STATEMENT OF SCOTT A. ANGELLE DIRECTOR, BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT UNITED STATES DEPARTMENT OF THE INTERIOR BEFORE THE COMMITTEE ON NATURAL RESOURCES SUBCOMMITEE ON ENERGY AND MINERAL RESOURCES U.S. HOUSE OF REPRESENTATIVES

Hearing on "Examining the Policies and Priorities of the Bureau of Ocean Energy Management, the Bureau of Safety and Environmental Enforcement, the U.S. Geological Survey, and the Office of Surface Mining Reclamation and Enforcement"

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Chairman Lowenthal, Ranking Member Gosar, and Members of the Subcommittee, I am pleased to join you today to discuss the policies and priorities of the Bureau of Safety and Environmental Enforcement (BSEE), a bureau of the Department of the Interior.

The Outer Continental Shelf (OCS) is a vital component of our nation's energy economy. In FY 2019, oil production from the federal OCS exceeded 683 million barrels and natural gas production topped 1.03 trillion standard cubic feet. This accounted for approximately 16 percent of domestic oil production, and 3 percent of domestic natural gas production, resulting in over \$5 billion dollars in revenue for the Treasury, states, and conservation programs, and supporting hundreds of thousands of jobs.

Total crude oil production from the U.S. OCS has seen steady increases. The vast majority of offshore production, 99 percent, occurred in the Gulf of Mexico. Deepwater wells (those in \geq 1,000 feet water depth) accounted for 89 percent of all OCS production, a substantial increase from the year 2000 when deepwater accounted for 50 percent of all OCS production. It should be noted that 10 years ago, it required 43 deepwater facilities to produce 50 percent of the total Gulf of Mexico production; however, in 2019 it only required 10 facilities to produce 51 percent of the total production. Deepwater facilities are increasing in size and complexity; thus the safety and environmental risks that BSEE is responsible for mitigating are more focused on these facilities' scope and complexities.

While offshore oil production enjoyed a record high in FY 2019, with 99% occurring in the Gulf of Mexico as noted above, the Gulf of Mexico operates as two distinct hydrocarbon sections – one active and one in sharp decline. Development in the shallow water areas of the Gulf of Mexico, first drilled in 1947, is mature and experiencing drastic reductions in the number of wells drilled and the oil and gas resources produced. From 2008 to 2018), the number of wells drilled in the shallow water area decreased 89 percent. Production in shallow water has shifted almost entirely to natural gas, but both oil and natural gas production is down from historic highs. Since 1998, shallow water oil production has decreased 77 percent while natural gas

production has decreased 92 percent. As a result, this area of the Gulf of Mexico continues to experience significant infrastructure removal.

In March 2017, prior to my appointment as Director of BSEE, the U.S. Government Accountability Office (GAO) published its report *Stronger Leadership Commitment Needed at Interior to Improve Offshore Oversight and Internal Management* (GAO-17-293). GAO found "that BSEE leadership had started several key strategic initiatives to improve its offshore safety and environmental oversight, but its limited efforts to obtain and incorporate input from within the bureau have hindered its progress." Similarly, GAO also found that "since 2013, BSEE leadership has started several key strategic initiatives to improve its internal management, but none have been successfully implemented, in part, because of limited leadership commitment."

In light of these substantial findings, we have worked to establish a strategic and sustainable approach on multiple fronts to meet Congress's stated purpose that "the outer Continental Shelf is a vital national resource reserve held by the Federal Government for the public, which should be made available for expeditious and orderly development, subject to environmental safeguards, in a manner which is consistent with the maintenance of competition and other national needs."¹ We are entrusted to ensure safe and environmentally sustainable operations, and robust production. This vision of "We Can Do It ALL," is aligned with BSEE's three mission components – Safety, Environmental Stewardship, and Conservation. In addition, we have driven improvements, through innovation and collaboration, beyond what could be achieved through regulatory enforcement alone.

