

---

**From:** Hoc, HOO X  
**Sent:** Friday, September 08, 2017 11:29 AM  
**To:** Miller, Barry  
**Subject:** FW: POTENTIAL IMPACTS: NPP, 11km SSW of Paredon, Mexico (us2000ahv7 Version 3)  
**Attachments:** shakecast\_report-us2000ahv7-3.pdf

FYI - Laguna Verde is below the threshold for "Impact Potential"

---


**From:** Stapleton, Bernard  
**Sent:** Friday, September 08, 2017 11:24 AM  
**To:** Hoc, HOO X <HOO.Hoc@nrc.gov>  
**Subject:** FW: POTENTIAL IMPACTS: NPP, 11km SSW of Paredon, Mexico (us2000ahv7 Version 3)

HOOs,

This is the report I received from Shakecast. Use as appropriate in your updates to management (EDO briefing).

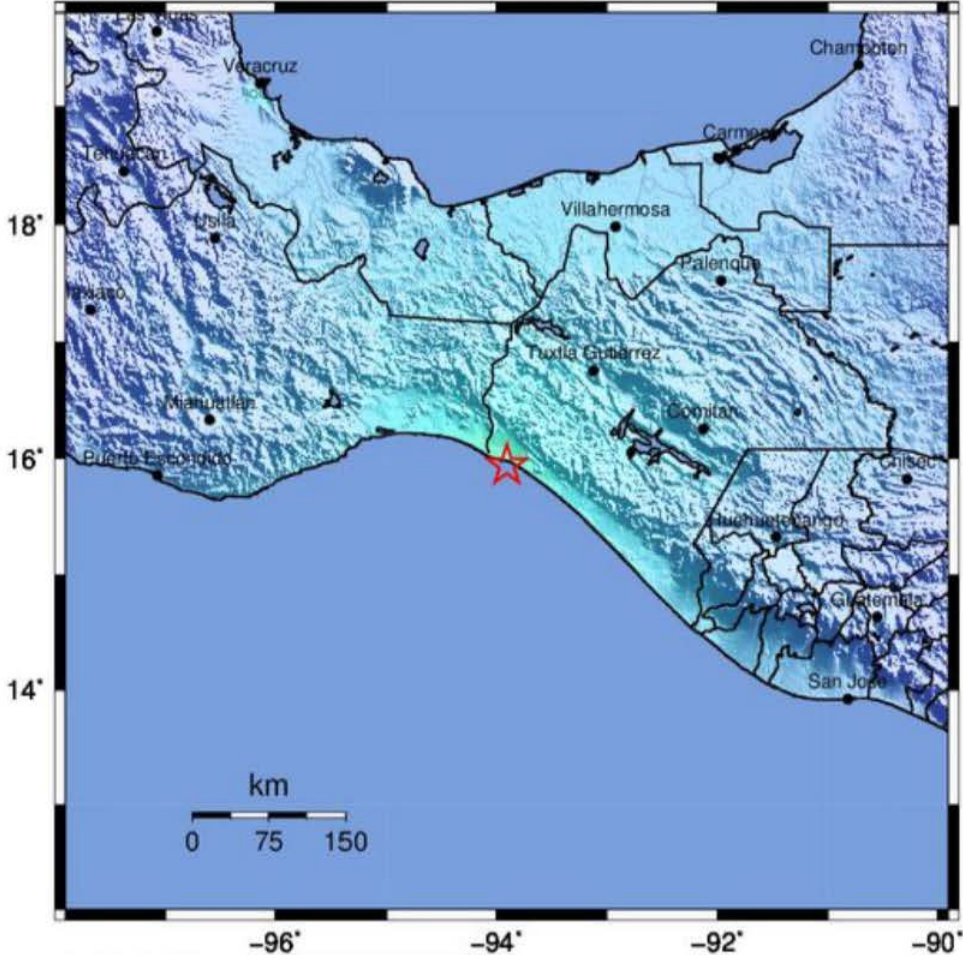
Bern

**From:** ShakeCast [mailto:shakecast@usgs.gov]  
**Sent:** Friday, September 08, 2017 9:15 AM  
**To:** ShakeCast <shakecast@usgs.gov>  
**Subject:** [External\_Sender] POTENTIAL IMPACTS: NPP, 11km SSW of Paredon, Mexico (us2000ahv7 Version 3)

