

---

# **Oil Spill Prevention and Response**

## **Guidance Document**

**for**

## **Oil and Gas Project Applications**



**California Coastal Commission**

**July 2013**



**Cover Photo Credits:**

Photo 1: On-water oil recovery, 2010 BP Deepwater Horizon Spill, Doug Helton - NOAA/NOS/NOR.

Photo 2: Oiled bird, 1997 Platform Irene Spill, California Department of Fish and Wildlife.

Photo 3: Oiled seal, The Marine Mammal Center.

Photo 4: Huntington Beach oil cleanup, 1990 American Trader Spill, California Department of Fish and Wildlife.

# **Oil Spill Prevention and Response Guidance**

**for**

## **Oil & Gas Exploration, Development and Transportation Project Applications**

**California Coastal Commission**

Energy, Ocean Resources, and Federal Consistency Division  
Oil Spill Program

**July 2013**



# TABLE OF CONTENTS

<b>Introduction</b> .....	<b>1</b>
<b>Oil Spill Risks and Lessons Learned in California</b> .....	<b>1</b>
<b>Oil Spill Prevention and Response Programs in California</b> .....	<b>3</b>
California Office of Spill Prevention and Response .....	4
California State Lands Commission – Mineral Resources Management Division .....	5
California State Lands Commission – Marine Facilities Division.....	5
U.S. Bureau of Ocean Energy Management, and Bureau of Safety and Environmental Enforcement.....	6
<b>Coastal Commission’s Role and Policies for Oil Spill Prevention and Response</b> .....	<b>7</b>
Coastal Commission Jurisdiction .....	7
Coastal Act Policies.....	8
<b>Application Information Required for Coastal Development Permit and Federal Consistency Review</b> .....	<b>10</b>
Oil Spill Prevention and Safety Measures.....	11
Oil Spill Risk Assessment and Worst-Case Spill Volume .....	11
Worst-Case Spill Volume.....	12
Oil Spill Trajectory.....	12
Resources at Risk Analysis .....	13
Response Capability Analysis .....	13
Response Time Frames and Response Capability.....	14
Alternative Response Technologies – Dispersants, In-situ Burning, and Bioremediation.....	16
Oil Spill Notification .....	16
Oil Spill Preparedness Training and Drills.....	17
Evidence of Financial Responsibility for Worst-Case Spill Clean-up.....	17
<b>Additional Information and Questions</b> .....	<b>17</b>



## **Introduction**

The purpose of this guidance document is to provide applicants an explanation of the oil spill prevention and response information that is required for oil and gas exploration, development, and transportation project (“oil and gas project”) applications submitted to the California Coastal Commission (“Coastal Commission”) for review and approval. Included is a discussion of the Coastal Commission’s authority<sup>1</sup> and process for requiring implementation of the best achievable oil spill prevention and response measures in all new or modified oil and gas projects in or affecting California’s coastal zone.<sup>2</sup>

Oil and gas project proposals that are subject to the Coastal Commission’s coastal development permit and federal consistency review authority include (1) offshore oil and gas exploration and production platforms, and associated pipelines, in state waters and federal Outer Continental Shelf (“OCS”) waters; (2) onshore projects in the coastal zone, including oil and gas drilling projects, processing facilities, refineries, pipelines, and marine oil terminals; and (3) all facility modifications and operation changes for oil and gas facilities operating under a Coastal Commission coastal development permit or federal consistency certification approval.

The discussion that follows includes (1) oil spill risks and lessons learned in California; (2) oil spill prevention and response programs in California; (3) the role of the Coastal Commission, and the California Coastal Act’s oil spill prevention and response policies; and (4) information required for a Coastal Commission coastal development permit or federal consistency review.

## **Oil Spill Risks and Lessons Learned in California**

California contains several of the most important bioregions in the nation and the world, and has the largest area of coastal and marine sanctuaries and preserves in the nation. The State also has rich reserves of onshore and offshore oil and gas. California ranks as the 3<sup>rd</sup> highest producing state in the nation in crude oil production (behind Texas and North Dakota), and 13th in natural gas production.<sup>3</sup> California must balance the economic benefits from oil and gas development with the economic benefits derived from the protection of its scenic and sensitive coastal and marine resources.

---

<sup>1</sup> The Coastal Commission’s primary regulatory authority is derived from the California Coastal Act of 1976 (Public Resources Code (PRC) Division 20, §§30000 *et seq.*)

<sup>2</sup> “Coastal zone” means that land and water area of the State of California, extending seaward to the state’s outer limit of jurisdiction, including all offshore islands, and extending inland generally 1,000 yards from the mean high tide line of the sea. In significant coastal estuarine, habitat, and recreational areas it extends inland to the first major ridgeline paralleling the sea or five miles from the mean high tide line of the sea, whichever is less, and in developed urban areas the zone generally extends inland less than 1,000 yards. The coastal zone does not include the area of jurisdiction of the San Francisco Bay Conservation and Development Commission, nor any area contiguous thereto, including any river, stream, tributary, creek, or flood control or drainage channel flowing into such area (From Coastal Act §30103 (PRC §30103).)

<sup>3</sup> U.S. Energy Information Administration: California, [State] Rankings Crude Oil Production, April 2013 and California, [State] Rankings Natural Gas Marketed Production, 2011.

In 2012, 27 platforms and 5 man-made islands for oil and gas production operated in the waters offshore California. Of these 27 platforms, 23 are located in the federal OCS waters offshore Santa Barbara, Ventura, and Los Angeles Counties; the other 4 are located within California territorial waters (i.e., within 3 miles) offshore Santa Barbara and Orange Counties.<sup>4</sup> Supporting infrastructures for these offshore oil and gas developments include onshore processing facilities, refineries, and miles of both underwater and onshore pipelines in California's coastal zone. In addition, California has 44 onshore and 3 offshore marine terminals for transferring oil from Alaskan and trans-Pacific oil tankers.<sup>5</sup>

Future oil and gas exploration and development projects in California's coastal zone include proposals for offshore and onshore wells using directional drilling and hydraulic fracturing, to develop existing or new oil and gas reservoirs.