Background

BSEE has jurisdiction over elements of offshore energy development on the OCS, with operations permitted in three regions – the Gulf of Mexico, Pacific, and the Alaska OCS. The Bureau was established to protect life, property, and the environment by ensuring the safe and responsible exploration, development, and production of offshore energy resources. Currently offshore, there are approximately 40 active drilling rigs, and over 1800 production facilities steadily pumping hundreds of millions of barrels of oil and trillions of cubic feet of natural gas through thousands of miles of pipelines (much of which is under the jurisdiction of the Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA)), predominantly in the Gulf of Mexico. BSEE has a close cooperative relationship with the Bureau of Ocean Energy Management (BOEM), the U.S. Coast Guard, PHMSA, and other Federal agencies that share jurisdiction on the OCS.

BSEE actively works to promote the efficient and responsible production of offshore energy resources through a comprehensive program of permitting, regulations, compliance monitoring and enforcement, technical assessments, inspections, preparedness activities, and incident investigations. As a steward of our nation's natural resources, resource conservation is also central to BSEE's mission. The Bureau protects federal royalty interests by ensuring that offshore oil and gas resources are conserved through efficient production methods, volumes are metered and measured accurately, and leaseholders maximize recovery from OCS reservoirs and minimize stranding of the Nation's valuable energy resources. In support of these efforts:

¹ Outer Continental Shelf Lands Act, 43 USC 1332(3)

- BSEE conducted 5,335 meter inspections in FY 2019 to ensure the performance of meters used for royalty determinations. These inspections included, among other things, meter proving, calibrations, verification, sampling, reporting, and protection against loss or tampering.
- BSEE ensures that reservoirs are not prematurely abandoned if they are still producing at economic rates. Over the past 18 years, this program alone has brought to market an additional 10 million barrels of oil and 55 billion cubic feet of natural gas, which may have otherwise been permanently stranded. This resulted in approximately \$141 million of additional federal royalties during that period that would otherwise never have been collected.
- BSEE is a world leader with regard to minimizing the flaring and venting of natural gas from operations offshore.

To carry out its diverse array of policies and programs, the Bureau employs highly skilled engineers, geoscientists, geologists, environmental specialists, inspectors, and preparedness analysts. Our people have the breadth of expertise and experience needed to oversee offshore energy projects from the planning of exploratory drilling operations through the decommissioning of offshore production platforms.

This Administration's accomplishments have improved our oversight of oil and natural gas development on the OCS and reflects a careful consideration of worker safety, environmental protection, resource development, and production goals. In overseeing an industry with such complex and expansive operations, BSEE has placed an emphasis on using data analysis to identify possible opportunities to drive safety performance and environmental stewardship improvements.

Recognizing NASA's expertise in managing the risk associated with space exploration, we are strengthening our dialogue with NASA in hopes of adopting some of their sophisticated data analysis capabilities. BSEE recently established the Safety Performance Enhanced by Analytical Review (SPEAR) initiative, in which the goal is to surface new data analytic tools and strategic Bureau-wide processes to enable BSEE subject matter experts throughout the organization to thoroughly analyze data and other information to assist in identifying safety and environmental hazards related to energy operations on the OCS. This initiative seeks to evolve BSEE from a data warehouser to a world class data analyzer.

The SPEAR initiative seeks to establish "next generation level" use of advanced data analytic tools to support these processes and establish a world class approach to analyzing and communicating data and information throughout the Bureau and to external stakeholders, as the need may arise. Development of such tools requires creating a complex learning system. As a leader in the field of advanced data analytics, NASA's Advanced Supercomputing Division can provide BSEE with the needed expertise that is not readily available in the commercial marketplace. The SPEAR team is working to execute a new interagency agreement with NASA for the assessment of the Bureau's data and information.

BSEE is pursuing the acquisition and use of machine learning services and tools and is seeking to enhance its expertise in the use of machine learning and artificial intelligence techniques. The work product and outcomes of this agreement will help BSEE expand the safety analytical capabilities and could comprehensively advance safety within the oil and gas industry. In return, NASA will benefit from the experience gained by performing these activities which could help further develop their use of machine learning for finding accident precursors in space exploration.

