

From: [Lombard, Mark](#)
To: [Lombard, Mark](#)
Subject: NSIR update
Date: Friday, October 4, 2019 5:11:33 PM
Attachments: [UAV One-Pager.docx](#)

A few items this wonderful Friday afternoon:

- This week has been Drone-a-palooza for ssure. With the two drone swarm flyovers at PVNGS early in the week getting a lot of attention in the agency and outside (e.g., folks who work in the EEOB), we learned a lot and briefed a lot. And our UAV/drone Commission paper should go up to them next week. See the attached one (two really) pager we put together. It is intended for internal and external stakeholders. DOE is working closely with FAA to designate areas over NPPs are no-fly zones and we are working to communicate to licensees what that means. At this time, we are not planning to impose new requierments on licensees, but the landscape is dynamic and changing. May also be an invite ffor me to travel downtown for a limited atendance NSC/CISR meeting to discuss.

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Have an awesome weekend!
mark

NRC's Ongoing Assessment of Unmanned Aerial Vehicles

Key Messages:

- Non-Responsive Record
- Non-Responsive Record
- Non-Responsive Record
- Non-Responsive Record

Facts:

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- As an example, the NRC received a report of recent suspicious UAV activity from a nuclear power plant licensee. The licensee has kept the NRC informed of their interaction with law enforcement and the FAA, along with their planned actions.

- Non-Responsive Record

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- Non-Responsive Record

From: [Bowen, Jeremy](#)
To: [Helton, Shana](#); [Thomas, Brian](#); [Rivera, Alison](#); [Rivers, Joseph](#); [Stone, Rebecca](#)
Subject: FYI - Drones Stakeholder Engagement Document
Date: Wednesday, October 23, 2019 8:03:52 AM
Attachments: [UAV One-Pager.docx](#)

Same attachment
on pgs. 65

FYI,

For your records, attached is the final version of the document that was created to support external stakeholder engagement related to drones. It was shared with the regional DRS Directors & Deputies, NRR, OPA, OCA, OEDO, and the Commission. I believe Mark also shared it with DHS and DOE.

Jeremy

Non-Responsive Record

From: Hoc, HOO X <HOO.Hoc@nrc.gov>
Sent: Friday, October 4, 2019 7:27 AM
To: Lombard, Mark <Mark.Lombard@nrc.gov>
Cc: (b)(6) Pearson, Laura <Laura.Pearson@nrc.gov>
Subject: RE: SID Notice: 10/3/2019 * * * OFFICIAL USE ONLY--SECURITY RELATED INFORMATION * * *


In PWS we've identified 42 drone SIDs in the past 3 years (57 SIDs since 12/27/14), but we are cc'ing ILTAB duty officer and BC to give you an official answer since they track these events.

Headquarters Operations Officer

U. S. Nuclear Regulatory Commission

 phone: 301-816-5100

 fax: 301-816-5151

 hoo.hoc@nrc.gov

 secure: hoo1@nrc.sgov.gov



From: Lombard, Mark
Sent: Friday, October 04, 2019 7:05 AM
To: Hoc, HOO X <HOO.Hoc@nrc.gov>
Subject: Re: SID Notice: 10/3/2019 * * * OFFICIAL USE ONLY--SECURITY RELATED INFORMATION * * *

Good morning. Can you all easily find out how many drone SIDs we have had over the last 3 years?

----- Original Message -----

From: "Hoc, HOO X" <HOO.Hoc@nrc.gov>

Date: Thu, October 03, 2019 10:12 PM -0400

To: "Hoc, HOO X" <HOO.Hoc@nrc.gov>

Subject: SID Notice: 10/3/2019 * * * OFFICIAL USE ONLY--SECURITY RELATED INFORMATION * * *

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SID#: SID-03000 ; Seabrook ; Open

~~The following attached report may contain "law enforcement sensitive" information. Please do not relay this information to individuals who do not have a "need to know".~~

Headquarters Operations Officer
U.S. Nuclear Regulatory Commission
Phone: 301-816-5100
Fax: 301-816-5151
email: hoo.hoc@nrc.gov
secure e-mail: hoo1@nrc.sgov.gov