There is substantial risk of oil spills from the onshore and offshore oil and gas exploration, production, processing, and transportation facilities. Examples of potential causes of oil spills from offshore and onshore marine facilities include uncontrolled oil well blowouts; pipeline leaks and ruptures; breaches of containment systems; containment tank overfills, leaks, or failures; and accidental discharges during oil transfer operations.

Oil spills from oil and gas projects have had significant adverse impacts for the economic, cultural, and environmental resources of California's coastal zone. A few examples of past significant spills in California that provided lessons influencing the state's policies on oil spill prevention, response, restoration, and remediation include (1) the 1969 Santa Barbara Platform A spill; (2) the 1990 American Trader vessel spill offshore Orange County; (3) the Guadalupe Oil Field underground hydrocarbon diluent<sup>6</sup> contamination (chronic, first discovered in 1988); (4) the 1996 Cape Mohican vessel spill in San Francisco Bay; (5) the 1997 Torch/Platform Irene pipeline spill offshore Santa Barbara County; (6) the Avila Beach pipeline oil spills (I and II, in 1992 and 1999); (7) the 2007 Cosco Busan and 2009 Dubai Star vessel spills in San Francisco

---

<sup>4</sup> Email from Mark LeClair, California State Lands Commission-Mineral Resources Management Division, dated August 9, 2012, stated: "Offshore within California's 3-mile territorial waters there are: 30 active leases (22 producing and 8 non-producing); 4 oil and gas production platforms (Eva, Emmy, Esther, Holly); and 5 artificial man-made oil production islands. In addition, there are several onshore wells producing from offshore reservoirs."

Email from Craig Ogawa, U.S. Bureau of Safety and Environmental Enforcement, dated August 9, 2012, stated: "OCS oil and gas activities offshore California are: 49 active OCS leases (43 producing and 6 non-producing); 23 oil and gas production platforms (19 in Santa Barbara Channel and Santa Maria Basin, 4 offshore Los Angeles and Orange Counties; 202 miles of offshore oil and gas pipelines; 1046 Development wells; and 328 Exploration wells."

<sup>5</sup> The 3 offshore marine oil terminals are located in southern California at El Segundo, San Nicholas Island (U.S. Navy facility) and San Clemente Island (U.S. Navy facility). The 47 onshore marine oil terminals consist of 28 in southern California and 19 in northern California. Source: State Lands Commission – Marine Facilities Division, July 22, 2013.

<sup>6</sup> Diluent definition: A hydrocarbon fluid that is used to dilute heavy oil and reduce its viscosity for easier transportation. Schlumberger Oil Glossary, <http://www.glossary.oilfield.slb.com/en/Terms.aspx?LookIn=term%20name&filter=diluent>.

Bay; and (8) the 2008 Platform A and 2012 Platform Houchin spills in the Santa Barbara channel.<sup>7</sup>

Oil spill prevention and response policy in California is a dynamic and evolving process influenced by lessons learned from major oil spills in California, around the nation, and in the world, as well as by advances in spill response technologies. Lessons learned from these spills have resulted in improvements in statewide requirements for oil spill prevention and response issues such as financial responsibility for clean-up and restoration, larger spill response funds, inspection procedures, operation manuals, oil spill contingency plans (“OSCPs”), equipment stockpiles, wildlife rehabilitation, and spill response training and surprise drills.<sup>8</sup>

### **Oil Spill Prevention and Response Programs in California**

In 1990, California passed the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (California Government Code §8670.1 *et seq.*, California Public Resources Code §8750 *et seq.*), in response to lessons learned from the 1989 Exxon Valdez oil spill offshore Alaska and the 1990 American Trader oil spill offshore Orange County, California. Pursuant to this act, California has developed a comprehensive oil spill prevention and response program that requires all marine facilities (e.g., oil and gas exploration, production, processing, and transportation facilities) and vessels to comply with an integrated system of statewide regulations, operation manuals, inspections, training and drill programs in order to provide the “best achievable protection” of the state’s coastal and marine resources through the use of “best achievable technologies” and practices.<sup>9</sup>

The Coastal Act’s oil spill prevention and response policy (§30232) includes broad requirements that ensure that proposed oil and gas projects in the coastal zone provide the highest level of

---

<sup>7</sup> Details on these and other spills can be found in *Major Oil Spills and Incidents in California, 2/29/2013*, California Office of Spill Prevention and Response, webpage: <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=29364>.

<sup>8</sup> Additional information about improvements made to California’s oil spill prevention and response regulations and programs, based on lessons learned from oil spills, may be obtained from the California Office of Spill Prevention and Response and the State Lands Commission.

Some examples of recent changes made to improve the safety of offshore oil and gas operations in response to lessons learned from the 2010 BP Deepwater Horizon spill in the Gulf of Mexico include: (1) OSPR amended its oil spill contingency plan regulations (14 CCR §817.02(d)(1)(C-D) to require that offshore oil platforms in State marine waters provide worst-case spill scenarios and response capability analysis for a 30-day uncontrolled well blow-out and oil spill in their OSCP; and (2) the California State Lands Commission Minerals Resource Management Division adopted interim guidelines and is in the process of amending its regulations to require independent third-party certification of the compatibility for blowout preventers for oil wells at offshore platforms within California’s 3 mile territorial waters. These regulatory changes complemented the updates made to the U.S. Bureau of Ocean Energy Management (“BOEM”) and Bureau of Safety, Environment, and Engineering (“BSEE”) regulations governing oil and gas platforms in the federal OCS waters offshore California.

<sup>9</sup> The Lempert-Keene-Seastrand Act (California Government Code §8670.3) states that “‘best achievable protection’ means the highest level of protection which can be achieved through both the use of the ‘best achievable technology’ and those manpower levels, training procedures, and operational methods which provide the greatest degree of protection achievable. The [OSPR] administrator’s determination of ‘best achievable protection’ shall be guided by the critical need to protect valuable coastal resources and marine waters, while also considering (A) the protection provided by the measures, (B) the technological achievability of the measures, and (C) the cost of the measures. . . .”

protection against oil spills, and that effective containment and clean-up facilities are required. The Coastal Commission staff works in partnership with seven other California state agencies and five federal agencies to ensure that California and federal regulations and programs for safe oil and gas exploration and development operations, and for oil spill prevention and response, are consistent with Coastal Act policies.<sup>10</sup>

The Coastal Commission staff regularly consults with and coordinates its permit and federal consistency review of oil and gas project proposals with the California Office of Spill Prevention and Response (“OSPR”); the California State Lands Commission – Mineral Resources Management Division (“CSLC-MRMD”); the California State Lands Commission – Marine Facilities Division (“CSLC-MFD”); the U.S. Bureau of Ocean Energy Management (“BOEM”); and the U.S. Bureau of Safety and Environmental Enforcement (“BSEE”).

