



Compliance Systems, Inc.

Final
~~Ongoing~~ Environmental Audit
M/T Theo T

Conducted March 13-16, 2011
Cristobel, Panama

In the matter of:

United States of America

v.

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

Hamilton House ♦ 26 E. Bryan Street ♦ Savannah, Georgia 31401 USA
Telephone: (912) 233-8181 ♦ Fax: (912) 231-2938
E-mail: csi@compliancesystemsinc.com ♦ Web site: www.compliancesystemsinc.com



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March 30, 2011

**M/T THEO T
ONGOING ENVIRONMENTAL AUDIT
CRISTOBEL, PANAMA
MARCH 13 - 16, 2011**

Preliminary

The undersigned conducted an Ongoing Environmental Audit aboard the M/T Theo T, while the vessel was at anchor off Cristobal, Panama and underway. Upon the suggestion of the Superintendent, the vessel got underway from the Cristobel Outer Anchorage so the OWS could be operated while the vessel was underway. The vessel was underway for a total of 4.75 hours during this operation. Portions of the audit were also conducted, while the vessel was transiting the Panama Canal.

The Theo T is a 73,021 DWT, double hull crude oil and product oil carrier, built in Samsung Shipyard, Koje Island, South Korea and delivered on August 7, 2003. The vessel has twelve cargo tanks with a total capacity of 81,618 m³. The vessel is powered by a B&W six cylinder main engine. Complete vessel particulars are attached.

Audit participants included:

Ioannis Mastrodimas, Master
Filippo Nakos, Chief Engineer
Lemwel Gapasinao, Chief Officer
Allan Flores, Second Engineer
Aguedo Tabangay, Third Engineer
Andresito Hontanosas, Fourth Engineer
Nicolae Budu, Electrician
Rogelio Sumilang, Pumpman

In addition to the above, Capt Aristeidis Dimou, Superintendent for the company, assisted with the audit. He arrived onboard the vessel on 13 March 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:

March 13, 2011

1445

Arrive aboard vessel, anchored off Cristobel Outer Anchorage



1450-1500 Met with Captain. Set up meeting with senior officers
1530-1545 Opening Meeting with Master, Chief Officer (C/O), Chief Engineer (C/E),
and Second Engineer (2/E), and Chief Cook.
1545-1900 Engine Room inspection including review of enviro-logger and printout,
incinerator, testing of OWS three way valve and alarm, inspection of
seals, MSD, operation of incinerator on diesel.
1900-1930 Dinner with Master, and C/E; discussions about audit
1930-2030 Review of EMS
2030 Retire for evening.

March 14, 2011

0800-0830 Breakfast; met with Superintendent
0830-0930 Met w/ C/O and conducted deck walk including inspection of cargo pump
room, bosun store, on deck garbage storage and SOPEP locker
0930-1000 C/O conducted test of ODME
1000-1100 Reviewed Ballast Water management plan (BWMP), Ballast water
reports, Ballast water log, Garbage Management Plan (GMP), Garbage
Record Book (GRB),
1100-1150 In engine room; observed starting of Incinerator.
1136 U/W from anchorage
1150-1220 Lunch
1220-1545 In engine room. Observed operation of OWS and reviewed critical
pollution prevention spare parts; inspected steering gear room.
1545-1900 Reviewed ORB and sounding log.
1615 Vessel anchored back at Cristobel Outer Anchorage
1900-1930 Dinner
1930-2030 Reviewed BWMP, GMP and handover notes.
2030 Retire for evening

March 15, 2011

0745- 830 In engine room to observe daily tank sounding; found out it is done at
0700; observed incinerator being shut down.
0830-0900 Breakfast.
0900-1130 In engine room; observed sounding of the sludge tanks and compared
this to SWOMS; observed testing of the OCM using the test fluid;
inspected engine room.
1130 -1200 Lunch
1200 -1700 Reviewed handover notes, ENV 011, tank sounding log, familiarization
forms, shore side training, shipboard training, Master Environmental
Review, Environmental Compliance sign off forms, seal logs, weekly
report, ORB and Vessel General Permit paperwork and inspections.
1700 -1900 In engine room. Observed sounding of sludge tanks and compared this
to SWOMS. Spoke with Oiler about daily soundings; reviewed calibration
certificate for SWOMS.
1900-1930 Dinner.
1930 -2030 Reviewed flexible hose inventory documents and other EMS documents.
2030 Retire for evening



March 16, 2011

0300 Underway from Cristobel Outer Anchorage to Panama Canal
0550 Vessel entered Gatun lock (Panama Canal)
0600-0800 Conducted deck walk and observed canal operations
0736 Vessel Anchored in Gatun Anchorage
0800-0830 Breakfast
0830-1030 In engine room; observed sounding of the sludge tanks and compared this to SWOMS. Spoke with C/E about daily tank sounding; reviewed fuel oil tank piping diagram to look at Fuel Oil Overflow Tank which is on the IOPP as a sludge tank.
1030-1130 Reviewed Cargo record book and ODME test log; reviewed last internal EMS audit.
1130-1200 Lunch
1300-1400 Conducted debrief of audit with Captain and superintendent.
1400-0800 Reviewed OWS, MSD and Incinerator manual and compared to PMS documentation; reviewed history of inoperative incinerator and entries in PMS and ORB.
1800-1830 Observed sludge tank soundings and compared to SWOMS.
1900-1930 Dinner. Informed launch would pick me up at 2200.
1930-2030 Reviewed older ORBs.
2030-2230 Observed canal transit.
2400 Departed vessel from Balboa Anchorage

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 appeared fully committed to the purpose and philosophy of the EMM. This was clearly demonstrated throughout my audit and during discussions with these officers. This is the second ongoing audit. The previous ongoing audit on this vessel was conducted on 19-22 February 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. According to Section 5.19 of the EMS "In the event that the incinerator malfunctions, the company should be notified using the SMS defect report and an entry should be made in the Oil Record Book (ORB), Part I." It appears there were problems with the incinerator starting 12 October 2010 when the prior C/E requested numerous parts for the incinerator (see attached request form). The new C/E reported aboard on 16 October 2010 and on 7 November 2010 he sent a request for spare parts for the incinerator. On the bottom of the form he stated "Note: Incinerator unit inoperative. Condition of primary burner very bad and fan impeller destroyed. The above additional to req 50/10." An entry was not made in the ORB when the C/E discovered this, nor was a SMS defect report sent to the company concerning the inoperative incinerator. The vessel did not receive the incinerator spare parts until 1 February 2011. According to the C/E the incinerator was working for a while and then a few days before Goteborg, Sweden, the milling pump for the incinerator began having problems. This spare part was received on 14 March 2011 and repaired on this day. A satisfactory test of the incinerator on diesel was conducted before on 13 March 11. After the repair to the milling pump, the incinerator burned sludge for a total of 20 hours starting at 1104 on 14 March 2011 and completed the operation at 0711 on 15 March 11. The initial sounding of the Waste Oil Service Tank (WOST) was 0.834 m³ and the final sounding was 0.161 m³. Therefore, the incinerator operated for a total of 20 hours and burned a total of 673 liters or a burn rate of 33.65 l/hr. According to the IOPP the incinerator is rated from 15 to 80 l/hr however, the incinerator manual states it is rated for 40 l/hr. Therefore, the incinerator operated within its rated capacity. It is recommended that when pollution prevention equipment fails, it be logged in the ORB and a SMS defect report be submitted as required by the EMS. See attached.
2. During my review of the Oil Record Book, Part I, I noted the sludge tank weekly retentions were recording all five sludge tanks listed under section 3.3.1 of the Supplement to the IOPP Certificate; however, the Bilge Holding Tank (BHT) retention is not being recorded as recommended by the previous ongoing audit and now required in Section 9.5 of the EMS. It is recommended this be done in the future. See attached.
3. Recently ABS added the FO Overflow Drain Tank to the list of sludge tanks. After talking with C/E it seems this tank is not usually on an IOPP. It appears it was added since it is connected to the sludge pump. There are a few entries in the ORB in which this tank drops in volume with no explanation (for example 27 Feb 11 to 06 Mar 11 in the C.11 entries). I saw in the engine log book that the liquid from this tank was transferred to the HFO settling tank on 02 Mar 11. Since this tank is listed as one of the IOPP sludge tanks, recommend all transfers to and from this tank be entered in the ORB. See attached.



