|  |  |  |
| --- | --- | --- |
| **WANO Event Report WANO Atlanta Centre, 2013-0007** | **Earthquake Results in Emergency Preparedness Plan Activation Diablo Canyon 1, 21/10/2012** | **Revision Number00 - Posted date09/01/2013** |

*None*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Unit (Year) : | Diablo Canyon 1 (1985) | | Additional Units : | Diablo Canyon 2 | | Reactor Type : | PWR | | Reactor Manufacturer : | Westinghouse (WH) | | Plant Designer : | Pacific Gas & Electric Company | | Event Date : | 21/10/2012 | | INES : | N/A | | **OE Station Information Contact**   **WANO Information Contact** Name : Bob Ciminel , Email : ciminelrj@wano.org , Phone : + 1 770 644 8310 Fax : +1 770 644 85 |

|  |  |
| --- | --- |
| Reference : | INPO OE 301145 |



http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegOECT Information

Summary  
A 5.3 magnitude earthquake occurred approximately 90 miles north of the plant resulting in an Unusual Event being declared. No damage occurred at the plant as a result of this seismic event.  
  
Causes  
The motion felt in Unit 1 and Unit 2 control rooms was caused by a 5.3 magnitude earthquake which occurred approximately 90 miles north of the plant.  
  
Keywords  
earthquake,seismic event  
  
References

http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegSummary

A 5.3 magnitude earthquake occurred approximately 90 miles north of the plant resulting in an Unusual Event being declared. No damage occurred at the plant as a result of this seismic event.

http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegDescription

An earthquake was felt on site at approximately 0009 PDT on 10/21/2012. DCPP had confirmed two out of three of the criteria for declaring an Unusual Event were met (i.e. the earthquake was felt in the control room and the earthquake was confirmed by the USGS [U.S. Geological Survey] Web site). All the necessary walk downs and equipment checks were performed and verified no damage to the plant. Both units remained stable at 100% power.

http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegConsequences

An earthquake was felt, requiring the declaration of an Unusual Event. The event was non-consequential because all necessary walk downs and equipment checks were performed and verified no damage to the plant. Both units remained stable at 100% power.

http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegAnalysis/Comments

The motion felt in Unit 1 and Unit 2 Diablo Canyon Control Room was caused by a 5.3 magnitude earthquake which occurred approximately 90 miles north of the plant.

http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegCorrective Actions

All the necessary equipment checks, tests, and walk downs of the plant and intake structure were completed to verify no damage had occurred due to the earthquake. No damage was identified.

http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegAttachments

http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegCoded Fields

|  |  |  |
| --- | --- | --- |
| **Field** | **Code** | **Description** |
| Category | 08 | Other events involving plant safety or reliability |
| Consequences | 10 | Non consequential or near miss |
| Systems | 000 | NONE or Unidentified |
| Components | 000 | UNIDENTIFIED or no specific component involved (This code to be used where inappropriate human action is the direct cause of the event) |
| Status | 110 | Steady Power Operation |
| Activity | 05 | Normal equipment operations formerly Normal Operations (before 2012-06) |
| Group | 490 | All Groups |
| Direct Cause | 0704 | Earthquake |
| Root Cause |  |  |
| Causal Factor |  |  |

*CONFIDENTIALITY NOTICE: Copyright © 1987-2012 World Association of Nuclear Operators (WANO). All rights reserved. Not for sale or commercial use. This document is protected as an unpublished work under the copyright laws of all countries which are signatories to the Berne Convention and the Universal Copyright Convention. Unauthorised reproduction is a violation of applicable law. Translations are permitted. This document and its contents are confidential and shall be treated in strictest confidence. In particular, except with the prior written consent of the WANO Coordinating Centre, this document shall not be transferred or delivered to any third party and its contents shall not be disclosed to any third party or made public, unless such information comes into the public domain otherwise than in consequence of a breach of these obligations.  
  
LIABILITY DISCLAIMER NOTICE: This information was prepared in connection with work sponsored by the WANO. Neither WANO, WANO members, nor any person acting on the behalf of them (a) makes warranty or representation, expressed or implied, with respect to the accuracy, completeness, or usefulness of the information contained in this document, or that use of any information, apparatus, method or process disclosed in this document may not infringe on privately owned rights, or (b) assumes any liabilities with respect to the use of, or for damages resulting from the use of any information, apparatus, method, or process disclosed in this document.*

|  |  |  |
| --- | --- | --- |
| **WANO Event Report WANO Atlanta Centre, 2013-0008** | **Earthquake Results in Emergency Preparedness Plan Activation Seabrook 1, 16/10/2012** | **Revision Number00 - Posted date09/01/2013** |

