CAREER EPISODE 1

Restoration of BOP Single Point Mooring (SPM3) buoy and repair of 36" Pipeline

A) Introduction

[CE 1.1]

Title:Restoration of BOP Single Point Mooring (SPM3) buoy and repair of 36" Pipeline

Duration: [Date] – [Date]

Location: [Location]

Organization: [Organization]

Position: Environmental Engineer

B) Background

[CE 1.2]

I was tasked with the restoration of the BOP Single Point Mooring (SPM3) buoy and the repair of the 36" pipeline. It was a critical project that required meticulous planning and precise execution.

[CE 1.3]

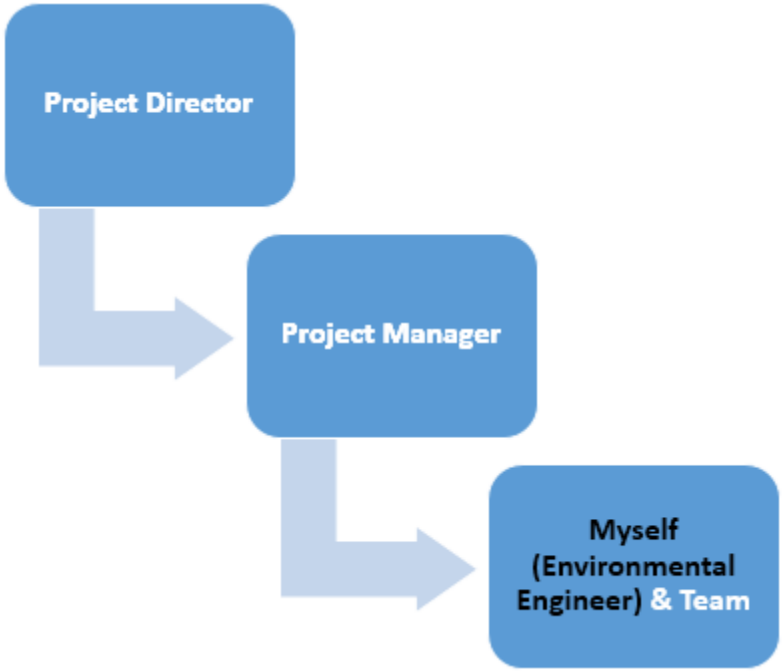
The first step was to assess the condition of the SPM3 buoy and the pipeline. I conducted thorough inspections and found significant damage to both structures. The buoy had suffered corrosion and mechanical wear, while the pipeline had developed several leaks and cracks.

[CE 1.4]

After careful evaluation, I developed a detailed restoration and repair plan. I assembled a team of skilled technicians and gathered the necessary equipment and materials. Safety protocols were paramount throughout the entire process.To begin the restoration of the SPM3

buoy, we first had to secure it and ensure its stability. Using specialized vessels, I carefully maneuvered into position and attached strong mooring lines to keep the buoy steady during the repair process.

[CE 1.5]



[CE 1.6]Responsibilities:

- I worked on deploying the divers for inspecting the damaged sections up close and verifying the extent of the issue.
- I did the replacement of the corroded or cracked segments and ensuing the secured connections and proper alignment.
- I implemented the steps for the 36” pipeline repair.
- I worked on checking the corrosion, cracks, and dents signs during the inspection.

C) Personal Engineering Activity

[CE 1.7]

I commenced with the repair of the 36" pipeline. I deployed divers to inspect the damaged sections up close and verify the extent of the issues. I then meticulously replaced the corroded or cracked segments, ensuring secure connections and proper alignment.Simultaneously, the team initiated the restoration work on the SPM3 buoy. I repaired the corroded sections by[2]

sanding and applying protective coatings to prevent further deterioration. Mechanical components that showed signs of wear were replaced, and the buoy's overall structural integrity was reinforced.Throughout the project, I encountered various challenges, such as adverse weather conditions and logistical constraints. However, our team remained resilient and adaptable, making necessary adjustments to ensure the project's success.Once all repairs and restoration activities were completed, we conducted rigorous testing to ensure the integrity and functionality of the SPM3 buoy and the pipeline. I performed pressure tests, checked for leaks, and verified the buoy's ability to withstand marine conditions.

