OFFICE OF
INSPECTOR GENERAL
U.S. DEPARTMENT OF THE INTERIOR

REPORT OF INVESTIGATION

Case Title	Case Number
BP Atlantis	**OI-OG-13-0103-I**
Reporting Office	**Report Date**
Energy Investigations Unit	**December 30, 2013**
Report Subject	
Report of Investigation	

SYNOPSIS

We initiated this investigation in December 2012 after receiving a complaint from the legal team of a former BP contractor who filed a False Claims Act lawsuit against BP in 2009. The lawsuit stated that Atlantis, a BP deepwater production platform in the Gulf of Mexico, lacked critical engineering documentation that created a serious safety risk.

The complaint we investigated referred to a Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) structural engineer who had participated in an investigation of Atlantis initiated by BOEMRE after the lawsuit was filed. This engineer claimed that (1) BOEMRE's investigation was flawed and incomplete. The complaint also implied that (2) [redacted], BOEMRE's Houma District Manager and the lead on the BOEMRE investigation, had a conflict of interest because he had approved many of the Atlantis platform's original permits. Finally, the complaint stated that (3) BOEMRE's investigative report on Atlantis, issued in March 2011, failed to interpret or comment on a specific regulation, the 2002 version of 30 C.F.R. § 250.901(d), that applied to Atlantis at the time the platform was built and deployed, and that [redacted] failed to ensure that BP had complied with the regulation.

We did not substantiate the allegation that the investigation was flawed and incomplete. Rather, we found that BOEMRE kept the scope of the investigation deliberately focused on the issue of the engineering documentation, a decision with which the structural engineers who served on the investigative team were vocally displeased. We also found a fundamental disagreement between the structural engineers and the production engineers and BOEMRE management as to the interpretation and application of a subpart of the pertinent regulations, 30 C.F.R. §§250.900 – 921, also known as Subpart 1. This disagreement remained unresolved at the end of our investigation.

Reporting Official/Title [redacted], Special Agent	Signature [redacted]
Approving Official/Title [redacted], Special Agent In Charge	Signature

Authentication Number: D60A176A8E1852F5765BDD28793733DD

Our investigation focused on the allegations of a conflict of interest and/or misconduct by [redacted] while he investigated safety concerns about the Atlantis platform. Several BOEMRE staff engineers and managers stated that [redacted] showed no bias when leading the Atlantis investigation. Moreover, another BOEMRE official took over the role of lead during the last 6 months of the investigation and wrote the final Atlantis report.

We also investigated the allegation that BOEMRE's investigative report on Atlantis failed to properly interpret and apply the 2002 version of 30 C.F.R. § 250.901(d). We found that BOEMRE did not become aware of the allegation until some 6 months after its report was issued.

BACKGROUND

Atlantis is a BP-owned deepwater oil and gas production platform in the Gulf of Mexico. It was built and deployed between approximately 2005 and 2007.

In April 2009, [redacted] a former BP contractor, filed a lawsuit against BP under the False Claims Act (31 U.S.C. §§ 3729-3733), alleging that BP did not maintain copies of engineer-approved drawings for Atlantis as required under the Code of Federal Regulations (C.F.R.). [redacted] alleged that this lack of documentation created imminent and significant safety risks on the platform.

On February 24, 2010, several members of Congress wrote to then Minerals Management Service (MMS) [1] Director S. Elizabeth Birnbaum, urging her to direct a full investigation of whether BP had all of the required engineering drawings for the Atlantis platform and its subsea components in place before production from the platform began, and to report the results to Congress (**Attachment 1**). The Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) released a report on its Atlantis investigation on March 4, 2011. The investigation concluded that the facility was safe.

DETAILS OF INVESTIGATION

We opened an investigation after receiving a letter, dated December 11, 2012, from [redacted] attorney, [redacted] requesting an investigation related to her client's False Claims Act allegations against BP (**Attachment 2**). [redacted] complaint letter referred to a BOEMRE employee, whom we later identified as Advanced Structural Engineer [redacted] who participated in the BOEMRE investigation and who claimed it had been conducted improperly. The letter also implied that Houma District Manager [redacted], BOEMRE's lead investigator into [redacted] False Claims Act allegations, had a conflict of interest because he had approved BP's original Atlantis permit applications. The letter further alleged that BOEMRE's Atlantis investigation report never interpreted or even commented on the 2002 version of 30 C.F.R. § 250.901(d), which was the applicable regulation at the time BP filed its permit applications for the Atlantis platform. According to 30 C.F.R. § 250.901(d) (2002), the lessee is required to submit a letter to BOEMRE certifying that a registered professional structural or civil engineer has certified the design and any modifications of the structure being constructed and deployed.

[1] After the April 20, 2010 explosion of the Deepwater Horizon drilling rig in the Gulf of Mexico, then Secretary of the Interior Ken Salazar decided to reorganize MMS. MMS was renamed BOEMRE in June 2010. Then, on October 1, 2010, the Office of Natural Resources Revenue became a separate U.S. Department of the Interior (DOI) office responsible for collecting revenue from mineral leases covering Federal lands. Finally, BOEMRE was split into the Bureau of Safety and Environmental Enforcement (BSEE) and the Bureau of Ocean Energy Management (BOEM) on October 1, 2011. The timeline of our investigation spans several stages of this reorganization, so for the sake of simplicity we will refer to the bureau as BOEMRE throughout this report.

Claim That the Atlantis Investigation Had Been Conducted Improperly

First Phase of the Investigation, BP Headquarters, Houston, TX (June 2010 – July 2010)

[redacted] was assigned to lead BOEMRE's Atlantis investigation prior to the explosion of the Deepwater Horizon drilling rig on April 20, 2010. [redacted], the manager of the Houma District for the past 5 years, was previously a production engineer in the Houma District (**Attachment 3**). He started working for BOEMRE in 1997.

According to [redacted], BOEMRE initiated its review of the Atlantis platform in late 2009 after [redacted] filed his False Claims Act lawsuit. He said that BOEMRE met with [redacted] attorneys and attempted to answer several questions related to their allegations but the attorneys were apparently not satisfied with BOEMRE's responses because the matter was then raised to Congress. [redacted] said BOEMRE management asked him to lead the Atlantis investigation because no one in the U.S. Government knew more about the Atlantis platform than he does. [redacted] explained that he had been studying the platform for 5 years and if BOEMRE management ever needed any questions answered about the platform, he was the person they came to.

[redacted] stated that [redacted] attorneys provided BOEMRE a list of BP's engineering documents to support their allegations. He said that while [redacted] is not an engineer, BOEMRE recognized that he was a document specialist and believed his allegations might be credible. As a result, [redacted] traveled to Houston to review BP's Atlantis documentation, which BP offered to provide to BOEMRE at the company headquarters. Two days after he arrived in Houston, the Deepwater Horizon drilling platform exploded, and [redacted] diverted his efforts from the Atlantis investigation to the Deepwater Horizon incident.

According to [redacted], he restarted the Atlantis investigation approximately 6 weeks after the Deepwater Horizon explosion. He was aided by BOEMRE Production Engineer [redacted] who, he said, had the second-highest level of Government knowledge about the platform. [redacted] plan and scope of the investigation at that time was for the investigative team to review documentation for the Atlantis platform's subsea components to see if BP was confident that the equipment had been built and installed to specification (**Attachment 4**). The team was also working with BP employees to review each drawing listed in the database [redacted] had used at BP to determine the accuracy of [redacted] assertion that BP lacked "as-built" drawings for Atlantis' subsea components.

[redacted] said that [redacted] identified a specific "handover" process BP used when transferring mechanical and system engineering drawings to the next stage of building the platform (see Attachment 3). He said that BP had an extensive chain of custody covering the handover process, and that BOEMRE's review of this process and the related handover packages would have identified the problem if [redacted] had been correct in his allegations that BP did not have the necessary certified engineering drawings for the platform. According to [redacted], the mechanical and system handover packages were highly detailed and so voluminous that [redacted] thought it would take her 4 years to complete a review of the documents without assistance.

Two Structural Engineers Join the Atlantis Investigation Team

At this point, according to [redacted] BOEMRE management told him that structural engineers [redacted] and [redacted] could help [redacted] review the packages. [redacted] said that he

had not worked with either woman before, but he welcomed their assistance. [redacted] and [redacted] were assigned to travel to Houston to assist [redacted] and [redacted]

Advanced Structural Engineer [redacted] has worked for BOEMRE since January 2009 (**Attachment 5**). She issues permits to energy-producing facilities operating on the Outer Continental Shelf and ensures that the facilities are safe and comply with applicable Federal regulations.

[redacted] said that her first-line supervisor, [redacted], Chief of BOEMRE's Office of Structural and Technical Support, informed her of the assignment to Houston in May 2010. According to [redacted] [redacted] was also assigned to the structural engineering team at that time. She and [redacted] were the only two structural engineers assigned during the first phase of the investigation.

According to [redacted] she and [redacted] alternated their travel to BP's Houston headquarters to work on the investigation. [redacted] was assigned to travel to Houston first. [redacted] reviewed the pertinent regulations with [redacted] and tutored her on structuring an investigation before [redacted] left for Houston because [redacted] had only 4 years of engineering experience.

