



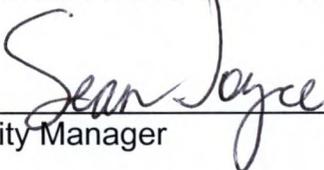
REQUEST FOR CITY COUNCIL ACTION

MEETING DATE: APRIL 24, 2012

TITLE: SAN ONOFRE NUCLEAR GENERATING STATION



Senior Management Analyst



City Manager

RECOMMENDED ACTION

1. Review the City Council subcommittee's draft advocacy letter, revise as deemed appropriate, and authorize its distribution in substantially similar form to the Nuclear Regulatory Commission and other interested parties.
2. Receive and file response to questions posed during March 27, 2012 meeting.

EXECUTIVE SUMMARY

At its March 27, 2012 meeting, the City Council appointed Councilmembers Larry Agran and Steven Choi as a subcommittee to assist with preparing recommended communications pertaining to the City's interests and concerns regarding San Onofre Nuclear Generating Station. The Subcommittee prepared an advocacy letter to the Nuclear Regulatory Commission (NRC) and other interested parties for the City Council's consideration (Attachment 1).

The City Council also requested staff to return with a response to Councilmember Agran's questions posed during the meeting (Attachment 2).

ATTACHMENTS

- Attachment 1: Draft letter to the Nuclear Regulatory Commission
Attachment 2: Response to Councilmember Agran's questions

DRAFT

April 24, 2012

The Honorable Gregory Jaczko
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Chairman Jaczko:

The disaster at the Fukushima Daiichi Nuclear Power Plant in Japan has renewed world-wide concern regarding the safety of commercial nuclear power. The City of Irvine is located 22 miles north of the San Onofre Nuclear Generating Station and is home to 220,000 people. Irvine has a workday population of nearly 350,000. A 50-mile radius around the San Onofre Plant extends into five California counties. This area includes the three most populous California counties – Los Angeles, San Diego and Orange Counties – as well as San Bernardino and Riverside Counties.

The City is fortunate to have Federal elected officials who are well informed and active in the Nation's ongoing discussion about nuclear power.

After careful deliberation, on behalf of the citizens of the City of Irvine and my City Council colleagues, the Irvine City Council requests the following:

- Support for Senator Feinstein's April 20, 2011 letter to you requesting that the NRC examine "seismic and tsunami hazards, operational issues, plant security, emergency preparedness, spent fuel storage options and other elements of a nuclear power plant's 'design basis' within the scope of the relicensing process." While we are aware that the NRC used best possible science of that era during the SONGS Unit 2 and 3 licensing process in 1982 and 1983, respectively, much has been learned and modern technologies have been developed since SONGS was licensed. In addition to the effects of age-related degradation of the facility. We agree with Senator Feinstein that: "These new threats logically should be considered in a relicensing process, just as they would be in the licensing of a new nuclear power plant in the United States."

All pertinent information should be taken into account before relicensing is considered. This includes the need for permanent off-site storage solution for spent nuclear fuel to be identified as a condition for relicensing. The continued accumulation of spent fuel on site presents a significant hazard that must be solved at the federal level and a solution implemented before continuing to generate more spent fuel. In California, researchers have recently found new faults close to nuclear power plants, and tsunami experts have learned that submarine landslides can generate local tsunamis far larger than previously believed.

Accordingly, we ask that the NRC adopt the following positions:

- Mindful that Senators Feinstein and Boxer have called upon the NRC to swiftly adopt the “Near-term Task Force Recommendations for Enhancing Reactor Safety in the 21st Century,” *we urge the NRC implement the recommendations without delay. For SONGS, special care should be given to reevaluating seismic and flooding hazards.*
- *Expand the Emergency Planning Zone to 50 miles.* The current 10-mile radius is inadequate. We acknowledge the focused effort of the current Inter-jurisdictional Emergency Planning Committee, as we have remained involved as a nearby agency. We also acknowledge that there may be different emergency planning needs at differing distances from SONGS. However, increased strategic emergency planning efforts to include vicinity communities that are clearly part of evacuation plans and potentially within plume zones should be incorporated into an expanded Emergency Planning Zone. The “Recommendations for Enhancing Reactor Safety in the 21st Century” provides only a cursory discussion of Fukushima which required additional protections up to *and beyond* a 16-mile (20 kilometer) area.
- *Revise the risk/benefit analysis that the NRC uses to ensure that it adequately assesses public risk levels.* There have been important lessons learned regarding human performance, and unforeseen human error. We acknowledge that there is a *Human Reliability Analysis* component in the NRC’s high-level Probabilistic Risk Assessment. We also acknowledge that the NRC emphasizes employee training, certification and management, and believe that SONGS employees are earnest in their desire to safely conduct their daily duties. Management, by SCE in this case, is a critical component here.

We have learned that human error contributed to catastrophic nuclear plant failures and exacerbated conditions following failure. Recent years-long human performance and safety culture issues at SONGS bring urgency to our concerns. Human performance and safety culture issues at SONGS took at least four years to address – and included willful violations. These issues were placed on the Regulatory Response Action Matrix. There were multiple letters from NRC and SCE, multiple NRC staff reviews, and at least two independent assessments before changes were made showing sustained improved performance to NRC’s satisfaction as of the September 6, 2011 closure of the “chilling effect” letter. In its March 4, 2009 Annual Assessment letter, the NRC made a number of specific disturbing findings:

- “Known performance problems have persisted and new performance problems have emerged”
- “Ineffective use of human error prevention techniques”

- “The effectiveness of your initiatives has not been evident and this annual assessment is the third cycle where substantive cross-cutting issues were identified in human performance and problem identification and resolution.”

We acknowledge that regular assessment, monitoring and correction to maintain an effective feedback loop is important to safely operate a nuclear power facility. We also recognize the transparency within which NRC conducts this monitoring. However, this does not reduce our concerns related to human performance – especially management and safety culture issues. There are 440 commercial nuclear power plants worldwide, with 104 in the United States. Not included among those are three nuclear generating stations that experienced catastrophic failure well short of their expected 40-year life – related in part to human performance.

- We urge you to require utilities to move spent fuel rods to dry cask storage as soon as those rods can be safely moved. The storage of spent fuel rods on site at SONGS continues to be of concern to the Irvine City Council and is an area we believe that the NRC can take more immediate action. Our understanding is that the spent fuel rods stored in dry cask storage at Fukushima Daiichi were unaffected by the tsunami. Although movement of spent fuel away from the community will require many federal agencies to reach agreement, we believe the movement to dry cask storage is an area of regulation within the authority of the NRC.

On behalf of the citizens of Irvine and my elected colleagues, I respectfully request that your agency respond to the above requests. As representatives of the people we serve, it is our City Council's duty to be informed and to act upon our knowledge. Where we cannot exercise authority, we will advocate for the public's best interest. We appreciate the role of the NRC as the government agency that ensures that commercial nuclear power plants operate safely.

Sincerely,

cc: Irvine City Council
Sean Joyce, City Manager
Senator Barbara Boxer
Senator Dianne Feinstein
Congressman John Campbell

**Response to Questions for Irvine City Staff
City Councilmember Larry Agran
San Onofre Nuclear Generating Station
April 24, 2012**

- 1. In the event that the San Onofre nuclear power plant experiences a Chernobyl-like or Fukushima-like catastrophic failure – resulting in a major, widespread radioactive contamination field – what are our City’s public safety responsibilities? Are we prepared to cope with such an emergency?**

Response: In the event of a Chernobyl/Fukushima failure, the San Onofre Nuclear Generating Station will declare a *General Emergency* which describes the highest action level associated with the degradation of a reactor core with a loss or potential loss of containment integrity. This action level is intended to protect the general public and requires the activation of the County of Orange Emergency Operations Center. In conjunction with the Operational Area (County of Orange), the Irvine Department of Public Safety will activate the City’s Emergency Operations Center staffed by members of the Emergency Management Team.

