

American Submariners Inc.
4370 Twain Ave.
San Diego, CA 92120-3404



The Silent Sentinel November 2019



Our Creed and Purpose

To perpetuate the memory of our shipmates who gave their lives in the pursuit of their duties while serving their country. That their dedication, deeds, and supreme sacrifice be a constant source of motivation toward greater accomplishments. Pledge loyalty and patriotism to the United States of America and its Constitution.

In addition to perpetuating the memory of departed shipmates, we shall provide a way for all Submariners to gather for the mutual benefit and enjoyment. Our common heritage as Submariners shall be strengthened by camaraderie. We support a strong U.S. Submarine Force.

The organization will engage in various projects and deeds that will bring about the perpetual remembrance of those shipmates who have given the supreme sacrifice. The organization will also endeavor to educate all third parties it comes in contact with about the services our submarine brothers performed and how their sacrifices made possible the freedom and lifestyle we enjoy today.



U.S. Submarine Veterans San Diego Base

Base Commander
Warren Branges
wgbranges@gmail.com
619-461-0464

Membership – Change of Address
Ray Ferbrache
2955 Lloyd St.
San Diego, CA 92117
arayz@san.rr.com
619-972-4474

Treasurer
Mike Cosgrove
619-559-4004
1557 Swallow Drive,
El Cajon, CA 92020
grover02@aol.com

Senior Vice Commander
Manny Burciaga
619-921-5877
8406 Alado Place, El Cajon
CA 92021
mpburcia@cox.net

Newsletter Editor
Mike HYMAN
3639 Midway Drive, B-320
San Diego, CA 92110-5254
(619)223-9344
stamps@fortunesofwar.com

Assistant Editor / Photographer
Jack Kane
619-602-1801
2498 Boyington Place
El Cajon, CA 92020
jkane32@cox.net
subvetparades@cox.net

Junior Vice Commander
Joe Peluso
858-693-0627
8380 Pallux Way
San Diego, CA 92126
jpeluso@pacbell.net

Base Storekeeper
Paul Hitchcock

Chief of the Boat/Middle East Liason
Bob Bissonnette
H: 619-644-8933
Cell: 619-251-7095

Secretary/Parade Chairman
Jack Kane
619-602-1801
2498 Boyington Place
El Cajon, CA 92020
jkane32@cox.net
subvetparades@cox.net

Chaplain
David Martinez
858-565-6165
4283 Mt. Herbert Ave
San Diego Ca 92117

Scholarship Chairman
Paul Hitchcock

The Silent Sentinel via Email

To all of my Shipmates and families who currently receive our Great newsletter via the mail who would like it sent via email or continue to receive it via mail, please fill out the form and mail it to the base or myself. We are trying to cut the cost of the newsletter down from \$3700 to about \$1900 a year. By receiving the Silent Sentinel via email will cut down the printing and mailing cost. The other plus to receiving it via email is you can save it on your computer and not have the paper lying around the house.

A subscription to the Silent Sentinel newsletter will be available to surviving family members via internet email, at no charge, upon notification of the Membership Chairman. If a printed hard-copy is preferred, via US Post Office delivery, an annual donation of \$5.00 will be requested to cover costs.

NAME: _____

ADDRESS: _____

CITY/STATE/ZIP: _____

EMAIL: _____

TELEPHONE: _____

Would like the SILENT SENTINEL emailed: YES _____ NO _____

USSVI Base Commander
c/o VFW Post 3787
4370 Twain Ave.
San Diego, CA 92120-3404

*DUE TO LOGISTICS CONSTRAINTS, ALL INPUTS FOR THE SILENT SENTINEL MUST BE IN MY HAND NO LATER THAN **ONE WEEK** AFTER THE MONTHLY MEETING. IF I DO NOT RECEIVE IT BY THIS TIME, THE ITEM WILL NOT GET IN. NO EXCEPTIONS! MIKE*

November Meeting

Our monthly meeting is held on the second Tuesday of the month at VFW Post 3787, 4370 Twain Ave., San Diego. Our next meeting will be on *November 12th*. The post is located one-half block West of Mission Gorge Road, just north of I-8. The meeting begins at 7 p.m. The E-Board meets one hour earlier at 6 p.m.