	<p>United States Nuclear Regulatory Commission</p>	<p><b>ShakeCast Report</b> National Earthquake Information Center (NEIC)</p>
<p><b>Potential Impacts: NPP</b></p>		
<p>This report supersedes any earlier reports about this event. This is a computer-generated message and has not yet been reviewed by an Engineer or Seismologist. Epicenter and magnitude are published by the <a href="#">USGS</a>. Reported magnitude may be revised and will not be reported through ShakeCast. The <a href="#">USGS</a> website should be referenced for the most up-to-date information. Inspection prioritization emails will be sent shortly if ShakeCast determines significant shaking occurred at user's infrastructure. An interactive version of this report is accessible on the <a href="#">ShakeCast internet/intranet website</a>.</p>		
<p><b>Earthquake Details</b></p>		

# USGS ShakeMap : OFFSHORE CHIAPAS, MEXICO

Sep 8, 2017 05:01:40 UTC M 5.7 N15.94 W93.91 Depth: 54.5km ID:us2000ahv7



Map Version 3 Processed 2017-09-08 13:09:56 UTC

PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Mod./Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	<0.05	0.3	2.8	6.2	12	22	40	75	>139
PEAK VEL.(cm/s)	<0.02	0.1	1.4	4.7	9.6	20	41	86	>178
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

Scale based upon Worden et al. (2012)

Name: (not assigned at this time)

Magnitude: 5.7

ShakeMap ID: us2000ahv7-3

Location: 11km SSW of Paredon, Mexico

Latitude-Longitude: 15.9366, -93.9075

Local Time: 2017-09-07 23:01:40

## Summary of Potential Impacts: NPP

Total number of facilities analyzed: **1**

Summary by impact rank:

<b>High</b>	<b>0</b>	High impact potential
<b>Medium-High</b>	<b>0</b>	Medium-High impact potential
<b>Medium</b>	<b>0</b>	Medium impact potential
<b>Low</b>	<b>0</b>	Low impact potential
<b>Below Threshold</b>	<b>1</b>	No impact potential

### List of Potentially Impacted Facilities: NPP

NPP presented in the table below are sorted in order of impact potential. The list includes the top 200 facilities in the area of shaking. The complete list is available on the web server.

<b>NPP</b>	<b>Facility ID</b>	<b>Location</b>	<b>Impact Potential</b>	<b>PGA</b>
Laguna Verde	MEX	Laguna Verde	<b>Below Threshold</b>	0.05

### ShakeCast Server

ShakeCast Web: [https://shakecast.cr.usgs.gov/sc\\_nrc/](https://shakecast.cr.usgs.gov/sc_nrc/)

Software: **ShakeCast V3**

Notification Generated: **2017-09-08 07:09:21**

Reported by: **Server ID 1000**

Template Type: **default.txt**

Template Modified: **10-26-2015**

Questions about ShakeCast? Contact Administrator at [shakecast@usgs.gov](mailto:shakecast@usgs.gov).

[END]