[CE 1.8]

After addressing the restoration of the BOP Single Point Mooring (SPM3) buoy, I turned my attention to the repair of the 36" pipeline. This pipeline played a crucial role in transporting oil or gas, but it had developed multiple issues that required immediate attention.To begin the repair process, I gathered a team of skilled technicians and organized the necessary equipment and materials for the job. Safety protocols were of utmost importance, and we ensured that everyone involved had the appropriate protective gear and was well-informed about the tasks at hand.The first step was to conduct a thorough inspection of the pipeline to assess the extent of the damage. This involved deploying divers who closely examined the sections of the pipeline that were identified as problematic. Through their inspections, we were able to pinpoint the areas with leaks, cracks, or other forms of damage that required repair.I conducted a thorough inspection to assess the extent of the damage. This step was crucial in identifying the specific areas that required repair and determining the appropriate course of action.To begin the inspection process, I assembled a team of experts with expertise in pipeline assessment and integrity. We gathered the necessary inspection equipment, including cameras, sensors, and measurement tools, to aid in our evaluation.

[CE 1.9]

Carefully following established safety protocols, we approached the pipeline and visually examined its exterior. I looked for any signs of corrosion, cracks, dents, or other visible damage. This initial visual inspection provided valuable insights into the overall condition of the pipeline.To obtain a more detailed assessment, we utilized advanced inspection techniques. This involved deploying remotely operated vehicles (ROVs) equipped with high-resolution cameras to capture close-up images of the pipeline's surface. These images allowed us to examine the pipeline more closely and identify any subtle or hidden damage that may not have been visible during the initial visual inspection.In addition to visual inspections, we employed non-destructive testing (NDT) methods to assess the structural integrity of the pipeline. This included techniques such as ultrasonic testing, magnetic particle inspection, and radiographic testing. These methods allowed us to detect flaws, cracks, or defects that may not be visible to the naked eye.Throughout the inspection process, we meticulously documented our findings, recording the locations and characteristics of any identified damage. This documentation served as a crucial reference for planning the subsequent repair work and determining the specific repair methods required.

[CE 1.10]

Based on the comprehensive inspection results, I analyzed the data and developed a detailed repair plan. This plan considered the severity and extent of the damage, prioritizing the areas that required immediate attention. It also took into account factors such as environmental conditions, accessibility, and the availability of necessary equipment and materials.The thorough inspection of the pipeline provided us with a comprehensive understanding of its condition and guided the subsequent repair efforts. By identifying and documenting the extent of the damage, we were able to develop an effective repair strategy that targeted the specific areas in need of attention. This approach ensured the successful restoration of the pipeline's integrity and functionality.Based on the findings, I developed a systematic plan to address each issue. I carefully removed the corroded or cracked segments of the pipeline, ensuring that the surrounding areas were not further damaged in the process. Special care was taken to prevent any spills or environmental impact during the repair work.Once the damaged sections were removed, we proceeded with the installation of new pipeline segments. This involved precise alignment and welding techniques to ensure secure connections. Thorough testing was conducted to verify the integrity of the newly installed segments, including pressure tests to ensure they could withstand the required operating conditions.In addition to the direct repair work on the pipeline, I also focused on implementing measures to prevent future damage and enhance the pipeline's longevity. This included applying appropriate coatings or protective materials to vulnerable areas to mitigate corrosion and strengthen the pipeline's resistance to external factors.

[CE 1.11]

Throughout the repair process, I closely monitored the progress, overseeing the work of the team and addressing any challenges or issues that arose. Effective communication and collaboration were essential to ensure a smooth and efficient repair operation.Maintaining a collaborative environment was paramount to the success of the repair operation. I encouraged open dialogue and active participation from team members, fostering a sense of shared responsibility and teamwork. Regular meetings and progress updates allowed us to assess the project's status, identify any bottlenecks, and collectively develop strategies to overcome obstacles.I also provided support and guidance to individual team members as needed, ensuring that they had the necessary resources and knowledge to perform their tasks efficiently. By addressing any concerns or questions promptly, I fostered a positive work environment that promoted productivity and teamwork.Effective communication and collaboration played a vital role in ensuring that the repair operation proceeded smoothly. By closely monitoring progress, overseeing the team's work, and promptly addressing challenges, I facilitated a cohesive and efficient repair process that ultimately led to the successful restoration of the 36" pipeline's integrity and functionality.Upon completing the repair activities, I conducted comprehensive inspections and tests to verify the pipeline's integrity. I performed thorough pressure tests to ensure there were no leaks and that the pipeline could safely and effectively transport oil or gas. Additionally, I conducted visual inspections and used advanced techniques, such as pipeline

inspection gauges (PIGs), to assess the internal condition of the pipeline.

