

noble energy  
mediterranean ltd.  
a subsidiary of noble energy, inc.

## INCIDENT INVESTIGATION REPORT

FORM

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <b>Lead/Owner</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | [שם עובד]                                      |
| <b>Incident Number</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | [סוד מסחרי]                                    |
| <b>Incident Title</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Galley Grease Fire                             |
| <b>Incident Investigation Status</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Final                                          |
| <b>Incident Level</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Level 2                                        |
| <b>Location</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Kitchen, Living quarters second level, [תיג]   |
| <b>Incident Occurrence</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 17 October 2020                                |
| <b>Preliminary Investigation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                | [סוד מסחרי]<br>18 October 2020                 |
| <b>Investigation Team</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Click here to enter the time.<br>[שמות עובדים] |
| <b>Incident Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                |
| <p>On Saturday, October 17, 2020 at [סוד מסחרי] the galley staff for the Leviathan Production Platform were preparing evening meals for the LPP crew. While conducting meal preparations, a new cook left an empty metal pot on the stove unattended with the heat turned on.</p> <p>At approximately [סוד מסחרי], the cook returned to the metal pot on the stove and added 1L of ambient temperature cooking oil. This caused the oil to ignite in the pot and started an incipient fire.</p> |                                                |
| <b>Investigative Steps</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                |
| <ol style="list-style-type: none"> <li>1. Witness Statements</li> <li>2. Review of Permit to Work (PTW), Job Risk Assessment (JRA), and other documentation.</li> <li>3. Collection of information from involved personnel</li> <li>4. Pictures</li> </ol>                                                                                                                                                                                                                                      |                                                |
| <b>Sequence of Events (in points, facts only)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                |
| <p><b>1. Background:</b></p> <p>1.1. In February of 2020, MOE directed Noble to nationalize the Galley staff. This request was part of an annual nationalizing plan. The first national galley crew joined Noble in June.</p>                                                                                                                                                                                                                                                                   |                                                |

1.2. The galley completed Basic Offshore Training and safety orientation.

1.3. Noble began nationalizing the galley crew on Leviathan in late June through a previous contractor [מסך חיצוני]. A new contractor, [מסך חיצוני], began operating on Leviathan on October 1. [מסך חיצוני] retained between 6-8 national galley workers that previously worked at Leviathan through [מסך חיצוני].

1.4. Initially it wasn't too difficult to recruit people willing to work on the platform, though it was a struggle to find cooks with the necessary skill level. The issues became more prominent once they had gone through the recruitment and training process and arrived at the facility. There have been a host of problems including getting cold feet once on the platform and going home the same day, individuals who are not willing to do what is required of them or what is requested of them by their on-site managers, failed drug tests, and failed COVID tests.

## 2. Crew change October 15th

2.1. On October 15<sup>th</sup>, as part of the TAR preparation, the galley crew was increased from 14 workers to 17 (on the crew change included two new workers who came on to the platform and returned to shore on the same day). The two workers felt discomfort staying on the LPP. The existing situation resulted in a need to fill two galley positions and Camp bosses covered these positions

## 3. Sequence of Events:

On Saturday, October 17, 2020 at [סוד מסחרי] the galley staff for the Leviathan Production Platform were preparing evening meals for the LPP crew.

While conducting meal preparations, a new cook left an empty metal pot on the stove unattended with the heat turned on.

At approximately [סוד מסחרי], the cook returned to the metal pot on the stove and added 1L of ambient temperature cooking oil. This caused the oil to ignite in the pot and started an incipient fire.

The camp boss immediately evacuated all personnel from the galley and attempted to locate a fire blanket. The camp boss was unable to locate a fire blanket and instead attempted to operate the fire suppression system in the galley. However, the fire had not reached sufficient temperature to automatically trigger the overhead fire suppression system and the camp boss was not familiar with manual operation of the system.

The camp boss located the nearest [מידע אודות רכיבים], but opted not to use the [מידע אודות רכיבים] due to risk of displacing the oil and spreading the fire. An announcement to the platform using the [מידע אודות רכיבים] was made that a fire had started in the galley in the living quarters.