The Emergency Management Team is a cross-section of experienced and well-trained City personnel who fill essential roles during any given emergency. By activating the Emergency Operations Center, the City of Irvine will have access to WebEOC, which is an online Operational Area Emergency Management tool and provides real time status updates related to the event. At the same time, the City will retain on-duty personnel and will initiate an emergency “call-back” of off-duty essential Public Safety personnel. The Department of Public Safety has Emergency Deployment Plans that allow for substantially increasing field personnel quickly and with minimal effort.

In a real-time example, on November 1, 2011, the San Onofre Nuclear Generating Station experienced an ammonia gas release which prompted an “Alert” action level. An Alert action level is used to describe an event or events that also indicate a potential degradation of safety at a nuclear power plant. The County’s Emergency Operations Center was activated. The City of Irvine Emergency Operations Center was notified and in an abundance of caution activated the City of Irvine’s Emergency Operations Center. Outgoing Public Safety personnel were held over for approximately one-hour while the event was assessed. This action provided the Department of Public Safety a 100 percent increase in deployable resources. The Emergency Operations Center remained activated until assured the events at San Onofre Nuclear Generating Station would not impact the residents in the City or surrounding communities.

The aforementioned General Emergency action level for San Onofre Nuclear Generating Station plans for the evacuation of South Orange County residents residing in a 10-mile radius of San Onofre Nuclear Generating Station. This radius is referred to as the Emergency Planning Zone. Residents within the 10-

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mile Emergency Planning Zone have been instructed to evacuate or be transported to the Orange County Fair Grounds in the City of Costa Mesa. The Orange County Fair Grounds will serve as a focal point where evacuees will be assessed and directed or transported to predetermined congregate care centers throughout Orange County. The congregate care centers will serve as reunification centers and will also provide evacuees with shelter and food. It should be noted that the University of California, Irvine (UCI) is identified as a congregate care center and the UCI Police Department will have primary responsibility for law enforcement functions when receiving evacuees while at the University.

Recognizing the San Onofre Nuclear Generating Station emergency plan does not include City of Irvine within its Emergency Planning Zone there is no plan to evacuate Irvine residents.

During an emergency event as described above, the Department of Public Safety will support the San Onofre Nuclear Generating Station emergency plan in a manner that has the least impact on the City of Irvine. In the event of an evacuation by residents in the Emergency Planning Zone, State Route 133, Interstate 5, and Interstate 405 will likely be closed to southbound travel in south Irvine. Vehicles traveling southbound on the I-5 and I-405 will be directed to proceed onto State Route 133 and redirected northbound on the I-5 and I-405 Freeways. The closure of southbound freeway traffic will allow first responders to rapidly assist in the evacuation of residents located in the Emergency Planning Zone. Also under this plan, transit buses from the Orange County Transportation Authority will be staged at the Orange County Great Park and will be deployed as needed to transport residents from the Emergency Planning Zone to the Orange County Fair Grounds. Supporting this traffic plan will be a critical focus for the Department of Public Safety and will be handled by current staffing levels and supplemented by recalled personnel as necessary.

Coping with the severity of a Chernobyl/Fukushima failure and evacuation as described will undoubtedly require a significant public safety deployment from throughout Orange County and the region.

- 2. What is the emergency response chain of command within our City? What are the prescribed roles and responsibilities of the Mayor, the City Council, the City Manager, and the Director of Public Safety? What are the responsibilities of other public and private entities – Southern California Edison, the County of Orange, the State government, the federal Department of Homeland Security?**

Response: As with any emergency, the City Manager will lead a collaborative effort relying on the City's broad range of capabilities and existing protocols and plans. At the same time, the City Manager will also advise the City Council on the impact and course of action triggered by a serious event at the San Onofre Nuclear Generating Station.

The plan calls for following the State Emergency Management System and National Incident Management System models during an emergency response. The Incident Command System is a standardized, on-scene, all-hazard incident management structure. In the event of an emergency at the San Onofre Nuclear Generating Station, the City of Irvine would implement its Incident Command System and designate an Incident Commander responsible for directing the City's field response.