[CE 1.12]

The successful repair of the 36" pipeline was a significant achievement, as it restored its functionality and ensured the safe and reliable transportation of oil or gas. The diligent efforts of the team, combined with careful planning and meticulous execution, resulted in a restored pipeline that met all necessary safety and quality standards.

D) Summary

[CE 1.13]

After satisfying all quality and safety standards, we demobilized the equipment and vessels, leaving the restored SPM3 buoy and repaired 36" pipeline fully operationally. The successful completion of this project was a testament to our team's expertise, dedication, and commitment to delivering exceptional results.

[CE 1.14]

Overall, the restoration of the BOP Single Point Mooring (SPM3) buoy and the repair of the 36" pipeline were significant accomplishments. They not only ensured the smooth operation of the offshore facility but also demonstrated our capability to overcome complex engineering challenges in a demanding marine environment.

[CE 1.15]

By leading a team of technicians and specialists, I successfully restored the buoy's structural integrity and repaired the pipeline's damaged sections, ensuring the smooth operation of the offshore facility and demonstrating my ability to overcome complex engineering challenges.

CAREER EPISODE 2

Complete design, fabrication, and installation of 4" and 12" pipes and Umbilical

A) Introduction

[CE 2.1]

Title: Complete design, fabrication, and installation of 4" and 12" pipes and Umbilical

Duration: [Date] – [Date]

Location: [Location]

Organization: [Organization]

Position: Environmental Engineer

B) Background

[CE 2.2]

I undertook the comprehensive responsibility of designing, fabricating, and installing 4" and 12" pipes, along with an umbilical system. This project required meticulous planning, precise execution, and coordination with a skilled team to ensure the successful completion of each stage.

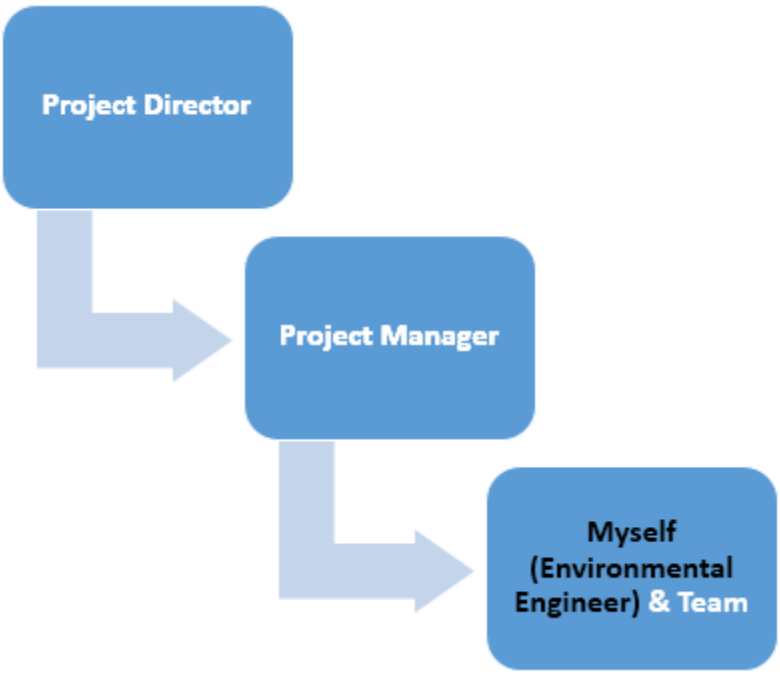
[CE 2.3]

I initiated the design phase by conducting thorough research and analysis to determine the specific requirements and specifications for the pipes and umbilical system. This involved considering factors such as the intended application, fluid flow rates, pressure ratings, environmental conditions, and compliance with industry standards.

[CE 2.4]

Based on the design parameters, I collaborated with engineers and drafters to create detailed engineering drawings, including dimensions, materials, and connection points for the pipes. For the umbilical system, I incorporated the necessary components such as electrical cables, hydraulic lines, and control systems into the design.

[CE 2.5]



[CE 2.6] Duties:

- With the design finalized, I moved forward with the fabrication process.
- I coordinated with specialized manufacturers and suppliers to procure high-quality materials, ensuring they met the required standards for strength, durability, and corrosion resistance.
- To commence the fabrication, I collaborated closely with reputable manufacturers and suppliers to source the necessary materials of the highest quality.
- I worked on ensuring the materials met the required specifications for strength, corrosion resistance, and durability was of utmost importance.