Following the Deepwater Horizon incident, 14 organizations issued over 424 recommendations to many different groups, including industry and government agencies. These organizations included oversight bodies such as the Government Accountability Office and DOI's Inspector General, as well as advisory groups such as the National Academy of Engineering and the Transportation Research Board. Over 350 of the recommendations were received by BSEE. At the end of the previous Administration, over 70 percent of the recommendations to BSEE were addressed. As of February 26, 2020, 94 percent have been addressed.

Offshore Safety Innovation and Improvement

Over the last several years, America has seen increasing levels of oil production offshore, with production levels reaching record highs in FY 2019. In that same year, BSEE inspected every platform, drilling rig, and non-rig unit on the OCS and improved the efficiency of inspections. BSEE continues to satisfy its statutory inspection obligation, with improved efficiency, while playing a critical role in ensuring that the record-level of offshore production in 2019 was carried out safely and in an environmentally responsible manner.

Through the eRecords initiative, BSEE increased the physical inspection time offshore during CY 2018. This initiative has led to an approximately ten percent increase in physical inspection time offshore and has contributed to increasing the number of inspections in 2018 by 21.5 percent over 2016. In 2016, we conducted 8,508 inspections, for an average of 1.83 inspections per offshore trip. In 2018, we conducted 10,282 inspections, for an average of 2.44 inspections per offshore trip. Reduction in flight time also decreases our inspector transportation costs and, more importantly, reduces the risk to our inspectors and other personnel who are required to travel by helicopter offshore. The Bureau plans to continue pursuing systematic improvements for its inspection program in FY 2021.

Beginning in 2017, the Bureau initiated an effort to not only determine how it might carry out its responsibilities in a more efficient manner, but also to determine how the agency could be more effective in achieving its core mission. Toward this effort, BSEE amended its strategic plan to adopt data-driven strategic decision-making and uses data analytics to identify possible opportunities to drive safety performance and environmental stewardship improvements. Our Vital Statistics initiative, launched in 2017, is a cross-bureau effort that uses accurate, reproducible information relevant to BSEE's mission and operations to advance evidence-based decision making. Data visualization and trend analysis are key components, bringing together cross-cutting performance measures that are intended to enhance engagement and awareness, support analysis of current processes and programmatic functions, and inform decisions to better

achieve BSEE's mission. The cross-cutting performance measures are categorized into seven key focus areas: Lease Life Cycle Activities; Permitting; Environmental Stewardship; Inspections; Incidents and Investigations; Technical Resources; and, Human Resources.

Additionally, over the last 18 months, we have instituted a required continuing series of information exchanges that bring together BSEE staff from different divisions throughout the Bureau for dialogues in search of improvements toward excellence. The information exchanges focus on a specific mission-critical function and include: All Things Safety; All Things Permitting; All Things Conservation; All Things Training; All Things Decommissioning; All Things Environmental; All Things Renewable Energy; All Things BAST (best available and safest technology); All Things Oil Spill Preparedness; All Things IT; and, All Things Human Resources.

BSEE has also focused on change management initiatives to further equip the organization with strong, smart programs and processes moving forward. As of March 4, 2020, we have completed 112 Safety Initiatives and 60 Environmental Initiatives. Among these initiatives are continued efforts to implement risk-based inspections as a part of our overall inspection strategy; use of offshore near-miss data to identify incident precursors; development of a direct-to-workforce safety alert system; and proactively addressing observed safety risks.