[redacted] said that she contacted [redacted] before [redacted] went to Houston to try to learn about the structure and parameters of the investigation. According to [redacted] [redacted] told her that the investigation's structure was "fluid." [redacted] said that she and [redacted] were surprised by this comment because they knew the investigation was related to a legal matter, and therefore they believed it should have been more rigidly structured.

[redacted], who has since been promoted to Chief of BSEE's Environmental Inspection and Enforcement Unit, said that in Houston she was assigned to help [redacted] review "data books" (**Attachment 6**). These data books contained a large amount of information on the equipment attached to the Atlantis production platform, including information related to who manufactured the equipment, how the equipment was meant to function, and how it was attached to the platform. According to [redacted], the data books did not contain structural designs, nor did they include "issued-for-construction" or "as-built" drawings,[2] which she understood to be the focus of the investigation based on her review of the [redacted] lawsuit and the request from Congress. [redacted] said that she recommended to [redacted] and [redacted] that they ask BP for these drawings rather than review the data books.

[redacted] said that she further recommended to [redacted] and [redacted] that they focus on subsea structural drawings in order to verify whether or not the claims in [redacted] lawsuit were valid. According to [redacted] [redacted] and [redacted] "pushed back" on her recommendation at first, but eventually [redacted] was allowed to request the drawings from BP. [redacted] said that she drafted a letter to BP requesting the drawings during her second visit to Houston in June 2010, but BP's response did not contain a complete set of the drawings. [redacted] said she asked BP for additional drawings but never received the drawings to her satisfaction.

[2] Issued-for-construction drawings are drawings that have been reviewed, checked, approved, and officially released as completed documents for construction. As-built drawings are a revised set of drawings submitted by a contactor upon completion of a project or a particular job. They reflect all changes made in the specifications and working drawings during the construction process, and show the exact dimensions, geometry, and location of all elements of the work completed.

[redacted] *and* [redacted] *Discomfort Over the Investigation Grows*

According to [redacted] sent her several text messages during [redacted] initial visit to Houston, telling her that she was uncomfortable with how the investigation was structured and how it was being conducted (see Attachment 5). [redacted] said that the experience upset [redacted]. She met with [redacted] the weekend after [redacted] finished her first rotation in Houston and tried to advise her on how an investigation should be conducted. [redacted] told [redacted] that she wanted to prepare as much as possible before joining the investigation herself, and [redacted] replied: "I don't think you need to worry about being prepared."

[redacted] described for us her experiences on her first trip to Houston. Upon her arrival, she found the investigation to be "very limited," and she could not understand the direction it was taking. [redacted] explained that because the investigation was responding to a congressional request, she had expected to find a far more comprehensive and structured investigation.

[redacted] said she assumed the investigation was so unstructured because the BOEMRE employees involved did not have much private-sector experience. Accordingly, [redacted] said, she made several suggestions to [redacted] and [redacted] as to how BOEMRE should proceed with the investigation in order to make it "defensible," but they quickly let her know that her suggestions were not welcome. [redacted] said that rather than consider her suggestions, [redacted] directed her to review documentation unrelated to her duties as a structural engineer. [redacted] said that she did not understand this direction, but did what [redacted] told her to do because he was the lead.

[redacted] also said that during her first Houston trip, she had several discussions with [redacted] about the applicability of the Federal regulations to Atlantis, during which they disagreed about how 30 C.F.R. §§ 250.900 – 921 (Subpart I)[3] applied. According to [redacted] [redacted] stated several times that he believed that BOEMRE does not regulate a production platform's subsea components, yet [redacted] knew that subsea equipment was "clearly listed in our regulations."

[redacted] stated that he assigned [redacted] and [redacted] to review the mechanical and system handovers when they began assisting in the Atlantis investigation in Houston (see Attachment 3). He said that [redacted] and [redacted] refused to comply with the assignment because "they had their own ideas" about what needed to be done, and [redacted] in particular was adamant about only doing what she believed she should be doing. He stated that he was not sure how to handle [redacted] because he was not her direct supervisor.

[redacted] told us that during her work in Houston she came to believe that BP was being allowed to control the investigative effort (see Attachment 6). For example, she said, BP had requested updates on BOEMRE's efforts in the investigation, which she believed was inappropriate.

According to [redacted] and [redacted] [redacted] became so disturbed about how the investigation was being conducted that she brought their concerns to BOEMRE Regional Director Advisor [redacted] in late June 2010, telling her that she felt uncomfortable because BP employees often entered the BOEMRE investigative team's workspace and asked probing questions about the investigation (see Attachments 5 and 6). [redacted] said that [redacted] specifically complained to [redacted] that [redacted], a

[3] The BOEMRE regulations governing offshore oil and gas operations in the Outer Continental Shelf are found in 30 C.F.R. § 250. Different regulatory requirements apply to different components of an offshore oil and gas production facility. The regulations are divided into subparts applicable to the different components. Subpart I (30 C.F.R. §§ 250.900-.921) applies to platforms and structures.

former BOEMRE employee who was now working for BP, regularly approached her with specific questions. According to [redacted] both she and [redacted] were concerned that BP may have been trying to control the investigation.

We interviewed [redacted], who has worked for BOEMRE for 32 years (**Attachment 7**). In her current position, she identifies legal issues and offers the regional director informal legal advice, including outlining whether formal legal counsel would be needed from either DOI's Solicitor's Office (SOL) or the Department of Justice.

[redacted] confirmed that during the early phase of the Atlantis investigation, [redacted] told her that the investigation's independence might be at risk because it was being conducted at BP's headquarters. [redacted] said that [redacted] "is a stellar employee" who "goes by the book," so she placed faith in [redacted] perspective. [redacted] told us that she advised [redacted] to contact her third-line supervisor, Regional Supervisor for District Field Operations [redacted] and ask that BOEMRE relocate the investigation to New Orleans. [redacted] was not certain if [redacted] spoke to [redacted] about the matter, but [redacted] assumed that she did. [redacted] also said that she may have talked directly to [redacted] herself about the matter, but she was not certain. [redacted] stated that beyond this advice to [redacted], she was not involved with the Atlantis investigation.

[redacted] told us that sometime after [redacted] spoke with [redacted], BOEMRE management informed BP that the investigation would be relocated to New Orleans (see Attachment 5). In August 2010, all documents from the investigation were moved from BP's headquarters in Houston to BOEMRE's New Orleans District Office, and the second phase of the Atlantis investigation began.

Second Phase of the Investigation, BOEMRE Office, New Orleans (August 2010 – October 2010)

[redacted] told us that her supervisor, [redacted], told her and [redacted] that they needed to continue assisting the investigation after it was relocated to New Orleans (see Attachment 5). By [redacted] second trip to Houston, however, [redacted] had concluded that she did not want her name associated with the investigation, and she began documenting everything [redacted] asked her to do. [redacted] decided to ask to be removed from the project, but [redacted] was so distraught about the investigation that [redacted] withheld her request so that [redacted] could ask [redacted] to be removed instead.

[redacted] said that once the first phase of the investigation was completed, she emailed [redacted] asking to be removed (see Attachment 6). [redacted] said that she made this request for several reasons: 1) she was very busy with her normal workload; 2) she did not feel that she was being managed as a professional; 3) she did not feel she was being tasked with appropriate duties for a structural engineer; and 4) she did not feel comfortable with the interaction between BOEMRE and BP. [redacted] agreed to allow her to be taken off the investigation.

[redacted] said that she worked with [redacted] to decide which structural engineer would replace [redacted] (see Attachment 5). According to [redacted] a significant portion of the investigation needed to be conducted by structural engineers, and there were too many technical drawings for one engineer to review alone. [redacted] assigned [redacted] a structural engineer whom [redacted] trusted, to the investigation. [redacted] said that she also told [redacted] at that point that she did not trust [redacted] and was not comfortable working with him.

[redacted] also said that in August 2010, [redacted] drafted a summary of her Houston experiences that was accurate as well as "very scathing and honest" (**Attachment 8**) [redacted] received a copy of [redacted] report and emailed it on September 5, 2010, to [redacted], to be forwarded to [redacted], saying that it was a "good job and very thorough" (see Attachment 4).

The Final Structural Engineering Team Is Formed

[redacted] said that early in the second phase of the investigation, BP produced a substantial number of structural drawings for review (see Attachment 6). She said that [redacted] asked her to rejoin the investigative effort and help review them, and she agreed to do so part time. From this point onward, [redacted] and [redacted] made up the investigation's structural engineering team.

According to [redacted] before [redacted] started work on the investigation again, [redacted] approached [redacted] to lay down "ground rules" so that they could proceed respectfully as a team while acknowledging that their approaches differed (see Attachment 5). [redacted] suggested ways to professionally disagree while reporting the investigative team's findings, informed [redacted] that she believed the investigation should proceed in a more formal manner, and suggested that all communication with BP go through [redacted] because he was the lead. According to [redacted] listened to her and agreed to move forward with the investigation in a professional manner.