C) Personal Engineering Activity

[CE 2.7]

I worked closely with skilled welders, fabricators, and technicians who possessed expertise in their respective fields. They meticulously followed the engineering drawings and instructions to shape, cut, and weld the materials into the desired configurations and dimensions. I took on the responsibility of designing, fabricating, and installing 4" and 12" pipes, as well as an umbilical system, as part of the project. This encompassed a comprehensive process that involved careful planning, precise execution, and coordination with a skilled team.To begin, I initiated the design phase by thoroughly assessing the project requirements and specifications. This included considering factors such as fluid flow rates, pressure ratings, environmental conditions, and compliance with relevant industry standards. Collaborating with engineers and drafters, I translated these requirements into detailed engineering drawings that outlined the dimensions, materials, and connection points for the pipes

and umbilical system. With the design parameters finalized, I proceeded to the fabrication stage. Working closely with trusted manufacturers and suppliers, I ensured the procurement of high-quality materials that met the necessary standards for strength, durability, and corrosion resistance. I collaborated with skilled welders and fabricators who meticulously followed the engineering drawings to construct the 4" and 12" pipes and the umbilical system components with precision.Quality control was a top priority during the fabrication process. I conducted regular inspections to ensure that the fabricated components aligned with the specified dimensions, tolerances, and material requirements. Non-destructive testing techniques, such as ultrasonic or radiographic testing, were employed to detect any defects or imperfections in the welded joints or material integrity.After successful fabrication, I moved on to the installation phase. This involved coordinating the logistics and equipment required for the safe and efficient installation of the pipes and umbilical system. Working closely with a dedicated team, I oversaw the careful positioning and connection of the pipes, ensuring secure welds and proper sealing to prevent leaks. The umbilical system was also meticulously installed, with attention given to routing electrical and hydraulic lines and integrating control systems.

[CE 2.8]

Following the installation, rigorous testing and commissioning procedures were carried out. This included conducting pressure tests to verify the integrity and functionality of the pipes, ensuring they were free from leaks and complied with design specifications. The umbilical system underwent thorough testing to validate its electrical and hydraulic capabilities, ensuring all connections and control systems operated as intended.The successful completion of the design, fabrication, and installation of the 4" and 12" pipes, along with the umbilical system, marked a significant achievement. Through careful planning, precise fabrication, and meticulous installation, I ensured the creation of a reliable and efficient system that met the project's specifications. This system would play a crucial role in facilitating the intended operations and contributing to the overall success of the project.I closely supervised the installation activities, ensuring that all safety protocols and guidelines were followed. The pipes were carefully aligned and connected, paying attention to proper welding techniques and secure fastening to prevent any potential leaks or structural weaknesses.Simultaneously, the umbilical system was installed with precision. This involved routing electrical cables, hydraulic lines, and control systems in the designated pathways to ensure seamless integration and efficient operation. I ensured that all connections were properly sealed and tested to guarantee their functionality and reliability.

[CE 2.9]

Upon completion of the installation, the system underwent rigorous testing and commissioning procedures to ensure its optimal performance. This included comprehensive tests to validate the integrity and functionality of the pipes, as well as the proper functioning of the umbilical system.Pressure tests were conducted to verify the pipes' strength and integrity, ensuring they could withstand the anticipated fluid flow rates and pressure conditions. Specialized equipment was utilized to simulate real-world operating conditions, allowing us to detect any potential leaks or weaknesses.The umbilical system underwent extensive testing to validate its electrical and

hydraulic capabilities. This involved checking for proper insulation, testing the electrical connections for continuity, and verifying the hydraulic lines for efficient fluid flow and control.In addition to functional testing, comprehensive commissioning procedures were implemented. This involved coordinating with other systems and components to ensure seamless integration and compatibility. Control systems were tested and fine-tuned to guarantee their responsiveness and accuracy.Throughout the testing and commissioning process, I meticulously documented the results, identifying any issues or discrepancies that needed to be addressed. Prompt resolutions were implemented to rectify any detected problems and ensure the system met the required specifications and performance standards.The successful completion of the installation, testing, and commissioning phase marked a significant milestone in the project. It demonstrated the reliability, functionality, and compliance of the 4" and 12" pipes, as well as the umbilical system, providing confidence in their ability to support the intended operations.

