10/11	A857173	25/09/06	25/09/11	TT0905743
10	UMALI	NICANOR L.	ELECT	FILIPINO	12/01/57 Lipa City Phil.	18/04/07	16/04/12	B0369579	11/04/07	11/04/12	VV0060853
11	VERONA	ESMERALDO C.	P/MAN	FILIPINO	12/10/67 Manila, Phil.	22/07/10	21/07/15	B0898911	17/04/08	16/04/13	XX0287477
12	SANTOS	RAMIL M.	BOSUN	FILIPINO	17/08/74 Pampanga Phil.	01/06/09	13/05/14	B0733366	03/01/11	02/01/16	EB1638211
13	RANIDO	JIM VOI B.	A.B.	FILIPINO	08/05/86 Albay, Phil.	28/08/08	27/08/13	B0578470	14/11/06	14/11/11	UU0125593
14	REYES	MARNIE S.	A.B.	FILIPINO	05/11/84 Pampanga Phil.	05/12/08	04/12/13	B0642262	27/11/08	26/11/13	XX2686902
15	NAHIL	JOHN PAUL Z.	A.B.	FILIPINO	16/02/88 Aklan, Phil.	16/06/08	15/06/13	B0575389	16/06/08	15/06/13	XX1408680
16	MALCONTENTO	WARREN S.	O/S	FILIPINO	16/09/86 Iloilo, Phil.	28/05/08	27/05/13	B0551658	28/06/08	27/06/13	XX1489845
17	NAHIL	JAN FIDER Z.	O/S	FILIPINO	13/05/89 Aklan, Phil.	02/06/09	01/06/14	B0733392	07/04/09	06/04/14	XX3436016
18	SEGUNDO	ARNEL G.	O/S	FILIPINO	28/01/83 Leyte Phil.	20/05/08	19/05/13	B0552872	20/01/09	19/01/14	XX2823857
19	ALDBA	EDUARD L.	OILER	FILIPINO	18/06/72 Bacolod City, Phil.	09/04/08	08/04/13	B0541851	06/03/08	04/03/13	XX0642925
20	CABILITASAN	DANILO B.	OILER	FILIPINO	22/09/75 Iloilo, Phil.	03/08/10	02/08/15	B0869216	24/05/07	24/05/12	VV0327055
21	ADUCA	RYAN V.	WIPER	FILIPINO	28/09/90 San Fablan Phil.	19/05/09	18/05/14	B0724048	07/04/09	06/04/14	XX3430059
22	DAGSA	FRANCISCO JR. B.	COOK	FILIPINO	26/11/62 E. Samar Phil.	29/09/10	28/09/15	B0926982	07/10/10	06/10/15	EB1130009
23	KARAGIORGIS	GEORGE	SPN'RY	HELLENIC	23/08/62 Chios Grc.	03/04/81	NO EXPIRATION	2151TH	06/10/06	05/10/11	AB1608459
24	DIAGOMAS	CHRISTOS	SPN'RY	HELLENIC	05/11/73 Peiraias Grc.	20/07/10	20/07/15	649506	31/05/07	30/05/12	AB9517173
25	CROWLEY	BRADFORD	AUDITOR	AMERICAN	14/09/68 NEW YORK U.S.A.	N/A	N/A	N/A	21/04/09	20/04/19	460469777

14. Date and signature by master, authorized agent or officer

ESTIA  
CAPT. TOURNARIS EVANGELOS  
Master  
NASSAU

**SUPPLEMENT TO THE INTERNATIONAL OIL POLLUTION PREVENTION CERTIFICATE  
(IOPP CERTIFICATE)**

**RECORD OF CONSTRUCTION AND EQUIPMENT FOR OIL TANKERS**

In respect of the provisions of Annex I of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred to as "the Convention").

**Notes :**

1. This form is to be used for the first two types of ships as categorized in the IOPP Certificate, i.e. oil tankers and ships other than oil tankers with cargo tanks coming under regulation 2.2 of Annex I of the Convention. For the third type of ships as categorized in the IOPP Certificate, Form A shall be used.
2. This Record shall be permanently attached to the IOPP Certificate. The IOPP Certificate shall be available on board the ship at all times.
3. If the language of the original Record is neither English nor French, nor Spanish, the text shall include a translation into one of these languages.
4. Entries in boxes shall be made by inserting either a cross (X) for the answers "yes" and "applicable" or a dash (-) for the answers "no" and "not applicable" as appropriate.
5. Unless otherwise stated, regulations mentioned in this Record refer to regulations of Annex I of the Convention and resolutions refer to those adopted by the International Maritime Organization.