[redacted] explained to us that these ground rules were meant to avoid a repetition of the tension that had occurred between the structural engineers and [redacted] during the first phase of the investigation (see Attachment 6). According to [redacted], however, the day she arrived to assist in the second phase, [redacted] immediately confronted her again about her views of how the investigation should be conducted. She said he stressed that Atlantis had no structural issues if Federal regulations had not been violated.

We also interviewed Structural Engineer [redacted] who began working for BOEMRE's structural engineering group in 2009 (**Attachment 9**). He said that he helped [redacted] and [redacted] create spreadsheets and review the Atlantis engineering drawings for issued-for-construction and as-built signatures or labels.

According to [redacted] he was unsure about the direction the investigation was taking. [redacted] said that he had reviewed the original congressional request several times and it appeared to him that Congress was concerned about "BP's document control" regarding Atlantis. [redacted] added that when the structural engineers attempted to locate the engineering drawings they needed to review, they found it difficult due to BP's flawed index system. [redacted] noted that the production engineers assigned to the Atlantis investigation were not as concerned about this situation as the structural engineers.

BOEMRE Focuses Its Investigation on Regulatory Function

On July 21, 2010, 18 members of Congress sent a letter to DOI Secretary Salazar and BOEMRE Director Michael Bromwich urging BOEMRE to take steps to ensure the safe operations of the Atlantis platform (**Attachment 10**).

[redacted] told us that as the investigation was being relocated to New Orleans, he recommended to BOEMRE managers [redacted], Regional Supervisor for Regional Field Operations [redacted], and [redacted] that the Atlantis investigation focus on regulatory documents (see Attachment 3). [redacted]

explained that he felt that BOEMRE should only be reviewing documents that BP had actually been required by regulation to submit for approval and oversight during Atlantis' construction and commission. He said that [redacted], [redacted], and [redacted] agreed with this approach and that [redacted] sent a letter to BP on July 21, 2010, requesting pertinent structural and production documents and drawings (**Attachment 11**). He said that both the production engineers and the structural engineers should have followed this approach, but the structural engineers were attempting to change "how they [were] doing business."

During their interviews, [redacted] and [redacted] confirmed that they agreed with [redacted] recommended approach (**Attachments 12 and 13**). [redacted] also said that if BOEMRE learned after conducting the Atlantis investigation that it needed to tighten the pertinent regulations, it should do so for the future, but it could not retroactively penalize BP for following BOEMRE's interpretation of the regulations at the time the facility was constructed and approved.

BOEMRE Concludes That Atlantis' Subsea Components Are Not Covered by Subpart I

[redacted] said she, [redacted] and [redacted] all believed that according to regulations contained in Subpart I, BOEMRE was responsible for ensuring the compliance of all subsea components of any platform operating on the Outer Continental Shelf, including Atlantis (see Attachment 5). She said that [redacted], however, believed that Subpart I did not apply to the subsea components of drilling or production platforms, and this was the interpretation BOEMRE ultimately followed when writing its final report. [redacted] said that [redacted] continually confronted [redacted] about the subject, but [redacted] would simply state to them that "somebody" had decided that BOEMRE was not going to regulate subsea structures.

[redacted] explained her belief that Subpart I does apply to subsea components (see Attachment 6). She said that the structural engineers did their best to provide BOEMRE management with the engineers' professional view of Subpart I, but BOEMRE management simply accepted [redacted] interpretation, which was that historically Subpart I only applied to "weight-bearing" structures attached to a platform, not to subsea components. She stated that even though [redacted] supervised her and the rest of the structural engineers, he was not a structural engineer himself and his interpretation was flawed.

[redacted] acknowledged that the structural engineers interpreted Subpart I differently than the production engineers and [redacted] (see Attachment 9). He felt that the regulations in Subpart I were worded in a way that could lead to either interpretation.

[redacted], who is now retired from BOEMRE, directly supervised [redacted] [redacted], and [redacted] during the Atlantis investigation (**Attachment 14**). He told us he disagreed with the structural engineers' assertion that subsea components were covered in Subpart I. [redacted] said that he attempted to "steer" the structural engineers away from this view, but they chose to follow a "real strict, literal" interpretation of the subpart.

We also interviewed SOL Attorney [redacted] who was introduced to the Atlantis investigation after [redacted] filed his False Claims Act allegations in 2009 (**Attachment 15**). She was assigned to help BOEMRE evaluate whether [redacted] allegations represented a violation of Subpart I. [redacted] said that the core legal issue that [redacted] case appeared to rely on was the notion that Subpart I requires as-built drawings for subsea components. Accordingly, she reviewed the regulations and found that the Subpart I requirement for as-built drawings did not apply to subsea components.

In addition to reviewing Subpart I and its administrative and legislative history, [redacted] consulted with BOEMRE engineers [redacted] and [redacted] about whether BOEMRE had historically regulated subsea components under Subpart I. According to [redacted], [redacted] and [redacted] informed her that BOEMRE had not historically interpreted Subpart I as applying to subsea components, only to load-bearing structures. As a result, BOEMRE had not historically required companies like BP to provide as-built drawings of subsea components. She documented her legal analysis of the issue and provided copies of it to Michael Bromwich, BOEMRE Director, and [redacted], Director of BOEMRE's Investigations and Review Unit (**Attachment 16**).

BOEMRE Concludes That Engineering Drawings Do Not Need "As Built" Stamp

In addition to the structural engineers' disagreement with [redacted] interpretation that Subpart I's as-built requirement does not apply to subsea components, they also disagreed with [redacted] and [redacted] about what constituted an as-built engineering drawing, in particular whether the drawing should be labeled or stamped with the words "as built."

In an August 25, 2010 email response to BOEMRE's July 21, 2010 document request, BP defined its labeling standard for as-built drawings and final handover drawings (see Attachment 4). [redacted], [redacted], and [redacted] exchanged emails about this information on August 31, 2010, concluding that BP's labeling system complied with regulations.

When interviewed, [redacted] said that he remembered several email discussions about the definition of an as-built engineering drawing during the Atlantis investigation (see Attachment 13). He said that he did not contribute to these discussions but knew that the as-built label was a significant point of discussion. [redacted] said he learned that several companies had different ways of labeling their drawings to indicate that they were as-built drawings, even if the drawings did not have the actual words "as built" stamped on them. [redacted] believed such labels were acceptable under Federal regulations.

[redacted] explained that the structural engineers looked at the as-built requirement as if it were a house that was being built, not an offshore production platform (see Attachment 14). He said that offshore operators do not create final as-built drawings. According to [redacted], the final engineering drawing made at the time the component or structure was put into commission is all that is necessary, not a drawing stamped "as built."

In contrast to these beliefs, [redacted] said that in order for a structural engineering drawing to be classified as an as-built drawing, it needed to have an as-built stamp on it (see Attachment 6). According to [redacted], BOEMRE management adopted the idea that if structural engineering drawings *represent* as-built drawings, then the drawings comply with the regulations. She said that this interpretation is contrary to the general professional standards of structural engineering. Furthermore, [redacted] said, even if this interpretation could be legally justified under the regulations, she believed that drawings stamped "as built" should be required in order to determine whether the designs on the drawings complied with general professional standards.

[redacted] also acknowledged that BOEMRE's upper management decided that as-built engineering drawings did not need the exact words "as built" on them (see Attachment 9). He explained that he has never worked in private industry and therefore was not familiar with industry labeling standards, but an as-built drawing should ideally have the label.

SOL attorney [redacted] said that she did not examine whether a structural engineering drawing needed the words "as built" stamped on it to satisfy the regulations' requirements (see Attachment 15). Like [redacted], she explained that each company involved in creating the drawings had different codes for their as-built drawings. Therefore, BOEMRE seemed satisfied that the drawings complied with the regulations even though several drawings did not have the exact stamp or words "as built." [redacted] did not express an opinion about whether BOEMRE could legally make such an interpretation or whether the regulations require "as built" to appear on drawings.

The Production Engineering Team and the Structural Engineering Team Split (September 2010)

[redacted] became responsible only for the production engineers working on the Atlantis investigation once it relocated to New Orleans, although he retained the title of lead for a time (see Attachment 3). He told us that it was clear to him that [redacted] would not take any direction from him and so he was relieved of the responsibility of trying to assign any tasks to the structural engineers. From that point onwards, [redacted] said, he had no control over or knowledge of the structural engineers' activities during the investigation.

Tensions Continue to Grow Between Domangue and the Structural Engineers

[redacted] explained that after learning that the engineering teams continued to have problems working together, he directed [redacted] to have [redacted] monitor how the structural engineers were working with [redacted] and the production engineers (see Attachment 12).

[redacted] and [redacted] described how [redacted] provided direct oversight to the structural engineers (see Attachments 13 and 14). According to [redacted], [redacted] informed him that he was "extremely frustrated" with the structural engineers because they were not following [redacted] directions and were going "beyond the scope" of the congressional request and the regulation requirements. [redacted] said that he therefore directed [redacted] to oversee the structural engineers directly, including visiting the structural engineers' designated work site in the New Orleans District Office a couple of times a day. [redacted] did not remember [redacted] reporting any particular issues to him after [redacted] started providing more oversight to the structural engineers. [redacted] confirmed that he visited the New Orleans work site every day and worked closely with the structural engineers while they reviewed engineering drawings, along with actually reviewing the drawings himself.