4. The incinerator capacity listed on the Supplement to the IOPP Certificate is 15-80 liters/hour. This appears to reference the pump rate of the sludge pump. Review of the technical data contained in the manufacturer's manual (copy attached) indicates this value is the capacity of the sludge pump and the liquid waste burn capacity is 38 kg/hour and later in the manual it states the capacity is 40 liters/hour. Recommend that the accuracy of the Supplement to the IOPP Certificate be verified by Class during the next occasion of their visit to the vessel. This was identified in the previous ongoing audit and still has not been resolved. It is recommended this be addressed by ABS. See attached.
5. During the previous ongoing audit it was determined non crewmembers had to fill out the Environmental Procedures for Non-Crew Members, Form ENV 022. It was suggested that the form be eliminated and a readily visible notice posted at the gangway, with the watch stander pointing this out to all personnel boarding the vessel. When I came on board the vessel, my identification was checked by the gangway watch and they knew I was the environmental auditor. They did not show me the sign which was created as a result of the earlier audit. It is highly recommended that all gangway watch standers know to show the sign to visitors on board and to have them read the sign before they proceed.
6. The ODME is tested monthly by the C/O and recorded in an ODME Test log (excerpt attached). 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. Due to the vessel being at anchor and also, 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 ballast and 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. The testing of the ODME was not entered into the ORB Part II except for the March 2011 entry. As required by the Scope of Work and Section 9.5 of the EMS, I recommend the monthly testing also be recorded in the ORB. See attached. This was also identified during the previous ongoing audit.
7. Section 5.14.11 states "the vessel must maintain spares for the oily water separator, oil content meter, and its filters in accordance with the list of Minimum Recommended Spares." The spares for the OCM are not listed on the list of minimum recommended spares for this vessel. It is recommended that such spares be added to this list. See attached.
8. While conducting the deck walk it was discovered that the standard oil discharge flanges do not have proper seals on the flanges. The Starboard side flange did not have seals on it. The Port side flanges had broken seals on them. See photos.
9. There are steam lines which are on the high and low sea chest. These flanges could be removed to install a "magic pipe." It is recommended these steam lines have seals installed to ensure they are not used improperly. See photos.



10. Section 5.21. states that "Seals with unique identification numbers shall be placed on the flanges on the vessel's ODME sample lines and flow connections." Some seals have been placed on some of the flanges of the ODME sample line, but not on all of them. Also some of the seals installed are loose and could allow someone to remove the flanges without removing the seal. It is recommended that this be resolved. See photos..
11. A Master's Environmental Review must be conducted with a meeting of the officers on board. It is not clear if a meeting of the officers occurred when the Master's Environmental Review was conducted on 1 March 11. According to Section 8.4.7 of the EMS, "Upon completion of the meeting, minutes shall be compiled and posted in the previously mentioned areas. A copy of the minutes shall be retained onboard and a copy shall be submitted to the company along with the Master's Environmental Management Review report." There were no such minutes found on board the vessel. It is recommended that the minutes of the meeting be recorded and kept on board the vessel.
12. Section 5.16 of the EMS and the Scope of Work both state that the OWS source tank shall be cleaned every 6 months. Section 9.5 of the EMS states that whenever the OWS source tank is cleaned it should be recorded in the ORB. According to the computer PMS system there is a six month requirement which states "Inspection of Bilge Holding Tank through manhole, cleaning if necessary." This requirement does not state the tank has to be cleaned every 6 months as required by the Scope of Work and the EMS. The C/E told me that according to the PMS system, the BHT was cleaned on the following dates: 6 Feb 11, 4 Nov 10, 8 Aug 10 and 6 Mar 10. I reviewed the ORB and there were no entries stating the BHT was cleaned on these dates. On 13 Feb 11 there is an entry in the ORB stating the BHT was inspected, but it does not state it was cleaned. On this date the BHT had 10.066 m3 still in the tank. It is not possible to see the bottom of the tank or to easily clean the entire tank when there is still about a quarter of the tank volume still in the tank. According to the ORB on 4 Nov 10, the last time the BHT was cleaned, the tank volume in the BHT was 8.732 m3. On 8 Aug 10, the BHT had 0.2 m3, so it is possible it was cleaned or inspected but it is not entered in the ORB. It is recommended the BHT be cleaned every 6 months and a record be maintained in the ORB and in the PMS. See attached.
13. 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 EMS. Excerpts of the Log for January, February and part of March 2011 are attached. The remarks section of the sounding log has been returned to the form. When I entered the ECR on my first day I saw that the sounding log was being completed, but there were no signatures for any of the March entries. I took a photocopy of this document. I asked the C/E about this and he told me that the 4/E and 3/O initial the document whenever the page is full. The C/E told me that the 4/E and 3/O do not accompany the oiler every morning when he does the daily manual soundings as required by the Scope of work and the EMS. Furthermore, the oiler is not taking three soundings of each tank to ensure a proper sounding has been conducted as recommended by the previous ongoing audit. Also, the sounding log is just a print out and it is not bound and uniquely numbered allowing for removal of a page and changing



the information. It is recommended this be a bound document. It is also recommended that all of the above be resolved immediately. See attached.

14. As per the Scope of Work and Section 13.3 of the EMS 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. There were no such sample bottles on board during this audit. It is highly recommended that such sample bottles be retained on board the vessel at all times to allow for taking samples and sending to the laboratory.
15. The vessel is required to conduct quarterly Qualified Individual (QI) Notification drills. The date of the last QI drill according to the records on board the vessel was 12 May 2010. The vessel has been to the USA on a few occasions since that date including Savannah, GA in November 2010. It is recommended the vessel conduct and record the required QI drills on a quarterly basis.
16. The ORB states the OWS coalescer filters were renewed on 13 Feb 2011. The ORB also states the OWS internals were cleaned and washed. Neither of these were entered into the computer PMS. It is recommended that all maintenance performed on the pollution prevention equipment be recorded in the computer PMS.
17. The vessel has a computerized Preventative Maintenance System (PMS) using the Ulysses software. Most of the maintenance requirements for the pollution prevention equipment in the PMS is similar to what is listed in the manuals for the equipment; however, there appears to be maintenance which is being performed which is not being recorded in the PMS system. For example according to the C/E the MSD is being back flushed monthly and there is weekly chemical dosing done. The pH of the MSD is being checked every three months according to the C/E. None of this is being logged in the PMS.
18. During the course of the audit, several seals were broken in the engine room. The Master gave the C/E all of the spare seals without keeping track of which seals were used. It is highly recommended the Master be reminded the unused seals need to be carefully handed out to the C/E so they are not used improperly.
19. The Master's handover notes does not have an inventory of the spare seals on board the vessel. It is recommended this be done.
20. A test of the OWS was conducted while the vessel was underway from the anchorage. The test was begun at 1245. The sounding of the BHT was 0.59 m which equates to 6.37 m³. When the C/E started the OWS he had to keep pressing the fresh water flushing button on the SWOMS. At 1308 the SWOMS stated the OWS overboard valve was opened. According to the SWOMS at 1316 LT the BHT was at 0.51 m or 5.93 m³. At about 1348 the 15-ppm alarm kept going off. The BHT sounding was 0.34 m or 3.375 m³. The total volume of the BHT is 43.3 m³. Therefore the tank was at about 7% of its capacity. The C/E told the 2/E to open the sea water valve to the bilge pump to dilute the fluid going into the OWS. I told the C/E to not do that since it is not how the system should be operated. I asked to C/E why the alarm began going off and he told me that



there is rust in the pipe and this is causing the 15-ppm to go off. This did not make sense to me. There is currently no company policy on the minimum level of the BHT to operate the OWS. It is highly recommended the company enact a policy to not operate the OWS when the BHT drops below 20% of the tank volume. The OWS ran from 1308 to 1348. The difference between the BHT soundings was 2.99 m³ with an hourly rate of 4.48 m³/hr. See attached.

