



# Compliance Systems, Inc.

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February 27, 2009

**M/T FIDIAS  
Initial Audit Underway from  
Constanta, Romania - Novorossiysk, Russia  
January 24 – February 04, 2009**

## Introduction

The undersigned, S. Joshi, conducted an Initial Environmental Audit aboard the M/T Fidiyas, while the vessel was underway between Constanta, Romania and Novorossiysk, Russia. During the audit period, the vessel discharged gas oil at Constanta and loaded gas oil at Novorossiysk. The time tables of personal activities and the vessel movements are attached. The audit was conducted in accordance with the conditions laid down in Attachment A of the document pursuant to the Plea Agreement between United States District Court, District of Connecticut and the Ionia Management S. A. ref. Criminal No.3:07CR134 (JBA).

The M/T Fidiyas is owned by Fidiyas Maritime S.A. It was delivered on June 29, 2007, to the owners and current manager: Ionia Management S.A. It was built by STX Shipbuilding, Jinhae, in Korea. The vessel of 30,004 GRT, classed with DNV, is a double hull tanker with segregated ballast tanks and built to carry oil and chemical products. The vessel is equipped with 12 cargo tanks with FRAMO pumps for individual tanks and 2 slop tanks. The vessel is fitted with Oil Filtering and Oil Detection equipment complying with IMO MEPC resolution 107(49) and has Oil Detection Monitoring Equipment complying with IMO MEPC Resolution 108(49).

I boarded the vessel at 1510 on Saturday, January 24, 2009 at the port of Constanta.

Audit participants included:

Master	Pouletsos Theodoros
Chief Engineer	Simoudis Ilias
Chief Officer	Moise Claudiu Eduard
Second Engineer	Marco Bayani F
Third Engineer	Serva Jose Cyril C.
Fourth Engineer	Pacliblar Erwin S.
Third Officer	Petere Marlon G.
Electrician	Garzon Geer John S

The Chief Officer and Chief Engineer were both new to the vessel and new to the company (first ship and first contract). Both are well experienced and appeared competent to handle the task. During the conduct of the audit, in addition to the above participants, various crew members



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

The vessel does not have a formal Environmental Management System on board. The environmental policies, procedures are a part of overall company SMS. The Company was recently certified for ISO 9001/2000; certificate # 24256-2008-AQ-HRV-RvA, and for ISO 14001/2004, certificate # 24257--2008-AQ-HRV-RvA by Det Norske Veritas. Both certificates were issued on April 08, 2008, with expiry on April 08, 2011. The Company has recently installed a computerized Planned Maintenance System prepared by Ulysses System UK Ltd., with type approval cert. # M-PMS-8657 dated, July 07, 2004, issued by Class DNV. There was no outstanding condition of Class in the last quarter related to waste stream management.

The audit process consisted of a review of SMS documents, records, and procedures related to environmental matters; MARPOL required logs; inspection of vessel related to environmental issues; waste handling equipment; testing of the OWS; incinerator and interviews with vessel personnel. The audit was conducted in accordance with the guidelines contained in Attachment A titled, "Procedural Guidelines for the Initial Audit, Ongoing and Final Audit", Section A.

The auditor appreciates the Master, senior officers and crew for their professional behavior and full co-operation throughout the audit.

Following is a compendium of the audit assessment requirements as prescribed in section A of the attachment A and observations made for each. In addition to the below, attached is a completed EMS Audit Checklist of Compliance Systems Inc., with notes made during the audit, supporting extracts and documents, and various other documents and photos supporting and amplifying the observations.

### **Assessment Requirements and Observations**

#### ***Requirement:***

***Be performed while the vessels are underway, when systems are in operation and when personnel are performing their normal routines.***

The audit was performed while the vessel was underway between Constanta and Novorossiysk. The transit time was 3 days 21 hours and 16 minutes from berth to berth, when all systems were in operations and personnel performing their normal routines.