On September 1 and 2, 2010, several email exchanges took place about the conflict between the structural engineers and [redacted] (see Attachment 4). [redacted] said that after the investigation was relocated to New Orleans, [redacted] sent an email to BOEMRE management complaining that [redacted] was not following his directions and was being difficult (see Attachment 6). According to [redacted] sent the email to [redacted], [redacted], and [redacted], stating that [redacted] was "disruptive" and was jeopardizing the timely completion of the investigation (see Attachment 5). [redacted] said that in response to [redacted] email, she informed her supervisors that she felt he had created a hostile work environment and was attempting to retaliate against her. At this time, [redacted] said, she also emailed [redacted] asking to be removed from the investigation; [redacted] offered to meet with her, but he denied her request.

When interviewed, [redacted] confirmed that [redacted] came to him with concerns about [redacted] even as [redacted] was receiving complaints from [redacted] about [redacted] (see Attachment 12). [redacted] said that he denied [redacted] request to be released from the Atlantis investigation because BOEMRE was

trying to meet a congressional deadline and it would have taken far too much time to replace her. He said that he tried to encourage [redacted] and [redacted] to work together as a team.

[redacted] said that the structural engineers continued to have concerns about the second phase of the investigation (see Attachment 6). For example, she said, when the structural engineers requested certain structural engineering drawings to review, [redacted] would attempt to limit their review to platform drawings, versus subsea drawings. [redacted] said that the structural engineers also believed that the BOEMRE employees who were interviewing witnesses for the investigation were not asking the witnesses questions related to structural engineering. The engineers raised these concerns with [redacted] rather than [redacted]

The Structural Engineers Begin Their Own Separate Report of Atlantis Findings

As the investigation went on and the structural engineers' concerns continued to grow, [redacted] stated, [redacted] and [redacted] both voiced their desires to be removed from the investigation (see Attachment 5). [redacted], and [redacted] met with [redacted] on September 15, 2010, and he told them to produce a separate report of their findings (see Attachments 5, 6, and 9). [redacted] said that she was satisfied with this direction because, based on her observations, she would not have been comfortable signing her name to the production engineers' findings (see Attachment 6). [redacted] said that he also embraced this direction because the three could then feel assured that they would be able to document their concerns and findings without having to combine them with those of the production engineers (see Attachment 9).

[redacted] said that at this meeting, he listened to the structural engineers' general concerns and issues (see Attachment 12). He did not remember specifics, but he believed that he told them to compile their findings and conclusions separately from the production engineers so that they could be incorporated into one final BOEMRE report. He did not believe he told them to prepare a separate final report.

The structural engineers finalized their own report of Atlantis findings and conclusions on September 28, 2010 (**Attachment 17**). They presented their findings to [redacted] and [redacted]. According to [redacted], this represented the end of the second phase of the investigation (see Attachment 6).

Third Phase of the Investigation, BOEMRE Office, New Orleans, and BOEMRE Headquarters, Washington, DC (October 2010 – March 2011)

In June 2010, in response to the Deepwater Horizon explosion, [redacted] and Director Michael Bromwich began working for BOEMRE (**Attachment 18**). [redacted] who when interviewed was serving as the Acting Assistant Secretary, Land and Minerals Management, told us that he was a senior advisor to Bromwich during the Atlantis investigation and acted essentially as his "lieutenant." The Atlantis investigation was already underway when [redacted] and Bromwich joined BOEMRE.

A New BOEMRE Unit Takes Over the Investigation

According to [redacted], Bromwich established the Investigations and Review Unit shortly after becoming Director in an effort to repair BOEMRE's credibility. He said that Bromwich believed that he needed to establish the capacity within BOEMRE to identify, respond to, and investigate allegations of misconduct, both internal and industry related. Once Bromwich learned of the congressional request

and the Atlantis investigation, [redacted] said, Bromwich decided that the unit should become involved, and directed its director, [redacted], to take over as lead for the investigation.

[redacted], who is now the senior advisor to the BSEE Director, was hired by Bromwich in July 2010 (**Attachment 19**). According to [redacted], he started performing a significant amount of work on the investigation in September 2010 and became the lead for the investigation at that time.

[redacted] said that he recognized early on that the relationship between the structural engineers and the production engineers was "completely broken." As a result, he began communicating directly with each team as opposed to trying to communicate through [redacted], who at the time was still the overall lead.

According to [redacted], when he initially took over as lead, he attempted to keep the investigation narrowly focused on whether BP's actions in deploying Atlantis may have violated Federal regulations. He said that in September 2010 he helped prepare BOEMRE's Atlantis investigation report, which included the production engineers' work. He sent a draft copy of this report to [redacted], [redacted], [redacted], and [redacted] to review on October 13, 2010 (see Attachment 4).

Bromwich Delays BOEMRE's Draft Investigation Report After the Structural Engineers' Review

[redacted] explained how the structural engineers learned of the Atlantis investigation report that BOEMRE planned to issue in the fall of 2010 (see Attachment 6). After the structural engineers issued their separate report in September 2010, [redacted] said, she was assigned to travel with Bromwich as part of a BOEMRE recruitment effort. During the trip, Bromwich made several comments about the final BOEMRE Atlantis report, which was to be issued soon. [redacted] told us that she had not read the draft of this report before Bromwich mentioned it.

On October 29, 2010, [redacted] emailed Bromwich to describe her concerns over what she perceived to be mismanagement of the Atlantis investigation, over-involvement by BP, and BOEMRE management's incorrect approach with regard to BP's requirements under the regulations (see Attachment 4). Bromwich forwarded [redacted] email to [redacted] the same evening, stating that her message was "unexpected and extremely troubling."

The next day, Bromwich emailed [redacted] back, telling her that BOEMRE would delay releasing the report, which was to be issued the next week, if she reviewed it and found that her concerns had not been addressed. He sent her another email that day with the draft report attached. [redacted] told him she had not seen the report before, nor did she believe [redacted] and [redacted] had.

[redacted] emailed her comments to Bromwich on November 1, 2010. Her email identified several areas in which she disagreed with the report, including the report's interpretation of regulations as they pertain to Atlantis' subsea components and issued-for-construction and as-built drawings. [redacted] also stated in her email to Bromwich that the report did not reflect the structural engineers' technical understanding of design and investigative findings. [redacted] also spoke with [redacted] that same day and gave him her comments on the draft report (see Attachment 4).

According to [redacted], after speaking with [redacted] and reviewing the draft BOEMRE report himself, he became concerned that the BOEMRE investigation and report were not answering the basic question of whether Atlantis was safe (see Attachment 18). He was also concerned because [redacted] the

complainant who raised the original allegations about the facility's safety, had not been interviewed during the investigation. [redacted] said that these concerns led him and Bromwich to conclude that more work was needed before a final report could be issued.

When interviewed, Bromwich said that he did not specifically remember [redacted] email and comments (**Attachment 20**). He said that he recalled directing that the report not be released and that he directed [redacted] to do more work on the Atlantis investigation. Bromwich said, however, that he was not certain whether [redacted] emails and comments were the "triggering event" for these decisions. He also recalled being disappointed to learn that [redacted] had not yet been interviewed.

The Atlantis Investigative Team Is Reassembled To Reexamine the Subsea Component Issue

According to [redacted] in early November 2010 [redacted] coordinated a conference call with her, [redacted], [redacted] and some of the production engineers, informing them that the Investigations and Review Unit planned to look at the subsea issue again and to reassemble the investigative team (see Attachment 5). On November 4, 2010, [redacted] emailed [redacted] with the structural engineers' comments and suggestions on the draft investigative report, along with its comments on [redacted] complaint (see Attachment 4). In her email, [redacted] stated that the report did not address several of the structural engineers' concerns about Atlantis' subsea component documentation and the structural engineers believed that "BOEMRE must verify that the subsea components and their parts were appropriately documented and approved prior to their installation and prior to the related production start-up dates." The structural engineers also gave [redacted] suggestions for documents that they believed BOEMRE needed to request from BP in order to answer the congressional inquiry regarding Atlantis.

According to [redacted], Bromwich and [redacted] directed him to expand the investigation to review and analyze every issue raised by [redacted] False Claims Act suit (see Attachment 19). Accordingly, [redacted] decided that he needed to interview every person [redacted] identified in his claim who supported the allegations. This went beyond his original approach of determining only whether BP had violated Federal regulations.

[redacted] told us that [redacted] formed a team to interview BP employees and contractors, as well as [redacted] and [redacted] experts (see Attachment 5). The team was composed of [redacted] then BOEMRE Production Engineer [redacted] and an individual from Bromwich's immediate office (**Attachment 21**). [redacted] said that the interview process extended through January 2011 (see Attachment 5). According to [redacted] [redacted] provided several documents to the structural engineers that they had not seen during the first phase of the investigation and asked her to review them so that she could support him during the interviews.