## Magnitude 5.7 - OFFSHORE CHIAPAS, MEXICO

Version 3

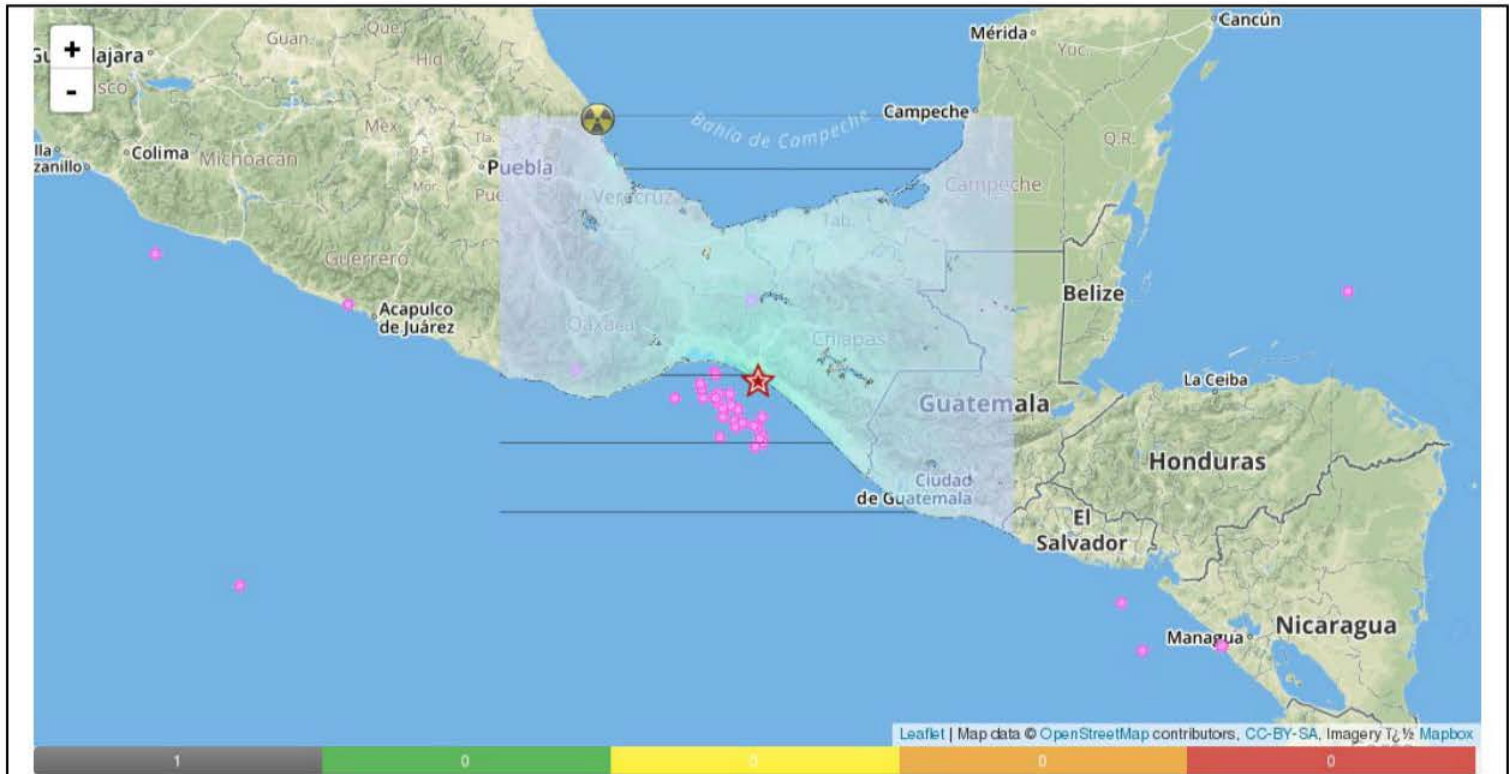
Origin Time: 2017-09-08 05:01:40 GMT

Created: 2017-09-08 13:13:43 GMT

Latitude: 15.93660 Longitude: -93.90750

Depth: 54.48 km

These results are from an automated system and users should consider the preliminary nature of this information when making decisions relating to public safety. ShakeCast results are often updated as additional or more accurate earthquake information is reported or derived.



Type	ID	Name	Ep. Distance (km)	Inspection Priority	PGA (%g)	PGV (cm/s)	PSA 1s (%g)	MMI	RG 1.166 App. A	Vs30 (m/s)
NPP	MEX	Laguna Verde	495.39	Below Threshold	0.05	0.11	0.12	II	Not Exceeded	292.285

\* MMI level may extend beyond map boundary; some facilities may not appear on the map due to space restriction

## M 5.7, 11km SSW of Paredon, Mexico

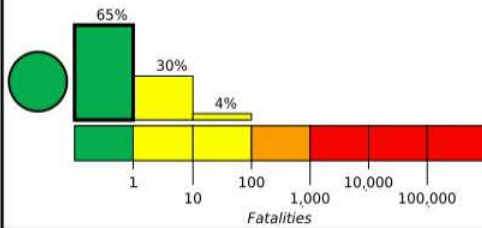
Origin Time: 2017-09-08 05:01:40 UTC (Fri 00:01:40 local)

Location: 15.9366° N 93.9075° W Depth: 54.5 km

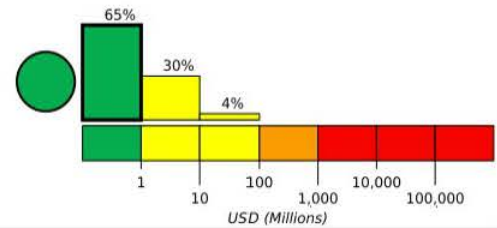
Created: 8 hours, 10 minutes after earthquake

### Estimated Fatalities

Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.