*Check us out on the World Wide Web
www.ussvisandiego.org*

Binnacle List

*Len Heiselt, Sergio Frost, David Martinez, Chris Sultana, Bob Oberting,
Matt Baumann, Joe Peluso and Tony Dack*

Submarine Losses in November

Originally Compiled by C J Glassford



USS Albacore (SS-218)

Lost on Nov 7, 1944 with the loss of 85 men when she was sunk off northern Hokkaido. Winner of two Presidential Unit Citations, Albacore was on her eleventh war patrol and struck a mine while running submerged near a Japanese patrol craft that had detected her.

USS Growler (SS-215)

Lost on Nov 8, 1944 with the loss of 86 men when she was sunk in the South China Sea. Winner of two Navy Unit Commendations. Growler was on her 12th war patrol, and was lost while attacking a convoy, probably as a result of a depth charge attack or victim of a circular run by one of her own torpedoes.

USS Scamp (SS-277)

Probably sunk on November 16, 1944 with the loss of 83 men near Tokyo Bay. On her 8th war patrol, she may have been damaged by a mine and was trailing oil, which helped Japanese coast defense vessels locate and destroy her with depth charges.

USS Corvina (SS-226)

Lost on Nov 16, 1943 with the loss of 82 men when she was sunk just south of Truk. Corvina was on her 1st war patrol and appears she was lost to the torpedoes of a Japanese submarine.

USS Sculpin (SS-191)

Lost on Nov 19, 1943 with the loss of 43 men near Truk. Severely damaged by depth charges after attacking an enemy convoy, Sculpin continued to fight on the surface. When the captain was killed, the crew abandoned ship and scuttled Sculpin. 41 men were taken prisoner but only 21 survived the war. Among those not abandoning ship was CAPT Cromwell, aboard as a potential wolfpack commander, he rode the Sculpin down, fearing that vital information in his possession might be compromised under torture. For this, CAPT Cromwell was posthumously awarded the Congressional Medal of Honor.



San Diego Base, United States Submarine Veterans Inc.
Minutes of Meeting - 10 September 2019
At VFW Hall, 4370 Twain Avenue, San Diego CA 92120

1904 - Base Commander Warren Branges called the meeting to order.

Conducted Opening Exercises - Pledge of Allegiance lead by **Chief of the Boat Bob Bissonnette**.

Base Commander Warren Branges lead the opening prayer and gave an Eternal Patrol Report. Lieutenant C. Dean Read, USN passed on 8 September 2019 in Madison WI. LT Read qualified on USS Razorback SS-394 in 1955. He also served on USS Rock SS-284.

Base Treasurer Mike Cosgrove conducted Tolling of the Boats for boats lost in the month of September.

Base Secretary Jack Kane recognized Past Commanders, dignitaries and guests

Base Secretary Jack Kane announced 15 members and 1 guest present.

Base Treasurer Mike Cosgrove presented the Treasurer's report. A copy of the Report will be filed with these minutes. Minutes of the September 2019 meeting were published in the Sentinel.

Base Commander Warren Branges called for Committee Reports

Binnacle List - Len Heiselt, Sergio Frost, David Martinez, Chris Sultana, Bob Oberting, Matt Baumann, Joe Peluso and Tony Dack are on Binnacle.

Parade Committee - Chairman Jack Kane announced the next parade is San Diego Veterans Day Parade on 11 November. Parade starts at 1000 vice 1100. Muster between 0900 and 1000 on Harbor Drive near Grape Street. Maps and further information will be sent via e-mail upon receipt from the Parade Committee. No Parking is available for this Parade. Best suggestion is for members to park at Trolley Stations (Old Town, Grossmont, etc.) and take the Green Line to Little Italy/County Center Station. The Seaport Village and Santa Fe Depot Stations are close to dispersal area for this parade. We have received a invitation to participate in the Linda Vista Parade on 25 April 2020.