During this phase of the investigation, [redacted] said, the structural engineers' focus on the adequacy and completeness of BP's structural engineering drawings continued (see Attachment 6). She said that BP did not have an index table for its drawings and the structural engineers could never determine whether BP had provided a complete, comprehensive set of structural engineering drawings for Atlantis. [redacted] said that the structural engineers knew that Atlantis had had subsea issues in the past, and therefore they wanted to review how those issues might have affected the final drawings. Overall, [redacted] said, she believed that the structural engineers did the best job possible with what BP provided, including issuing findings and recommendations for BOEMRE.

In addition to assisting [redacted] in his interviews, [redacted] said, the structural engineers reviewed footage of Atlantis' subsea components taken by a remotely operated underwater vehicle (ROV), along with the inspection reports that accompanied the footage (see Attachment 9). The ROV footage and associated inspection reports were provided to BOEMRE by BP.

The Investigations and Review Unit Issues a Revised Draft Report for Review, and the Structural Engineers Present a Separate Summary of Their Findings

On February 4, 2011, after the interviews and the additional work had been completed, [redacted] emailed a revised draft of the Atlantis report to those involved in the investigation, including [redacted], and [redacted], for their review (see Attachment 4).

Both [redacted] and [redacted] told us that they did not read the final report in depth or provide feedback because they noted that this report used the same approach and regulation interpretations as the October 2010 draft report, which the structural engineers did not agree with (**Attachments 22 and 23**). They said that they did not feel it was worth their time to comment on the new report because their comments and recommendations on the previous draft did not affect BOEMRE's approach. Moreover, [redacted] stated: "There was nothing [in the February 2011 draft] we could discern as originating from us" (see Attachment 5). [redacted] emailed [redacted] and told him that she and [redacted] had concluded that [redacted] was not interested in their thoughts on the report and that they did not intend to provide any input (see Attachment 4).

Instead of providing comments, on February 7, 2011, [redacted] emailed [redacted] a six-page summary of the structural engineers' findings and conclusions (**Attachment 24**). This summary was a subsection of a full structural engineering summary report, also dated February 7, that the structural engineers produced separately from BOEMRE's final report on the Atlantis investigation (**Attachment 25**, and see Attachment 5). In her email to [redacted], [redacted] wrote that out of the "hundreds of findings" in the third-party ROV inspection reports they reviewed the structural engineers' summary included "those we thought were most alarming" (see Attachment 4).

According to [redacted] the structural engineers observed insulation cracking and materials leaking from Atlantis into the Gulf of Mexico while reviewing the third-party ROV footage (see Attachment 9). He noted that the cracked insulation was similar to problems BP was experiencing with another platform. He said that the structural engineers did not know what types of materials were leaking into the Gulf and so simply documented their observations and findings in their report.

[redacted] reviewed the summary of the report and forwarded it to [redacted] the same day with a request for a meeting (see Attachment 4). He wanted to discuss whether the Investigations and Review Unit should issue the final BOEMRE report as drafted, issue the report while allowing the structural engineers to work on a separate report that would require BP to explain all of the problems they had noted, or delay the BOEMRE report until these problems were resolved. [redacted] wrote back to say he would read the report and they could talk the next day; he also forwarded the summary to Bromwich.

We showed [redacted] copies of the email exchange and the summary. [redacted] stated that he did not specifically remember receiving or reviewing the summary, but he reiterated that during this phase of the investigation he continued to be concerned about whether it was answering the core question at issue with the facility: its overall safety (see Attachment 18). When we interviewed Bromwich, he also

stated that he did not recall receiving or reviewing the structural engineers' summary (see Attachment 20).

On February 8, 2011, [redacted] emailed [redacted] stating that he wanted to meet with the structural engineers in New Orleans the next day, with [redacted] participating via telephone (see Attachment 4). After the meeting, [redacted] emailed [redacted], asking: "Why didn't they know what the call was about? I feel like I wasted time." [redacted] explained to us that the teleconference was to discuss any ongoing concerns the structural engineers had regarding the report's completeness, along with discussing the path forward (see Attachment 18). He was frustrated, however, because there seemed to be no structure to the conference call and he had to step in and provide talking points about the structural engineers' concerns.

[redacted] emailed [redacted] to explain that the structural engineers believed there were issues outside the scope of the report that still needed to be explored, but "for some reason no one was willing to step to the plate and talk to you about those issues" (see Attachment 4) [redacted] also stated in his email that he would support further investigation into the structural engineers' issues if Bromwich agreed they were "important enough." [redacted] forwarded [redacted] response to Bromwich, and Bromwich wrote that he would speak with [redacted].

According to [redacted], during the February 9 meeting, [redacted] and [redacted] made it clear to the structural engineers that the Atlantis investigation needed to be completed soon and they wanted to hear directly from the engineers about its issues (see Attachment 6). [redacted] said that all of the structural engineers expressed their feelings that their February 2011 report spoke for itself with respect to their findings, concerns, and recommendations. She said that [redacted] did not seem to know how to deal with the structural engineers' findings. [redacted] asked them: "How do we move forward?" and they told him that they would prepare recommendations on how to do so.

[redacted] remembered the February 9 meeting as "unremarkable" (**Attachment 26**). She recalled offering to prepare a summary of the structural engineers' findings that would educate nontechnical readers.

A February 14, 2011 email exchange between Bromwich, [redacted], and [redacted] indicated that Bromwich and [redacted] had a telephone conversation with [redacted] that day (see Attachment 4). After reviewing the email exchange, Bromwich acknowledged that he must have spoken with [redacted] about the structural engineers' concerns that day, but he does not specifically remember contacting her about this matter or the substance of the conversation he had with her (see Attachment 20).

When asked about her February 14 conversation with Bromwich and [redacted], [redacted] said that Bromwich requested the conference call in order to discuss the structural engineers' findings (see Attachment 6). According to [redacted], Bromwich said that BOEMRE needed to conclude the Atlantis investigation and issue a final report. [redacted] told Bromwich that it was not the structural engineers' intention to delay the BOEMRE report, adding that they stood by their findings and believed that their report had given BOEMRE management all of the information necessary to decide how to proceed. [redacted] said that she also informed Bromwich that the structural engineers' concerns and issues raised in September 2010 were still unresolved (see Attachment 23).

Two days after the February 9 meeting in New Orleans, [redacted] sent an updated draft Atlantis report to Bromwich and [redacted] (see Attachment 4). [redacted] suggested adding a footnote to the report

explaining the scope of the investigation and BOEMRE's responsibility to follow up on the issues the structural engineers identified that were outside the scope but required further examination. The footnote proposed by [redacted] was ultimately included in the final BOEMRE report:

> Performance of a full audit of the present condition of all subsea components was not within the scope of this investigation. *BOEMRE is continuing its regulatory review of the performance and integrity of the Atlantis facility's subsea components* [emphasis added], including wellheads, jumpers, and other components, and will take any appropriate action necessary to ensure the safe operation of the Atlantis facility and its subsea systems and components.

[redacted] and Bromwich both told us that they had no specific recollection of this footnote (see Attachments 18 and 20). When asked whether or not the structural engineers' findings and recommendations were ever addressed or investigated after the report was released, as the footnote and [redacted] email suggested would be the case, [redacted] stated that he did not remember whether anyone was directed to do so. Bromwich also initially stated that he did not remember, but he did recall having a personal conversation with [redacted] about the structural engineers' concerns.

Bromwich explained that he was in New Orleans on another matter when [redacted] was pointed out to him, and he asked if he could speak with her about the investigation. Bromwich recalled telling [redacted] that he took the structural engineers' concerns seriously and agreed that they needed to be followed up on. He also told [redacted] that while he did not believe the structural engineers' concerns should be incorporated into the investigation, he encouraged her to pursue them separately with his support. He admitted, however: "I don't know if she remembers it that way or not."

Bromwich emailed [redacted] on February 15, 2011, stating: "We can release the Atlantis report without fearing that [redacted] is] going to create issues about it" (see Attachment 4). After reviewing this email, Bromwich told us that he sent it because he believed that during his conversation with [redacted] she had agreed that there was "nothing incorrect in the report" (see Attachment 20). Bromwich added that [redacted] was concerned with the scope of the report, and he said that he would not have let the report be issued if she had told him its content was inaccurate. He further stated that it was his distinct impression that as long as the structural engineers' concerns were addressed in some way—even separately from the report—[redacted] had agreed to the report's release.

Conflict Continues Over Whether BOEMRE Pursues the Structural Engineers' Concerns

On February 17, 2011, [redacted] emailed Bromwich a two-page document from the structural engineers, entitled "The Bureau of Ocean Energy Management, Regulation and Enforcement, Atlantis Investigation: Path Forward" (**Attachment 27**). [redacted] email notified Bromwich that the structural engineers considered their work to be "substantially complete" (see Attachment 4). The "Path Forward" document identified several "lingering concerns" that they suggested "demand the BOEMRE's immediate attention," including "indications of possible well integrity deficiencies" (see Attachment 27). It also included their recommendations that an engineering evaluation of the integrity of all Atlantis wells be conducted, that BOEMRE establish an appropriate subsea monitoring regimen for Atlantis, that BOEMRE request the inspection and assessment documents and video related to possible cracks in Atlantis' flowline field joints, and that BOEMRE request detailed drawings for Atlantis' critical components, such as wellheads and trees.