### Estimated Economic Losses

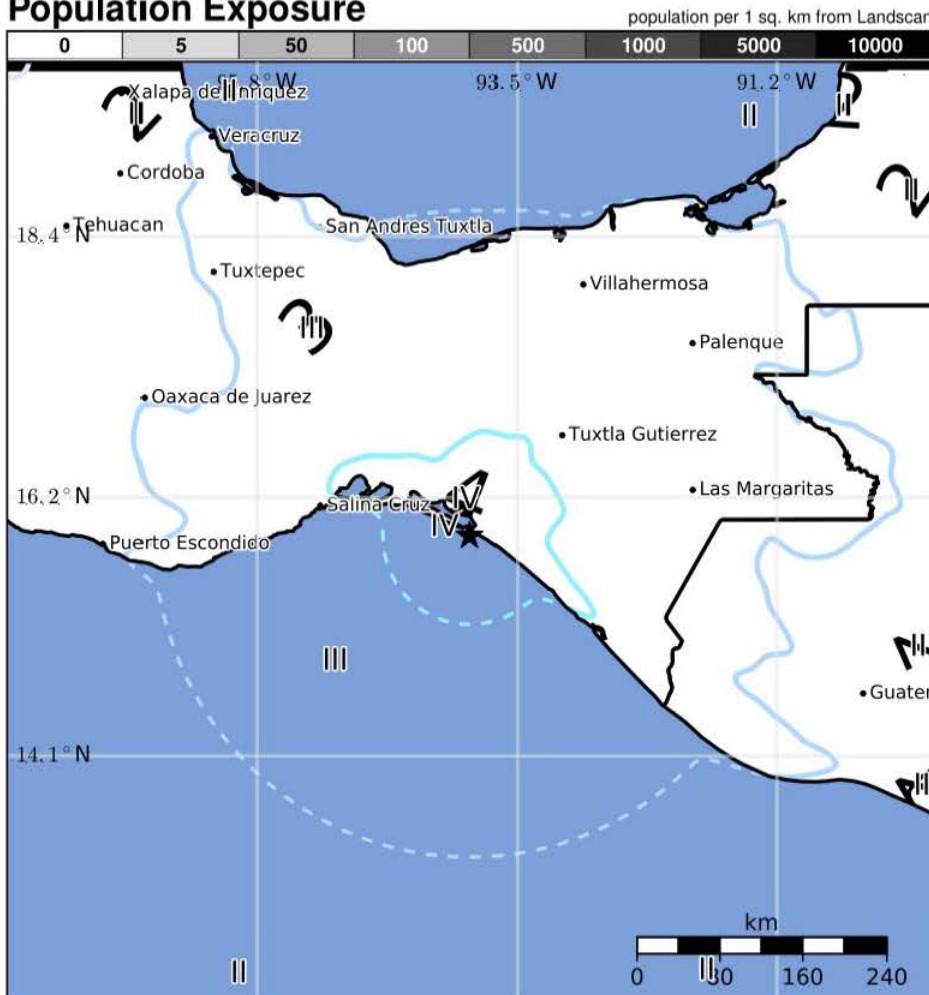


### Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)	15k*	32,302k	1,064k	0	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy

\*Estimated exposure only includes population within the map area.

### Population Exposure



### Structures

Overall, the population in this region resides in structures that are a mix of vulnerable and earthquake resistant construction. The predominant vulnerable building types are adobe block with concrete bond beam and ductile reinforced concrete frame construction.

### Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1994-07-04	383	6.4	V(118k)	2
1975-11-05	158	5.0	VI(21k)	1
1973-08-28	384	7.2	VII(847k)	600

Recent earthquakes in this area have caused secondary hazards such as landslides that might have contributed to losses.

### Selected City Exposure

from GeoNames.org

MMI	City	Population
IV	San Luqueno	1k
IV	Doctor Belisario Dominguez (La Barra)	1k
IV	Paredon	6k
IV	Manuel Avila Camacho (Ponte Duro)	2k
IV	Tres Picos	5k
IV	Tonala	33k
III	Tuxtla	481k
III	Villahermosa	362k
III	Oaxaca	263k
II	Guatemala City	995k
II	Xalapa de Enriquez	425k

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.

<https://earthquake.usgs.gov/earthquakes/eventpage/us2000ahv7#pager>

bold cities appear on map.