A short summary of these agencies and their oversight responsibilities is provided below.

### **California Office of Spill Prevention and Response**

The OSPR is the state’s lead agency for oil spill prevention, preparedness, response, and natural resource damage assessment. The OSPR is responsible for the development and enforcement of California’s regulations and programs for (1) oil spill prevention and response planning requirements for marine facilities, as well as tank and non-tank vessels, including response capability requirements for a reasonable worst-case spill volume; (2) identification of sensitive shoreline areas and response strategies; (3) oil spill drill and training requirements for vessels and marine facilities; (4) rating, inspections, and certification of oil spill response organizations; (5) licensing and use of alternative oil spill clean-up agents and technologies, including dispersants, in-situ-burning, and bioremediation; (6) natural resource damage assessment requirements for the restoration of ecological and human use losses caused by an oil spill; and (7) Certificate of Financial Responsibility requirements for unlimited liability for clean-up and restoration from worst-case oil spills.

The OSPR’s regulations and programs provide the best achievable protection for California’s economic, environmental, and cultural resources, using best achievable technologies and

---

<sup>10</sup> The seven other California state agencies with regulatory authority governing oil and gas exploration, development, and transportation are: (1) California Department of Fish and Game – Office of Spill Prevention and Response (“OSPR”); (2) California State Lands Commission – Marine Facilities Division (“CSLC-MFD”); (3) California State Lands Commission – Mineral Resources Management Division (“CSLC-MRMD”); (4) California Division of Oil and Gas and Geothermal Resources (“DOGGR”); (5) California State Fire Marshal (“CSFM”); (6) California State Water Resources Control Board/Regional Water Quality Control Boards (“SWRCB/RWQCBs”); and (7) San Francisco Bay Conservation and Development Commission (“BCDC”).

The five federal agencies are: (1) United States Coastal Guard (“USCG”); (2) U.S. Environmental Protection Agency (“EPA”); (3) U.S. Bureau of Ocean Energy Management (“BOEM”); (4) U.S. Bureau of Safety and Environmental Enforcement (“BSEE”); and (5) U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration – Office of Pipeline Safety (“PHMSA/OPS”).

management practices, pursuant to their mandate under the Lempert-Keene-Seastrand Act (California Government Code §8670.3). The OSPR regulations that are applicable to the review of proposed oil and gas facilities in the coastal zone are (1) Oil Spill Contingency Plans for Marine Facilities, Small Marine Fueling Facilities, Tank Vessels, Vessels Carrying Oil as Secondary Cargo and Nontank Vessels (14 CCR §§815.01-818.03; §§825.01-827.02); (2) Drills & Exercises (14 CCR §820.01); (3) Oil Spill Response Organization Rating (14 CCR §§819.01-819.07); (4) Certificates of Financial Responsibility (14 CCR §§791-797); and (5) Licensing & Use of Oil Spill Cleanup Agents (14 CCR §§884-886.4).<sup>11</sup>

### **California State Lands Commission – Mineral Resources Management Division**

The CSLC-MRMD is the state’s lead agency responsible for overseeing and regulating oil and gas drilling, production, and processing facilities on state lands and tidelands under the CSLC’s jurisdiction. This agency emphasizes the prevention of accidents and environmental damage, and conducts frequent inspections of equipment and facilities to ensure safe and environmentally-friendly operations. Its regulations and programs for oil and gas operations cover engineering and design standards, drilling and production well requirements, operations manuals, inspection and maintenance standards, and personnel training requirements.

Frequent inspections and a rigorous Safety and Spill Prevention Audit program are used for the assessment of facilities. Operators are required to use the best achievable technologies and practices to prevent oil spills and to provide the best achievable protection of California’s resources. The CSLC-MRMD’s regulations for oil and gas exploration and development are in 2 CCR §§2101-2175.<sup>12</sup>

### **California State Lands Commission – Marine Facilities Division**

The CSLC-MFD is the state’s lead agency for overseeing and regulating onshore and offshore marine terminals within California, to ensure safe and pollution-free operations. Its regulations for marine terminals establish engineering and design standards for the construction and operation of terminals; govern the inspection and monitoring of oil transfer operations; require oil spill prevention training and certification of marine terminal personnel; and require the inspection and testing of oil pipelines at marine terminals.

---

<sup>11</sup> Additional information about the OSPR regulations and programs is available at the website <http://www.dfg.ca.gov/ospr/>.

<sup>12</sup> Additional information about the CSLC-MRMD’s regulations and programs is available at the website [http://www.slc.ca.gov/division\\_pages/mrm/mrm\\_home\\_page.html](http://www.slc.ca.gov/division_pages/mrm/mrm_home_page.html).

Best achievable protection standards are used in the inspections and regulations, to ensure that operators use the best achievable technology and best management practices to minimize the risk of oil spills. The CSLC-MFD regulations and engineering standards for marine terminals are in 2 CCR §§2300-2571, and 24 CCR §§3101F.1-3111F.11 (Marine Oil Terminals, or “MOTEMS”).<sup>13</sup>

### **U.S. Bureau of Ocean Energy Management, and Bureau of Safety and Environmental Enforcement**

On October 1, 2011, the U.S. Department of the Interior established two new, independent bureaus: the Bureau of Ocean Energy Management (“BOEM”) and the Bureau of Safety and Environmental Enforcement (“BSEE”). These agencies are collectively responsible for offshore energy management and safety, and other environmental oversight missions, which were under the jurisdiction of the former Minerals Management Service (“MMS”).<sup>14</sup>

The BOEM’s Pacific Region is responsible for managing, in an environmentally and economically responsible way, the development of conventional energy resources (i.e., oil and natural gas) and mineral resources (primarily sand replenishment) on the federal OCS waters offshore southern California, as well as renewable energy resources (i.e., wind, wave, and ocean current), on the federal OCS waters offshore California, Oregon, Washington, and Hawaii. The agency’s principal functions relative to these energy and mineral resources include offshore leasing; review and administration of oil and gas exploration and development plans; National Environmental Policy Act (“NEPA”) analyses; resource evaluation and economics; renewable energy development; marine mineral development; environmental analysis; and environmental studies. The BOEM’s regulations related to offshore oil and gas operations are in 30 CFR §§550, 551, 552 and 556.<sup>15</sup>

The BSEE’s Pacific Region agency office is responsible for the safety and environmental enforcement of oil and gas exploration, development, and production operations, and renewable energy facilities, in the federal OCS waters offshore southern California, as well as renewable energy facilities offshore California, Oregon, Washington and Hawaii.<sup>16</sup> Submarine pipelines that transport hydrocarbons between these facilities are also under the jurisdiction of BSEE.