The specific roles of the City Council and City executive staff are prescribed in the City's Municipal Code and allow for the formation of an Irvine Disaster Council. The Irvine Disaster Council is comprised of the Mayor, Director of Emergency Services (City Manager), Assistant Director of Emergency Services (appointed by City Manager), Director of Public Safety, and other representatives with emergency responsibilities that may be appointed by the Director of Emergency Services. The Irvine Disaster Council is empowered to develop and recommend City Council adoption of emergency and mutual aid plans and agreements as well as ordinances, resolutions and regulations deemed necessary to address unfolding emergencies.

In the event of a Chernobyl/Fukushima failure at the San Onofre Nuclear Generating Station, the City Manager, in his capacity as the Director of Emergency Services, can request the City Council to proclaim the existence or threatened existence of a "local emergency." Declaring a local emergency permits the Governor to proclaim a "state of emergency" when locally available resources are not fully capable of addressing an emergency. The declaration of a local state of emergency permits the City Manager to issue rules and regulations related to the protection of life and property, permits for the acquisition of vital supplies and requires emergency services of any municipal employee.

The primary responsibility of the County of Orange and Southern California Edison during an emergency incident at San Onofre Nuclear Generating Station will be the implementation of their emergency plans. Coordination with the City of Irvine will take place formally through the County's Operational Area Emergency Operations Center.

There are several State and Federal agencies that would have a role in the event of an emergency incident at San Onofre Nuclear Generating Station. They include, but are not limited to, the California Emergency Management Agency, California Department of Public Health, California Department of Food and Agriculture, Department of Energy, Environmental Protection Agency, Nuclear Regulatory Commission and the Federal Emergency Management Agency (FEMA). The responsibility of all of these agencies will be to assist with the response, recovery, and mitigation of the emergency.

3. Are we prepared to respond to an evacuation order – to evacuate our entire City if ordered to do so, or to receive and provide for evacuees from elsewhere? Are our responsibilities clearly set forth in an evacuation plan available for public review?

Response: In accordance to the San Onofre Nuclear Generating Station emergency plan there is no provision to evacuate the City of Irvine which is located 10 miles beyond the Emergency Planning Zone. During an emergency at San Onofre Nuclear Generating Station, the initial recommendation for protective actions will come from on-site staff. When the Offsite Dose Assessment Center is activated, it becomes the primary source of information used to determine protective actions. The Offsite Dose Assessment Center is staffed by various County and San Onofre Nuclear Generating Station personnel, including the Orange County Health Care Agency. The Offsite Dose Assessment Center in conjunction with Radiological Monitoring Teams will continuously assess the emergency and provide recommendations to the County's Operational Area Emergency Operations Center.

The City of Irvine Emergency Operations Center will be in constant communication with the County Emergency Operations Center and will be able to provide timely and relevant protection action information to the residents of Irvine through various avenues, such as airing on AM 1640, posting on the City website, broadcasting on ICTV and, if necessary, using the *iAlert* notification system. The City's information broadcasts will be in coordination with the Orange County Alert notification system to ensure residents receive consistent and up-to-date information.

The overall actions of the City of Irvine during an emergency event are governed by the City of Irvine Emergency Plan which can be found for review on the internet. The San Onofre Nuclear Generating Station emergency plan calls for the residents in the Emergency Planning Zone to be evacuated to the Orange County Fair Grounds and there is no mass evacuation plan for the City of Irvine.

- 4. Do we have equipment to measure radioactive contamination? Do we have access to sufficient masks, special suits and other protective equipment for our public safety workers and for the general public? Do we have iodine pills for widespread distribution to protect against thyroid cancers?**

Response: The Department of Public Safety deploys 30 portable dosimeters in patrol vehicles that can be used to measure background and cumulative gamma rays and x-rays. The Police Department also has the ability to deploy a gamma scintillator device capable of pinpointing a radiation source.