Bromwich told us that he recalled thinking as he read the document that it confirmed his understanding that the structural engineers wanted him to be aware of their ongoing concerns, but at the same time agreed to the report being released without addressing those concerns in it (see Attachment 20). He said that he had given [redacted] and [redacted] permission to pursue their concerns and he did not believe that they needed more than that; he added that he assumed they would have informed their supervisors that they had the Director's support. According to Bromwich, [redacted] had proved that she was an assertive person; therefore, the notion that she may have believed she needed further direction from a lower-level supervisor in addition to permission from him "rings a little hollow."

In contrast, [redacted] said that she never knew that Bromwich had final approval of the Atlantis investigation report (see Attachment 26). She said that during her meeting with Bromwich, they discussed unrelated issues and only briefly touched on the Atlantis investigation.

We told [redacted] about Bromwich's assertion that [redacted] had agreed that there was "nothing incorrect in the report" and that it was ready to be released (see Attachment 22). [redacted] replied that she never told Bromwich that she believed there was nothing incorrect in the final report or that she was "agreeable" to the report's contents. When asked if Bromwich had given her permission during their conversation to pursue the structural engineers' concerns, findings, and recommendations, [redacted] said that he had not. According to [redacted] it was evident to her and the other structural engineers that no one in BOEMRE's chain of command welcomed their concerns and recommendations.

When we asked [redacted] if Bromwich had given her permission to pursue the structural engineers' concerns, findings, and recommendations, she said that he "absolutely did not" (see Attachment 23). Like [redacted] [redacted] felt "there was no management buy-in" to their concerns.

BOEMRE Issues Its Final Investigation Report

The final BOEMRE Atlantis investigation report was released to the public on March 4, 2011 (**Attachment 28**). An accompanying press release issued by BOEMRE stated: "Based on a thorough review of the evidence, the investigation found the majority of the allegations to be unfounded, but did find that there were a number of problems with the way that BP organized, stored, and labeled engineering drawings and documents. BOEMRE found no evidence that these documentation deficiencies created specific unsafe conditions on the Atlantis production platform" (**Attachment 29**). The press release quoted Bromwich as saying: "This report reflects a careful and comprehensive investigation of the allegations by an interdisciplinary team of lawyers, *structural engineers* [emphasis added], and other BOEMRE personnel, led by our Investigations and Review Unit."

That afternoon, Bromwich emailed the BOEMRE personnel who participated in the investigation, thanking them for their efforts and noting that he had discussed with the structural engineers that there were still "broader issues that need to be pursued" (see Attachment 4).

[redacted] said that she, [redacted], and [redacted] reviewed the final report and were still dissatisfied (see Attachment 5). She said that they all thought that the report ignored the structural engineers' findings, stating: "I skimmed through the report and did not see anything that looked familiar."
We asked [redacted] whether she believed the voices of the structural engineers who participated in the Atlantis investigation were fairly considered by BOEMRE management when it came to finalizing its investigation (see Attachment 26). [redacted] stated that while she initially believed that BOEMRE

management's approach to the investigation was based on "ignorance" of certain engineering processes, she came to believe that BOEMRE management was attempting to "tailor" the investigation in such a way as "to not find what [they] know is there."

[redacted] said that she believed BOEMRE's regulatory oversight had weaknesses and that the bureau needed to gain a better understanding of its oversight responsibilities regarding the subsea components of drilling and production structures in the Gulf of Mexico (see Attachment 6). She explained that while the BOEMRE final report referenced some of the structural engineers' findings, the report represented a "legal response" to [redacted] allegations instead of a comprehensive technical response. She believed that BOEMRE should be concerned about the greater issue of safety instead of only being concerned with strict compliance with Federal regulations. She said that [redacted] followed this strict approach, however, and became very defensive about the structural engineers' attempts to address the safety issues they found regarding Atlantis' structural engineering drawings and subsea components.

[redacted] also stated that she did not believe the final BOEMRE report was issued as a result of any "inappropriate conduct," and the structural engineers did ultimately have the opportunity to review the necessary drawings. She said, however, that the final report did not incorporate most of the findings, concerns, and recommendations in the structural engineers' report. She stated that the structural engineers' recommendations included areas that BOEMRE should follow up on, and it would be inappropriate not to do so.

[redacted] also said that he reviewed the final report (see Attachment 9). He noted that several of its findings and conclusions differed from the structural engineers' February 7, 2011 report, but he did not feel he needed to say anything to anyone about this fact. He said that in the end, BOEMRE had the authority to issue a report as it saw fit, regardless of the structural engineers' findings. He said, however, that he fully stands behind their report, stating that unlike the final BOEMRE report, the structural engineers simply documented what they found without being manipulated by management's interpretations.

Comparison of the Final Report by the Structural Engineers and the Final BOEMRE Atlantis Report

OIG compared the findings of the structural engineers' final Atlantis report and the final BOEMRE Atlantis report and found several discrepancies (**Attachment 30,** and see Attachment 19). For example, we compared the two reports' findings on ROV inspections of subsea structures:

BOEMRE's Findings	The inspection report on the 2010 ROV footage was prepared by 2H Offshore Inc. in January 2011. . . . The report concluded that the Atlantis subsea equipment is in good condition, with the exception of jumper insulation, which was shown to have a number of cracks.*
Structural Engineers' Findings	*The gas leak at the wellhead at GC 699 is an indication of well integrity problems* [emphasis in original]. This leak was identified during an earlier inspection. The formations of hydrates at wellheads as well as fluid leaks at wellheads are indicative of well integrity problems. As well, the source of the burn marks on the wellheads should be identified.

*Note: This section in the BOEMRE report included the footnote, quoted on page 16 of this report, which stated that BOEMRE was continuing its review of Atlantis' subsea components.

After reviewing our comparison, [redacted] said that the structural engineers' conclusion that there were "well integrity problems" caught his attention and he exchanged several emails with [redacted] and

others inquiring about it. He said that the response he ultimately received from the structural engineers did not support changing the BOEMRE report's conclusion.

According to [redacted], he learned about the subsea ROV footage during the investigation, and he asked for the footage and associated reports for BOEMRE's review. After receiving the footage and reports, however, he believed that they were outside the scope of the investigation's original task of analyzing [redacted] allegations related to the lack of as-built engineering drawings. He believed the structural engineers' findings and conclusions that went beyond this focus or that did not directly identify an ongoing safety concern or violation should remain separate from the BOEMRE report, to be followed up in BOEMRE's continuing "regulatory review." This is why, according to [redacted], he included the footnote in the BOEMRE report; he expected the structural engineers to follow up on their observations after the final BOEMRE report was released.

We also compared the section in the BOEMRE report concerning problems with the labeling of engineering drawings with the language in the structural engineers' report:

BOEMRE's Findings	We found that BP's engineering drawings relating to the Atlantis facility, which were prepared by a number of different contactors, were inconsistently labeled. . . . [and] that some drawings had inconsistent, undated, or missing engineer stamps. Other drawings had missing drawing numbers. We found that at least one of the subsea field architecture drawings was inconsistent with a subsea start-up chronology provided by BP. . . . These labeling and documentation problems alone do not constitute a violation of BOEMRE's regulations. Current BOEMRE regulations do not address how engineering drawings are to be stamped, organized and labeled. We find that BP complied with the requirements of 30 C.F.R. § 250.903(a)(1) and 30 C.F.R. § 250.905(d).
Structural Engineers' Findings	• BP did not have a complete set of "approved for construction" engineering documents for all subsea components of the Atlantis platform and related facilities when it began production in October 2007. • BP does not have a complete set of "as built" engineering documents for the Atlantis facilities that are currently in operation; and therefore BP is not currently in compliance with 30 CFR 250.903(a)(1). • BP did not demonstrate that they can produce drawings on the spot given their current documentation system. Even when providing drawings to us back in August, there were some that were out of order or scattered. [A BP employee] stated that they, BP, had only two weeks to provide a smattering of drawings which proved to be a difficult task. This doesn't bode well for BP's capability of responding to an emergent situation.

[redacted] explained that if he had believed that BP was not complying with the regulations regarding the as-built engineering drawings, he would have taken action against the company. He explained that ultimately he found BP's explanation of why all of the applicable engineering drawings were as-built drawings, even though not all of them had the specific words "as built" on them, was more persuasive than [redacted] claim that the drawings could not be considered as-built unless labeled exactly in that manner. He also noted the difference of opinion between the structural engineers and the production engineers as to whether or not Subpart I applied to subsea structures and cited SOL's [redacted] research determining that the subpart did not require as-built drawings of subsea components as it did for other weight-bearing components attached to the platform.