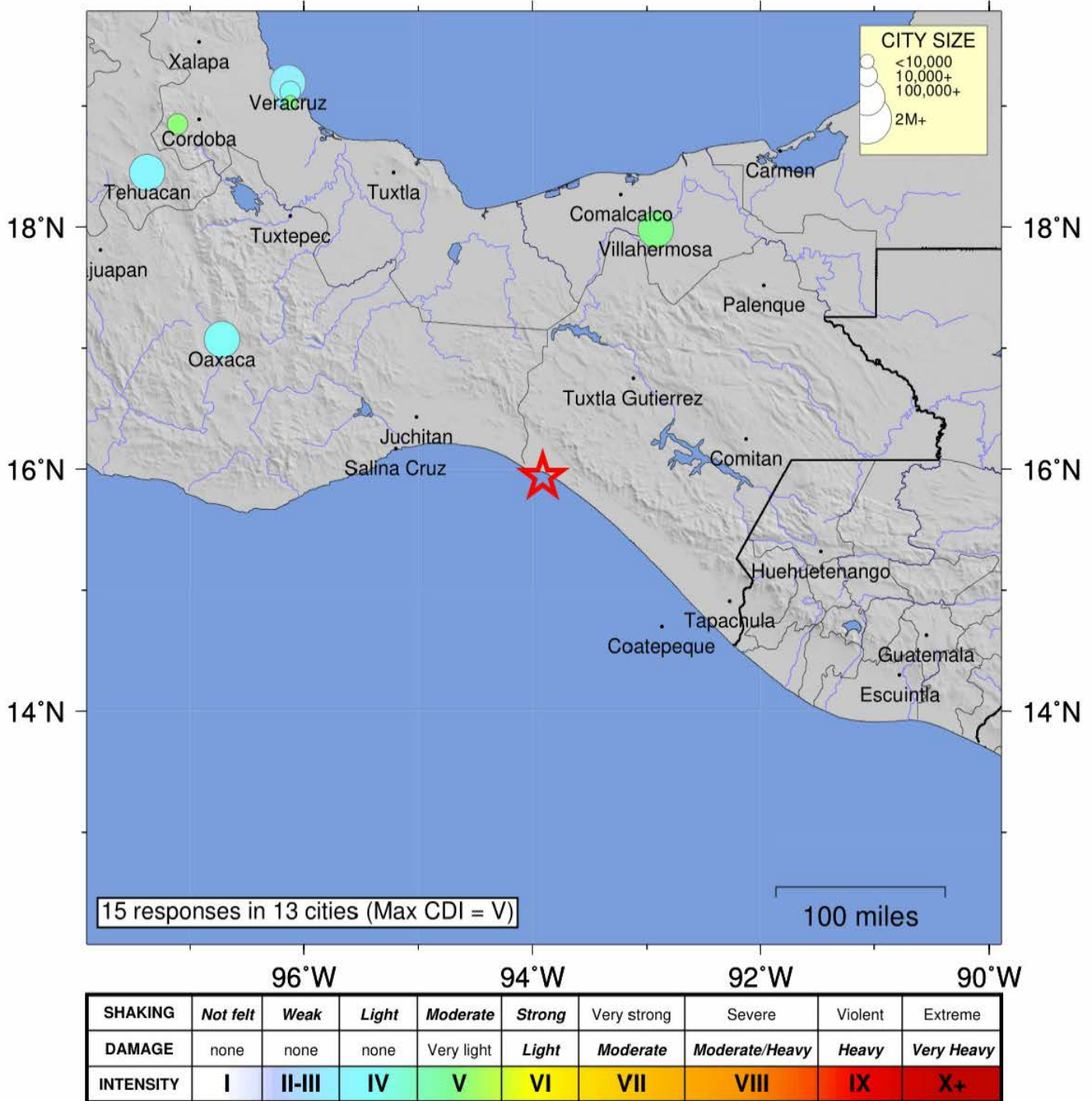
(k = x1000)

Event ID: us2000ahv7



# USGS Community Internet Intensity Map OFFSHORE CHIAPAS, MEXICO

Sep 8 2017 12:01:40 AM local 15.9366N 93.9075W M5.7 Depth: 54 km ID:us2000ahv7



Processed: Fri Sep 8 13:09:16 2017 vmdyfi1

**From:** [Hoc, HOO X](#)  
**To:** [Rini, Brett](#)  
**Cc:** [Miller, Barry](#)  
**Subject:** RE: Hurricane in Mexico  
**Date:** Thursday, August 10, 2017 9:42:00 AM  
**Attachments:** [image001.jpg](#)

---

No notifications from CNSNS.

We get periodic StormGeo reports of their weather predictions. They were calling for it being Category 1 around 4 AM in that area this morning.