[CE 2.10]

Throughout the fabrication process, I maintained a strict focus on quality control. Regular inspections were conducted to verify that the components being produced adhered to the specified dimensions, tolerances, and material requirements. Non-destructive testing techniques, such as ultrasonic or radiographic testing, were employed to detect any flaws or imperfections that could compromise the functionality or integrity of the fabricated components.I fostered a collaborative environment where open communication was encouraged among the fabrication team. Any challenges or issues that arose during the fabrication process were promptly addressed to ensure timely resolutions and maintain progress.As fabrication progressed, I closely monitored the timeline and ensured that the fabrication activities remained on schedule. I coordinated with the manufacturing team to prioritize and optimize their workflow, ensuring efficient utilization of resources and adherence to project milestones.Once the fabrication of individual components was completed, meticulous assembly and integration followed. I oversaw the seamless joining of the fabricated elements, paying close attention to proper alignment, accurate measurements, and robust connections.

[CE 2.11]

Quality assurance was a top priority throughout the fabrication process. Comprehensive testing procedures were conducted to verify the functionality, structural integrity, and compatibility of the fabricated components. These tests included pressure tests, material testing, and functional checks to ensure that the components met the required standards and would perform optimally in their intended applications.The successful completion of the fabrication process marked a significant milestone in the project. It represented the transformation of design concepts into tangible components, showcasing the meticulous craftsmanship and attention to detail invested in every step. The fabricated components were now ready for the subsequent installation phase, bringing the project one step closer to its successful realization.

Quality control and assurance were paramount throughout the fabrication process. I conducted

regular inspections to verify that the fabricated components met the specified dimensions, tolerances, and material requirements. Non-destructive testing techniques, such as ultrasonic or radiographic testing, were employed to detect any defects or imperfections in the welded joints or material integrity.After successful fabrication, I proceeded with the installation phase. Working closely with a dedicated team, I coordinated the logistics and equipment necessary for the safe and efficient installation of the pipes and umbilical system. This included specialized lifting and positioning equipment, as well as skilled operators to handle the installation process.

[CE 2.12]

I ensured that the installation adhered to relevant safety guidelines and procedures. This involved carefully aligning and connecting the pipes, ensuring secure welds and proper sealing to prevent leaks. The umbilical system was meticulously installed, ensuring the correct routing of electrical and hydraulic lines, as well as the integration of control systems.

D) Summary

[CE 2.13]

Once the installation was completed, I conducted rigorous testing and commissioning procedures. This involved conducting pressure tests to verify the integrity and functionality of the pipes, checking for leaks, and confirming compliance with design specifications.

[CE 2.14]

The umbilical system underwent thorough testing to validate its electrical and hydraulic capabilities, ensuring all connections and control systems were functioning as intended.

[CE 2.15]

The successful completion of the project marked the culmination of my efforts in the design, fabrication, and installation of the 4" and 12" pipes, as well as the umbilical system. The meticulous planning, precise execution, and strict adherence to quality standards resulted in a reliable and efficient system that met the required specifications and contributed to the overall success of the project.

CAREER EPISODE 3

Removal and Installation of the boat landing to the wellhead, wellhead repairs, replacement of gratings on the cellar, spider and helideck

A) Introduction

[CE 3.1]

Title: Removal and Installation of the boat landing to the wellhead, wellhead repairs, replacement of gratings on the cellar, spider and helideck

Duration: [Date] – [Date]

Location: [Location]

Organization: [Organization]

Position: Environmental Engineer

B) Background

[CE 3.2]

I was tasked with the removal and installation of a boat landing to the wellhead platform. The first step was to carefully dismantle the existing boat landing, ensuring that all components were properly disconnected and secured. I made sure to follow the safety guidelines and used appropriate tools for the job.

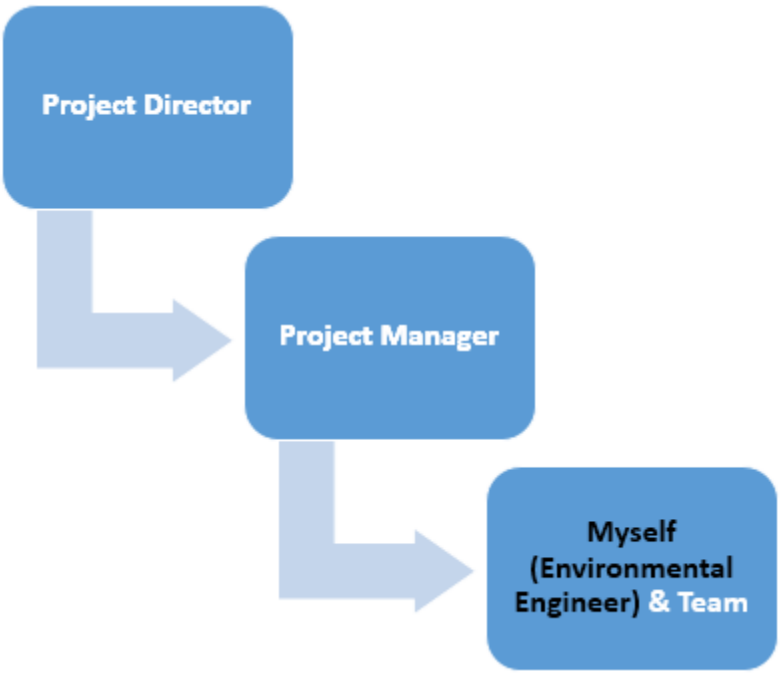
[CE 3.3]