During the investigation, [redacted] said, he received a live demonstration of BP's document control system, in which BP employees demonstrated how they could access any as-built drawing of the

platform that was required by regulations. [redacted] told us that after viewing this demonstration, he became comfortable with BP's ability to access these documents and drawings, and he believed BP did comply with Subpart I.

We also compared the section in the BOEMRE report on alleged false or incomplete submissions of structural drawings with the language in the structural engineers' report:

BOEMRE's Findings	The "as built" requirements . . . apply only to structures associated with the platform. BOEMRE defines structures "associated with the platform" as those structures that are weight bearing on the platform. The following structures fall within the scope of 30 C.F.R. 250.901(a) [sic] and 30 C.F.R. 250.905(d): drilling, production, and pipeline risers and riser tensioning systems; turrets and turret-and-hull interfaces; foundations, foundation pilings and templates, and anchoring systems; and mooring or tethering systems. *See 30 C.F.R. 250.910(b)* [emphasis added]. BOEMRE's regulations currently do not specifically require the submission and approval of "as built" drawings for subsea components.
Structural Engineers' Findings	*[From a review of 135 mooring and foundation drawings for Atlantis]* Drawings lacking a PE [professional engineer's] stamp, signed and dated 100% Drawings not noted as having been issued for construction 48% Drawings not noted as "as-built" 100% *[From a review of 43 flowline/riser drawings]* Drawings lacking a PE stamp, signed and dated 100% Drawings not noted as having been issued for construction 2% Drawings not noted as "as-built" 100%

We showed the above comparison to [redacted] to show the way BOEMRE's final report differentiates between how its regulations apply to subsea components as opposed to risers and moorings or foundations. The BOEMRE final report acknowledges that the as-built requirement in the Subpart I regulations applies to risers and moorings or foundations, yet the structural engineers' findings indicated that 100 percent of both the risers and moorings or foundations drawings were not labeled "as built." [redacted] replied that the structural engineers' finding was probably a result of their view that the drawings needed the exact words "as built" on them. He still believed, however, that the regulations do not require the exact label or wording on the drawings as long as the drawings accurately represent the structures attached to the platform.

[redacted] said that he had felt that the structural engineers had taken an "undisciplined" approach to applying Federal regulations to the Atlantis platform. According to [redacted], if any facts had supported a violation or an ongoing safety concern, he would not have hesitated to identify those facts in the BOEMRE report and take action to correct the violations.

[redacted] also stated that he believed the current regulations may not be as "robust" as he would like them to be. He believed the regulations should include specific requirements for engineering drawings for all components attached to a platform, subsea or otherwise, but he had to consider the regulations that applied at the time of Atlantis' construction and deployment in pursuing the Atlantis investigation. He reiterated that he had been fully prepared to hold BP accountable if the Atlantis investigation had found solid evidence that BP had violated BOEMRE's regulations.

We told [redacted] about [redacted] statement about the difference of opinion between the structural engineers and the production engineers, including his assertion that [redacted] determined that the regulation did not require the maintenance of as-built drawings of subsea components as it did for other "weight-bearing" components attached to the platform (see Attachment 26). [redacted] said that she never learned where the idea came from that Subpart I should not apply to subsea components. She believed this interpretation is illogical because all of the structures below the water's surface are considered subsea components; therefore, she did not understand why the regulation distinguishes between subsea components because some of the components may be weight bearing and others not. In fact, she said, structural engineers use the term "load bearing," as opposed to "weight bearing," to describe an effect on a structure, and "loading" is defined as any outside effect on a structure, including water currents, temperatures, and so on. Accordingly, any components below the surface of the water would be load bearing.

We told [redacted] about [redacted] conclusion that the Federal regulations do not require a label with the actual words "as built" on an engineering drawing in order to be in compliance. She responded that his explanation and acceptance of such drawings would be "unacceptable" to a structural engineer and "demonstrated malpractice." According to [redacted] "if you take that position, you have created a world of hazard out there and a world of unknowns, and a world of assumptions that the appropriate, correct knowledge" of a structure's design will be accurately transferred through the years to each new operator. She further said that based on the interviews conducted of BP employees, it was obvious that creating as-built drawings was "a broken process" for much of Atlantis, particularly the subsea components.

[redacted] *Alleged Conflict of Interest*

The Structural Engineers Speak of Difficulties With [redacted] Approach and Leadership

[redacted] said that she did not know [redacted] before being assigned to the Atlantis investigation (see Attachment 5). According to [redacted] when she first arrived at the office assigned to the Atlantis investigation, [redacted] stated that he planned on "cutting the legs out from under" [redacted] False Claims Act lawsuit and that he "was going to declare the Atlantis facility safe." [redacted] said that she was repelled by the fact that [redacted] as the lead, would make such a statement at the beginning of an investigation.

[redacted] said it became apparent to her that [redacted] was not interested in objectively reviewing Atlantis. In fact, she said, [redacted] had told her that he was conducting the investigation as a "partner" of BP. [redacted] believed that [redacted] became frustrated with her after she confronted him with her interpretation of the regulations' applicability to Atlantis. She said that after this discussion, [redacted] clearly wanted her to "shut up and do what I was being assigned."

During the first phase of the investigation in Houston, [redacted] said, she did not know whom to trust in BOEMRE, and the atmosphere in the Atlantis investigation office became "more and more hostile." In one instance, according to [redacted] when [redacted] was not present, [redacted] came into the office, closed the door, and then approached her and said: "Your big mouth is going to get you in trouble." [redacted] said that she felt shocked and threatened by this statement.

[redacted] told us that she did not learn that [redacted] was a part of the original permitting process for the Atlantis platform until after the investigation was relocated to New Orleans (see Attachment 6). In

addition to her discomfort with BP's probing actions in Houston, she said, she was also concerned about how [redacted] was leading the investigation. [redacted] explained that BP was conducting its own internal investigation into the Atlantis lawsuit allegations and [redacted] suggested that BOEMRE simply wait for BP to finish and then review the BP report for accuracy, rather than conduct its own investigation [redacted] further said that she had the impression that [redacted] wanted to find the facility safe.

[redacted] said that [redacted] was not receptive to her concerns about the drawings produced by BP. Instead, she said, he would often become defensive and repeatedly ask: "Does that violate regulations?" [redacted] said that based on the [redacted] lawsuit and the congressional request, she believed that the fundamental component of Atlantis' design process needed to be reviewed, not just whether or not BP had strictly complied with regulations, but [redacted] did not seem to care whether the drawings provided by BP were accurate.

[redacted], BOEMRE Management, and the Production Engineers Deny a Conflict of Interest

[redacted] denied ever saying to [redacted] that her "big mouth" could get her into trouble (see Attachment 3). He also stated that he did not recall ever saying that he planned on "cutting the legs out from under" [redacted] lawsuit or that he intended to "declare the Atlantis facility safe." According to [redacted], [redacted] has made several untruthful statements about him and his character. He also said that [redacted] regularly berated and insulted the production engineers during the Atlantis investigation.

[redacted] pointed out that [redacted] became the overall lead of the Atlantis investigation during its final 6 months and [redacted] did not author the final Atlantis report. [redacted] also acknowledged that while [redacted] drafted the legal analysis of the applicability of the BOEMRE regulations for the final report and [redacted] provided a significant portion of the technical analysis, [redacted] "owned authorship" of the final BOERME report (see Attachment 19).

According to [redacted], the potential appearance of a conflict of interest on [redacted] part was discussed within BOEMRE (see Attachment 12). [redacted] said, however, that he ultimately decided that [redacted] had too much integrity to allow a conflict to occur while leading the investigation. In addition, he believed that [redacted] experience with the Atlantis facility was far too valuable to forfeit. Moreover, [redacted] said, he assigned several other engineers to work with [redacted], and therefore [redacted] did not conduct the investigation alone.

[redacted] stated that he was never part of any discussion about the potential appearance of a conflict of interest if [redacted] was the lead in the Atlantis investigation (see Attachment 14). [redacted] said that he never considered such a thing because [redacted] had no ties to BP. [redacted] believed [redacted] was chosen to lead the investigation simply because he was the most qualified person to do so.

[redacted] the BOEMRE petroleum engineer who assisted [redacted] in the beginning of the Atlantis investigation, said that she never observed anything that would make her question [redacted] professionalism while he led the investigation (**Attachment 31**). According to [redacted] any of the production engineers that were assigned to the Atlantis investigation would have spoken up if they believed Atlantis was unsafe in any way. She said that all of the production engineers recognized their burden of ensuring the safety of offshore facilities and took it very seriously.

Former Production Engineer [redacted] now the Productions Operations Chief for the Houma District, stated that she was involved with the original permitting of Atlantis after joining BOEMRE in 2004 and participated in several of the final physical inspections of Atlantis before it went offshore (see Attachment 21). At that time, she explained, [redacted] was the Houma District manager, and [redacted] was the senior production engineer for the District. [redacted] delegated final approval of facility permits to [redacted], which was why [redacted] signed many of the approval permits for Atlantis during its construction and commissioning.