#### ***Requirement:***

***Assess all waste streams developed from any system, equipment and components found in any engine room, machinery space or pump room onboard the covered vessels. This will include observation and documentation describing the leakages apparent on every system that can contribute to bilge loading. The audit will determine the status and quantify leakages stemming from:***

- ***all pump and valve seals and glands during operation,***
- ***all piping systems, flanges, gaskets, fittings and joints,***
- ***all equipment casings such as main and auxiliary engines, reduction gears,***
- ***operation of engines, boilers, incinerators, evaporators and,***



- ***every other mechanical component found aboard IONIA vessels.***

Various pumps and machineries were in operation as mentioned above during the voyage. Observations were made of operation of diesel generators on line, fuel oil/lube oil purifiers and pumps. No leakages from any pumps, pipelines systems, gaskets or glands and fittings were observed. The engine room was in clean condition, free of oil, dirt or water leakages. Bilges and bilge wells were inspected and found to contain no trace of oil, only small quantity of water. During the voyage, the purifiers were functioning normally and satisfactorily with no leakages observed. The vessel has four purifiers with automatic time recording counters.

***Requirement:***

***Assess the adequacy and performance of the SWOMS, Oily Water Separator, Oil Content Meter, Incinerator, Sewage System and any other pollution prevention equipment to handle the quantities and types of wastes developed during normal operations. This assessment shall include an evaluation of the capacities for all tanks or containers associated with the management of sludge, bilges and oily wastes or other wastes. It shall include an evaluation of documentation tracking, maintenance and repair, modifications of all pollution prevention equipment, and notifications of equipment failure to shoreside personnel.***

Special Waste Oil Monitoring System (SWOMS)

SWOMS equipment was supplied on board. The installation was not completed by the shore company which supplied the equipment. Some components were fitted but not interconnected. In short the system was not functional during the audit. No observations were made of performance. In absence of equipment manual or advice from management it was unable to assess the adequacy of the equipment supplied.

Oily Water Separator (OWS)

The OWS fitted on board is manufactured by B+V Industrietechnik, GMBH. The Turbulo-MPB-5 bilge water separator is fully compliant with IMO resolutions MEPC 107 (49) approved by class and the USCG. The MPB (mechanical phase breaker) bilge water separator is a two stage system, the first stage operating as the well known and established gravitation method using oleophilic coalescer inserts and with the second 'breaking' stage using HycaSep filtration elements to separate mechanical emulsions, with throughput of 5.0 m<sup>3</sup> per hour. It has adequate capacity to handle the oil water mixtures generated in the E/R during normal operations.

Oil Content Meter (OCM)

The OCM is German make DECKMA model OMD-2005, that meets the requirements of IMO MEPC Res. 107(49). It was calibrated on 03/11/2008. This unit is provided with tamper proofing device to prevent dilution of samples entering the OCM. In addition the OWS has a flow meter provided to indicate the direction of flow of the effluent.

Incinerator

The vessel is fitted with an incinerator made by Hyundai Atlas; make MAXI NG50SL WS meeting the requirements MEPC Res 76(40), with a capacity to burn liquid waste of 38Kg/hr and solid waste 80Kg/hr. It is of adequate capacity to meet the needs of the vessel of incineration of liquid and solid waste generated. Company has a policy in place to dispose of



solid and liquid waste ashore as far as possible where the facilities are available. Operational test of the incinerator was carried out on January 31, 2009 from 1045 hrs till 1945 hrs. Initial quantity and final quantity in incinerator service tank was 945 L and 540 L giving a total 405 L of sludge burnt in 9 hours. This equates to 45 L of sludge per hour with specific gravity assumed at about 0.8 giving, 36 kg/hr against rated capacity of 38kg/hr. The vessel had recently disposed sludge ashore in Istanbul on January 22, 2009 prior arrival Constanta.

#### Sewage system

The vessel is fitted with sewage collection system made by JETS model Vacuumator 15MB-D with a capacity of 15m<sup>3</sup>/hr, 120 flushes per hour based on 1.2 L per flush. The treatment plant fitted meets the requirements of MEPC 2(VI) Annex IV of MRPPOL. It is made by DVZ-Services GMBH. Model DVZ-SKA 20- BIOMASTER is designed for 20 persons as per manual supplied on board. It was pointed out to Master and C/E's attention that the ship's complement on Safety Equipment certificate is 27. According to Chief Engineer it is working satisfactorily and he has had no issues to deal with so far. It is an automatic treatment plant with continuous discharge and is also provided with a holding tank with capacity of 7.0 m<sup>3</sup> for use during maintenance period or malfunction of the plant. The plant is provided with a facility to dispose sewage ashore through standard connection on main deck aft on either side, if necessary.

#### Pollution Prevention from Cargo Operations

Vessel is provided with one manifold tray on either side amidships to contain any leakages from the shore hose connections during loading and discharging operations. Each tray has a capacity to contain 6.3m<sup>3</sup>. The vessel carries two portable diaphragm pumps on deck one on each side with a capacity of 8.3m<sup>3</sup> each, during cargo operations and has additional three spare pumps in SOPEP locker on deck.