At [סוד מסחרי] the camp boss used a fire alarm hand station [תינוג ציוד] located in stairway [ציוד] near the exit door to the lifeboats to trigger a confirmed fire alarm in the living quarters [תינוג ציוד]. Per Cause & Effects, this initiated a fire and gas alarm, cut [ציוד] power via [ציוד], closed [ציוד], and started the fire water pumps. Also, per Cause & Effects, a confirmed fire alarm in the living quarters initiated an [רכיב] of the platform at [סוד מסחרי]

At [סוד מסחרי], the LPP OIM made an announcement to proceed to secondary muster location [ציוד] and that this was not a drill.

[סוד מסחרי]

At [סוד מסחרי] a response team was dispatched. Two team members proceeded to sweep the living quarters and two additional team members responded to the fire in the galley. The response team confirmed the fire was present, reported a confirmed fire to the team lead, and proceeded to extinguish the fire. The response team removed the flaming pot from the stove. The response team also isolated the stove, ensuring the area had been de-energized.

At [סוד מסחרי] the muster officer confirmed a full muster at the secondary muster location.

At [סוד מסתיר] , a second response team confirmed the fire was extinguished in the galley and OIM was notified that the area was secure. The second response team proceeded to ventilate the galley.

At [סוד מסתיר] the OIM stood down the muster and convened all personnel in the dining hall with access to the galley isolated.

At the end of the event a Stand-down was held with all personnel on board aim to share the incident and its learning.

#### **4. The Cook**

4.1. The cook stated that he had worked in the food industry for over 12 years.

4.2. The cook started working at Levitan from June 3<sup>rd</sup> as a cook. As part of the investigation, the cook claimed that he was previously worked as a cook assistant. Here he was assigned as a cook.

4.3. The cook was the Performing Authority on the day shift. (See permit [תיג] ).

4.4. In the investigation, the cook claimed that he went to the toilet for about 15 minutes while leaving an empty metal pot on the stove unattended with the heat turned on.

When he returned to the metal pot on the stove and added 1L of cooking oil. This caused the oil to ignite in the pot and started an incipient fire.

#### **5. Camp Boss**

5.1. The camp boss immediately evacuated all workers from the galley and attempted to locate a fire blanket. The camp boss was unable to locate a fire blanket and instead attempted to operate the galley's fire suppression system. However, the fire had not reached sufficient temperature to trigger the overhead fire suppression system automatically, and the camp boss was not familiar with the system's manual operation.

5.2. The Camp bosses were asked to fill in the two galley positions and this resulted lack of supervision of the galley staff.

5.3. The camp boss stated that he was working as a camp boss for over 15 years, and most of that time, he worked on vessels.

5.4. The camp boss has participated in Basic offshore Training on August 21<sup>st</sup>.

5.5. The camp boss participated in safety orientation on July 21<sup>st</sup>.

#### **6. Suppression system**

6.1. [מידע אודות תיג ציוד] with one manual pull activating system, system will be active in around 150 Celsius (See Pictures of the system with the manual PULL handle below).