---

<sup>13</sup> Additional information about the CSLC-MFD’s regulations and programs is available at the website [http://www.slc.ca.gov/division\\_pages/MFD/MFD\\_Home\\_Page.html](http://www.slc.ca.gov/division_pages/MFD/MFD_Home_Page.html).

<sup>14</sup> The MMS was renamed the Bureau of Ocean Energy Management Regulation and Enforcement while the reorganization occurred that resulted in the formation of BOEM and BSEE.

<sup>15</sup> Additional information about the BOEM Pacific Region is available at the website <http://www.boem.gov/About-BOEM/BOEM-Regions/Pacific-Region/Index.aspx>.

<sup>16</sup> As of 2013, the BSEE Pacific Region currently oversees operational and production activity from 23 oil and gas platforms located offshore southern California. These facilities produce about 24 million barrels of oil and 47 billion cubic feet of gas annually.

The BSEE functions encompass all field operations, including permitting and research, inspections, offshore regulatory programs, oil spill prevention and response, and training and environmental enforcement and compliance. BSEE requires that operators of the offshore facilities prepare and maintain oil spill response plans (“OSRPs”), conduct response drills, and exercise oil spill prevention measures. BSEE reviews and approves the OSRPs, and also conducts unannounced spill response drills and inspections of spill response equipment listed in the OSRPs to ensure the operators are prepared to respond to a spill. The BSEE’s regulations related to offshore oil and gas operations are in 30 CFR §§250 and 254.<sup>17</sup>

## **Coastal Commission’s Role and Policies for Oil Spill Prevention and Response**

### **Coastal Commission Jurisdiction**

The Coastal Commission has a long history of concern and actions for the protection of marine and coastal resources from the impacts of oil spills. The California Coastal Act and the federally certified California Coastal Management Program give the Coastal Commission a strong role in regulating the siting, design, and permitting of major oil and gas facilities, both onshore and offshore. The Coastal Commission’s primary regulatory authority is derived from the California Coastal Act of 1976.<sup>18</sup> “Development” activities in the coastal zone, which are defined broadly by Coastal Act §30106,<sup>19</sup> require a coastal development permit.

Under the federal Coastal Zone Management Act of 1972 (“CZMA”), the Coastal Commission also has regulatory authority to review, for consistency with the enforceable policies of California’s Coastal Management Program, any federal activity that is conducted by, permitted by, or licensed by a federal agency, “that affects any land or water use or natural resources of [California’s] coastal zone.”<sup>20</sup> The Coastal Commission is the only state agency in California that has authority under federal law to review proposed oil and gas projects in the federal OCS waters, to ensure consistency with the enforceable policies of California’s Coastal Management Program, which are contained in Chapter 3 of the Coastal Act.

Oil and gas project proposals that are subject to the Coastal Commission’s coastal development permit and federal consistency review authority include (1) offshore oil and gas exploration and

---

<sup>17</sup> Additional information about the BSEE Pacific Region is available at the website <http://www.bsee.gov/About-BSEE/BSEE-Regions/Pacific-Region.aspx>. The BSEE requires offshore oil and gas operators to use the best available and safest technology (BAST) whenever practical on all exploration, development, and production operations.

<sup>18</sup> See California Public Resources Code (PRC) Division 20, §30000 *et seq.*

<sup>19</sup> Coastal Act §30106 states: "Development" means, on land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land ... As used in this section, "structure" includes, but is not limited to, any building, road, pipe, flume, conduit, siphon, aqueduct, telephone line, and electrical power transmission and distribution line."

<sup>20</sup> See CZMA §§307(c)(1)(A) and (3)(A) (16 U.S.C. §1456 and implementing regulations at 15 CFR §530). See CZMA Federal Consistency Overview, by NOAA Office of Ocean and Coastal Resource Management, dated February 20, 2009.

production platforms, and associated pipelines, in state waters and federal OCS waters; and (2) onshore oil and gas projects in the coastal zone, including oil and gas drilling projects, oil processing facilities, refineries, oil pipelines, and marine oil terminals.

Although no new platforms have been installed offshore California since the installation of Platforms Harmony and Heritage in federal OCS waters in 1993, proposals for future projects that are pending, or likely to come before the Coastal Commission for review, include the continuing drilling of development wells at offshore platforms; the use of onshore or offshore directional drilling to reach more distant reservoirs; and the re-commissioning of idle onshore piers for use in drilling into offshore oil wells.

In addition, the Coastal Commission reviews all facility modifications and operation changes for oil and gas facilities operating under a Coastal Commission permit or federal consistency certification approval. Changes requiring review include (1) modifications to onshore and offshore oil and gas facility infrastructure; (2) updates to oil spill response plans for oil and gas operations offshore in federal OCS waters (prepared in compliance with BSEE regulations); (3) updates to oil spill contingency plans and operation manuals for oil and gas facilities within state boundaries (prepared in compliance with California OSPR and CSLC-MRMD regulations); and (4) changes or updates in spill response equipment and response procedures for oil and gas facilities within state boundaries, or within federal land or offshore OCS waters.

### **Coastal Act Policies**

Upon submittal of a coastal development permit application or federal consistency certification, the Coastal Commission staff reviews an application for consistency with the Chapter 3 policies of the Coastal Act. Chapter 3 of the Coastal Act contains strong policies for the prevention of and response to oil and hazardous substance spills (PRC §30232); protection of marine and coastal resources (PRC §§30214-30236); protection of environmentally sensitive habitats, and endangered, threatened, or rare species of wildlife and plants (PRC §§30240 and 30107.5); protection of coastal waters (PRC §§30230-30237); protection of fishing activities (PRC §30234.5); and permitting of coastal-dependent industrial facilities (PRC §30260).