21. The bilge piping diagram does not show the modifications done to the OWS and OCM for the enviro-logger. There does not appear to be any Class approval for these modifications. It is highly recommended class approve these modifications to the system to ensure they are installed properly.
22. There is a fresh water flushing system off of the discharge side of the OWS, which does not have any seals on the flange. It is recommended this system have seals on the flanges. See photos.
23. Pages 48-49 of the incinerator manual are only in German. It is recommended these pages be translated to English or the language of the crew.
24. The ballast water reporting forms were reviewed. It was determined that all forms submitted to the U.S. are not being printed up and signed by the C/O. I asked to see the last Ballast Water Reporting Form for the vessels visit to Savannah, GA on 6 Nov 2010. The C/O could not find it. Eventually the Master found it on his computer, printed it out and signed it. The C/O who prepared the reporting form was no longer on board the vessel. It is recommended that when the forms are submitted electronically it is also printed and signed by the C/O generating the report. See attached.
25. SWOMS data for tank soundings was compared against manual tank soundings. The following table shows the results:

Date & Time: 1807 Panama Time; 3/13/2011							
Tank	Cap. (m ³)	Manual (cm)	Manual (m ³)	SWOMS (cm)	SWOMS (m ³)	Diff. (m ³)	% Diff. (m ³)
BHT	43.3	55.5	6.51	54	6.35		0.37
SBOT	35.8	165	18.58	161	17.84		2.07
Pur. Sludge	6.6	42	3.64	38	3.32		4.85
WOST	1.89	60	.878	65	.95		3.81

Date & Time: 1400 Panama Time; 3/14/2011							
Tank	Cap. (m ³)	Manual (cm)	Manual (m ³)	SWOMS (cm)	SWOMS (m ³)	Diff. (m ³)	% Diff. (m ³)
BHT	43.3	34	3.375	32	3.14	.	0.54%
SBOT	35.8	168	19.09	169	19.34	.	0.70%
Pur. Sludge	6.6	43	3.73	43	3.7	.	0.45%
WOST	1.89	52	.761	60	.88		6.30%



Date & Time: 0913 Panama Time; 3/15/2011							
Tank	Cap. (m3)	Manual (cm)	Manual (m3)	SWOMS (cm)	SWOMS (m3)	Diff. (m3)	% Diff. (m3)
BHT	43.3	36	3.64	35	3.47		0.39
SBOT	35.8	171	20.06	161	17.91		6.01
Pur. Sludge	6.6	43	3.73	43	3.7		0.45
WOST	1.89	12	0.18	14	0.19		0.75

Date & Time: 1703 Panama Time; 3/15/2011							
Tank	Cap. (m3)	Manual (cm)	Manual (m3)	SWOMS (cm)	SWOMS (m3)	Diff. (m3)	% Diff. (m3)
BHT	43.3	36	3.65	38	3.93		0.64
SBOT	35.8	172	19.78	166	18.71		2.99
Pur. Sludge	6.6	30	2.58	30	2.55		0.47
WOST	1.89	87	1.23	93	1.36		6.88

Date & Time: 0904 Panama Time; 3/16/2011							
Tank	Cap. (m3)	Manual (cm)	Manual (m3)	SWOMS (cm)	SWOMS (m3)	Diff. (m3)	% Diff. (m3)
BHT	43.3	40	4.21	39	4.04		0.38
SBOT	35.8	172	19.78	173	19.95		0.47
Pur. Sludge	6.6	33	2.84	30	2.59		3.79
WOST	1.89	80	1.17	84	1.23		3.12

Date & Time: 1808 Panama Time; 3/16/2011							
Tank	Cap. (m3)	Manual (cm)	Manual (m3)	SWOMS (cm)	SWOMS (m3)	Diff. (m3)	% Diff. (m3)
BHT	43.3	42	4.6	40	4.27		0.75
SBOT	35.8	174	20.13	144	15.17		13.85
Pur. Sludge	6.6	33	2.84	31	2.67		2.58
WOST	1.89	38	0.32	38	0.32		0

The above soundings were taken by the oiler in my presence. When the soundings were taken the vessel was either at anchor or under way with very little swell, therefore there was minimal movement of the vessel that could skew the soundings. The daily sounding document, ENV 023, is filled out every day and the C/E is calculating the % difference for the morning daily soundings. While I was onboard, the 14 Mar 11 soundings had a difference between the actual soundings and the SWOMS of 8.6% for the Bilge Oil tank. As can be seen above, there were a few occasions when some of the tanks were more than 5% difference. The C/E thinks the difference related to the Oily Bilge tank is related to the fact that the tank is being heated and there is vapor in the tank which is distorting the radar return in the tank. This sounds plausible. It was recommended during the initial audit that "to ensure manual soundings are as accurate as possible, I recommend that the procedure for taking soundings include taking at least three manual soundings each time and recording the average or median value." This



was not done when I was onboard. It is recommended this be adopted. On 4 Feb 2011, the BHT SWOMS level indicator was re-calibrated by a shore technician. See attached.

Observations without Recommendations

1. During the previous ongoing audit the following was identified. Section 1 of the EMM contains Ionia's Environmental Policy, Ethics Policy and Non-Retaliation Policy. Areas specified where the policies are to be posted aboard the vessel include the Master's Office, Chief Engineer's Office, Bridge, CCR, and ECR. To ensure crewmembers have access to the posted policies and are fully aware of their contents, I recommend these policies also be posted in the officer & crew messes and smoking rooms. Attached are copies of the policies. The SMS Quality, Safety, and Environmental Policy, a separate policy from the EMM Environmental Policy, is posted in the crew mess. This has since been corrected.
2. I observed various engine room pumps and machinery in operation during the period of time the vessel was underway, and at anchorage. The engine room was noted to be in an exceptionally clean condition. Minimal lube oil leakages were noted from the main engine. No oil or oily residue was noted in the bilges or bilge wells. The bilge well below the main engine fly wheel was also free of any oily residues. The bilge wells contained only small quantities of relatively clean water. One leak was observed at the Fresh water jacket water cooling three way valve near the fresh water maker. The purifier room was very clean, with no evidence of excessive leakages from the purifiers. Auxiliary diesel engines on line, and fuel oil and lube oil pumps and valves were also noted to be leak free. Attached are photos depicting the condition of the engine room.
3. Similar to the engine room, both the cargo pump room and steering gear room were noted to be exceptionally clean, with no apparent leakages from pumps.
4. A monthly 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.
5. The vessel is fitted with a sewage treatment plant (STP) made by DVZ, type DVZ-SKA-20, BIOMASTER, with a rated capacity of 3.70m³ per day. The vessel has no sewage holding tank and all black water is treated with the recommended chemical dosage for discharge overboard. According to the C/E, the STP is in continuous operation, both in port and at sea, with the direct overboard valve kept chained and locked in the closed position, except during short periods of maintenance, while at sea. Accordingly, only treated sewage is discharged. According to the C/E the system is adequate for the complement of the vessel, though the model type indicates capacity for only 20 persons. The present complement during the audit was 25 persons. The vessel, however, is also equipped with a vacuum toilet system, which substantially reduces the amount of black water requiring processing.
6. During the last ongoing audit it was determined most crewmembers were not aware of the anonymous reporting procedures. During this audit all crewmembers interviewed



were aware of the system. Furthermore, signs have since been placed throughout the vessel listing the procedure and the telephone numbers to call.