*None*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Unit (Year) : | Seabrook 1 (1990) | | Additional Units : |  | | Reactor Type : | PWR | | Reactor Manufacturer : | Westinghouse (WH) | | Plant Designer : | United Engineers & Constructors (UE&C) | | Event Date : | 16/10/2012 | | INES : | N/A | | **OE Station Information Contact**   **WANO Information Contact** Name : Bob Ciminel , Email : ciminelrj@wano.org , Phone : + 1 770 644 8310 Fax : +1 770 644 85 |

|  |  |
| --- | --- |
| Reference : | INPO OE 301212 |



http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegOECT Information

Summary  
Due to an earthquake felt by control room operators and confirmed by a reliable source, an unusual event was declared. Following confirmation that all safety related equipment was functioning per design and that no plant damage resulted from the tremor, the unusual event was exited. News reports listed the earthquake as a magnitude 4.5.  
  
Causes  
The cause of earthquake was natural phenomena.  
  
Keywords  
earthquake  
  
References

http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegSummary

Due to an earthquake felt by control room operators and confirmed by a reliable source, an Unusual Event was declared at 1920 on 10/16/12. Following confirmation that all safety related equipment was functioning per design and that no plant damage resulted from the tremor, the Unusual Event was exited at 01:49am. News reports listed the earthquake as a magnitude 4.5.

http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegDescription

During a refueling outage, due to an earthquake felt by control room operators on duty and confirmed by a reliable source, an Unusual Event was declared at 1920 on 10/16/12.   
  
The earthquake occurred shortly after 19:00 and was centered 58 miles away in Hollis Center, Maine. Although no seismic alarm was received in the control room, review of emergency response procedures determined that declaration of an Unusual Event was warranted. That declaration was made at 19:20 and notification of the states was completed 6 minutes later. The Technical Support Center was fully staffed by 19:40.   
  
The Emergency Response team worked with Operations to coordinate a comprehensive inspection of all safety related equipment, components and structures. An immediate walk down was performed by Operations of all in-service safety related equipment. This was followed up by Engineering performing a detailed plant walk down using their post seismic event procedure. They were accompanied by the NRC senior resident. I&C Maintenance reviewed the data from the seismic recorders and monitoring system and confirmed that no thresholds for recorders or alarm setpoints had been exceeded.   
  
Following confirmation that all safety related equipment was functioning per design and that no plant damage resulted from the tremor, the Unusual Event was exited at 01:49am.   
  
News reports listed the earthquake as a magnitude 4.5.

http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegConsequences

An earthquake was felt, requiring the declaration of an Unusual Event. The event was non-consequential because all necessary walk downs and equipment checks were performed and verified no damage to the plant.

http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegAnalysis/Comments

Natural Phenomena

http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegCorrective Actions

Immediate Actions: A comprehensive inspection of all safety related equipment, components and structures was conducted; no damage was identified.

http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegAttachments

http://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/collapse.jpeghttp://www.wano.org/OperatingExperience/OE_Database_2012/Images/OEDB/expand.jpegCoded Fields

|  |  |  |
| --- | --- | --- |
| **Field** | **Code** | **Description** |
| Category | 08 | Other events involving plant safety or reliability |
| Consequences | 10 | Non consequential or near miss |
| Systems | 000 | NONE or Unidentified |
| Components | 000 | UNIDENTIFIED or no specific component involved (This code to be used where inappropriate human action is the direct cause of the event) |
| Status | 160 | Refuelling Operations or Open Vessel - All some fuel inside core |
| Activity | 60 | Fuel Handling / Refuelling Operations |
| Group | 490 | All Groups |
| Direct Cause | 0704 | Earthquake |
| Root Cause |  |  |
| Causal Factor |  |  |

*CONFIDENTIALITY NOTICE: Copyright © 1987-2012 World Association of Nuclear Operators (WANO). All rights reserved. Not for sale or commercial use. This document is protected as an unpublished work under the copyright laws of all countries which are signatories to the Berne Convention and the Universal Copyright Convention. Unauthorised reproduction is a violation of applicable law. Translations are permitted. This document and its contents are confidential and shall be treated in strictest confidence. In particular, except with the prior written consent of the WANO Coordinating Centre, this document shall not be transferred or delivered to any third party and its contents shall not be disclosed to any third party or made public, unless such information comes into the public domain otherwise than in consequence of a breach of these obligations.  
  
LIABILITY DISCLAIMER NOTICE: This information was prepared in connection with work sponsored by the WANO. Neither WANO, WANO members, nor any person acting on the behalf of them (a) makes warranty or representation, expressed or implied, with respect to the accuracy, completeness, or usefulness of the information contained in this document, or that use of any information, apparatus, method or process disclosed in this document may not infringe on privately owned rights, or (b) assumes any liabilities with respect to the use of, or for damages resulting from the use of any information, apparatus, method, or process disclosed in this document.*