A project must demonstrate effective oil spill prevention and response measures that meet the standards of Coastal Act §30232:

*Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

An applicant must submit an oil spill risk analysis for the proposed project that includes identification of potential impacts to California's coastal and ocean resources. The first test of Coastal Act §30232 then requires evidence of oil spill prevention technologies, programs, and procedures "to protect against the spillage of crude oil, gas, petroleum or other hazardous materials." The second test requires a proposed project to provide sufficient oil spill response

capability to provide “effective containment and clean-up facilities and procedures....for accidental spills that do occur.”

While Coastal Act policies do not expressly describe a “best achievable protection” or “best achievable technology” standard as defined by the Lempert-Keene-Seastrand Act, the Coastal Act’s Chapter 3 policies (e.g., PRC §30240, §30230, §30231, and §30232) require the highest level of protection of the biological values and productivity of coastal and marine resources. Through the Coastal Commission’s coastal development permit and federal consistency review authority, the Coastal Act policies thereby provide a level of protection equivalent to the best achievable protection and best achievable technology. The Coastal Commission staff keeps apprised of emerging technology trends and best management practices that may relate to its oil spill prevention and response review criteria by participating on an ongoing basis in state and federal studies, other technical reviews, workshops, and committees, including the federal Area Contingency Planning process.

The Coastal Commission determines which technologies and best management practices to require for oil spill prevention and response, and for the design and safe operation of oil and gas facilities, on a case-by-case basis, based on experience and consultation with other local, state, and federal regulatory agencies that have primary regulatory jurisdiction over the different facility types (e.g., Santa Barbara County, OSPR, CSLC-MRMD, BOEM, BSEE, and USCG). As discussed previously, the Coastal Commission works in partnership with other California and federal agencies in the development and implementation of California’s integrated system of spill prevention and response regulations and programs, in order to ensure consistency with Coastal Act policies.

The Coastal Commission may reference and consider an applicant’s compliance with other California, local government, and federal oil spill prevention and response regulations in its permit and federal consistency approvals, when applicable to a particular project. For example, the Coastal Commission coordinates with the OSPR, SLSC-MRMD, and BSEE on platform inspections and oil spill drill programs, and may reference those agencies’ requirements in its permits (for project proposals in state waters), or in its federal consistency reviews (for projects in federal OCS waters).

In order to make findings of consistency with Coastal Act §30232, the Coastal Commission requires submittal of an oil spill contingency plan, and other oil spill prevention and response technologies and measures, that demonstrate effective protection, containment, and clean-up equipment and procedures to protect coastal zone resources from spill impacts. If the Coastal Commission finds that a proposed oil and gas project proposal, or change in an oil spill response plan or equipment configuration, is inconsistent with Coastal Act policies due to a deficiency in the level of protection provided (although it may meet another agency’s requirements), then the Coastal Commission can require the applicant to provide additional spill prevention or response equipment and procedures in order to meet the Coastal Act’s standards.

## **Coastal Development Permit and Federal Consistency Information Requirements**

To ensure compliance with Coastal Act policies, applicants for proposed oil and gas projects must submit information that describes the risk of oil spills, the potential adverse impacts to coastal and marine resources in the event of a spill, and the spill prevention and response measures that will be taken to effectively avoid and mitigate potential adverse impacts to the state's coastal and marine resources.

Coastal Commission staff reviews an oil and gas project's oil spill prevention and response measures for compliance with Coastal Act policies on a case-by-case basis. When applicable, in order to assess the project's consistency with Coastal Act policies, Coastal Commission staff will review oil spill contingency/response plans, operations manuals, or other information that the applicant has prepared in compliance with one or more of the following federal and California state regulations:

- BOEM federal regulations for offshore OCS oil and gas exploration, development, and production operations (30 CFR §§550, 551, 552 and 556)
- BSEE federal regulations for OCS oil and gas exploration, development, and production operations (30 CFR §250(S), 30 CFR §250(O), 30 CFR §254.54);
- USCG federal regulations for marine facilities and oil transfer operations (33 CFR §§154 and 156);
- U.S. Department of Transportation Pipeline and Hazardous Materials Administration – Office of Pipeline Safety (“PHMSA/OPS”) federal regulations for interstate pipelines (49 CFR §195);
- U.S. EPA regulations for SPCC Plans (40 CFR §112);
- California OSPR regulations for Oil Spill Contingency Plans for Marine Facilities, Small Marine Fueling Facilities, Tank Vessels, Vessels Carrying Oil as Secondary Cargo and Nontank Vessels (14 CCR §§815.01-818.03; §§825.01-827.02); Drills & Exercises (14 CCR §820.01); and Certificates of Financial Responsibility (14 CCR §§791-797);
- California SLC-MFD regulations for marine terminals (2 CCR §§2300-2571);
- California SLC-MRMD regulations for oil and gas exploration, production, and processing facilities (2 CCR §§2101-2175);
- California State Fire Marshal (“SFM”) regulations for intrastate pipelines (Cal. Gov. Code §§51010-51019.1); and
- California Division of Oil and Gas and Geothermal Resources (“DOGGR”) regulations for oil and gas drilling (14 CCR §§1712-1998.2).

Coastal Commission staff typically reviews the following information to assess a proposed project's consistency with relevant Coastal Act policies: (1) identification of oil spill prevention measures to minimize the risk of an oil spill; (2) oil spill risk and worst-case spill assessment that includes oil spill trajectories, and identification of the coastal and marine resources at risk from

oil spill impacts; (3) response capability analysis of the equipment, personnel, and strategies (both on-site and under contract) capable of responding to a worst-case oil spill, including on-water containment and recovery equipment (e.g., boom, skimmers, and vessels), alternative response technologies (e.g., dispersants, in-situ burning, and bioremediation), and shoreline protection measures; (4) spill notification procedures; (5) oil spill preparedness training and drills; and (6) certificate of financial responsibility demonstrating capability to pay for total costs and damages from a worst-case spill.<sup>21</sup> This information, which is typically required to be submitted in order to meet the Coastal Commission application filing requirements, is discussed in more detail below.