From: [Lombard, Mark](#)
To: [Warner, Deanna](#)
Subject: Fw: SID Notice: 9/30/2019
Date: Sunday, March 22, 2020 12:47:18 PM
Attachments: [SID.pdf](#)

From: Hoc, HOO X <HOO.Hoc@nrc.gov>
Sent: Monday, September 30, 2019 3:22 AM
To: Hoc, HOO X <HOO.Hoc@nrc.gov>
Subject: SID Notice: 9/30/2019

~~FOR OFFICIAL USE ONLY - LIMITED DISTRIBUTION~~

SID#: SID-02998 ; Palo Verde ; Open

~~The following attached report may contain "law enforcement sensitive" information. Please do not relay this information to individuals who do not have a "need to know".~~

Headquarters Operations Officer
U.S. Nuclear Regulatory Commission
Phone: 301-816-5100
Fax: 301-816-5151
email: hoo.hoc@nrc.gov
secure e-mail: hoo1@nrc.sgov.gov

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~~*This report may contain "law enforcement sensitive" information*~~

~~*Please do not relay this information to individuals*~~

~~*who do not have a "need to know"*~~

Event #: SID-02998

Security Event Description

Site: Palo Verde

Facility Type: Power Reactor - Operating

Event Date/Time: 09/29/2019 America/Phoenix

Notify Date/Time: 9/30/2019 12:47:00 AM (EDT)

Last Update Date: 9/30/2019 1:22:11 AM (EDT)

Event Type: Drone

H.E.R.O.: Thomas Kendzia

Caller Affiliation: Palo Verde Security

Officer noticed several drones (5 or 6) flying over the site. The drones are circling the 3 unit site inside and outside the Protected Area. The drones have flashing red and white lights and are estimated to be 200 to 300 hundred feet above the site. It was reported the drones had spotlights on while approaching the site that they turned off when they entered the Security Owner Controlled Area. Drones were first noticed at 2050 MST and are still over the site as of 2147 MST. Security Posture was normal, which was changed to elevated when the drones were noticed. The Licensee notified one of the NRC resident inspectors.

As of 0237 EST, no drones have been observed at the site since 2230 MST. Officers believe drones were over 2 feet in diameter.

This report is open pending ILTAB/ILTAT review. ILTAB/ILTAT will update or close this report when appropriate.

From: [Lombard, Mark](#)
To: [Warner, Deanna](#)
Subject: Fw: SID Notice: 10/1/2019 - 2nd occurrence noted as update to SID-02998 is now SID-02999
Date: Sunday, March 22, 2020 12:47:10 PM
Attachments: [SID.pdf](#)

From: Hoc, HOO X <HOO.Hoc@nrc.gov>
Sent: Wednesday, October 2, 2019 12:54 PM
To: Hoc, HOO X <HOO.Hoc@nrc.gov>
Subject: SID Notice: 10/1/2019 - 2nd occurrence noted as update to SID-02998 is now SID-02999

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This event was originally entered as an update to SID-02998, but is administratively now a new event in the database.

SID#: SID-02999 ; Palo Verde ; Open

~~The following attached report may contain "law enforcement sensitive" information. Please do not relay this information to individuals who do not have a "need to know".~~

Headquarters Operations Officer
U.S. Nuclear Regulatory Commission
Phone: 301-816-5100
Fax: 301-816-5151
email: hoo.hoc@nrc.gov
secure e-mail: hoo1@nrc.sgov.gov

~~**FOR OFFICIAL USE ONLY - LIMITED DISTRIBUTION**~~

~~*This report may contain "law enforcement sensitive" information*~~

~~*Please do not relay this information to individuals*~~

~~*who do not have a "need to know"*~~

Event #: SID-02999

Security Event Description

Site: Palo Verde

Facility Type: Power Reactor - Operating

Event Date/Time: 09/30/2019 America/Phoenix

Notify Date/Time: 10/1/2019 12:13:00 AM (EDT)

Last Update Date: 10/1/2019 1:09:22 PM (EDT)

Event Type: Drone

H.E.R.O: Donald Norwood

Caller Affiliation: Palo Verde Security

*** This event was originally entered as an update to SID-02998, but is administratively now a new event in the database. ***

Four (4) drones were observed flying beginning at 2051 MST and continuing through the time of this report (2113 MST). As occurred last night, the drones are flying in, through, and around the owner controlled area, the security owner controlled area, and the protected area. Also, as last night, the drones are described as large with red and white flashing lights. Spotlights have not been noted tonight.