Membership Committee - **Chairman Ray Febrache** was absent. Base Commander reported we have 240 members.

Scholarship Committee - **Committee Chairman Paul Hitchcock. No Report.** The Base Commander will query USSVI National as to the feasibility and process needed if we were to turn our Scholarship Program over to the USSVI Charitable Foundation. Revamping the Scholarship Program will be put on the agenda for November.

Storekeeper - **Chairman Paul Hitchcock.** Base Commander noted that 2020 Calendars should be available in early December.

Breakfast Committee - **Chairman Base Commander Warren Branges.** The Next Breakfast is 29 December 2019. The VFW Kitchen Supervisor will hold a certification/re-cert class for Food Handlers at 0700 that morning. Check the list on the bulletin board for your status. Some volunteers are needed for this Breakfast. The last Breakfast on 29 Sept netted \$200.99

52 Boat Memorial - **Chairman Base Commander Warren Branges.** - The next All Flags Day will be Monday, 11 November 2019 (Veterans Day) and then on 7 December 2019. We will post flags at 0700 and retrieve them at 1730 both days. The revamp of 52 Boat Memorial has begun. They also have begun procuring new polished concrete markers to replace damaged markers. All granite markers will be replaced with polished concrete on a graduated schedule. The Committee will start a fund drive soon to finance the changeover. Flyers announcing the new drive will be available soon.

Float Committee - Chairmanship open. The battery on the float has been replaced.

Eagle Scout Program - **Co Chairs Nihil Smith and Glenn Gerbrand.** An Eagle Scout Court of Honor for Troop 959 will be held at 1700 on 27 October at San Carlos Unified Methodist Church.

1915 - Presentations. Base Secretary Jack Kane gave a short presentation on his recent trip to the Navy Museum at the Navy Yard in Washington DC.

1919 - Base Commander called for a break. 50/50 Raffle held.

1935 - Unfinished Business

FLOAT STORAGE STATUS - Naval Base San Diego will be opening a new RV storage lot adjacent to the Mini Mart at Rosecrans and Nimitz. We will be moving the float to that lot when it opens. When we make the move we will obtain and install a new float cover. The Base anticipates opening the lot in November/December (or later).

BASE ROSTER AND EMAIL VERIFICATIONS are continuing. If you a verification email please respond. We are still reconciling the Base List with National List.

VFW STORAGE AREA. We will help the VFW rehab the storage garage after the Solar Parking Area is completed. The Base Commander will call for a working party later in the year or early next year.

WREATH LAYING AT 52 BOATS. The Wreath Laying tentatively scheduled for 7 December 2019 will have to be moved to 6 December 2019. The Park is being used on 7 December for The Jingle Bell Run. Base Commander will work out details of the event with the Point Loma Association. We do have funds from last year to cover most of the anticipated cost for this year's event. Donations for this year's wreaths are now being accepted. See the Base Commander if you want to donate. Each wreath costs approximately \$15.00. We will still put out flags on 7 December.

December 7th Remembrance and Memorial Service. USS BONEFISH Base will host this service at the Veterans Amphitheater on the grounds of the Riverside National Cemetery. 22495 Van Buren Blvd, Riverside, CA 92518. The ceremony will begin at 1000.

CHANGE TO MEMORIAL DAY CEREMONY/TOLLING OF THE BOATS. The Base Commander is working with CSS-11 to determine a new starting time for the Memorial Day Ceremony. Starting the ceremony later in the day would help eliminate the inherent conflict with the concurrent ceremony at Rosecrans National Cemetery. The Commander will also discuss base access with CSS-11 and Naval Base Point Loma for the event. We may be able to use pre-approved access list rather than escorts.