#### Bilge and Waste Oil Tanks

The vessel has, as per IOPP Certificate, adequate tanks to manage the sludge, bilges and oily wastes or other wastes that are generated during normal operations. The vessel consumes an average of 32/33 tons of heavy fuel per day at full speed. If the sludge generated is at an average of 1.5% of the heavy fuel oil of CST 380 specification, the vessel has adequate capacity to hold the sludge in oil bilge tank and sludge tank (a total of 28.0 tons) for a normal duration of voyage, vessel, shall undertake. The capacities and the accumulations for past month are tabulated in the table below: All figures indicated are in cubic meters.

Sr. #	Tanks with maximum capacity	Jan23/09	Jan16/09	Jan09/09	Jan02/09
1	Bilge Holding (22.7)	0.1	3.2	0.0	3.6
2	Oily Bilge (13.9)	0.011	5.42	0.0	3.7
3	Sludge (14.6)	0.01	0.0	5.42	2.2
4	M/E Scav. Air Box Drain (0.4)	0.052	0.148	0.14	0.058
5	M/E Stuffing Box Drain(1.9)	0.0	0.116	0.077	0.057
6	Waste Oil ( 1.79)	0.0	0.25	0.0	1.0
7	Fuel Oil Drain(6.6)	0.04	0.383	0.32	0.24
8	Luboil Drain (3.1)	0.0	0.073	0.073	0.073



The Company has introduced a waste oil tank sounding log to record quantities on a daily basis, with the sounding records forwarded to management offices in Piraeus on a regular basis. There are no specific log books to record maintenance, or failures etc. of individual equipment. Operational and malfunction records of related machineries are kept in the Oil Record Book (ORB) as required. The information is sent to management through a computerized Planned Maintenance System.

**Requirement:**

***The assessment of the adequacy and performance of the Oily Water Separator and Oil Content Meter will specifically include an operational test of the system under actual operational conditions, with consideration of the manufacturer's recommendations. This test shall include one (1) hour of continuous processing of the contents of the Bilge Holding Tank without dilution, conducted in the presence of the auditor(s), Chief Engineer, First Engineer, and any other engine room personnel assigned responsibility for the operation and/or maintenance of the Oily Water Separator. If an actual discharge is not feasible due to the location of the vessel, then the discharge piping shall be disassembled after the control valve and the discharge redirected back to the bilges, or holding tank provided safety procedures are in place and approved by Class. Soundings of the Bilge Holding Tank shall be made before and after the test and made a part of the audit record, along with a calculation made of actual throughput of the OWS. All alarms shall be recorded and made a part of the audit record. All of the above shall be recorded in the Engine Room Oil Record Book. In the event that the assessment determines that the Oily Water Separator is not adequate, then an immediate report shall be made to the Special Master, the CCM and to the United States.***

Oily Water Separator and Oil Content Meter

On January 24, the section of pipe adjacent to the overboard discharge valve was removed for inspection in the presence of the Chief Engineer, 2/E and the auditor. The pipe and the opening of the valve were found clean, and free of oil. A notice (see photo and document 15)) to that effect was placed on the pipe for future reference, with appropriate entries in E/R log book and ORB.

The operational test of Oily Water Separator/OCM was carried out off shore on January 26<sup>th</sup>. Initially the OCM was tested with clean water and with blocking of the Sensor to activate the 3-way solenoid valve operation. The OCM and 3-way valve functions were satisfactory. The OWS is fitted with flow direction indicator and OCM (Deckma OMD-2005) with a tamper proof control to prevent dilution of the effluent sample. All the associated pipelines were painted with distinctive colors indicating the flow direction and destination tanks. The vessel had disposed the bilge water and sludge ashore in Istanbul prior to arrival in Constanta on January 22. The source tank (Bilge Holding Tank) for OWS being empty, had to be filled with sea water prior to carrying out the test. The test was conducted for a period of 45 minutes giving an average rate of 4.93 m<sup>3</sup>/hr compared to rated capacity of 5.0 m<sup>3</sup>/hr. The test conducted was for a period less than one hour, as the source tank did not have sufficient effluent from the bilges. Filling of the tank with salt water was a slow process and the tank was filled with salt water that lasted for a period of 45 minutes operation. The Chief Engineer, Second Engineer, Electrician and an oiler were present during the test. Samples were taken and the OCM readings were monitored throughout. The Bilge Holding Tank was confirmed as the source tank for OWS operation from



the approved drawings. Soundings were taken by the oiler and quantities were calculated by the C/E. On completion of the test, new seals were put on the overboard discharge valve and appropriate entries were made in the E/R log book and Oil Record Book, with geographical positions of the vessel obtained from the navigating bridge.