The licensee has not changed their security posture. The licensee continues to monitor the drones.

As of 0355 EDT, no drones have been observed at the site since before 0020 MST. LLEA surveyed the area and were unable to locate drones on the ground or anyone controlling the drones.

The licensee notified FAA (both Phoenix and Albuquerque), FBI, DHS, and the Maricopa Sheriff's Office. The licensee notified the NRC Resident Inspector.

Notified R4DO (Proulx) and ILTAB (b)(6)

This report is open pending ILTAB/ILTAT review. ILTAB/ILTAT will update or close this report when appropriate.

From: [Rivers, Joseph](#)
To: [Pearson, Laura](#); [Lombard, Mark](#); [Helton, Shana](#); [Bailey, Marissa](#); [Holian, Brian](#)
Cc: [Thomas, Brian](#); [Bowen, Jeremy](#); [Rivera, Alison](#); [Morris, Scott](#); [Atack, Sabrina](#)
Subject: RE: PVGS - UAV overflights (an update)
Date: Thursday, October 3, 2019 7:31:10 AM

There are a number of websites that provide such information. Here is one below:

<https://cqrcengage.com/auvsi/statelegmap>

I would point out that restricted airspace will do nothing to stop an adversarial attack and even the detection systems identified earlier in this email chain have limited success rates, and there is even lower likelihood that law enforcement will arrive quickly enough to actually engage with the pilots. We should be focusing our attention on getting Federal regulations and laws changed to allow sites to be defended and to identify engineering fixes that would mitigate an adversarial attack before there our licensed facilities become vulnerable.

From: Pearson, Laura

Sent: Thursday, October 03, 2019 7:15 AM

To: Lombard, Mark <Mark.Lombard@nrc.gov>; Rivers, Joseph <Joseph.Rivers@nrc.gov>; Helton, Shana <Shana.Helton@nrc.gov>; Bailey, Marissa <Marissa.Bailey@nrc.gov>; Holian, Brian <Brian.Holian@nrc.gov>

Cc: Thomas, Brian <Brian.Thomas@nrc.gov>; Bowen, Jeremy <Jeremy.Bowen@nrc.gov>; Rivera, Alison <Alison.Rivera@nrc.gov>; Morris, Scott <Scott.Morris@nrc.gov>; Atack, Sabrina <Sabrina.Atask@nrc.gov>

Subject: Re: PVGS - UAV overflights (an update)

The last time I looked at the state laws on drones was about a year ago, and that that time the number of states with similar laws was in the high teens with more pending. There has been a big push for states to enact these laws because the federal government has limited authority to enact similar laws, since most drone activity that is worrisome occurs close to the ground/structures- and the federal government's authority starts higher than that, if I recall, over 500 feet. (This is why FAA's drone regulations get shot down in court constantly- lack of authority to create the regulations.) By contrast the states have vast power over this, and a lot (if not most at this point) have laws pertaining to drone activity at power plants.

----- Original Message -----

From: "Lombard, Mark" <Mark.Lombard@nrc.gov>

Date: Thu, October 03, 2019 3:45 AM -0400

To: "Pearson, Laura" <Laura.Pearson@nrc.gov>, "Rivers, Joseph" <Joseph.Rivers@nrc.gov>, "Helton, Shana" <Shana.Helton@nrc.gov>, "Bailey, Marissa" <Marissa.Bailey@nrc.gov>, "Holian, Brian" <Brian.Holian@nrc.gov>

CC: "Thomas, Brian" <Brian.Thomas@nrc.gov>, "Bowen, Jeremy" <Jeremy.Bowen@nrc.gov>, "Rivera, Alison" <Alison.Rivera@nrc.gov>, "Morris, Scott" <Scott.Morris@nrc.gov>, "Atack, Sabrina" <Sabrina.Atask@nrc.gov>

Subject: Re: PVGS - UAV overflights (an update)

Thanks Laura. Do we know if other NPP states have similar laws?