Once the boat landing was removed, I inspected the wellhead for any signs of damage or wear. I identified a few areas that required repairs, such as corroded fittings and worn-out seals. I proceeded to replace these damaged parts, ensuring that the wellhead was in optimal working condition.

[CE 3.4]

I focused on the gratings located in the cellar, spider, and helideck. These gratings had become worn and unstable over time, posing a safety risk. To replace them, I carefully removed the old gratings, taking care not to damage the surrounding structure.After completing the boat landing installation, my attention turned to the gratings situated on the cellar, spider, and helideck. These gratings had experienced wear and tear over time, and it was necessary to replace them to maintain the safety and integrity of the platform.

[CE 3.5]



[CE 3.6]Duties:

- I conducted a thorough inspection of the existing gratings.
- I carefully assessed their condition, looking for signs of damage, corrosion, or instability. Based on my evaluation, it was evident that the gratings required replacement to ensure a secure and reliable walking surface.
- I obtained the appropriate replacement gratings, ensuring they were specifically designed for marine environments and met the necessary safety standards.
- Before proceeding with the removal of the old gratings, I took the necessary safety precautions, including wearing personal protective equipment and securing the area.

C) Personal Engineering Activity

[CE 3.7]

Starting with the cellar, I systematically removed the old gratings by carefully disconnecting them from their support structures. I paid close attention to any bolts, screws, or fasteners that held the gratings in place, ensuring they were removed without causing any damage.Moving on to the spider and helideck, I followed the same meticulous process of removing the old gratings. I exercised caution to prevent any accidents or injuries during the dismantling process, and I made sure to maintain a safe work environment throughout.With the old gratings successfully removed, I proceeded to install the new gratings in their designated locations. I carefully positioned each grating, aligning them with precision to ensure a proper fit. Using appropriate tools, I secured the new gratings firmly in place, ensuring they were stable and resistant to movement.

[CE 3.8]

After completing the installation, I conducted a comprehensive inspection of the newly installed gratings. I double-checked all connections, ensuring they were secure and properly aligned. I also walked across the gratings to confirm their stability and to verify that they provided a safe walking surface.By replacing the gratings on the cellar, spider, and helideck, I improved the overall safety of the platform. The new gratings offered enhanced stability, preventing slips and falls, and provided a reliable surface for personnel to traverse. This maintenance work contributed to the smooth and safe operation of the platform.After completing the installation of the new gratings on the cellar, spider, and helideck, I proceeded to conduct a thorough and comprehensive inspection. The purpose of this inspection was to ensure that the gratings were installed correctly and met all the necessary safety requirements.Starting with the cellar, I carefully examined each grating, checking for proper alignment, secure fastening, and stability. I ensured that the gratings were flush with the surrounding surfaces and that there were no gaps or unevenness. Additionally, I inspected the edges of the gratings to confirm that they were smooth and free from any sharp or protruding edges that could pose a risk to personnel.

[CE 3.9]

Moving on to the spider, I repeated the inspection process. I meticulously assessed the newly installed gratings, examining them for proper fitting and secure attachment. I paid close attention to the connections between the gratings and the spider structure, verifying that they were tight and reliable. I also checked for any signs of misalignment or structural damage.I conducted a comprehensive inspection of the gratings on the helideck. I carefully walked across the gratings, observing their stability and resistance to movement. I paid particular attention to the areas where the gratings joined together, ensuring that they were properly aligned and supported. I also checked for any signs of flexing or instability while applying pressure.After the installation of the new gratings on the helideck, I proceeded to conduct a comprehensive inspection to ensure their proper installation and adherence to safety standards.I carefully walked across the gratings, paying close attention to any irregularities or instability. I checked for any noticeable flexing or movement of the gratings under my weight, ensuring that they were securely fastened and capable of withstanding the expected loads.I inspected the connections between the gratings and the helideck structure. I examined the bolts, screws, or fasteners used to secure the gratings, ensuring they were tightly and properly fastened. I checked for any signs of looseness or misalignment, as these could compromise the integrity of the gratings.