7. In the previous ongoing audit there was some confusion concerning the use of the Declaration of Environmental Commitment, Form ENV 020. The crew is now properly filling this out before they arrive on board the vessel.
8. During the previous ongoing audit it was determined that the Declaration of Environmental Compliance, Form ENV 021, signed upon sign-off, is only completed by officers aboard. Now all crewmembers are signing this form upon sign-off.
9. During the previous ongoing audit it was determined that in the Ballast Water Management Plan (BWMP), the appendix containing the U.S. ballast water exchange and reporting requirements was outdated. This has since been corrected. I questioned the C/O with regard to his knowledge of the U.S. ballast water requirements and he was fully aware and knew the current requirements.
10. The OWS discharge sample line is now painted orange and the OCM flushing line is now painted blue as required by the EMS. See photos.
11. A flexible hose inventory is kept, with hoses stored in the mid-ship house and forecabin. There are now labels to identify each hose.
12. 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. Attached are completed weekly, quarterly and annual inspection reports. There is now 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. See attached.
13. The Fleet Engineering Survey, Form ENV 015 is being completed by engineering officers within three months of arriving on board the vessel. There are a few minor grammar issues which should be resolved.
14. 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:

03/12/11	6.45 m ³ processed	1408 - 1537	4.3 m ³ /hr
03/11/11	7.39 m ³ processed	1056 - 1240	4.2 m ³ /hr
03/04/11	5.25 m ³ processed	1035 - 1526	1.1 m ³ /hr

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. Currently, the BHT and sludge tanks are periodically transferred to the cargo slop tanks through this approved connection. The cargo slop tanks are subsequently transferred ashore. Both the C/E and the C/O were aware that any machinery space bilge or sludge transfer to the slop tanks must be discharged ashore. ORB Part II entries verify all



machinery waste transferred to the slop tanks is being sent ashore. Corresponding entries for the transfers to the slop tanks are recorded in the ORB Part I and Part II. See attached ORB excerpts.

15. The vessel has a Deckma OCM, model OMD 2005, which conforms with the requirements of MEPC 107(49). The OCM was last calibrated on 27 Oct 10 (copy of certificate attached). The Scope of Work requires recalibration at least annually, with copies of the certificates maintained on board. See attached.
16. Daily checks of the Enviro-Logger are being carried out and recorded on Form ENV 024. See attached samples.
17. 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.
18. The vessel received a USCG expanded Marpol Annex I exam at Sector NY on 31 Jan 2011. The vessel did receive three deficiencies. None of them were related to any pollution prevention systems. See attached.
19. A lab test was done for the samples of the BHT, bilge well and OWS discharge line taken during the last external audit done Feb 2010. I requested the results of the tests and was also given an email from the manufacturer of the OWS stating the results of the test were acceptable. See attached.
20. Ionia has an internal environmental auditing procedure in place. Attached is a copy of the Internal Environmental Audit Report, Form ENV 016, for the audit conducted on 23 Feb 2011. The audit report is very detailed and comprehensive. The internal audit occurred while the C/E was having problems with the incinerator and yet the internal audit mentions that the "incinerator was found in good working condition and a functional test was carried out during audit." This auditor found numerous other deficiencies on board the vessel. The depth of the internal audit should be more extensive. Seven non-conformities or observations were identified and were in the process of being corrected at the time of this audit. The non-conformities were as follows:
 - a. Fleet engineering survey form ENV 015 has not been completed for 3rd Engineer. (corrected)
 - b. Records for the internal/external audits were found on board with follow up and close out of the internal audit observations/non conformities. The external audits carried out by the independent environmental consultants, although they carry recommendations to be implemented, there is no evidence that the company/vessel followed up and complied with these requirements.
 - c. The code of ethics could not be located on board in the designated areas. Moreover interviews with the crew revealed that some were unaware of this booklet. (corrected)
 - d. A flexible hose inventory list dated Dec 2010 was found on board. The previous one is dated Dec 2009 although this list should be completed every six months. Furthermore, there was no evidence that the hoses listed in the inventory are



- properly tagged with their corresponding tag and purpose of use. At the time of the inspection, the locations of some hoses were also not correct. (corrected)
- e. Only one copy of the scope of work was found on board located in the Master's cabin. The additional three stipulated in the EMP were not found on board. (corrected)
 - f. The form ENV 23 Envirologger checklist is being completed on a daily basis as required. On the monthly data comparison between logger readings and manual soundings there is a discrepancy on the bilge oil tank that exceeds the normal tolerance at some times. The C/E makes a note of it whenever there is such a discrepancy. It has to be noted that the volume discrepancy is very small compared to the total tank capacity.
 - g. C/E weekly report form ENV 009 shows a negative production of sludges/bilges at some times.

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,

Bradford J. Crowley
Auditor

Enclosures:

1. Completed Environmental Checklist
2. Ship's Particulars
3. Crew List
4. IOPP Certificate (4 pages)
5. Supplement to IOPP Certificate (10 pages)
6. Sewage Treatment Plan Manual Excerpt (2 pages)
7. Oil Record Book Part I Excerpt (16 pages)
8. Oil Record Book Part II Excerpts (7 pages)
9. OCM Calibration Certificate dated 27/10/10
10. Enviro-Logger Service Report dated 04/02/11
11. Sounding Log Excerpt (6 pages)
12. ODME Test Record
13. Training Program 2011
14. Training Program 2010
15. Safety Committee Meeting Minutes 27/02/11 (6 pages)
16. Fuel oil system Piping Diagram
17. Bilge Water Piping System
18. Incinerator Technical Data (3 pages)
19. Internal Audit Report dated 23/02/11 and observations (14 pages)
20. NPDES Weekly Inspection dtd 12 Mar 11
21. NPDES Quarterly Inspection dtd 21 Dec 10



22. NPDES Annual Inspection 30 Dec 10
23. Envirologger Checklist – ENV 023 (2 pages)
24. Monthly Environmental Performance Report – ENV 004
25. Chief Engineers Weekly Report - ENV 009 (2 pages)
26. Coast Guard COC dated 13 May 10 (2 pages)
27. Coast Guard Form A and B for Expanded Marpol Exam dtd 31 Jan 11 (2 pages)
28. List of Critical spare parts, Annex to EMS
29. Critical spare parts list from SMS
30. Request form for Incinerator dtd 12 Oct 10
31. Request form for Incinerator dtd 07 Nov 10
32. EMS familiarization form for C/E ENV 18B (2 pages)
33. Garbage Record Book (3 pages)
34. Garbage receipt dated 23 Dec 2010 (2 pages)
35. Ballast Water Reporting form for Savannah, GA dtd 06/11/10 (2 pages)
36. Shoreside EMS training for C/O Lemwei Gapasinao dtd 01 Feb 11
37. Receipt for Slop discharge in Goteborg dtd 22 Feb 11
38. Email from OWS manufacture concerning lab results (2 pages)
39. Photos



Compliance Systems, Inc.

Hamilton House ♦ 26 E. Bryan Street ♦ Savannah, Georgia 31401 USA

Telephone: (912) 233-8181 ♦ Fax: (912) 231-2938

E-mail: csi@compliancesystemsinc.com ♦ Web site: www.compliancesystemsinc.com

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"/> 8. Oil Water Separator	<input checked="" type="checkbox"/> 17. Waste /Sludge Oil Incineration
<input checked="" type="checkbox"/> 2. Audits	<input checked="" type="checkbox"/> 10. Sounding Log	<input checked="" type="checkbox"/> 18. Sewage Waste Stream
<input checked="" type="checkbox"/> 3. Certificates	<input checked="" type="checkbox"/> 11. Oil Transfer Procedures	<input checked="" type="checkbox"/> 19. Fuel Oil / Lube Oil Purifier
<input checked="" type="checkbox"/> 4. SOPEP Manual	<input checked="" type="checkbox"/> 12. Standard Discharge Connection	<input checked="" type="checkbox"/> 19. Hazardous Waste
<input checked="" type="checkbox"/> 5. VRP's	<input checked="" 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 checked="" type="checkbox"/> 21. Ballast Water Management
<input checked="" type="checkbox"/> 7. Oil Record Book	<input checked="" type="checkbox"/> 15. Bilge Water Management	<input checked="" type="checkbox"/> 22. Additional Environmental Items
<input checked="" type="checkbox"/> 8. Garbage Management Plan	<input checked="" type="checkbox"/> 16. Seal Management Program	<input checked="" type="checkbox"/> 23. General Comments and Observations