----- Original Message -----

From: "Pearson, Laura" <Laura.Pearson@nrc.gov>
Date: Wed, October 02, 2019 8:42 PM -0400
To: "Lombard, Mark" <Mark.Lombard@nrc.gov>, "Rivers, Joseph" <Joseph.Rivers@nrc.gov>, "Helton, Shana" <Shana.Helton@nrc.gov>, "Bailey, Marissa" <Marissa.Bailey@nrc.gov>, "Holian, Brian" <Brian.Holian@nrc.gov>
CC: "Thomas, Brian" <Brian.Thomas@nrc.gov>, "Bowen, Jeremy" <Jeremy.Bowen@nrc.gov>, "Rivera, Alison" <Alison.Rivera@nrc.gov>, "Morris, Scott" <Scott.Morris@nrc.gov>, "Atack, Sabrina" <Sabrina.Atask@nrc.gov>
Subject: Re: PVGS - UAV overflights (an update)

Mark, to answer your question, Arizona law prohibits flying a drone within 500 feet horizontally or 250 feet vertically of any critical facility, which includes power plants of any type.

----- Original Message -----

From: "Lombard, Mark" <Mark.Lombard@nrc.gov>
Date: Wed, October 02, 2019 7:25 PM -0400
To: "Rivers, Joseph" <Joseph.Rivers@nrc.gov>, "Helton, Shana" <Shana.Helton@nrc.gov>, "Bailey, Marissa" <Marissa.Bailey@nrc.gov>, "Holian, Brian" <Brian.Holian@nrc.gov>
CC: "Thomas, Brian" <Brian.Thomas@nrc.gov>, "Bowen, Jeremy" <Jeremy.Bowen@nrc.gov>, "Rivera, Alison" <Alison.Rivera@nrc.gov>, "Holian, Brian" <Brian.Holian@nrc.gov>, "Morris, Scott" <Scott.Morris@nrc.gov>, "Bailey, Marissa" <Marissa.Bailey@nrc.gov>, "Atack, Sabrina" <Sabrina.Atask@nrc.gov>, "Pearson, Laura" <Laura.Pearson@nrc.gov>
Subject: Re: PVGS - UAV overflights (an update)

PS-let's please not brief this out further until I get to Dan and we have a bit more info.

----- Original Message -----

From: "Lombard, Mark" <Mark.Lombard@nrc.gov>
Date: Wed, October 02, 2019 7:14 PM -0400
To: "Rivers, Joseph" <Joseph.Rivers@nrc.gov>, "Helton, Shana" <Shana.Helton@nrc.gov>, "Bailey, Marissa" <Marissa.Bailey@nrc.gov>, "Holian, Brian" <Brian.Holian@nrc.gov>
CC: "Thomas, Brian" <Brian.Thomas@nrc.gov>, "Bowen, Jeremy" <Jeremy.Bowen@nrc.gov>, "Rivera, Alison" <Alison.Rivera@nrc.gov>, "Holian, Brian" <Brian.Holian@nrc.gov>, "Morris, Scott" <Scott.Morris@nrc.gov>
Subject: Re: PVGS - UAV overflights (an update)

Since drones are aircraft and they are not violating a law, what is the action that can be taken legally if they locate the operator?

Mark

----- Original Message -----

From: "Rivers, Joseph" <Joseph.Rivers@nrc.gov>
Date: Wed, October 02, 2019 6:55 PM -0400
To: "Helton, Shana" <Shana.Helton@nrc.gov>, "Bailey, Marissa" <Marissa.Bailey@nrc.gov>, "Lombard, Mark" <Mark.Lombard@nrc.gov>, "Holian, Brian" <Brian.Holian@nrc.gov>

CC: "Thomas, Brian" <Brian.Thomas@nrc.gov>, "Bowen, Jeremy" <Jeremy.Bowen@nrc.gov>, "Rivera, Alison" <Alison.Rivera@nrc.gov>, "Stone, Rebecca" <Rebecca.Stone@nrc.gov>, "Miller, Geoffrey" <Geoffrey.Miller@nrc.gov>
Subject: Re: PVGS - UAV overflights (an update)

Actually, the system they describe is not a counter-UAV technology. It is a detection system that could aid in the identification of the people flying the UAVs. However, at this time, the pilots are not violating any laws or regulations by flying over the plant.