According to [redacted] she believed that [redacted] was chosen to lead the Atlantis investigation not necessarily because of his past experiences with the platform, but rather because he had the most production and subsea experience in BOEMRE's Gulf of Mexico Region. [redacted] explained that the Houma District dealt with deepwater and subsea production far more often than the New Orleans District. She believed that she was chosen to assist [redacted] in the Atlantis investigation because of her experience in Houma.

[redacted] stated that she never heard any suggestion that she or [redacted] might have had a conflict of interest when conducting the Atlantis investigation because of their prior roles in permitting the platform. [redacted] said that she participated in the interviews of [redacted] and his attorneys and they never alleged that she or [redacted] might be biased.

[redacted] also said that she never had any impression that [redacted] was biased in his review of Atlantis. She explained that he was her mentor for several years in the Houma District and together they have always approached their reviews of a facility "with an open mind." She told us she would never consider trying to cover up a past oversight if she had made one when originally permitting the facility, and she said she was certain that [redacted] believed similarly when starting the Atlantis investigation.

We interviewed Work-Over Completions Engineer [redacted] of BOEMRE's Lake Jackson District (**Attachment 32**). [redacted] was working as a production engineer in the Lake Charles District when [redacted] asked him to assist during the second phase of the Atlantis investigation.

According to [redacted] he never had any impression that [redacted] was biased in his review of Atlantis. He said that he had a high opinion of [redacted], who acted as a mentor to [redacted] in Lake Charles. [redacted] further stated that he believed [redacted] professionalism and integrity far outweighed any potential claim of a conflict of interest, and the idea of a conflict never occurred to him while he was assisting with the investigation.

[redacted] is a production engineer for BOEMRE's Lake Jackson District (**Attachment 33**). At the time of the Atlantis investigation, [redacted] also worked in the Lake Charles District. He said that he started assisting with the investigation at [redacted] request during the first phase. He was taken off the Atlantis investigation after the Deepwater Horizon explosion, but resumed his work on the project during the second phase.

According to [redacted] the first day that he started working in New Orleans, he noticed a "funny dynamic" between [redacted] and the structural engineers. He explained that while [redacted] was explaining to him how they planned to approach the Atlantis investigation with an open mind and that the investigation was focused on Atlantis and had nothing to do with Deepwater Horizon, [redacted] walked up to [redacted] and "started yelling at him." [redacted] said that [redacted] told [redacted] that she

interpreted what he said to mean that he was determined to find Atlantis safe. According to [redacted] never said anything of the sort, and [redacted] had no idea how she had come to this conclusion. In fact, according to [redacted] as he assisted with the Atlantis investigation, it became his impression that [redacted] was convinced that BP was guilty because the structural engineers were always trying to compare Atlantis to Deepwater Horizon. [redacted] said that he assisted with the Atlantis investigation for approximately 5 weeks and the tension between [redacted] and [redacted] continued the entire time.

[redacted] said that he never observed anything that would make him question [redacted] professionalism while [redacted] led the Atlantis investigation. He said that [redacted] was one of the most competent people in BOEMRE and he had the most knowledge and experience about project engineering. [redacted] stated that no one else could have led the Atlantis investigation as well as [redacted] had and it never occurred to him that [redacted] might have had a conflict of interest.

Finally, [redacted] told us that he had communicated regularly with [redacted] during the Atlantis investigation and he believed that [redacted] did his best to be objective (see Attachment 19). [redacted] admitted that [redacted] "probably" should not have been put in charge of the Atlantis investigation because of the appearance of a conflict of interest, but [redacted] did not observe any bias on [redacted] part during the investigation. He further pointed out that [redacted] was not involved in the interviews that [redacted] led at the end of 2010.

Allegation That BOEMRE's Atlantis Report Failed To Interpret or Comment on 30 C.F.R. § 250.901(d) (2002) and That [redacted] Failed To Ensure Its Compliance

According to the 2002 version of 30 C.F.R. § 250.901(d): "[T]he lessee shall also sign, date, and submit the following certification: Lessee certifies that the design of the structure/modification has been certified by a registered professional structural or a civil engineer specializing in structural design, and the structure/modification will be fabricated, installed, and maintained as described in the application and any approved modification thereto." This was the applicable regulation at the time BP filed its permit applications for the construction and deployment of Atlantis.

According to [redacted], he did not remember any discussion concerning 30 C.F.R. § 250.901(d) (2002) during the Atlantis investigation (see Attachment 19). [redacted] said that he did not believe that [redacted] raised the subject of this particular regulation in his original complaint and therefore BOEMRE did not consider its applicability. He acknowledged that BOEMRE's failure to consider this regulation could represent a "gap" in its Atlantis findings; however, since it was not included in [redacted] original complaint, he did not believe it was necessarily within the purview of the investigation. [redacted] explained that he was not aware of any aspect of [redacted] complaint that concerned certification by a professional engineer until after several related depositions occurred in September 2011, approximately 6 months after the release of BOEMRE's final Atlantis report.

We asked [redacted] about [redacted] attorney's allegation that he failed to adequately review the list of certified engineers that BP provided to BOEMRE during its investigation, which [redacted] attorney claimed was required under the 2002 version of 30 C.F.R. § 250.901(d) (see Attachment 3). [redacted] replied that according to the regulations at the time, BOEMRE was only required to ask a company for a letter of certification stating that an engineer had certified the structure's design and that the structure would be fabricated, installed, and maintained as described in the application and any approved modification. He said that he was trained to accept the letter, which is what BOEMRE did for all

companies under the regulation, and not to look beyond it because the "playing field had to be level" for all companies.

According to [redacted], the Department did not ask her for an opinion on 30 C.F.R. § 250.901(d) (2002) when she helped BOEMRE with its Atlantis investigation (see Attachment 15). She believed that [redacted] attorneys did not raise the issue of whether certain structural plans or drawings had been certified by a registered professional structural engineer until after the BOEMRE Atlantis report was issued in March 2011. She also stated that she first recalled hearing about this issue around the time several BOEMRE engineers, including [redacted], were being deposed in relation to [redacted] case in September 2011.

We told [redacted] that [redacted] stated in his deposition testimony that he was not trained to look beyond the letter of certification to determine if each structural engineering drawing was certified by a registered professional structural engineer. [redacted] replied that she did not analyze whether the regulations required each structural drawing to have a certification stamp. She recalled that [redacted] attorneys had argued that the manner of certification depended on Texas State law; most of Atlantis had been built in Texas, and Texas required a certification stamp by an engineer on each drawing.

We reviewed all of [redacted] lawsuit filings, and 30 C.F.R. § 250.901(d) (2002) was not mentioned in any of them until after BOEMRE released its final Atlantis report in March 2011.

SUBJECT(S)

[redacted], Houma District Manager, BOEMRE (now BSEE).

DISPOSITION

We are providing this report to the Secretary of the Interior for any action deemed appropriate.

ATTACHMENTS

1. Congressional letter to Birnbaum, dated February 24, 2010.
2. [redacted] complaint letter to OIG, dated December 11, 2012
3. IAR – Interview of [redacted], March 13, 2013.
4. IAR – Email review.
5. IAR – Interview of [redacted] January 17, 2013.
6. IAR – Interview of [redacted], February 28, 2013.
7. IAR – Interview of [redacted], March 13, 2013.
8. [redacted] Atlantis report, dated August 16, 2010.
9. IAR – Interview of [redacted] March 12, 2013.
10. Congressional letter to Ken Salazar and Michael Bromwich, dated July 21, 2010.
11. [redacted] letter to BP requesting documents, dated July 21, 2010.
12. IAR – Interview of [redacted], March 13, 2013.
13. IAR – Interview of [redacted], March 13, 2013.
14. IAR – Interview of [redacted], March 14, 2013.
15. IAR – Interview of [redacted], February 12, 2013.
16. [redacted] legal analysis, undated.
17. The structural engineers' September 28, 2010 Atlantis investigation report.

18. IAR – Interview of [redacted], May 2, 2013.
19. IAR – Interview of [redacted], February 12, 2013.
20. IAR – Interview of Michael Bromwich, May 8, 2013.
21. IAR – Interview of [redacted] March 13, 2013.
22. IAR – Interview of [redacted] May 29, 2013.
23. IAR – Interview of [redacted], May 24, 2013.
24. Six-page summary of the structural engineers' findings and conclusions, February 7, 2011.
25. The structural engineers' final Atlantis report, February 7, 2011.
26. IAR – Interview of [redacted] March 12, 2013.
27. The structural engineers' document titled "The Bureau of Ocean Energy Management, Regulation and Enforcement, Atlantis Investigation – Path Forward," February 17, 2011.
28. BOEMRE's final Atlantis investigation report, March 4, 2011.
29. BOEMRE press release about the Atlantis investigation report, March 4, 2011.
30. IAR – Comparison of the structural engineers' and BOEMRE's final Atlantis reports, February 1, 2013.
31. IAR – Interview of [redacted] April 30, 2013.
32. IAR – Interview of [redacted] April 30, 2013.
33. IAR – Interview of [redacted] April 30, 2013.