| Contributory Factors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Try to select one (1) from each category.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                        |
| <b>Training</b><br>Lack of Training<br><b>Equipment</b><br>Not Applicable<br><b>Ergonomics</b><br>Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Behavior</b><br>Inattention<br><b>Policy/Procedure</b><br>Not Applicable<br><b>Working Environment</b><br>Availability of Proper Equipment/Tools/Materials                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Other</b><br>Not Applicable<br><a href="#">Click here to enter Other.</a><br><a href="#">Click here to enter Other.</a><br><a href="#">Click here to enter Other.</a><br><a href="#">Click here to enter Other.</a> |
| <b>RCA (Root Cause Analysis)</b><br>Continue to ask 'Why' until root cause(s) is/are determined                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Causal Factors:</b> <ol style="list-style-type: none"> <li>1. Expedited timeline for having a nationalized galley crew on the facility not allowing for appropriate personnel selection, competency assessment and training.</li> <li>2. Shortage of galley manpower with enough supervision and training prior to mobilization offshore.</li> </ol><br><b>Root Cause:</b><br>Lack of training, competency and knowledge by the national galley new crew driven from: lack of training programs and competency assurance from the contract company; lack of galley specific training and SPAC by Noble; and lack of knowledge and training verification by Noble. |                                                                                                                                                                                                                        |
| Conclusions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                        |
| Based on the above information, the following conclusions are: <ol style="list-style-type: none"> <li>1. In general, working offshore, and specifically in the galley, require additional and specialized training and competency compared to normal kitchen environments. The incident revealed some gaps in relation to training and competency of the galley staff. This was driven from pressure to quickly nationalize the galley crew and not provided the appropriate training and competency assurance from both the contract company and Noble.</li> <li>2. The shortage of manpower caused the Camp Bosses to fill in for cooks in the galley instead of supervising the work, as noted in Sequence of Events Section: 2 "Crew Change Oct 15<sup>th</sup>" and Section 5 "Camp Boss".</li> </ol> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                        |
| Lessons Learned                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                        |
| <ol style="list-style-type: none"> <li>1. Competency: the galley staff lacked appropriate knowledge and skills required when working in an offshore oil and gas facility.</li> <li>2. Galley specific safety orientation failed to appropriately educate personnel on all safety aspects within the galley (e.g. location of manual operation of overhead fire supersession system, safe work practices, etc.).</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                        |

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| Action Item | Description                                                                                                                                                                                                                                                                                                                                                     | Owner                                                                                                                    | Refer to EHS Incident Action Tracker for:                                                                                                                                   |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1           | Improve galley safety training prior to mobilization offshore:<br>1. Noble to verify contractor training and competency program<br>2. Facility specific galley training, with specific instructions for safe work practices and incident response when working in the galley – NBL<br>3. Better selection, training and competency assurance - Contract company | 1. Asset Services and EHS<br>2. Asset Services, EHS, LPP Ops Leadership Team<br>3. Asset Services, EHS, Contract Company | <ul style="list-style-type: none"> <li>• <b>Current Status</b></li> <li>• <b>Action Owner</b></li> <li>• <b>Due Date</b></li> <li>• <b>Other Key Information</b></li> </ul> |
| 2           | Manpower shortage – contractor and LPP leadership to develop staffing plan and redundancy aim to meet headcount galley support                                                                                                                                                                                                                                  | LPP Leadership and Contract Company                                                                                      |                                                                                                                                                                             |
| 3           | Purchasing fire blankets for the kitchen                                                                                                                                                                                                                                                                                                                        | Maintenance Foreman                                                                                                      |                                                                                                                                                                             |
| 4           | Evaluate and asses the need to add a second manual pull handle for suppression system in the galley.                                                                                                                                                                                                                                                            | Engineering (offshore facility)                                                                                          |                                                                                                                                                                             |

|                                                                                                                                                                                                            |                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| <b>Incident Investigation Report Review Person/Team</b>                                                                                                                                                    | [שמות עובדים]                                                    |
| <b>Final Investigation Report Issued</b>                                                                                                                                                                   | 30 October 2020<br><a href="#">Click here to enter the time.</a> |
| <b>Management Comment</b>                                                                                                                                                                                  |                                                                  |
| Click here to add Management comments. Include name of person making comment.<br>NOTE: This is optional for Level 1, but mandatory for Level 2 and 3 (e.g. Operations Manager, Operations Director, etc.). |                                                                  |

## Photos



Figure 1: Metal pot following the grease fire.