The alarms record was checked on the data logger in the ECR, which corroborated with the operational test. Physical inspection of the bilge wells forward port/starboard and aft in E/R showed no oil. The bilge wells were fitted recently with Rosemount Guided Wave Radar level and interface transmitter (installed as part of SWOMS in January 09-15, 2009, from Las Palmas to Gibraltar). Appropriate entries were made in the ORB and checked with data-logger. It was concluded that the OWS has adequate capacity to handle the effluents from E/R bilges.

According to the ORB, the last three operations of the OWS were as follows:

15 Jan 09	0925-1810	0.5m3 *
06 Jan 09	1500-1709	0.5m3 *
28 Dec 08	1040-1500	17.0m3

\*It was suspected by C/E that the sensor of the OCM was faulty indicating high ppm. A new sensor was fitted on 24 January, 2009. Due to suspected faulty operation of the sensor the vessel disposed Oily bilge water along with sludge ashore in Istanbul on January 22, 2009 (see attached copy of receipts).

As per computerized company PMS, the cleaning schedule is as follows:

Bilge wells - annually  
Bilge Holding Tank - every 3 months.

All entries in waste stream tank sounding log and the Oil Record Book were consistent.

**Requirement:**

**Assess each vessel's crew and their ability to handle the operational, maintenance and repair workloads in maintaining all systems, equipment and components onboard in an effort to minimize waste stream development and to determine if the size of the engineering crew is adequate for workloads.**

The present engineering staff comprising C/E, 2/E, 3/E, 4/E, three oilers, two wipers, an electrician and a trainee electrician is adequate to handle the operational, maintenance and repairs workloads in maintaining systems, equipment and components on board related to Waste Stream Management. All the staff appeared to be professional and proficient in their knowledge and experience for the job allocated. They are fully aware of the effort needed to minimize the waste streams development in the E/R.

**Requirement:**

**Assess the adequacy of the procedures, current practices and equipment, including storage capabilities used to manage shipboard solid wastes generated in all areas of the vessel and the effectiveness of garbage management plans.**



The vessel has an approved dedicated Garbage Management Plan on board. Throughout the vessel the garbage is collected, segregated and stored in color coded containers as per the Plan. Procedures are adequate to comply with MARPOL Annex V and the vessel is in compliance with current rules and practices. The containers were located in the accommodation, galley and pantries for officer and crew. On the poop deck aft the garbage is stored for shore disposal in large steel containers with covers. The Engine Room follows the Garbage Management Plan for collection, segregation and storage of the garbage generated. The ash was stored for shore disposal and oily rags for either incineration or shore disposal. Adequate number of placards and posters were displayed at key locations. All the disposal receipts are filed by the Garbage Management Officer i.e. Chief Officer. Garbage Record Book, maintained by C/O, was sighted for entries. All entries made were satisfactory. Galley waste oil was disposed through engine room waste oil collection. Periodically the monthly ship board safety meeting addressed the issue of garbage (minutes of the monthly meetings sighted). Vessel segregated hazardous waste for landing ashore, but does not maintain a hazardous waste manifest.

**Requirement:**

**Assess the machinery spaces for unauthorized ways to dispose of waste.**

All possible ways of unauthorized disposal of waste were checked. The overboard discharge valve for OWS is kept locked by chain and a padlock with keys in possession of Chief Engineer. The Emergency bilge suction and all cross over valves associated with General Service and Main Fire pump were sealed, painted with distinctive color and appropriate cautions displayed for unauthorized use. The shore standard connection common valve, interconnecting pumps of sludge and E/R bilges is a check valve preventing transfer of effluents from one tank to the other and was kept closed. All the possible ways of unauthorized disposal of waste are currently taken care of by locks, seals/tags and cautionary placards. On upper deck the standard connection valves for disposal of either bilges/sludge and sewage were sealed. On deck on portside the two Over Board Discharge valves connected with ODME operation were sealed.