1. Vessel Details:

Vessel Name	THEO T	IMO#:
Ports/Voyage	CRISTOBAL OTER ANCHORAGE →	
Dates of Audit	3/13/11	
Master		
Auditor(s)	BRAD CROWLEY	
Agent		
Cargo		
Time Arrive	3/13/11 1445	
Time Depart		



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	20 Feb 11
Were any non-conformities issued related to environmental aspects?	none
Has the vessel ever had an environmental audit? If so, list date and indicate by whom:	22 Feb 11
Date of last ISM External Audit?	20 Dec 08
Were any non-conformities issued related to environmental aspects?	
Did the review of the vessel's Safety Management System (SMS) reveal any unresolved occurrence reports relating to environmental systems? If so, explain.	yes defect incin
Is this audit being conducted during a probationary period?	yes

not for

3. Certificates

International Oil Pollution Prevention (IOPP) Certificate

Date of Expiry	06 Aug 13	Issuing Authority	ABS	Bilge Tank Capacity	102.45
Incinerator Capacity	15-80 l/hr	OWS Capacity	5.0 m ³ /hr	Sludge Tank Capacity	102.45 m ³

★

used sludge pump rating 15-60 l/h. 40 l/hr is rating in manual.

43.3 m³

International Sewage Pollution Certificate

Date of Expiry	06 Aug 13	Issuing Authority	ABS	Holding Tank Capacity	—
Type of STP	II	Manufacturer	DVE services	Daily Person Capacity	left blank

not visible on board

International Air Pollution Prevention Certificate

Date of Issue	03 SEP 10	Date of Expiry	06 Aug 13	Issuing Authority	ABS
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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

Last CdC COC 13 May 2010 Page 2 of 24 PI / Isp STI sector NY 31 Jan 11 (3 defts - not env.)

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14014001 ✓

Safety Equipment - 30 people



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	26 MAR 09	YES
List date of latest Annex II Contact List		31 DEC 10
What is the official working language of the crew?		English
Correct contact numbers for Company, National, and Local authorities		YES
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?	12 FEB 09	✓
Date of approval:		
Is the Company Certification Statement included in the Plan		✓
Date of last QI Drill	01 May, 2010	✗ MISSING 2 QI Drills
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:	March 28, 2006	
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?	YES
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?	NOT COMPANY SPECIFIC ✓
Is annual refresher training being conducted ashore and or onboard?	YES 05 MAR 11
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

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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 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"/>	
Date of last bunker spill drill?	04 JUL 10
Date of last environmental drill other than bunker spill?	16 Feb 11
Location: <i>V/W grounding</i>	
Is pollution prevention training conducted before bunker transfer? <i>nting</i>	Yes
Are pollution drills being conducted according to drill schedule?	NO
Does the SOPEP drills include evaluation of personnel performing such duties?	
Are QI notification drills conducted according to Federal, and State regulations?	MISSING 2 A 1
How long are training records being kept?	3 yrs.
Comments:	

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 <i>19 FEB 07 to present</i>	✓
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	✓
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?	✓
When bilge water is removed from a holding tank, do the recorded quantities match the quantities previously recorded as being pumped into the tank	✓
Do all bilge water movements that are recorded tally correctly?	✓
If bilge water has been transferred to a shore-side facility or to a slop barge, does the quantity and date recorded on the receipt match the information in the ORB?	Yes
Are receipts for bilge slops transferred ashore or to a slop barge attached to the ORB page where the entry is recorded?	✓
Are there identical entries or similar entries for recorded operations of the OWS or incinerator that cause suspicion	NO ✓

*MISSING 2 A 1
RETURNED BY
26 JUNE 11*

★ CE not signing bottom of ORB as reqd by EMS

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Is evaporation or draining of water from the incinerator waste oil tank being recorded in ORB 12.4	Yes
Are weekly ROB's for sludge tanks being recorded?	Yes

H 26. Date, location, and amount of bunkers taken.	22/FEB 11 Goteborg, Sweden 11.06 MT cy/oil
H 26. Date, location, and amount of bunkers taken	19 Jan 11 Philadelphia HSFO 1004.701 MT
H 26. Date, location, and amount of bunkers taken	28 NOV 11 HSFO 900.05 MT

D 15.1 Date, total time or operation, and quantity of OWS discharged.	3/12/11 6.450 m ³ 1 h 28 m	4.3 m ³ /hr
D 15.1 Date, total time or operation, and quantity of OWS discharged.	3/14/11 7.395 m ³ 1 h 43 m	4.22 m ³ /hr
D 15.1 Date, total time or operation, and quantity of OWS discharged.	3/4/11 5.248 m ³ 4 h 51 m	1.08 m ³ /hr

D 15.3 Bilge water transferred to holding tank.	MAR 11 1.762 m ³ ROB 7.009 BHT
D 15.3 Bilge water transferred to holding tank.	28 FEB 11 0.771 m³ 7.5 30 min BHT
D 15.3 Bilge water transferred to holding tank.	24 Feb 11 3.777 m ³ Bilge Well (to 789 m ³ BHT)

C 12 Date, location and quantity of oil disposal if incinerated list time and quantity	14 FEB 11 0.381 m ³ 9 h 30 min
C 12 Date, location and quantity of oil disposal if incinerated list time and quantity	30 OCT 10 0.687 m ³ 17 h 51 m
C 12 Date, location and quantity of oil disposal if incinerated list time and quantity	14 OCT 10 0.24 m ³ 9 h 15 m
C 12 Date, location and quantity of oil disposal if incinerated list time and quantity	14 OCT 10 0.65 m ³ 20 h.

Are there any additional Codes in the ORB: F: Condition of Oil Discharge Monitoring and Control System G: Accidental or other exceptional discharges of Oil I: Additional Operational Procedures and general Remarks.	I - 04/MAR 11 internal cleaning/washing coalescer filters - not in UMS. I 13 FEB 11 - OWS renew coalescer filter D 13 14 Feb 11 10.459 m ³ xhd fm BHT to "S" SLOP TANK.
--	--

Receipt for xhd of Bilge sludge + Slop to Goteborg, Sweden
 dtd 22 FEB 11 - does not show up in ORB

2 Feb 11 F.O. of TK - 31213 m³/9.5 m (C11.1) - not no entries about this tank - remove from JOT

No mention of in ORB of info incinerator outbd.

Not including BHT in C11.1 as recommended

02 DEC 10 OWS entry - ran OWS fm 2148 to 0047 13.933 m³
 (NOT an issue in EMS?)

OR MAR 11 - sent to HSFO settling tank

not in EMS



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?	e/o
Who is listed as the Garbage Management Officer?	yes
Are designated crewmembers familiar with Plan?	05 MAR 11
Is there documented evidence of Garbage Management training?	yes
Is shipboard garbage properly handled IAW Garbage Management Plan?	yes
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"/>	no signal? *?
Is the Garbage Record Books maintained onboard for the past 2 years?	yes
List dates of GRB on board	20-01-09
Is the incinerator being used to burn garbage?	yes
If so, what categories?	Not Plastic
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?	yes
Signage/placards in working areas of crew in the official working language?	yes
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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Environment Audit Checklist

Are medical wastes incinerated or manifested as bio-hazardous waste?	—
Garbage discharged outside special areas.	✓
Incinerator operation observed? Provide details:	Yes
Garbage Pollution Placards posted?	YES
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	NO
• Is vessel reusing packing (examine stockpiles)	NO
• Is waste generated in port disposed to shore reception facilities prior to sailing	NO
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	Yes
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	
Comments:	