### **Oil Spill Prevention and Safety Measures**

Applications for proposed oil and gas projects must include all prevention measures that are proposed to be taken to avoid or mitigate potential oil spills. Applicants should identify all federal, California, and local oil pollution and safety laws and regulations that apply to the proposed project, and demonstrate compliance with those requirements. Submitted information should also include a description of all industry safety and pollution prevention standards and best practices that are proposed to be implemented at the proposed facility.

Other types of information typically needed to assess oil spill prevention and safety measures include (1) schedules, methods, and procedures for testing, maintaining, and inspecting pipelines and other structures that contain or handle oil that may impact the coastal zone; (2) methods to reduce spills during transfer and storage operations, including overfill prevention and immediate spill containment provisions; and (3) procedures to assure clear communication during oil transfer operations.

Coastal Commission staff typically determines that information the applicant has prepared to comply with other state and federal agencies' spill prevention and safety regulations listed in the preceding section, above, is sufficient to meet all or part of the Coastal Commission's requirements for spill prevention and safety measures.

### **Oil Spill Risk Assessment and Worst-Case Spill Volume**

Coastal Commission staff use the oil spill risk assessment and worst-case spill scenario portion of a proposed oil and gas project's application for two purposes: (1) to determine the risk of oil spill impacts to California's marine and coastal resources over the life of the proposed oil and gas project (including the case of revision or modification of an existing oil and gas project); and (2) to determine the adequacy of the proposed oil and gas project's oil spill response capabilities.

---

<sup>21</sup> If the proposed project is oil and gas drilling and production in federal waters offshore California, then the project must also comply with (1) BOEM's oil and hazardous material information requirements for Exploration Plans (30 CFR §550.219) and for Development and Production Plans (30 CFR §550.250), as applicable; and (2) BSEE's oil spill response plan requirements pursuant to 30 CFR §254(B). If the proposed project is an onshore or offshore oil and gas facility in the California State Lands Commission's jurisdiction, then the project must also comply with the California State Lands Commission's laws and regulations for the leasing and operation of oil and gas exploration, production, and transportation facilities (2 CCR §§ 2101-2175) or marine oil terminals (2 CCR §§ 2300-2571, and 24 CCR §§3101F.1-3111F.11), as applicable.

The worst-case spill scenario and risk assessment should provide enough information and supporting evidence to allow the Coastal Commission to determine if the proposed project has sufficient spill response equipment, trained personnel, and waste disposal capability to contain and clean up the volume calculated for the worst-case spill.

To ensure that the Coastal Commission has adequate information to assess the project's consistency with Coastal Act policies, the oil spill risk assessment should analyze the oil spill risk and hazards for all existing and proposed facility infrastructure that could cause an oil spill, including, but not limited to, (1) onshore exploration and production operations/ facilities; (2) offshore and onshore pipelines, storage tanks, and processing and refining facilities; and (3) offshore oil exploration and production operations /platforms. The risk assessment should include an inventory of the hazards that resulted in historical spills, and identify the control measures that will be used to avoid or minimize the risk of an oil spill (for details, see the spill prevention and safety measures section). It should also include a probability analysis of significant oil spills (specifying size, frequency, cause, duration, and location) that could still occur after any or all spill control measures have been implemented, including a worst-case spill scenario.

### **Worst-Case Spill Volume**

The worst-case spill scenario portion of an application should include the volume of the potential worst-case spill from the entire proposed oil and gas project. If the proposed project is a modification of existing facilities, then the worst-case spill scenario must address how the proposed project will change the worst-case spill volume from the existing facilities over the length of time the project is in operation.

If the proposed project relates to infrastructure (e.g., platforms, wells, or offshore pipelines) in the federal OCS waters offshore California, which is under the jurisdiction of BOEM or BSEE, then an application that includes the worst-case discharge volume criteria and requirements specified in the federal regulations for oil spill response plans (30 CFR §§254.26 and 254.47) should meet the application filing requirements for the Coastal Commission.

If the proposed onshore or offshore oil and gas infrastructure (e.g., marine terminals, processing facilities, pipelines, wells, platforms, or offshore pipelines) is within California state boundaries, then an application that includes the worst-case spill volume criteria and requirements in either BSEE's requirements for Worst-Case Discharge (30 CFR §§254.26 and 254.47) or California OSPR's requirements for Reasonable Worst-Case Spill (14 CCR §817.02(d)) should meet the Coastal Commission's application filing requirements.

### **Oil Spill Trajectory**

In determining the worst-case spill scenario and volume, applicants should have conducted a trajectory analysis to identify the resources at risk of adverse impacts from the projected worst-case spill volume (including open ocean marine resources, mainland coastal areas, and offshore islands).

For offshore oil spill trajectories, applicants may use the public domain's BOEM/BSEE oil spill risk analysis ("OSRA") model, or the General NOAA Oil Modeling Environment ("GNOME")

spill response trajectory model, if applicable to a proposed project's operating area. These models are well known and respected models for the ocean dynamics of the Santa Barbara Channel and offshore southern California. Other models that are of the same caliber as these models may also be used, as long as they provide sufficient information about the oil spill trajectory for the Coastal Commission to assess the proposed project's consistency with the Coastal Act.

The trajectory analysis should include the following information: (1) the maximum distance that an oil spill from the proposed project could persist in the environment, and methods for tracking the oil movement; (2) consideration of the worst possible dispersion of the oil into the air or onto the water, assuming adverse environmental conditions; (3) consideration of the known characteristics of the oceanic circulation regimes for the proposed project's region of operation (e.g., Santa Maria Basin, Santa Barbara Channel, or offshore Huntington Beach), using the best available current and wind data; and (4) 3-day, 10-day, and 30-day trajectory impact scenarios for resources at risk.

### **Resources at Risk Analysis**

Another application filing requirement is an analysis of the resources at risk, based on the trajectory analysis, which identifies the environmental, economic, and culturally sensitive shoreline and marine resources that could be impacted by a spill from the proposed project, and the response strategies for protecting these areas.