**Requirement:**

**Assess the adequacy of the vessel crewmembers to maintain the following records, including a complete comparative analysis of recorded values (against each other where possible) of the following records, if applicable:**

- **Oil Record Book (Deck and Engine)**
- **Engine Room Alarms**
- **Tank Sounding Record Book**
- **Personnel work records and lists**
- **Maintenance records**
- **Vendor service records**
- **Bilge waste and sludge receipts**
- **Deck Log**
- **Garbage Record Book**
- **Wastewater Discharge Log**
- **Oil to Sea Equipment Interface records**
- **Hazardous waste manifests**



- **Solid waste discharge receipts**
- **Oil Content Monitor (OCM) calibration records**
- **Training records**
- **Vetting documents**
- **Inspection Documents**
- **EMS or SQE Audit documents**

ORB Part I maintained by Chief Engineer and other engineers performing the task and Part II by Chief Officer.

E/R alarms and Tank sounding book by 4<sup>th</sup> engineer and witnessed by 3/O

Personnel work records and lists - C/E and C/O

Maintenance records by - C/O and C/E as per PMS

Vendor service records - C/E and C/O

Bilge and sludge receipts- C/E

Deck log by Chief Officer and all deck officers

Garbage record log - C/O (along with garbage shore disposal

Oil-to-sea interface records as per Tail shaft Monitoring form of DNV and OCM Calibration records- C/E

Port State, Flag State and Vetting inspection records - Master

SQE audits - Master

Training records – Third officer

EMS audit and waste water discharge log are not presently maintained in the company.

All records were verified against each other where possible.

**Requirement:**

**Assess the adequacy of the policy, procedures, and current practices used to store and dispose of the following, if applicable:**

- **Solvents**
- **Degreasers Cleaning wastes**
- **Batteries**
- **Paints**
- **Oily rags**
- **Fluorescent and incandescent bulbs**
- **Expired boiler and engine chemicals**
- **Used boiler and engine chemicals**
- **Galley greases**
- **Pyrotechnics**
- **Medical supplies**
- **Contaminated bunkers**
- **Used Oils and greases**
- **Incinerator ash**
- **Transformer oils**
- **Contaminated refrigerants**
- **Hazardous materials**

As per company Garbage Management Plan, all the hazardous waste was segregated and stored on board for shore disposal. There was objective evidence available to see the storage



items of hazardous waste such as batteries and cartridges etc. on board. Solvents, Galley grease, cleaning wastes used oils and greases in engine room were disposed of with sludge. Oily rags were sent ashore or incinerated. No records for contaminated bunkers were found. Incinerator ash is sent ashore with rest of the garbage.

**Requirement:**

**Assess and evaluate documentation that all vessel officers understand the requirements of the Court's order.**

The information regarding the requirements of the plea agreement/scope of the work document has been distributed to officers on board and is used for discussion of requirements during the safety meetings. Some of the junior deck and engine officers were interviewed to find out if the requirements of the Court order were understood. The purpose of the document was explained and a record was sighted. It seemed that they were aware and understood the requirements.

**Requirement:**

**Assess current practices and procedures associated with the Master and Chief Engineer's capability to communicate with each other and with shoreside personnel including the CCM and other appropriate managers as required under the IONIA Safety Management System.**

Despite the cultural differences there was a good level of communication between the Greek Master and Chief Engineer with Filipino officers and crew, and all seemed to have good level of communication with shore staff and visiting port captains, technical superintendents, crewing manager and DPA.

**Requirement:**

**Assess the frequency and adequacy, through interviews of crewmembers, of shipboard pollution prevention and environmental protection meetings and training.**

The Safety meetings were held monthly as per company SMS. Environmental protection and pollution topics were discussed. The minutes were posted in the mess rooms of officer and crew. The training was carried out through videos on various topics including pollution prevention and records were kept. The Chief Engineer carried out periodical training of his staff for operation of Waste Stream related equipment. There was no evidence of specific training material on board developed by management.

**Requirement:**

**Assess the current practices and procedures used on vessels and ashore to track crewmember environmental training, as well as the availability of and access to training resources;**

Presently Pre-joining Familiarization Training for the "Proper care and disposal of oily waste" is done in manning office in Manila for crew members joining the vessel on the subject of ORB, OWS, Stern Gland, Incinerator and cleanliness of engine room.(see attached document). It appeared from the attached document that it was also given to members of deck department who were not assigned with the operation of the equipment and no details of training were



mentioned. The access to training resources on environmental awareness, pollution prevention etc. as far as the proper material, method of delivery and assessment were not found on board. Shipboard training was only through the monthly safety meetings, videos (list of videos attached) and drills as per company drill program, but availability of proper resource material was unknown. No CBT training was available on board.