Environment Audit Checklist

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: Approval number & date: MEPC Resolution compliant with:	
Are the manufacturer's manual and schematics for the OWS and OCM correct and readily available?	✓
List locations: <i>ECR + C/E cabin</i>	
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: _____ to _____ Lat./Long.	✓
Are there records to indicate the OCM is periodically calibrated? <i>27 OCT 10</i>	<i>not every yr</i>
Was the OCM calibrated by a shore facility or onboard by the ship's crew?	✓
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? <i>2/25/11</i>	YES <i>in ECR 105 BK</i>
How often is the OWS training being conducted and by whom? <i>2 times 3 months</i>	
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 (3-way valve) or shut down when the 15ppm level is reached?	
Are there any modifications to bilge piping, not approved by Class and not IAW approved plans?	YES <i>A OCM</i>
Has the OWS overboard pipe been previously removed for inspection or cleaning? Dates: <i>Mar 2010 + during this audit</i>	YES
What is the company policy regarding periodic cleaning of the OWS? <i>6 mos.</i>	
Has the coaleser filter been cleaned and or/replaced? Dates: <i>Did it in Mar - did not put in VMS 23 SEP 10</i>	YES <i>1</i>
How many spare coaleser filter sets are onboard?	1
Operator competent and knowledgeable of operation (CE and 2AE)	YES

*3 mar 11 - did 3 way resp of solenoid valve
VMS replaced ows filter 24 09-10 - we did this in Mar (annua)
Abeq 4) did not update VMS systems, req'd for eng.*



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?	next unit end of month	to sign
Is the Sounding Log maintained in the ECR and is it readily available?	YES	
Are entries written ink, pencil, or both?	INK	
Is the Sounding Log bound with numbered pages	NO	
Is the Sounding long maintained onboard for 3 years? 18 JUNE 02	NO	
Is it documented at what times of day sounding are to be taken?	NO	
Who is designated to take the soundings? Oiler 4-8 watch	-	
Does the Master sign the Sounding log on a weekly basis? every 2 weeks	✓	
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 - but does have legal statement	

started using new, old form w/ remarks section on 01 JUL 10
 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	✓
Description of transfer system, including a line diagram of piping system (pumps, vents, valves, alarms, shutoffs, etc.)	✓
Person in Charge fluent in English or language mutually agreed upon w/ shore side PIC	✓
Format in CFR order or cross reference index page	✓
List/description of products carried by vessel	✓

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Environment Audit Checklist

Declaration of Inspection (DOI) available and retained for at least one month 33 CFR 156.50	
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	✓
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)	20 JUN 10
Has a pre loading plan been completed (Washington)	
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	YES
Is there a record of tests and inspections	
Comments	

liquid
bow
cert.

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?	STBD Port NO do not have seals
Comments:	

★ /

13. Overflow Discharge Containment - Ref: 33 CFR 155.320

seals are not wax proof

Size adequate (<1600GT ½ 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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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"> • Tail shaft recess <input checked="" type="checkbox"/> • Purifier room <input checked="" type="checkbox"/> • Below boiler <input checked="" type="checkbox"/> • Hydraulic pump rooms <input checked="" type="checkbox"/> • Steering flat <input checked="" type="checkbox"/> 	
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: <i>some rust in aft bilge well</i>	✓
Is there leakage from systems and engines into machinery spaces? Detail below: <i>3 way valve for fw jacket water cooling - leak</i>	
Is there evidence of recent cleaning of systems, equipment, and components?	<i>NO</i>
Is there adequate tank capacity to store bilge waste?	
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>



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?	2 more found in engine room - not labeled
Are there hoses, fitting, and connections in areas where usage is unknown?	NO
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

★ /

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

see chest
★ /

Comments:

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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.	
Is there a seal number logbook identifying the seals in use and explanations provided when a seal is broken or removed?	
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 - but he gave C/E all the seals
Is there any duplication of seal numbers?	NO
Are the seals in use capable of being removed during an emergency?	Yes
Comments: can be opened remotely	

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: C/E + ECR	
Is there a record of tests, maintenance, and inspection of the incinerator?	24 Sep 18 - any bmc
Who is designated to operate the shipboard incinerator?	C/E
Is it documented?	
Are there operating instructions for the complete operation of the incinerator, including the valve alignment, temperature settings, reporting and documenting?	Yes
Incinerator operates with sludge/waste oils?	Yes
Is there evidence of use (clean or dirty firebox)?	✓
List the holding capacity of the Waste oil tank	
Transfer pumps operable? Test.	

★ No mention in UMS how often to clean the incinerator manual p48-49 in german - no english (sect 2.)

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? No maint reqts for enviro logger / calibration



Environment Audit Checklist

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"> • Check status of sludge tanks – full/empty • Check to see if there are connections to bilge main or other areas • Review estimated quantities of sludge produced – normal or excessive (fuel sludge production can exceed 2% of total fuel used) • Inspect incinerator main burner, pilot burner & igniter for overall operational condition • Inspect condition of refractory. Look for signs of overheating • Test operate incinerator using waste oil if sludge temperature permit. Test safety cutouts, verify pressure gauges and thermocouples • At minimum, test unit on D.O. • Determine incinerator ash disposal plan • Check C/E incinerator log book for operational hours and maintenance • Inspect waste oil tank – drain, heating coil, level gauge, thermometer, date last cleaned 	
Comments: <i>2 days before departure began having problems w/ inc in motor started incin Hot 1107 on Diesel/w.o</i>	

1/★
3/14

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: _____ Persons. Maximum crew capacity _____ 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:	Yes
Is the system rated for more than the maximum allowed on the Safety Equipment Certificate?	?
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	Yes
If a gray water holding tank is onboard, list the holding capacity.	NO
Is the STP direct overboard valve locked?	There is not one

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Environment Audit Checklist

Are there SMS procedures for maintenance available?	test alarm	overhead
If so, are they being followed?	12 mos drain/clean / 30 mos	sludge pump on / water
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?		yes
Is the unit operating within the manufacturers design specifications? (Records)		yes
Are their clear and simple operating instructions/manual available?		NO
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		NO
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?		NO
Comments: Taking monthly back flushing & weekly desing - not being recorded Taking pH monthly every 3 mos - not logging No record bk / log bk for sewage Do not log addition of chem to sewage (every Sat)		

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?	
Is the shoot interval settings for each purifier documented at all times	
Have there been any incidents involving the vessel receiving poo5 quality fuels? Provide details:	
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:	



Environment Audit Checklist

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:	
Any incidents occurred and recorded of accidental or unintended releases of quantities of water: salt, fresh, condensate, or cooling? Provide details:	

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?	
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?	
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 checked="" 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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Environment Audit Checklist

Is an inventory kept?	10 Feb 11	do.
How often and by whom?		Monthly

22. Ballast Water Management – Ref: 33 CFR 151.2045 and NVIC 7-04 (Change 1)

Is the Ballast Water Management Plan (BWMP) approved by Class?		✓
Name of Class:	ABS 23 NOV 07	
Does the BWMP identify: Particulars <input checked="" type="checkbox"/> , Piping Plan <input type="checkbox"/> , Ballast Pump Details <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"/> , IMO Guidelines <input checked="" type="checkbox"/> , Handling Log <input checked="" type="checkbox"/> , BWM Officer <input checked="" type="checkbox"/>		✓
Where is the BWMP kept onboard?		Ship's Office
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?		yes
Are the BW Reporting Forms being properly completed?		yes
Are the BW Reports from previous ports kept onboard for two years?		yes May 2007
Has the vessel recently undergone a Ballast Water exam by Port State Control?		
Is the vessel equipped to treat ballast water or transfer ballast ashore?		Transfer ashore
How often are ballast tanks required to be inspected by SMS procedures		annually - UMS
During ballast tank inspections, is the amount of sediment being recorded?		yes
Comments: ✓ H. 25 Nov 07 CB Regs Just dk officers have frms - * Cannot find us BW Rptg forms - for all us ports. found in comp - not signed.		