Risk-Based Inspections

Launched in March 2018, BSEE's risk-based inspection program focuses more oversight and resources on higher-risk offshore facilities. The Bureau uses findings from the analysis of offshore safety data to focus inspections on operations and facilities whose characteristics and records of safety indicate a greater risk of a safety or environmental incident. This program supplements our statutory responsibility to inspect each facility – every drilling rig, non-rig unit, and production platform – on the OCS that is subject to any environmental or safety regulation promulgated pursuant to the Outer Continental Shelf Lands Act (OCSLA) at least once per year.² These more intense, targeted inspections focus on the highest-risk operations and equipment such as crane safety and operations involving fired vessels.

Offshore Near-Miss Reporting Program

Our mission to promote offshore safety and environmental protection is strengthened by collaboration with industry, and the Bureau has improved industry awareness of its internetbased near-miss reporting system – called *SafeOCS* – through which offshore operators can report data that can be used to identify and address the causes of offshore incidents. Data sets generated by the system can be used to identify trends among the array of risks to safety and the environment that offshore operations can present and to draw insights from that data that can help minimize those risks. The collection and analysis of near-miss data are helping identify problems before they manifest into serious incidents. Under this Administration, participation of operators has dramatically increased from only 3 percent of OCS production represented in 2016 to current operator participation representing more than 85 percent of OCS production.

² 43 U.S.C. § 1348(c).

Making Inspection Operations More Efficient

BSEE has also undertaken a comprehensive review of our inspection program operations in an effort to improve efficiency and more effectively deploy our limited resources. Implementation of BSEE's revised inspection strategy approach began in FY 2019, with the roll out of a tiered approach to ensure the Bureau meets its requirements, fulfills regional and national priorities, and uses its workforce effectively. Implementation of the refined inspection strategy reduces overall costs and allows BSEE's inspectors to conduct more efficient, thorough, and critical physical inspection of components ensuring the safety of personnel and the protection of the environment.

BSEE!Safe Communication Platform

In May 2019, BSEE launched a first-of-its-kind platform for direct communication between a safety regulator and front-line workers. The text messaging alert service delivers critical safety information directly to offshore workers who voluntarily subscribe to the service. The BSEE!Safe program alerts subscribed offshore workers to newly published BSEE Safety Alerts, which is a key tool used to inform the offshore energy industry of circumstances surrounding an incident or near-miss. The alerts also contain recommendations to help prevent recurrence of similar incidents. As of February 24, 2020, the service has more than 5,300 subscribers. BSEE has used the service to send 31 safety alerts and bulletins to offshore workers, via more than 63,479 text messages, sharing lessons learned and recommendations from incidents and near misses. BSEE is currently the only safety regulator in the world that delivers critical safety information directly to several thousand workers through text messaging. When comparing data on injuries and illness rates that BSEE collects from the OCS oil and gas industry to published Bureau of Labor Statistics data, during the time period 2014-2018 the OCS oil and gas industry was second in safety performance among high hazard industries, with the nuclear electric power generation industry being first.

Secretary's Orders 3349 and 3350 and Major Regulatory Actions

In addition to the implementation of advanced safety initiatives and efforts to increase operational efficiency, BSEE has undertaken efforts to make the reforms called for in Secretary's Order 3350, which implements Executive Order 13795 entitled "Implementing an America-First Offshore Energy Strategy."³ With respect to BSEE, the Secretary issued Order 3350 to increase regulatory certainty for OCS activities; enhance conservation stewardship; and promote job creation, energy security, and revenue generation for the American people.

As suggested by this order, BSEE has finalized and implemented the revised regulations collectively referred to as the Well Control Rule. Fifty-three provisions were changed and 15 were deleted. Of the original 342 provisions, over 80 percent remain intact. BSEE compared each of the proposed revisions promulgated through the Well Control Rule to the 424 recommendations arising from 26 separate reports from 14 different organizations developed in

³ E.O. 13795 of Apr. 28, 2017. 82 Fed. Reg. 120815 et seq. (May 3, 2017).

https://www.federalregister.gov/documents/2017/05/03/2017-09087/implementing-an-america-first-offshore-energy-strategy.

the wake of - and in response to - the Deepwater Horizon incident. Career staff determined that none of the proposed changes ignored or contradicted any of those recommendations or would alter any provision of the original Well Control Rule in a way that would make the result inconsistent with those recommendations.