For personal protection, Irvine Police Officers have access to protective suits and breathing masks. These items provide limited protection depending on type/quantity of radiation encountered. Lastly, the City of Irvine does not maintain a stockpile of potassium iodine pills, however, these pills are available for purchase by the general public.

- 5. Does our City of Irvine 20-year Energy Plan address policy issues regarding the sources of electricity to meet our future energy needs? Does the Energy Plan presume or propose policies that would provide for safer, more reliable energy sources such as major Southern California solar installations – and reduced dependence on nuclear power generation? Does the Energy Plan consider conservation measures that presume a short-term, long-term, or permanent shutdown of San Onofre?**

Response: The City of Irvine Energy Plan was adopted in July 2008. It began as a tool to implement policies of the Energy Element in the General Plan and guide the City in achieving its long-term objectives to be a leader in energy efficiency and renewable energy.

The plan addresses policy issues regarding sources of electricity to meet future energy needs specific to Irvine. An introductory discussion outlines how reliance on fossil fuels results in a decreased, unreliable energy supply, and focuses on strategies to transition from energy produced from fossil fuels to renewable energy resources.

The plan proposes policy goals that would provide clean, reliable energy sources such as major Southern California solar installation, but does not specifically respond to or consider the San Onofre Nuclear Generating Station as a factor in development of these goals. The plan lists four goals for Irvine:

- A. Involve 100 percent of residents and businesses in the Energy Plan.

- B. Reduce energy use in buildings citywide 30% by 2015 compared to 2003 levels.
- C. Increase percentage of renewable energy used in new buildings citywide:
 - 40 percent of energy used by new buildings citywide derived from renewable sources by 2015.
 - 60 percent of energy used in new buildings citywide derived from renewable sources by 2020.
- D. Reduce greenhouse gas (GHG) emissions.
 - To 2000 levels by 2010 (equivalent to 11 percent reduction).
 - To 1990 levels by 2020 (equivalent to 25 percent reduction).
 - To 80 percent below 1990 levels by 2050.

The short-term, long-term or permanent shutdown of San Onofre was not part of the scope or focus of the Energy Plan. However, focusing on energy conservation, efficiency and transitioning to renewable energy could assist the City of Irvine in reducing dependency on electricity generated at the nuclear power plant.

6. Does the draft City of Irvine Budget for FY 2012-2013, soon to be submitted by the Mayor and City Manager, include stepped-up funding for emergency preparedness to cope with a catastrophic failure at San Onofre?

Response: In accordance with Municipal Code Section 1-3-210, it is the responsibility of the City Manager to prepare and submit the proposed annual budget to the City Council for its approval. There is no plan to increase the proposed budget for fiscal year 2012-13 related to emergency preparedness to address a specific catastrophic failure at the San Onofre Nuclear Generating Station. The Department of Public Safety plans, prepares and trains throughout the year for all hazards and major emergencies, whether natural or man-made disasters. The Department of Public Safety routinely participates in local, county, state, and federal exercises and maintains state-of-the-art equipment such as the Mobile Comm, BEAR (SWAT) Unit and the Mobile Command and Control Vehicle. The Department of Public Safety also coordinates the City's Emergency Management Team which as previously noted is a cross-section of trained employees who fill essential roles during any given emergency.

The City also places emphasis on emergency planning and training of auxiliary and reserve personnel to assure the adequacy and availability of sufficient resources to cope with emergencies. In the City of Irvine, the Community Emergency Response Team commonly referred to as "CERT" is a group of

residents who are trained to work in coordination with the Department of Public safety to help themselves, their families and their neighbors in the event of a catastrophic disaster. The Department of Public Safety also supports the Irvine Disaster Emergency Communications (IDEC) team comprised of over 50 experienced, trained and dedicated amateur radio operators. This team of amateur radio operators serves to support the City's emergency preparedness plan and general public safety by providing technical resources in the area of disaster response.