[CE 3.10]

I also examined the edges of the gratings on the helideck, ensuring they were smooth and free from any sharp or protruding edges that could pose a safety hazard to personnel. It was crucial to provide a safe walking surface that minimized the risk of tripping or injury.I checked for proper drainage on the helideck, ensuring that the gratings allowed for effective water drainage during wet conditions. This was important to prevent the accumulation of water and maintain a safe working

environment.Throughout the inspection, I carefully observed the condition of the gratings, checking for any signs of damage, such as cracks, breaks, or signs of wear. I also ensured that there were no missing or misplaced gratings that could compromise the overall integrity of the helideck surface.If any issues were identified during the inspection, such as loose connections or damaged gratings, I promptly addressed them. This might involve tightening loose fasteners, replacing damaged gratings, or making necessary adjustments to ensure the optimal performance and safety of the helideck.

[CE 3.11]

By conducting a comprehensive inspection of the gratings on the helideck, I aimed to provide a secure and reliable surface for personnel and equipment. This inspection was crucial in maintaining the highest safety standards and ensuring the smooth operations of helideck activities on the platform.Upon completing the installation of the new gratings on the helideck, I proceeded with a meticulous and comprehensive inspection to guarantee their proper installation and adherence to safety standards.To begin the inspection, I conducted a thorough visual examination of the gratings, carefully scrutinizing their alignment and overall condition. I ensured that each grating was securely fastened to the helideck structure, paying close attention to the connections and joints. I checked for any signs of looseness, ensuring that the gratings were stable and immovable.Taking a step further, I walked across the gratings, distributing my weight evenly to assess their durability and stability. I observed any deflection or unusual movement, checking for potential hazards that could compromise the safety of personnel or equipment on the helideck.I also paid close attention to the edges of the gratings, meticulously inspecting them for any sharp or jagged areas that could pose a risk of injury. It was crucial to ensure a smooth and obstacle-free surface to minimize the chances of tripping or stumbling.Furthermore, I assessed the drainage system of the gratings on the helideck. I verified that the gaps between the gratings were sufficient to allow efficient water drainage, preventing any accumulation that could lead to slippery conditions. Proper drainage was crucial for maintaining a safe environment, especially during inclement weather.

[CE 3.12]

Throughout the inspection, I remained vigilant for any signs of damage, such as cracks, fractures, or excessive wear. If any issues were identified, I promptly documented them for further action, including necessary repairs or replacements.I meticulously examined each grating for any defects, such as cracks, breaks, or signs of wear. I also ensured that the gratings were free from any debris or obstructions that could impede their functionality. If any issues were identified, I promptly addressed them, making any necessary adjustments or repairs to guarantee the gratings' performance and safety.

D) Summary

[CE 3.13]

By conducting this comprehensive inspection, I was able to confirm that the newly installed gratings were in optimal condition and met the required safety standards. This inspection provided14

peace of mind, knowing that the gratings would provide a secure and reliable surface for personnel to walk on, promoting safety on the platform.

[CE 3.14]

After removing the old gratings, I installed new ones that were designed to withstand the harsh marine environment. I ensured that they were securely fastened and provided a stable surface for personnel to walk on. Safety was of the utmost importance throughout the entire process, so I double-checked all the connections and made sure everything was properly aligned.

[CE 3.15]

By the end of the project, the boat landing was successfully installed at the wellhead, the wellhead repairs were completed, and new gratings were in place on the cellar, spider, and helideck. The final result not only improved the functionality of the platform but also enhanced the safety of all personnel working in the area.

PROFESSIONAL ENGINEER
Summary Statement

These are the competency Units and Elements. These elements must be addressed in the Summary Statement (see Section C). If you are applying for assessment as a Professional Engineer, you will need to download this page, complete it and lodge it with your application.