**Requirement:**

**Assess the adequacy of existing reporting methods to report environmental concerns and evaluate the capability of a reporting individual to remain anonymous, and review processes for handling environmental concerns from crewmembers and shoreside personnel. Evaluate the adequacy of signage and instructional material relevant to use of the existing reporting methods.**

The vessel has a locked box on A-deck with a key in possession of Master, available for anonymous reporting of environmental concerns by an individual crew member, (see photos). Printed forms and envelopes were provided. The Master has the responsibility to open the box once a month, and forward the envelopes to the CCM in the shore office. Blank form attached. The form appeared to be flawed as it required the name and signature of the person reporting, which defeats the purpose of anonymity. The form is not for specific use of environmental issues and includes safety issues also. In addition to the lock, the box should have a seal which can be broken by the visiting shore superintendent who could remove the contents in presence of the Master and a witness, and send them to CCM with receipts for the Master and CCM. A revised procedure and form are necessary. There are placards displayed in mess rooms and alleyways giving contact details of newly appointed CCM.

**Requirement:**

**Assess the equipment procedures related to Oil Transfer Procedures, including slops, bilges and sludge discharges, condition of hoses, connections and transfer equipment including reviews of Declarations of Inspections and methods in place to prevent illegal discharge via the shore connection.**

As informed by the Chief Officer and Chief Engineer, the SMS had adequate information in the form of procedures related to Oil Transfers including slops, bunkers, bilges and sludge discharges with standard shore connections and transfer equipment to prevent illegal disposal. Vessel had no inventory of spare hoses on board.

**Requirement:**

**Assess the adequacy of all records related to any failure of existing safety or other management systems, including a review of nonconformities and respective corrective actions.**

The records shown did not indicate any failures of existing safety or other management systems. The internal and external ISM audit reports were checked and had minor non-conformities reported. The audit findings need to be closed by DPA within a reasonable time frame when corrective action has been completed for non-conformities.



**Requirement:**

**Assess the availability and content of various manuals, schematics and documents required in the use of all pollution prevention equipment and activities.**

The vessel had all the manuals of equipment related to waste stream management and type test certificates. Schematic diagrams and pipe line diagrams were on board. Company SMS manuals and Quality & Environmental Management Procedures manual dealing with pollution prevention equipment were with Master and Chief Engineer.

**Requirement:**

**Assess the performance of the ODME in the presence of the Chief Mate. Ensure that members of the Deck department who operate the ODME are proficient in its operation and record keeping, including procedures for documenting ODME failures. The assessment should evaluate the correct running of pumps in the sample piping system; flow rates and pressure drops to ensure the system operates under correct flow conditions; correct functioning of the alarm system for no flow and other conditions; the triggering of alarms for manual signal inputs; recordings when manual overrides are activated and the proper operation of overboard interlocks. Related equipment to be tested will include permanent or portable tank gauging equipment used to determine oil water interfaces. The assessment shall include an examination of personnel associated with such tasks the knowledge and understanding of the requirements and equipment operations.**

During the audit, ODME was checked and tested as maker's manual by Chief Officer for safe operation, correct sequence of running pumps in the sample piping, flow rates, pressure drops to ensure correct operations; alarm systems for various conditions and triggering of manual inputs and recordings manual override etc. The vessel has three UTI tapes in use and one spare to gauge the tanks and oil/water interface. The UTI tapes are tested annually. Last test on two tapes was done in December 2008. (Certificate attached). The junior officers and pumpman were knowledgeable and familiar with requirements and the operation of equipment under the supervision of Chief Officer.

**Requirement:**

**An assessment of related deck department, policy, procedures and equipment used in the discharge of dirty ballast or contaminated ballast tanks. The assessment shall include an examination of personnel associated with such tasks the knowledge and understanding of the requirements and equipment operations.**

There were no specific procedures or instructions in SMS other than to follow the MARPOL regulations. The Master, Chief Officer and 2/O have knowledge and understanding of the requirements and equipment operations. The junior officers are constantly trained during operations by senior staff. The unlicensed crew member (Pumpman) is familiar with requirements and procedures associated with handling of dirty ballast, tank cleaning etc., under the supervision of Chief Officer. The segregated ballast tanks have a hatch opening on deck to check the status of ballast prior discharging. The vessel carried out ballast water exchange in Black Sea prior arrival Novorossiysk as required by Russian Authorities.