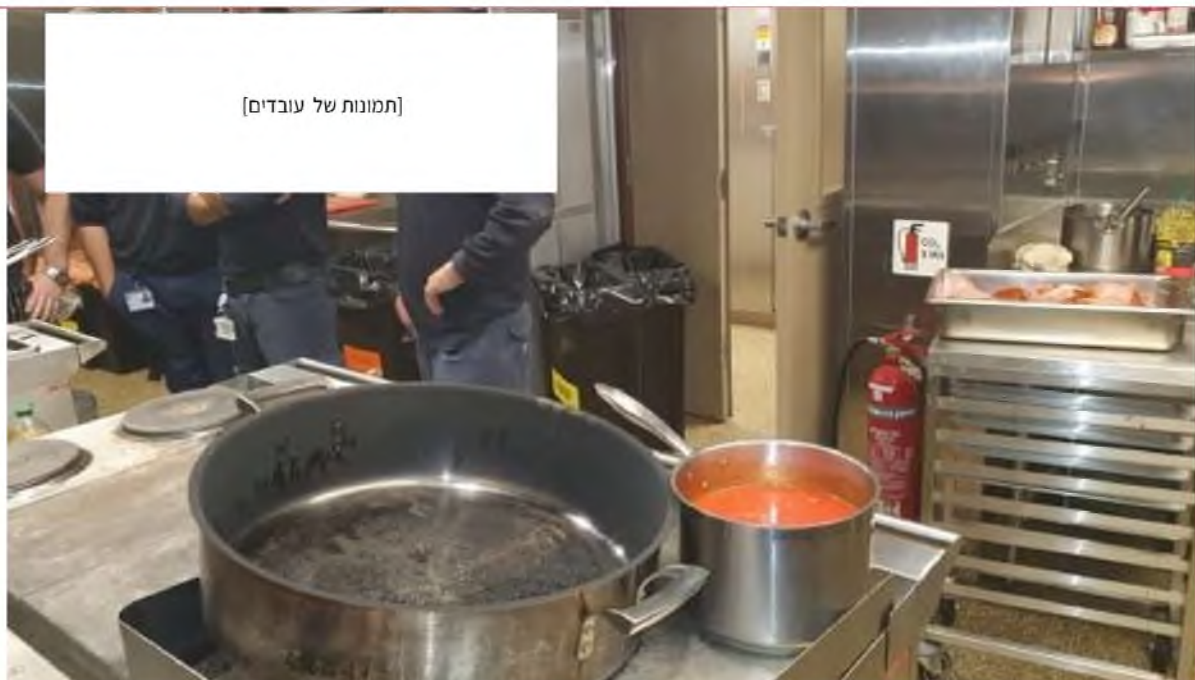


Figure 2: CO2 Fire extinguisher next to the stove working area.





Figure 4: Suppression manual pull activating system.

[מידע המהווה סוד מסחרי]

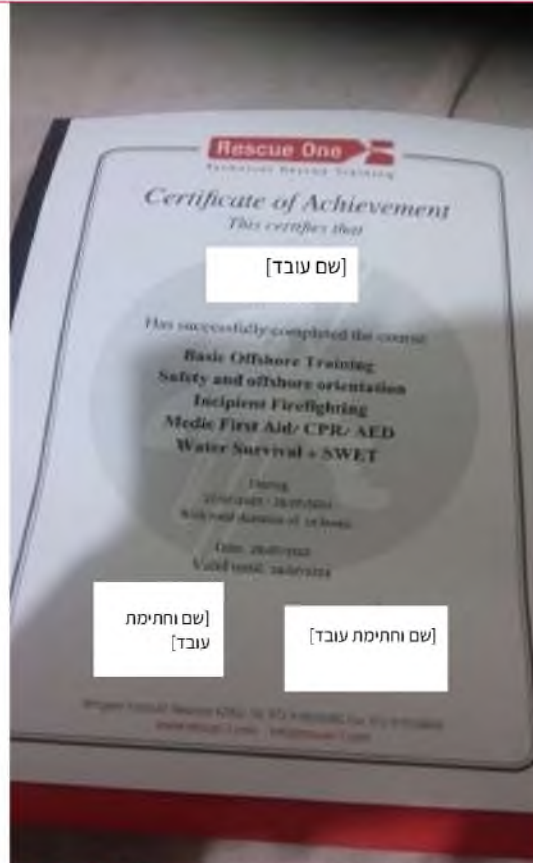


Figure 6: Camp boss Basic offshore Training

## Witness Statement

[עדות עובד]

[עדות עובד]

Permits, Job Risk Analysis, P&IDs, etc.

|                                                                                     |                                             |                                      |
|-------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------|
|  |                                             |                                      |
| בקשה להבהרות<br>זעיף 30 לחזקות לווייתן                                              | Letter to the PC -<br>NBL staff - signed -5 | עמידה בסעיף 30<br>לחזקות לווייתן.msg |
| MOC-14563.pdf                                                                       |                                             | C3248.pdf                            |

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