23. Additional Environmental Items (Check Company Specific ECP)



Environment Audit Checklist

3/13/11

1445	Arrive onld via launch	
1450	Meet w/ Captain	
1530	Met w/ Captain C/E, C/D, A/E, C/LK	
1600	C/E to eng rm.	

24. General Comments, Observations, Recommendations

Enviro Logger			
SENT	2100	13/03/11	email sent (local time 1600)
W.O SVL TK VOL		0.94m ³	SENT 0.65m
ART Bilge		0.23m ³	0.04m
PT Bilge	0.40m ³		0.10m
STBD Bilge	0.41m ³		0.12m
City Bilge TK	18.00m ³		1.62m
Sludge TK	3.31m ³		0.38m
Bilge Hd TK	3.06m ³		0.32m

Does not include JOPP The M/E SCV Air Box / Overflow FD
 GDNV LOG - Deck off + Eng Officer King pls please for TK
 signature - wait til end of month (ems 13.3)

Form ENV 023 - completed every day
 had prob in past w/ sent w/ sensor for enviro logger

Last OWS ops in enviro log			
OWS start	12/03/11	at 2037	Lat 12 05.266N 76 32.000W
stop			
OWS start	1904	at 12 17.430	76 15.665
stop			
AT 1926	15 min msg	BT at 9.26m ³	(0.72m)
AT 1942	15 min msg	BT at 7.75m ³	(0.62m)
Average ppm overhd			
AT 1957	"	"	6.20m ³ (0.53m)

Increrator pump does not work - cannot burn sludge - New fuel

170V tested OWS
 Many lines off of OWS do not have seals - fw line /
 FW line connected to flushing line to sludge pump
 way to put oil over FW inlet is BT 15 ppm sample

get # 09865 for bigo 545 cross over
 3 way valve for fw jacket water cooling keelway
 Drain line for MSD on keelway if no
 seal - Nor. washing - monthly
 Malden pump in E/R store for diesel kfr
 not invent?

1407 2NGS

BHT = 59.5 = 6.511
Oily hydrok 1205 CM

~~6.511~~ 18.58

1800L (x 500 GPM)
6.35 m³ (0.59 m)
~~17.84~~ 17.84 m³ (1.61 m)

Environment Audit Checklist

N/E

SCOV TR = 14 CM	0.0804	
L.O. Sludge 14 CM	3.640	3.32 m ³ (0.38 m)
VOT 60 CM	0.878	0.95 m ³ (0.65 m)

ran ows for test - START 22:11:59 BHT 3.10 m³
STOP 22:56:37 6.35 m³

ran incin on diesel oil - no problem
W.O. Tank milling pump (recirc. inside w.o. TR) broken

Scope of WIC

- states CIE + Master to sign as page - only Master
- where is scope of work left & 4 pieces
- Did not ^{show up} have Env Prof for non crew members posted at gangway ^{now posted}
- Req'd to have containers on hand for leaks for bridge / spill / loss some, do not have.

3/14
0800
0850

met Superintendent of block
entered pump room
seals on ODM can be worked around + seals missing
large suction for scrop pump room has not
have a seal - that is kept in closed position -
should be kept open with seal on remote of valve
on manifold it, know it has a lock on it -
should be seal

- 1) 1st SID Discharge Seal Fun 009560
- 1) 2nd SID " Does not have seal
- 1) These seals/vine is not in resistance
- 1) CIE says ODM MONITOR TEST NOT RECORDED IN OXB AT
- 0940 Lots of plastic in storage area - will discharge in SFCR
- conducted ODM TEST - good test 300 ppm
- CIE told me test at they received milling pump - told him I would like to see run on sludge
- Superint suggested we go out to see to test ows - I said we do not have to but I would like to
- ? BWR form - id. BW in NYC - discharged in Votery, SW
- Master told it was OK - did not do exchange.

Found
1000-1100

Cannot find Savannah GA (5010) or (Nov 10) BWR, for
ODME seal 1000-1100 VERY difficult to read
Kid GMP, GRB, BWRM/records

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found in com. printed up. Capt sign

WO TK = 57 = .834
 SWOMS-1100 (1600 GMT) 69 1.0 PM3

Environment Audit Checklist

172 today's (3/14) SDNG - compared to SWOMS - 8.6% discrep
 for Bridge Oil Tank - C/E no idea why
 150-1220 Lunch
 1136 d/w for Anchorage -
 1104 started main on sludge/w/o
 1241 SDNG BHT = 0.59 = 6.37 m³
 CK told me by opening sprout off of OCM sampling
 line it reduced the sample flow allowing OCM to work
 ABS apply for work to NS/OCM
 FW sub to OWS discharge PK
 1245 started OWS - vent thru auto sys - CK had to keep pressing
 FW flushing button on SWOMS -
 1305 SDNG BHT = 0.59 = 6.37 m³
 only bridge TK = 1.67
 Rev Air TK 16

1305 Enviro logger at 1300 (1800 GMT) BHT at 0.57m = 6.81 m³
 start open 1305 (1808 GMT) OWS overhd opened
 1660 m³ at 0.51 m 5.93 m³
 CK requested spare part for incm on 07 avoid
 - told her it was not broken, having trouble as they
 approached factory (Peta/Mar II).
 Design 145 m³ CK for 47E for incm sewage, 2/E OWS
 noted 2/25/01

1341 OWS 15ppm alarm went off - CK told CK to open
 see water valve to OWS to check what going
 so OWS so it can keep running.
 still have 3 m³ in tank
 Critical spare part lists - CK approved
 1344 1544 started 15ppm alarm
 BHT SDNG 343 3.36 m³ 0.32 3.14
 1349 oil/sludge TK = 1.66 19.09 m³ 1.69 17.34
 sludge TK = 43 3.73 43 3.70
 WO TK 52 2.76 1.60 1.88 m³
 OWS run 57.17 min incm run 57.83 min

30% diff.

OWS 1241 - 1348 = 40 min
 299 m³ 4.48 m³/hr rate

1418 Rev Critical Pollution Prev Equipment Annex
 very short list - does not have sewage or incm pump
 spare parts - none for enviro toger -
 OWS spare parts list does not have incm spare parts
 (CK says 15ppm kept going off due to rust in line.)

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Incinerator inoperative NOV 07, 2010 -> give all incinerator
 inoperative - Did report to C/E/DOJ?
 since Galeberg, Sweden incin inoperative until today
 Mar 03 11 - C/E made requisition for spare part for
 millind pump



Environment Audit Checklist

1545 Rv ORB/IDPP
- swams only has Barge Oil Tank Purifier Judge TK, NO TK
& BHT does not have F.O over flow drain TK
Anchored. Cristobal outer anchorage (Atlantic)

1615 ORB rv
Dinner - then rv of def

2015 - BRMP/EMP/rv
rv handover notes Master no - no mention of spare seals
2015 C/O handover states Master's Fav & Mgt Rv not in order

3/15/11 Incinerator stopped at 07:11 (20 hrs)
Purifier out of order during stop at 7:20 am
Order for Inca VM = 1661
Recommend Tank 5 be packed by hot waste crew mass

0913 started sledge pump
stopped 0950

Number Sledge TK	43	3.75	43	3.70
SDV Air	21	1.32		3.97 m ³
BHT	36	3.69	.35	
F.O OVERFLOW	43	3.16		
City B.V. TK	171	20.06	164	17.91
WD TK	12	1.76	114	0.09 m ³

1:30
10:50

Steam line into sea chest - no seal - pushing for steam chest
Large reward bk - space 17 FEET OF
Conducted 15 ppm Function Test procedure end - 2005
good test
W.D. IN SDV 1.332 .96m 41 m³
pump 2.581 .29m 2.50

1.56 m³ for Paint SI to WOT

2/25/11 Eng designated
Should have min amt in tank. policy.
only making me sounding - 3 sledge recommend 3 sledges
not making deck ok
Kvd ENV EN - observation report - many similar to items id in Mar 10
(6 thus code missing, flex hose labeling - ~~not~~ obsen stating the above -
23 Feb 11

Numerous issues w/ handover notes not addressing broken incin
Master's handover notes does not have "no comment"
Instead of connections, it is "corrections" in deck, long form. form ENV is
Master ENV RV - did not do safety commit m³.
RV ENV Famil Deck + Eng
Kvd Dec Env Cont. ENV PAD
ENV Compl sign off 2/26/11 days incin satisfactory 24 DEC 10
(ENV 021)

Red NOI - Ltr fm EPA dtd 09/08/2009 - ack now submit to
Captain [unclear] of the Sea [unclear] on C/E desk
Captain handover notes do not have seal inventory

Kvd w/ky rvt -
Numerous oral entries of xtr of bilge/sledge to slop tank - dispose
in Rotterdam on 22 Feb 11

10:30 ✓ Fixed part by welding - met did not trust it
 Did request for milling pump mech seal (25 MAR 11)
 incm - 07 NOV 10 → 01 Feb 11 received parts in NYC →
 1st operation of incinerator (at Feb 11) 09 Feb 11
 Environment Audit Checklist
 ran 09/12/14/17 Feb 11 (C/E says after last

operation 17 Feb 11 pump broken - then opened it up.
 Made request for new pump. - all get in
 checked web seals.