**1. PARTICULARS OF SHIP**

- 1.1. Name of ship : ESTIA  
BV Register : 07430D
- 1.2. Distinctive number or letters : C6VZ9 8001330
- 1.3. Port of Registry : NASSAU
- 1.4. Gross tonnage : 42048
- 1.5. Carrying capacity of ship (in m<sup>3</sup>) : 86260
- 1.6. Deadweight of ship (in metric tons) (regulation 1.23) : 73400
- 1.7. Length of ship (in m) (regulation 1.19) : 221.670



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NAME OF SHIP : ESTIA

BV REGISTER : 07430D

1.8. Date of build :

1.8.1. Date of building contract 07/11/2003

1.8.2. Date on which keel was laid or ship was at a similar stage of construction 10/06/2006

1.8.3. Date of delivery 12/04/2007

1.9. Major conversion (if applicable) :

1.9.1. Date of conversion contract -

1.9.2. Date on which conversion was commenced -

1.9.3. Date of completion of conversion -

1.10. Unforeseen delay in delivery :

1.10.1 The ship has been accepted by the Administration as a "ship delivered on or before 31 December 1979" under regulation 1.28.1 due to unforeseen delay in delivery

1.10.2 The ship has been accepted by the Administration as an "oil tanker delivered on or before 1 June 1982" under regulation 1.28.3 due to unforeseen delay in delivery

1.10.3 The ship is not required to comply with the provisions of regulation 26 due to unforeseen delay in delivery

1.11. Type of ship :

1.11.1 Crude oil tanker

1.11.2. Product carrier

1.11.3. Product carrier not carrying fuel oil or heavy diesel oil as referred to in regulation 20.2, or lubricating oil

1.11.4. Crude oil / product carrier

1.11.5. Combination carrier

1.11.6. Ship other than an oil tanker, with cargo tanks coming under regulation 2.2 of Annex I of the Convention

1.11.7. Oil tanker dedicated to the carriage of products referred to in regulation 2.4

1.11.8. The ship, being designated as a "crude oil tanker" operating with COW, is also designated as a "product carrier" operating with CBT, for which a separate IOPP Certificate has also been issued

1.11.9. The ship, being designated as a "product carrier" operating with CBT, is also designated as a "crude oil tanker" operating with COW, for which a separate IOPP Certificate has also been issued

**2. EQUIPMENT FOR THE CONTROL OF OIL DISCHARGE FROM MACHINERY SPACES BILGES AND OIL FUEL TANKS (regulations 16 and 14)**

2.1. Carriage of ballast water in oil fuel tanks:

The ship may under normal conditions carry ballast water in oil fuel tanks

2.2. Type of oil filtering equipment fitted:

1. Oil filtering (15 ppm) equipment (regulation 14.6)

2. Oil filtering (15 ppm) equipment with alarm and automatic stopping device (regulation 14.7)

2.3. Approval standards\* :

2.3.1. The separating / filtering equipment :

1. has been approved in accordance with resolution A.393(X)

2. has been approved in accordance with resolution MEPC.60(33)

3. has been approved in accordance with resolution MEPC.107(49)

\* Refer to recommendation on international performance and test specifications of oily-water separating equipment and oil content meters adopted by the Organization on 14 November 1977 by resolution A.393(X), which superseded resolution A.223(VII). Further reference is made to the Guidelines and specifications for pollution prevention equipment for machinery spaces bilges adopted by the Marine Environment Protection Committee of the Organization by resolution MEPC.60(33), which, effective on July 1993, superseded resolutions A.393(X) and A.444(XI); and to the revised guidelines and specifications for pollution prevention equipment for machinery spaces of ships adopted by the Marine Environment Protection Committee of the Organization by Resolution MEPC.107(49) which, effective on 1 January 2005, superseded resolutions MEPC.60(33), A.393(X) and A.444(XI).