After engaging in an extensive review of its regulatory footprint, BSEE identified the Production Safety Systems regulations as an area in which BSEE could relieve unnecessary regulatory burdens without decreasing safety. Eighty-one provisions were changed, and 3 provisions were deleted. Of the original 484 provisions, over 82 percent remain intact. The proposed revisions promulgated through the Production Safety System Rule were likewise compared to each of the 424 recommendations arising from 26 separate reports from 14 different organizations developed in the wake of – and in response to – the Deepwater Horizon incident. Career staff determined that none of the proposed changes ignored or contradicted any of those recommendations or would alter any provision of the original Production Safety Systems Rule in a way that would make the result inconsistent with those recommendations.

Preparing for a New Role in Offshore Renewable Energy

The high level of interest in offshore wind development, evidenced by the record-breaking dollar amount of bids submitted during the BOEM offshore wind lease sales over the past year, has prompted BSEE to consider its potential role in overseeing offshore wind farm safety and environmental compliance. BSEE is preparing to take on new responsibilities with respect to offshore renewable energy facilities and has taken several significant steps in that regard. The Bureau has increased staff participation in offshore wind conferences, educational seminars and workshops, and hosts engineers and safety professionals from the offshore wind industry, to both develop staff competencies and bring relevant experience from regulating hydrocarbon production on the OCS to our offshore renewable energy program development. BSEE uses these opportunities to emphasize our focus on driving safety performance.

In October 2019, the Department released a statement of policy that clarifies that the Department will act as the principal Federal agency for the regulation and enforcement of safety and health requirements for OCS renewable energy facilities. While the Department will be the primary regulator of worker health and safety on offshore renewable energy facilities, the Department will continue to collaborate with the Occupational Safety and Health Administration (OSHA) and the U.S. Coast Guard to share relevant safety and training information and promote safety on the OCS.

BSEE also supports the offshore renewable energy program by providing engineering expertise in the review of Renewable Energy Submissions to BOEM. Our engineers participated in the technical review of 123 Renewable Energy Submissions from 2016 to 2019. The pace of submissions has increased rapidly in this short period. The number of submissions reviewed by BSEE increased by 320%, from 15 submissions reviewed in CY2016 to 48 in CY2019. Our participation in the review of these projects reinforces the Department's commitment to a high standard of safety for offshore renewable energy.

Employee Engagement

Clearly none of these accomplishments could have occurred without the commitment and hard work of our dedicated BSEE employees. This administration increased BSEE participation in the Federal Employee Viewpoint Survey to its highest-ever levels. In 2019, 81.5 percent of BSEE employees responded to the survey, compared to 49.1 percent in 2016. The number of challenges identified in the survey fell from 8 in 2016, to zero in 2018 and 2019. The number of strengths rose from 35 in 2016 to 44 in 2019, the highest since BSEE's inception. These numbers are a direct result of a concerted effort to engage employees across all levels to share feedback, and of developing action plans to address areas of concern, while celebrating successes through formal and informal recognition mechanisms.

We have communicated our expectations regarding the importance and value of engagement and communication to BSEE employees across the board. BSEE employees are to be held accountable for their actions, competent in their abilities to do their jobs, and engaged with their coworkers. We are confident that our efforts to engage all of our employees, to provide them with opportunities to share their ideas for innovations and efficiencies, and to value their daily contributions to the Bureau achievements like those I have noted here, have encouraged an environment where management is trusted. We are confident that the actions management has taken, the training that employees and supervisors have been given, and the open access to information and BSEE leadership, have significantly improved employee morale. BSEE's results from the Federal Employee Viewpoint Survey (FEVS) confirm this outlook:

- In 2019, 44 BSEE strengths were identified. This is a record high for BSEE and an increase from 35 in 2016 up 26%. The Bureau achieved a Top 3 ranking in 2019, among DOI bureaus, within this category.
- Challenges were eliminated in 2018 and maintained at zero for 2019. This result is down from 8 challenges identified in 2016, and places BSEE among the highest performing bureaus in the Nation within this category.
- When comparing the positive gap between the number of strengths and the number of challenges, between 2016 and 2019, BSEE ranked second among bureaus in DOI.
- With a 74% increase in the FEVS response rate, BSEE achieved the highest rate increase in the DOI, from 2016 to 2019.
- With a 13% increase in the Employee Engagement Index in 2019, BSEE achieved the highest rate increase in DOI, from 2016 to 2019. This is a new record high for BSEE.
- For the first time, in 2019, BSEE ranked in the Top 3 within the Department simultaneously for Response Rate, Overall Employee Engagement Index Score, Challenges and Strengths.

The improvements noted above continue to manifest themselves in the reduction of employment related complaints, from 17 in FY 2016 to 7 in FY 2019. That number has continuously declined

during my leadership. I must note for the record that BSEE has never had any Findings of Discrimination from any EEO complaint.

Challenges

An important aspect of BSEE's mission and responsibilities is to ensure that wells and facilities associated with exploration, development, and production activities undertaken pursuant to the OCSLA are properly decommissioned to ensure the long-term protection of the resource and the surrounding environment. As production and operations mature, the decommissioning of wells and facilities that are no longer useful for operations will be a growing portion of BSEE's oversight activities. In FY 2019, BSEE revised its guidance to industry on the timeliness of decommissioning activities to reduce the environmental and financial risk of idle infrastructure being damaged by severe weather, such as hurricanes. Implementation of the revised guidance includes BSEE communicating with operators about aging of their idle infrastructure and ordering that further decommissioning actions be taken if necessary. A focus in FY 2020, and continuing into FY 2021, is strengthening the organization's capabilities to meet end of life cycle demands.

In FY 2019, BSEE and BOEM signed a new agreement establishing an intra-Bureau National Bankruptcy Coordination Team to enhance communication and administration of bankruptcy-related matters.

Recognizing that this Administration inherited nearly 70 years of exploration and production activity on the OCS, we have increased our efforts surrounding responses to asset retirement obligations. This includes a variety of change management initiatives regarding decommissioning, as well as participation in the draft proposed Joint BOEM-BSEE revised Financial Assurance Rule which is scheduled for publication this calendar year. Of importance and worth noting:

- Since 1947, there have been nearly 50,000 wells drilled in the shallow water province in the Gulf of Mexico resulting in over 3,000 platforms installed.
- 50 percent of all of the facilities installed in more than 70 years of OCS development in the Gulf of Mexico have been removed in the last 20 years.

Conclusion

Guided by this Administration's overarching strategy with respect to economic security, energy security, and national security, BSEE has instituted a new vision for the Bureau. That vision acknowledges that we can have safe and environmentally sustainable operations, and robust energy production. As a result, BSEE experienced many successes and seismic shifts in the Bureau during 2019. As the Administration pursues energy security consistent with the President's Executive Order 13795 '*Implementing an America First Offshore Energy Strategy*,' BSEE continues to build on efforts to advance its 'We Can Do It All' approach by implementing key change management initiatives.

In addition to a strong regulatory structure, BSEE is driving safety performance and environmental stewardship improvements beyond regulations through innovation and collaboration, while at the same time supporting robust energy production on the U.S. Outer Continental Shelf.

BSEE's efforts under this Administration are demonstrable and have resulted in:

- More safety initiatives;
- More environmental initiatives;
- More well permits issued;
- More wells spudded;
- More energy production;
- More royalty revenue from the OCS;
- More technical reviews of Renewable Energy industry submissions;
- Improved efficiency of budget expenditures; and
- Worked to ensure the organization is staffed consistent with the needs of our mission.

I thank the Chairman and Ranking Member for inviting me here today and would be happy to answer the Subcommittee's questions.