Competency Element	A brief summary of how you have applied the element	Paragraph number in the career episode(s) where the element is addressed
PE1 KNOWLEDGE AND SKILL BASE		
PE1.1 Comprehensive, theory-based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline	I executed the three environmental engineering projects which were: • Restoration of BOP Single Point Mooring (SPM3) buoy and repair of 36" Pipeline. • Complete design, fabrication and installation of 4" and 12" pipes and Umbilical. • Removal and Installation of boat landing to the wellhead, wellhead repairs, replacement of gratings on the cellar, spider and helideck	CE 1.1, CE 2.1, CE 3.1

PE1.2 Conceptual understanding of the mathematics, numerical analysis, statistics and computer and information sciences which underpin the engineering discipline	I was tasked with the restoration of the BOP Single Point Mooring (SPM3) buoy and the repair of the 36" pipeline. I undertook the comprehensive responsibility of designing, fabricating, and installing 4" and 12" pipes. I focused on the gratings located on the cellar, spider, and helideck. These gratings had become worn and unstable over time.	CE 1.2 CE 2.2 CE 3.4
PE1.3 In-depth understanding of specialist bodies of knowledge within the engineering discipline	I worked on deploying the divers for inspecting the damaged sections up close and verifying the extent of the issue. I collaborated with engineers and drafters to create detailed engineering drawings, including dimensions, materials, and connection points for the pipes. I obtained the appropriate replacement gratings, ensuring they were specifically designed for marine environments and met the necessary safety standards.	CE 1.6 CE 2.3 CE 3.6

PE1.4 Discernment of knowledge development and research directions within the engineering discipline	I commenced with the repair of the 36" pipeline. I deployed divers to inspect the damaged sections up close and verify the extent of the issues. I coordinated with specialized manufacturers and suppliers to procure high-quality materials, ensuring they met the required standards for strength, durability, and corrosion resistance. I proceeded to install the new gratings in their designated locations. I carefully positioned each grating, aligning them with precision to ensure a proper fit.	CE 1.7 CE 2.6 CE 3.9
PE1.5 Knowledge of contextual factors impacting the engineering discipline	I conducted a thorough inspection to assess the extent of the damage. This step was crucial in identifying the specific areas that required repair and determining the appropriate course of action. I conducted regular inspections to ensure that the fabricated components aligned with the specified dimensions. I proceeded to conduct a comprehensive inspection to ensure their proper installation and adherence to safety standards.	CE 1.8 CE 2.9 CE 3.10

PE1.6 Understanding of the scope, principles, norms, accountabilities and bounds of contemporary engineering practice in the specific discipline	I developed a systematic plan to address each issue. I carefully removed the corroded or cracked segments of the pipeline. I closely supervised the installation activities, ensuring that all safety protocols and guidelines were followed. I also ensured that there were no missing or misplaced gratings that could compromise the overall integrity of the helideck surface.	CE 1.10 CE 2.10 CE 3.11
PE2 ENGINEERING APPLICATION ABILITY		
PE2.1 Application of established engineering methods to complex engineering problem solving	Implemented the environmental engineering work concepts during the project to acquire the set work results.	CE 1.10, CE 2.10, CE 3.10
PE2.2 Fluent application of engineering techniques, tools and resources	Implemented the set fluent work resources during the project to achieve the core work outputs.	CE 1.12, CE 3.11, CE 3.13
PE2.3 Application of systematic engineering synthesis and design processes	Executed the design processes in an effective manner to accomplish the set work results.	CE 1.13, CE 2.13, CE 3.11
PE2.4 Application of systematic approaches to the conduct and management of engineering projects	Environmental engineering work concepts being evaluated and consistently applied during the project.	CE 1.11, CE 2.12, CE 3.12
PE3 PROFESSIONAL AND PERSONAL ATTRIBUTES		
PE3.1 Ethical conduct and professional accountability	Implemented the core ethical work concepts during the project to achieve the required outcomes.	CE 1.9, CE 2.9, CE 3.9
PE3.2 Effective oral and written communication in professional and lay domains	Followed the systematic communication methodology during the project to achieve the needed work outputs.	CE 1.11, CE 2.14, CE 3.9
PE3.3 Creative innovative and proactive demeanour	Followed the set work practices in the project which overall assisted in achieving the mandatory work results.	CE 1.10, CE 2.10, CE 3.12
PE3.4 Professional use and management of information	Made usage of the information management principles which helped acquiring the set work outcomes.	CE 1.12, CE 2.11, CE 3.10
PE3.5 Orderly management of self, and professional conduct	Worked on consistently following the orderly conduct during the project to achieve the needed results.	CE 1.13, CE 2.13, CE 3.11

PE3.6 Effective team membership and team leadership	Made sure to follow the team leadership concepts effectively to acquire the needed outcomes.	CE 1.14, CE 2.12, CE 3.13