**Requirement:**

**An assessment of related deck department, policy, procedures and equipment associated with the use of slop tanks, including decanting, procedures associated with the draining of top lines, in addition tank cleaning procedures and the disposal of associated wastes into the slop tanks. The assessment shall include an examination of personnel associated with such tasks the knowledge and understanding of the requirements and equipment operations.**

There is information required for operations in the SMS. The senior deck officers e.g. Chief Officer and second officer were familiar with such tasks and understand the requirements and equipment operation. The junior officers were trained by Chief Officer and were constantly observing these operations. The Chief Officer was overall responsible and is in charge. No cargo tank clearing operations were performed during the audit period. The vessel is not fitted with pump room and pumps operating from E/R. It has Framo pumps for individual tanks.

**Requirement:**

**The assessment of the ODME shall be recorded in the Deck Oil Record Book. In the event that the assessment determines that the ODME is not adequate then an immediate report shall be made to the Corporate Compliance Manager and the United States.**

The C/O was fully aware of the performance of ODME and procedures related to recording/reporting inadequacy of ODME if detected during operation. Deck Oil Record book was sighted for entries.

**Minimum Engineering Risk Mitigating Measures Required by Attachment B**

**Environmental Tag System:**

Implemented. The recording procedure may need to be revised.

**Bilge Main Cross- Connections:**

Implemented.

**Emergency Bilge Suctions:**

Implemented.

**Blank Flanges:**

In process of implementation.

**Bilge Sampling and OWS Performance Analysis**

Not implemented.

**Additional OWS/OCM Requirements:**

Implemented; equipment is configured for in port testing with skin valve closed. Remaining is in process of implementation. OCM is calibrated annually. No record of last cleaning of source tank was observed.



***Record Keeping:***

All soundings and logs are retained on board since the record keeping started. (The vessel was delivered in June 2007).

***Oil Record Book Entries:***

All the entries are signed by C/E and Master.

***Tank Sounding Record Book:***

Implemented.

***Fuel Oil/Lube Oil Purifier Settings and Line breaks***

In process of implementation.

***Oil to Sea Interface:***

No log book maintained. Procedures followed as per computerized PMS.

***Fleet Engineering Survey:***

Not implemented.

**Closing Meeting**

The Closing Meeting was held with the Master, C/E, C/O and 2//E after departure Novorossiysk on January 31, 2009 between 1330 and 1440 to appraise them with the overall impression of the vessel, discuss findings and address their concerns, if any.

A Second Closing Meeting was held prior arrival Aliaga, Turkey on February 03 2009 at 1030 hrs for rest of the staff to discuss their concerns and to express appreciation of their cooperation and professional behavior during the audit.

**Conclusions**

1. On this vessel, there appeared to be some confusion in maintaining the seal log due to lack of proper instructions and guidance. All the seals received were signed on the form by the previous Master and the C/E prior installation. (See attached blank form No. 13). Proper procedure for Seal Tag system is necessary in the SMS or EMS.
2. A new form will be required for the present staff to fill in to indicate the installation of the seals received.
3. Overall condition of the vessel and waste related machineries is very good. In light of recent incident, the Company may look at revising documents in SMS related Waste Stream Management or introduce EMS as a part of SMS to improve environmental performance. In future, the Company should introduce value added dedicated training programs suited to responsibilities of individuals to increase environmental awareness, protection and pollution prevention by external and internal sources. This may help to prevent recurrence of environmental violations and inculcate Compliance Culture.