The resources at risk analysis should include (1) identification of all state- or federally-listed rare, threatened, or endangered species; (2) shoreline habitat types and associated marine resources; (3) migratory bird and mammal migration routes, including breeding, nursery, stopover, haul-out, and population centers by season; (4) aquatic resources including fish, invertebrates, marine mammals, plants, and important habitat areas; (5) terrestrial animal and plant resources and sensitive habitat areas; (6) commercial and recreational fisheries; (7) recreational and economic resources, including public beaches, parks, marinas, diving areas, and boat ramps; (8) industrial and commercial drinking water intakes, power plants, and salt pond intakes; (9) known historical and archeological sites; (10) areas of cultural or economic significance; (11) major waterways and vessel traffic patterns that are likely to be impacted; and (12) a map identifying the location of all the sensitive habitats and resources at risk.

The submitted information should make use of and reference the sensitive sites information and maps from an applicable Area Contingency Plan that has been completed by the U.S. Coast Guard, state agencies, and local governments pursuant to the federal Oil Pollution Act of 1990. Information that has been prepared in compliance with the California regulation for Resources at Risk from Oil Spills (14 CCR §817.02 (c)(3)) is typically sufficient to meet all or part of the information needed for the resources at risk analysis.

### **Response Capability Analysis**

Additional information needed for proposed oil and gas projects includes a response capability analysis that describes the response and clean-up resources (i.e., containment, clean-up, and recovery equipment; trained personnel; supporting equipment; and waste disposal equipment) available to respond to the initial instantaneous spill volume, that also demonstrates how the

response operations can be supported for a worst-case ongoing spill (e.g., a well blowout lasting 30 days, an uncontrolled pipeline rupture, or an uncontrolled storage tank rupture).

The response capability analysis should include an oil spill response plan with notification procedures, response strategies, and an inventory of response equipment (with effectiveness ratings) and shoreline protection equipment that will be located at the oil and gas facility site and under contract. It should also provide information that demonstrates training of personnel to effectively control, respond, and recover a worst-case oil spill.

### **Response Time Frames and Response Capability**

To ensure that a proposed project meets Coastal Act standards, the Coastal Commission has evaluated oil spill response time frames and equipment for oil and gas facilities based upon a three-tier response strategy for the containment and clean-up of marine oil spills. Proposals for new or modified offshore oil and gas projects have provided evidence that the proposed project could meet or exceed the response time frames and equipment capability requirements described below. Determinations of whether a project can meet adequate oil spill response time frames are made on a case-by-case basis, taking into consideration the proposed oil and gas project's unique characteristics, oil spill risks, and location.

The Coastal Commission found fast response and sufficient response capability a key issue during its federal consistency review in the 1970s and 1980s for the installation of 11 oil and gas platforms and pipelines in the federal OCS waters offshore Santa Barbara and San Luis Obispo counties. The Coastal Commission's findings for its concurrence in the federal consistency certifications for those 11 platforms were based on the applicants' ability to meet the response time frames and equipment capability levels in the three-tier response strategy described below.<sup>22</sup>

Primary Response: Primary oil spill response equipment provides the first line of defense, and consists of open-ocean boom for containment, and skimmers (or other equivalent devices) for mechanical recovery of oil. Primary response equipment is usually maintained at or near the oil and gas facility (i.e., platform) for quick deployment. The goal of the primary oil spill response equipment is to quickly contain an oil spill from a facility by limiting the spread of the spill.

---

<sup>22</sup> The Coastal Commission's federal consistency certifications for the 11 platforms are: (1) Platform Irene, CC-36-84; (2) Platform Hermosa, CC-12-83; (3) Platform Harvest, CC-27-83; (4) Platform Hidalgo, CC-24-84; (5) Platform Harmony, CC-7-83; (6) Platform Heritage, CC-7-83; (7) Platform Habitat, CC-4-81; (8) Platform Gilda, CC-6-80; (9) Platform Gina, CC-6-79; (10) Platform Henry, CC-4-79; and (11) Platform Gail, CC-2-86 and CC-36-86.

During the federal consistency review process for these platforms, the Coastal Commission worked closely with the former Minerals Management Service (now renamed BOEM and BSEE), the USCG and other agencies to jointly develop the three-tier response strategy described above. This three-tier response strategy remains consistent with the BSEE's regulation requirements (30 CFR Part 254 Subpart B), and NTL No 2012-N06 *National Notice to Lessees and Operators of Federal Oil and Gas Leases and Pipeline Right of Way Holders: Guidance to Owners and Operators of Offshore Facilities Seaward of the Coast Line Concerning Regional Oil Spill Response Plans* (effective August 10, 2012).

*Boom and containment operations.* Open-ocean boom that is appropriate to the conditions at the operations site, and boom vessels that are capable of deploying the boom within approximately 1 hour (15-60 minutes) of the spill discovery. Historically, the Coastal Commission has also required 1,500 feet of open-ocean oil spill containment boom.

*Skimming operations.* An oil skimmer, (or other equivalent device), that is capable of operating in open-ocean conditions and can be deployed within 2 hours of the discovery of the spill. The skimmer device must have a recovery rate of 1,000 barrels/day (after derating to 20 percent of the manufacturer's listed efficiency factor), must be able to be deployed in seas in the 5-6 foot range, and must be capable of continuing to operate in 8-10 foot seas and 20-knot winds after deployment (in compliance with the USCG Marine Safety Manual).

Most often, boom and skimmers are located at or near the offshore platform site in order to meet the response time standards. In some cases, however, OCS platform operators located close to shore have demonstrated that Clean Seas LLC (the Oil Spill Response Organization ("OSRO") contractor for the platforms in the Santa Barbara Channel and Santa Maria Basin), with its fast spill response vessels ("SRVs") and trained personnel, provides more effective containment and skimming operations than would be the case if the boom and skimmers were located on or near the platform.

For example, in 2007, Dos Cuadras Offshore Resources LLC ("DCOR") requested approval from the former MMS (now renamed BSEE) to remove the *Walosep 2* skimmer from Platform Gilda, and instead use the skimming capability of Clean Seas' SRV *Clean Sweep*, which had two inboard LORI brush advancing skimming systems that exceeded the *Walosep 2* skimmer's capability. Clean Seas effectively demonstrated in an unannounced oil spill drill (on April 27, 2008, during non-work hours) that its SRV *Clean Sweep* could arrive at Platform Gilda and commence skimming operations within 1 hour and 15 minutes. Coastal Commission staff subsequently issued No Effects Determination NE-040-07 (June 6, 2008) agreeing with the former MMS's approval of DCOR's request to remove the skimmer from Platform Gilda.