Joe

From: Helton, Shana <Shana.Helton@nrc.gov>
Sent: Wednesday, October 2, 2019 5:05 PM
To: Bailey, Marissa <Marissa.Bailey@nrc.gov>; Lombard, Mark <Mark.Lombard@nrc.gov>; Holian, Brian <Brian.Holian@nrc.gov>
Cc: Thomas, Brian <Brian.Thomas@nrc.gov>; Bowen, Jeremy <Jeremy.Bowen@nrc.gov>; Rivers, Joseph <Joseph.Rivers@nrc.gov>; Rivera, Alison <Alison.Rivera@nrc.gov>; Stone, Rebecca <Rebecca.Stone@nrc.gov>; Miller, Geoffrey <Geoffrey.Miller@nrc.gov>
Subject: FYI: PVGS - UAV overflights (an update)
FYI, note the below re: licensee using counter-drone technology. (Thanks, Geoff, for passing this along.)

From: Miller, Geoffrey
Sent: Wednesday, October 02, 2019 5:03 PM
To: Helton, Shana <Shana.Helton@nrc.gov>; Bowen, Jeremy <Jeremy.Bowen@nrc.gov>
Cc: Lantz, Ryan <Ryan.Lantz@nrc.gov>
Subject: FW: PVGS - UAV overflights (an update)
FYI – in case you hadn't heard through other channels.

From: (b)(6)
Sent: Wednesday, October 02, 2019 3:31 PM
To: Morris, Scott <Scott.Morris@nrc.gov>; Lantz, Ryan <Ryan.Lantz@nrc.gov>; Miller, Geoffrey <Geoffrey.Miller@nrc.gov>; Vogel, Anton <Anton.Vogel@nrc.gov>; Inverso, Tara <Tara.Inverso@nrc.gov>
Cc: Dixon, John <John.Dixon@nrc.gov>; Haire, Mark <Mark.Haire@nrc.gov>
Subject: PVGS - UAV overflights (an update)

Scott,

At the urging of John Dixon (thanks, John!), I just received a call from Sean Darnseif and Michael Casenza (?) from PVGS to update me on the activities their site is undertaking to attempt to identify the UAV operators from earlier this week.

According to our discussions just now, PVGS is working closely with their regulatory affairs staff, LLEA, DHS, FAA, and FBI to address the UAV overflights. Further, PVGS intends to deploy a counter-drone technology from Area Armor to attempt to identify the UAV operators. This technology apparently has a 13-mile radius and can determine the specific point from which the UAVs were launched so that LLEA / site security can locate the operator(s). I confirmed with the licensee that they have coordinated the use of this counter drone technology with FAA, and they informed me that this technology only locates the UAVs; it does not interfere with the flight pattern of those UAVs in any way. PVGS has also

staffed an additional team on the backshift to help search for any potential operators should additional UAVs be observed later this week.

I have conveyed this information to my FBI counterpart with whom I have been coordinating this week for his awareness, and I have asked both PVGS and the FBI to keep me informed of any additional information they may receive during the course of this investigation. I will also share this information with ILTAB for their on-call duty officer's awareness.

Thank you,

(b)(6)

Intelligence Specialist

Response Coordination Branch, Region IV

U.S. Nuclear Regulatory Commission

Tel: (b)(6)

(b)(6)

From: Dixon, John
Sent: Tuesday, October 15, 2019 1:38 PM
To: Peabody, Charley; You, David; Bywater, Russ
Subject: FW: NRC Daily Notes for October 11, 2019

FYI. The drone issue is getting higher views, not specific to PV but it may have driven it faster.

John L. Dixon
Chief, Branch D
817-200-1574

(b)(6) (c)

From: NRC Intranet <drupal@nrc.gov>
Sent: Friday, October 11, 2019 3:01 PM
To: NRC Daily Notes <NRCDailyNotes@nrc.gov>
Subject: NRC Daily Notes for October 11, 2019

~~OFFICIAL USE ONLY - Sensitive Internal Info (default)~~

Daily Notes for October 11, 2019

NSIR

Non-Responsive Record

~~(OUO - SI)~~

(b)(5)

NMSS

Non-Responsive Record

Non-Responsive Record

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