4. The ECP/EMS related training for sea staff prior joining the vessel in Philippines by the Manning Agents of Ionia Management may have to be audited at least once during the probation period as to establish the content, delivery, qualifications, credibility of teaching staff involved and record keeping. The training syllabi should contain specific emphasis on ECP compliance, Company EMS (if and when issued), Compliance Culture, MARPOL Annex I, IV, V, VI, OWS/OCM operation, ORB entries, US environmental rules and consequences of violations and a provision for refresher courses.
5. Verification of SMS/PMS as to the status of Waste Stream Management related equipment and procedures as required by ECP, e.g. all WSM related equipment should be treated as critical. Management has issued a document covering most of the aspects of ECP requirement and some of the documentation is in use, but it does not appear to be a part of overall SMS due to absence of cross referencing and identification number of documents.
6. There are provisions made for in-port testing of the OWS /OCM with OVBD skin valve closed for <15 ppm effluent testing. In case for whatever reasons if the effluent is >15ppm then testing is not possible because the source tank and destination tank is the same namely Bilge Holding Tank, and it is not be possible to get accurate measurements of effluent handled by OWS to rate its current hourly capacity against manufacturer's capacity.
7. The OWS/OCM can be tested at sea with OVBD skin valve in open position for <15 ppm effluent on this vessel. In >15 ppm condition a foolproof provision should be available to send the effluent to bilges instead of BHT for testing purposes.
8. Presently there is no evidence existing in company Safety Management System of internal Environmental audit procedure detailing frequency, audit forms, non-conformance/closing etc. and training of auditors.
9. An EMS manual, though not required by Plea Agreement, may address the adequacy of policies, procedures, staff declarations, training/ awareness program for employees, risk analysis matrix, aspect/impact, objectives and targets for a specified period of say next five (5) years; and cross-referenced documentation for continual improvement of Environmental performance in line with recommendations of Environment Protection Agency (EPA) of USA. I was given to understand in Piraeus by CCM and DPA, prior to joining the vessel, that management is in the process of developing an Environment Management System manual as a separate document delineating the company Environmental policy along with non-retaliation policy, the objectives, targets, operational controls etc. for implementation fleet wide to improve the environmental performance of the Company. A document titled, "Code of Ethics" was recently issued by the management, which has scanty mention of Environmental Protection in Standard 7.1.
10. The Company may require addressing openly the need for Management of Change arising due to changes in rules, technology, best industry practices and company core



values for Environmental issues from all the company employees ashore and aboard. This need not be part of anonymous reporting.

11. As per discussion with Master and Chief Engineer there were no budgetary constraints from Management for disposal ashore of effluents of Oily Bilge water, Sludge/waste oil and Cargo Slops where the facilities are available.
12. Since the audit of MT THEO T, the management has made remarkable progress in meeting the compliance of ECP by introducing new forms procedures and guidelines.
13. Open dialogue between the sea staff and shore staff during future periodic company safety seminars or workshops with internal and external participants in manning centers will help to increase the transparency between the two, and improve environmental performance.
14. The Company currently has a total of seven tankers in operation, and three more to be added in year 2009. Only two of the seven are subject to ECP as per Plea Agreement. The manning as per company brochure on page 6 states that:

*"The rotation of crew on board Ionia managed vessels exceeds 80%."*

This may create a need for all sea staff hired by the company to undergo ECP/EMS familiarization awareness training and not restrict to only these two vessels.

Respectfully submitted:

For:  
Subhash Joshi



## Attachments

1. Environmental Checklist
2. Table 1 – Vessel Movement Times
3. Table 2 – Personal Time Table
4. Table 3 – Details of Waste Stream Management Equipment
5. Ship's Particulars
6. Crew List
7. Company's policies acceptance for seagoing persons/affidavit
8. Pre-joining familiarization/training for the proper care and disposal of oily waste
9. Circular Safety 092 dated 27/10/08 Subject : Incinerator, Plastic Garbage
10. Drills program for the year 2009
11. Training program for the first half of 2009
12. Vessel's monthly Environmental Performance report Part II 31/12/08
13. Preparation for Initial Audit undated unreferenced document
14. Safety Video training DVD's/Inventory List
15. Onboard safety committee meeting minutes for the months of January 2009
16. The company Obligation –unofficial uncontrolled document
17. Engine room seal log book cross connections valve form unreferenced document
18. Circular letter – SFT No. 078 dated 9 August, 2007 of Company policy
19. OWS OVBD valve and adjacent pipe inspection certificate
20. Procedures for Compliance Program undated, unreferenced document
21. C/E standing orders
22. OIL/water interface for cargo UTI tape calibration Certificate 05/12/08
23. Extract of ODM test carried out by C/O
24. ORB Part I extract covering period from 07/01/09 to 22/01/09
25. Slop, Sludge and garbage disposal ashore receipts Istanbul
26. Deficiencies reporting and handling undated, unreferenced document
27. OCM calibration certificate
28. Waste oil tanks sounding log book from December 2009
29. Line diagram of piping for waste streams in E/R
30. Anonymous reporting form of violations to include environmental releases
31. SWOMS related documentation
32. Code of Ethics General document unrelated to QSMS
33. Familiarization with Engine equipment for 3/E
34. Extract from company brochure re ROTATION of CREW. Page 6
35. Photos