Secondary Response: Secondary oil spill response to the offshore platforms is provided by an OSRO which maintains dedicated OSRVs and other support vessels that can deploy additional boom and/or recovery equipment to clean up larger spills. The OSRVs also have capacity for storage of recovered oil. If the OSRVs are appropriately equipped and have trained personnel, they can also provide applied response technologies, such as dispersants, in-situ burning, and bioremediation (if approved to do so). As discussed above under Primary Response, the OSRO can act as both a primary and secondary responder. As with primary response, a critical consideration for the Coastal Commission is the anticipated response time for a proposed project's secondary response capabilities. The Coastal Commission has found in past federal consistency certifications for the installation of 11 platforms in federal OCS waters offshore Santa Barbara County (see Footnote 22) that a 2-6 hour response time for secondary response vessels and equipment to arrive at a platform spill (or other spill site) is sufficient to meet Coastal Act standards.

Tertiary Response: In the case of a large, long term spill, additional resources that are cascaded in from outside the immediate area of the spill provide tertiary oil spill response. These resources can include OSROs from other regions of California or other states, the USCG Pacific Strike Team, and the U.S. Navy. These resources would be called in for a prolonged spill response if additional resources are needed. They may also be used to deploy alternative response technologies, such as dispersants, in-situ burning, and bioremediation.

The Coastal Commission's three tier response strategy and equipment capability levels are consistent with the BSEE's oil spill response regulation requirements (30 CFR Part 254 Subpart B) and with the California OSPR's response capability requirements (described in 14 CCR §817.02(d)(3)). The Coastal Commission will consider applications for proposed oil and gas projects that use information prepared in compliance with BSEE's or California OSPR's response capability requirements (30 CFR §254.26 or 14 CCR §817.02(d)(3)) to meet the Coastal Commission's filing requirements for response capability analysis. The Coastal Commission will determine, on a case-by-case basis, if the information provided satisfies the Coastal Act policies for oil spill response and coastal resource protection.

#### **Alternative Response Technologies – Dispersants, In-situ Burning, and Bioremediation**

The Coastal Commission also assesses a proposed project's potential to use alternative, non-mechanical technologies for oil spill response and clean-up, which may include the use of dispersants, in-situ burning, coagulants, bioremediation, and other chemical agents. The Coastal Commission has found in past federal consistency certifications (see Footnote 22) that the use of a non-mechanical method for oil spill response and clean-up may be adequate to meet Coastal Act policies.

The Coastal Commission typically considers information and documents that are consistent with applicable federal and state laws and regulations, and the provisions of the California Oil Spill Contingency Plan, the California Dispersant Plan, the National Contingency Plan, and applicable Area Contingency Plans, to be sufficient to meet the filing requirements for analysis of alternative response technologies. This includes documents that have been approved by BSEE (in compliance with 30 CFR §254.26) or by California OSPR (in compliance with 14 CCR §817.02(d)(5)(F)(1-6) and §§884-886.4)

#### **Oil Spill Notification**

In the event of an oil spill, all oil and gas facilities located onshore and offshore California are required (under California and federal law) to immediately notify the OSPR (800-852-7550 or 800-OILS-911) and the National Response Center, (800-424-8802).

In addition, for those oil and gas facilities that have received a coastal development permit or federal consistency certification/determination, the facility operator should also directly notify the Coastal Commission Oil Spill Program. The Coastal Commission Oil Spill Program contact information should be listed in the facility's Oil Spill Contingency/Response Plan spill notification agency list, as follows: 415-693-8375 (Oil Spill Program 24-hour cell phone); 831-

427-4873 (Oil Spill Program phone in Santa Cruz); 415-904-5247 (Oil Spill Program phone in San Francisco).

### **Oil Spill Preparedness Training and Drills**

The Coastal Commission also considers whether applicants have adequately demonstrated that their personnel are trained and ready to effectively respond, contain, and clean up an oil spill, including a worst-case oil spill, at all times. If an applicant's oil spill training programs comply with federal BSEE and California OSPR oil spill training and drills regulations (30 CFR §254.29 and 14 CCR §820.01), they are likely to be sufficient to meet the Coastal Commission's application filing requirements.

To ensure that the spill notification process is working properly, the Coastal Commission Oil Spill Program should be included in spill notifications conducted during a facility's oil spill drill and exercise program.

### **Evidence of Financial Responsibility for Worst-Case Spill Clean-up**

Past major oil spills have demonstrated that even with the most effective state-of-the-art mechanical and alternative spill response technologies, catastrophic adverse impacts to California's environmental and economic resources can still occur. Under California law, an owner/operator whose oil and gas facility or vessel has an oil spill has "unlimited liability," and must pay for all clean-up costs and damages (e.g., environmental and economic) in the event of a spill. Before an oil and gas facility can begin operations in California, the owner/operator must demonstrate financial capability to pay for all costs and damages that could be caused by a worst-case oil spill, in compliance with OSPR regulation 14 CCR §§791-797.

The Coastal Commission has similarly determined whether an applicant for a coastal development permit or federal consistency certification for a proposed oil and gas project has the financial capability to pay for all costs and damages that could arise from its worst-case spill scenario. In the past, the Coastal Commission has considered that a Certificate of Financial Responsibility that has been issued by the OSPR, demonstrating compliance with 14 CCR §§791-797, met Coastal Act policies.

### **Additional Information and Questions**

If you have questions about whether a specific project application may require the submittal of an oil spill risk and analysis, or need additional detail about the Coastal Commission's oil spill risk and analysis information requirements, please contact:

Jonathan Bishop  
Coordinator, California Coastal Commission Oil Spill Program  
725 Front Street, Suite 300, Santa Cruz, CA, 95060  
Email: [Jonathan.Bishop@coastal.ca.gov](mailto:Jonathan.Bishop@coastal.ca.gov)  
Phones:  
(415) 904-5247 (San Francisco - Oil Spill Program phone)  
(831) 427-4873 (Santa Cruz - Oil Spill Program phone)  
(415) 693-8375 (24-hour - Oil Spill Program cell phone)