Headquarters Operations Officer

U. S. Nuclear Regulatory Commission

Phone: 301-816-5100

Fax: 301-816-5151

email: [hoo.hoc@nrc.gov](mailto:hoo.hoc@nrc.gov)

secure email: [hoo1@nrc.sgov.gov](mailto:hoo1@nrc.sgov.gov)

color NRC seal



---

**From:** Rini, Brett

**Sent:** Thursday, August 10, 2017 9:40 AM

**To:** Hoc, HOO X <[HOO.Hoc@nrc.gov](mailto:HOO.Hoc@nrc.gov)>

**Cc:** Miller, Barry <[Barry.Miller@nrc.gov](mailto:Barry.Miller@nrc.gov)>

**Subject:** Hurricane in Mexico

Good morning,

Has there been any notification to the Ops Center regarding Hurricane Franklin and possible impacts on the Laguna Verde NPP?

Thanks,

Brett

***Brett A. Rini***

Sr. International Relations Officer

International Cooperation and Assistance

Office of International Programs

U.S. Nuclear Regulatory Commission

301-287-9063 (w)

(b)(6) c)

[brett.rini@nrc.gov](mailto:brett.rini@nrc.gov)

---

**From:** Miller, Barry  
**Sent:** Friday, September 08, 2017 10:43 AM  
**To:** Hoc, HOO X  
**Cc:** Rini, Brett  
**Subject:** RE: Earthquake of magnitude 8.1 strikes off Mexico's Pacific coast

Ok, thank you.

-Barry

---

**From:** Hoc, HOO X  
**Sent:** Friday, September 08, 2017 10:37 AM  
**To:** Miller, Barry <Barry.Miller@nrc.gov>  
**Cc:** Rini, Brett <Brett.Rini@nrc.gov>  
**Subject:** RE: Earthquake of magnitude 8.1 strikes off Mexico's Pacific coast

We have not received anything from Mexico. USGS told us about the quake and CNN reported the event. But nothing from CNSNS.

Headquarters Operations Officer  
U. S. Nuclear Regulatory Commission  
Phone: 301-816-5100  
Fax: 301-816-5151  
email: [hoo.hoc@nrc.gov](mailto:hoo.hoc@nrc.gov)  
secure email: [hoo1@nrc.sgov.gov](mailto:hoo1@nrc.sgov.gov)



---

**From:** Miller, Barry  
**Sent:** Friday, September 08, 2017 10:15 AM  
**To:** Hoc, HOO X <[HOO.Hoc@nrc.gov](mailto:HOO.Hoc@nrc.gov)>  
**Cc:** Rini, Brett <[Brett.Rini@nrc.gov](mailto:Brett.Rini@nrc.gov)>  
**Subject:** FW: Earthquake of magnitude 8.1 strikes off Mexico's Pacific coast

Good morning – has the HOO received any notifications from the Mexican regulator (CNSNS) regarding the status of Laguna Verde Nuclear Power Plant in Mexico given the early morning earthquake?

Thanks,  
Barry

Barry W. Miller  
Sr. International Relations Officer  
Office of International Programs  
U.S. Nuclear Regulatory Commission  
Email: [Barry.Miller@nrc.gov](mailto:Barry.Miller@nrc.gov)  
Office Phone: 301-287-9075



---

**From:** Breskovic, Clarence  
**Sent:** Friday, September 08, 2017 2:55 AM  
**To:** Breskovic, Clarence <[Clarence.Breskovic@nrc.gov](mailto:Clarence.Breskovic@nrc.gov)>  
**Subject:** Earthquake of magnitude 8.1 strikes off Mexico's Pacific coast

The earthquake took place approximately 450 miles from the Laguna Verde NPP on the opposite coast.

## **M8.0 - OFFSHORE CHIAPAS, MEXICO**

### Preliminary Earthquake Report

Magnitude 8.0

Date-Time

- 8 Sep 2017 04:49:18 UTC
- 7 Sep 2017 23:49:18 near epicenter
- 7 Sep 2017 23:49:18 standard time in your timezone

Location 15.029N 93.807W

Depth 35 km

Distances

- 97 km (60 miles) SW (221 degrees) of Pijijiapan, Chiapas, Mexico
- 107 km (66 miles) WSW (245 degrees) of Mapastepec, Chiapas, Mexico
- 117 km (73 miles) S (182 degrees) of Tonal, Chiapas, Mexico
- 165 km (102 miles) W (275 degrees) of Tapachula, Chiapas, Mexico
- 356 km (221 miles) W (278 degrees) of GUATEMALA CITY, Guatemala