- 7. Have the Mayor and City Manager been in communication with the highest officials at Southern California Edison to inquire as to their intentions regarding San Onofre – to either permanently shut down and decommission the nuclear power plant in 2022, or to apply for license renewal that would extend operations to at least 2042?**

Response: On April 11, 2012, Mayor Sukhee Kang, City Manager Sean Joyce and Special Assistant to the Chief of Police Dan Jung met Southern California Edison representatives Caroline Choi, Vice-President of Regulatory and Environmental Policy, Veronica Gutierrez, Vice President of Local Public Affairs and Robert Stiens, Public Affairs Manager.

Mayor Kang and staff were informed that Southern California Edison's priority is operational safety and examining the circumstances that led to the recent closure of the San Onofre Nuclear Generating Station. It was firmly stated and repeated by SCE officials that SCE will not contemplate renewing the operating license for the San Onofre Nuclear Generating Station until after Units 2 & 3 resume normal operation.

- 8. In the event that Southern California Edison pursues license renewal, what is the process and what options are available for City participation before state and federal agencies?**

Response: In accordance with the Atomic Energy Act and the Nuclear Regulatory Commission (NRC) regulations, the NRC is responsible for issuing licenses for commercial power reactors to operate for an initial 40 years and allows licenses to be renewed for an additional 20 years. In summary, an operating nuclear power plant may apply to the Nuclear Regulatory Commission to renew its license as early as 20 years before expiration of its current license and there is no limit on how late a licensee may apply for license renewal. If the licensee submits a renewal application that is sufficient for the Commission's review at least five years before expiration of its current license and the agency is still reviewing the application at the end of the five years, the plant can continue to operate until the Nuclear Regulatory Commission completes its review. However, if a sufficient application is not submitted at least five years before and

the current license expires before the review has been completed, the plant may have to cease operations until the renewal decision is made.

The decision whether to seek license renewal rests entirely with nuclear power plant owners and is often based on the plant's economic situation and whether it can meet Nuclear Regulatory Commission requirements. The Nuclear Regulatory Commission has established a formal license renewal process that, in part, involves public participation hearings, preparation of an Environmental Impact Statement and a Safety Evaluation Report. Collectively, the aforementioned steps are typically completed within 30 months leading up to a final decision by the Nuclear Regulatory Commission. It should be noted that license renewal schedules are dependent on available staff resources, the number of current and projected applications under review by the Commission, the complexity of the particular review, applicant timeliness in responding to requests for additional information and the coordination of the timing for on-site audits and inspections.

During the renewal process, the *Advisory Committee on Reactor Safeguards* is responsible for conducting an independent safety review of all license renewal applications and performs an evaluation of the renewal analysis conducted by Nuclear Regulatory Commission staff. This independently appointed Committee provides a forum where experts representing numerous technical perspectives provide advice that is factored into the Commission's decision-making process. All license renewal meetings of the *Advisory Committee on Reactor Safeguards* are open to the public and any member of the public may request an opportunity to provide written or verbal testimony during the Committee meeting.

Public participation plays an important part in the license renewal process. There are several opportunities for the public to question how an existing nuclear power plant will be managed during the period of extended operation and information provided by the licensee is made available to the public in a variety of ways. Shortly after the Nuclear Regulatory Commission receives a renewal application, a public meeting is held near the nuclear power plant to provide the public with information regarding the license renewal process and to obtain public input on the scope of the Nuclear Regulatory Commission's environmental review. An additional public meeting is held by the Nuclear Regulatory Commission to solicit comments on the site specific environmental review. The public may submit written comments on the draft environmental report, the Nuclear Regulatory Commission staff review of the renewal application and the *Advisory Committee on Reactor Safeguards* evaluations, findings and recommendations. Additionally, all evaluations, findings, recommendations and public meetings are posted on the Nuclear Regulatory Commission's website. Key meetings are publically announced through press releases and published in the *Federal Register*. It should be noted that concerns may be litigated in an adjudicatory hearing if any party that would be adversely affected requests a hearing. In addition, members

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of the public may petition the Nuclear Regulatory Commission for consideration of issues other than the management of the effects of aging during the period of extended operation of the plant.