1703 (2200 GMT) SWIMS

	SWIMS		Manual	
WQ Svc TK	0.93	1.36 m ³	0.87 0.965 0.765 =	1.273
Only Bilge TK	1.66	18.71	1.72 1.72 1.72 =	19.76
Purif Sludge	0.30	2.55	0.30 0.30 0.30 =	2.55 m ³
BHT	0.36	3.65 m ³	0.36 0.36 0.36 =	3.925 m ³
w/ 3/E				

1800 ✓ Out
 Outer Runy told me he always does S/day since Jul 20 10
 - Sept 1 4/E came w/ him - since Sept 10 just him
 He has never seen deck officer

Calibration cert for enviro logger
 Had issue w/ BHT - came out + recalibrated on 04 Feb 11 in N.J.

1900 ✓ Dinner - 11/007
 RV Flex Dices - last invent 04 MAR 11, 20 DEC 10, 30 JAN 11
 Enviro - Blank

16/11 ✓ Env II - enviro logger - battery filled out daily - bottom only filled
 only over 2 month antd 20 OCT 10 when started over day

0904 1404 GMT

	SWIMS		Manual	
WQ TK	0.84	1.23 m ³	0.80 0.81 =	1.17
Only Bilge	1.73	19.95	1.73 1.73 1.73 =	19.78
Purif Sludge	0.30	2.59	0.30 0.30 0.30 =	2.84
BHT	0.39	4.04	0.39 0.39 0.39 =	4.205
FD BHT			0.45 0.45 0.45 =	13.28
Scav Air			0.27 0.27 0.27 =	1.60

1800 ✓ water in Only Bilge TK
 C/E told me when only outer does S/day w/ no 4/E or DK officer -
 when just sign it every 2 hrs - he knows that it
 should happen every day w/ their sign. Said he will do it
 from now on.

1800 ✓ FO Overflow TK - connected to Sludge pump - C/E says this is
 not typical - if C/E appv recommend remaining in loop
 & disconnect from Sludge pump

1800 ✓ Env 24 Am 3/15/11 - Bilge 0.9 TK at 5% discrep of swims.
 some monthly tests not entered in ORB (D)
 RV old Audit/Response
 1806 Debrief

1800 ✓ critical spare parts - no more
 & swims calibration
 PMS

1800 ✓ Sample containers for tank
 ✓ Garbage sign
 2/E "no comment" for last 2/E

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MSC QSU - about.

Time w/v for anchor / BHT cleaning - record



Environment Audit Checklist

To see / ask

- Get to company for being millings pump for incin class appl for mods to OWS
- Get sight viewing + sightings of alarm print out w/ky
- Emergency bridge structure - remote operation
- Get with ~~data~~ from where to send samples
- results of test analysis done MORIO. - OWS manna response
- EMS 13.3 states samples taken using approp containers supplied w/ky lab
- w/ky rv SW OWS date on w/ky basis compare to OWS alarm print outs + test - shall initial all doc read - every day
- OWS friendly chem in ER
- Remove OWS of emergency large structure - NOTE in ER
- Photocopy of EMS 14001
- look at ODME seed - see if can read it - compare to 109
- receipts for GRS
- look at MANUP for hoses / time testing
- in sdng of F.O. overflow Drain TK (59.8)
- Superinten Name - CAPT ARISTEIDES DIMON
- ask at crew mess for Environmental Policy / Nm Retail
- DATE of CFR in BWM 2009
- ask at GMV for: Haz waste disposal - in Table 5 - one column tells them what to do in case of spill
- ask at OCM readout
- Do test using solution - OWS
- SOPE original - what purit capacity 6.6 m³
- Last time SW's MS calibrated - show me where calib pads - copy of
- ODME test log - also CRB address? - since soap used monthly
- VIOT VOP / EPA 10v - 1/4ly insp
- Do sampling using lab kettles
- Hand over notes
- ESC / us Cr.
- ask - generated Drain Tank water? Manual collected in ty 0, 1
- No req't to rpt to CGA about mop equip? incin? NO
- SMS defect report for mop incin? - Do not have 2 times
- Time w/v + Anchor.
- Master env ~~report~~ RV
- 0910 3/15/11 w.o TK swoms sdng / Do sdngs again
- oil to see interface sdng in Eng log book (obscure 4 Feb 10) - Not done, master diff. it is
- Master env rv on OI MTRN - supposed to be done 3ms Capt on board - it is
- appears to be quacked - does not "specify" when ok "no" - also there
- points to some observations - not required - states incin, when ng - checked no-but no manual
- C/O handover states env rv not being conducted
- ask C/E mbd 17 Oct 10 - Eng survey on 14 Dec 10 - states incin working normally was broken - Also states there are adequate spaces noted - missing parts for incin.
- ask Mirza cristian on 24 Feb 2011 - filled in every question w/ "No Comment" (this is when he left - mbd for 2 mos)
- ask Last Captain hand over notes (24 Dec 10) states incin has no defects
- ask Ask C/O about master env rv - missing
- response for OWS manna for lab analysis
- ask Eng log bk - oil to see interface - not done
- Fuel oil
- ask bunker line test cert / cargo
- ask by cargo record bk
- ask RV, Mar 10 response

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3/16/11 4:00 pm 0300 Outer Anchor
 IN 0550 GATUN LOCK
 SD 8-SDN 0736 GATUN ANCHOR

Waste Stream
 1420 W/W

MANUAL

Waste TRK	.68	1.00 m ³	65, 65, 65	0.951 m ³
Purif Sludge	1.31	2.67 m ³	33, 33, 33	2.846 m ³
Oil Bldge	1.44 m	15.17 m ³	174, 174, 174	20.13 (15.88)
BHT	.40 m	4.27 m ³	42, 42, 42: 4596	4.27 m³ 20

PMS 06 Feb 11 - Company Description "Inspection BAT through
 7 manhole, cleaning if necessary." ORB entries on
 called "Inspection Cleaning Holding Tank" this date was
 done on 06 Feb 11. - Not sure if cleaned, a full BHT
 on 13 Feb 11 ORB
 says BHT insp but
 not ~ 10 m³ in TRK

Waste Bldge Dwn line ser 1009799

Rtd ORB back to 16 MAR 10 to present + no
 mention about BHT insp or cleaning except
 13 Feb 11 mention of insp.

req'd to do 6 PMS cleaning
 04 NOV 10 PMS - cleaning (ORB says 8.732 m³)
 no mention in ORB this is 2 half meter deep
 08 MAR 10 - no mention in ORB - BHT ~ 0.2 m³
 06 MAR 10 - no mention in ORB ~ BHT 16.4 m³

Incinerator 14 Feb 11	0.381 m ³	9h 30m	40.10 l/hr
12 Feb 11	0.526 m ³	14h 33hrs	36.70 l/hr
09 Feb 11	0.351 m ³	14.5 hrs	24.20 l/hr