REPORT ON POTENTIAL MEETING PLACE RELOCATION. Shipmate Kip Casper and Chief of Boat Bob Bissonnette are contacting area venues. No venue has been identified to date. The Elks Club in El Cajon has not answered our inquiries. Using the facilities at Spring Valley VFW and/or La Mesa American Legion would require us to change our meeting day and time.

LIVE STREAMING OF OUR MEETINGS. The COB is looking into equipment/platforms/services to be able to stream the meetings on the Internet. Past Base Commander Fred Fomby will find out which USSVI Bases use Live Streaming and ask them for some insight.

2000 - NEW BUSINESS

DATE FOR 2020 SUBVET PICNIC. It was moved and passed that we hold our next SUBVET Picnic on 18 July 2020. 25 July 2020 was the second choice. The Base Commander will reserve Smuggler's Cove for 18 July 2020.

WAYS AND MEANS COMMITTEE will meet before the end of the year to develop a new budget.

FINANCIAL REVIEW - A Financial Review Committee headed by Chris Stafford will do an audit of the Base Financial in the next 60 days. Contact Chris if you can help with this audit.

2012 - Good of the Order

From the Floor - National will be sending messages soon about:

- Amazon Smile
- Adding an additional District to the Western Region
- The Charitable Foundation will be taking Scholarship Applications soon

The 2020 NATIONAL CONVENTION - will be in Tucson AZ - 24 through 30 Aug 2020.

The 2021 NATIONAL CONVENTION - will be in Orlando at Rosen Shingle Creek.

The 2022 National Convention - will be in Buffalo NY

SILENT SERVICE TV SHOW is available at olgoat.com

DEEP SUBMERGENCE REUNION will be held in San Diego 25-27 September 2020.

MEETING ATTENDANCE. A discussion was held on how to increase attendance. Special Recognition was afforded Charlie Tate for being able to attend at 97 years young.

The Meeting was adjourned at 2018.

/s/ **Jack E. Kane**

Jack Kane, Secretary

Sailing List for 8 October 2019

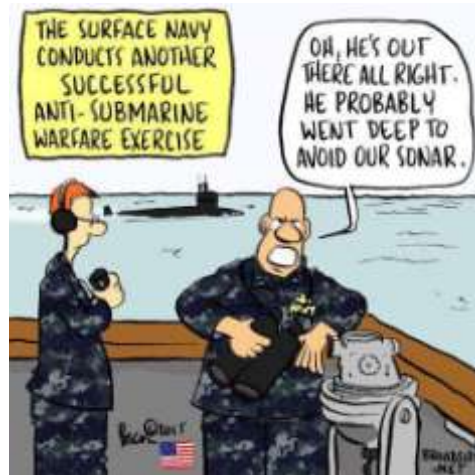
Members

WWII Veteran Charlie Tate
Matt Baumann
Bob Bissonnette
Warren Branges
Mike Cosgrove
Ed Farley
Bob Farrell
Fred Fomby
Dean Hickman

Jack Kane
William Pickering
Chris Stafford
Nihil D. Smith
Dirk Stahl
Richard A. Steele

Guests

Jessie Chang Farley



Silent Sentinel **EXCLUSIVE!**



Judith and Gary Murphy have graciously consented to allow the Silent Sentinel to republish their collection of USS Whale, SS-239, ship's newspaper, "THE RAG," from the WW-II era! Gary's father, Rex Murphy, served as Whale's Engineering Officer. The Silent Sentinel will now include a copy of The Rag in each issue. The Murphy's and I hope that you will find it an interesting reading experience.

On the evening of 19 March, *Whale* sighted two large freighters and one torpedo boat or destroyer as escort. Just after daylight the next morning, the submarine finally worked into a favorable attack position; she fired spreads of three torpedoes at each freighter, and hit both. The first target, tentatively identified as *Mogamigawa Maru*, sank rapidly by the stern. The second, a cargo ship resembling *Arizona Maru*, was plagued by several heavy internal explosions following a second torpedo hit. *Whale*, mistaking these secondary explosions for bombs, went deep. Upon discovering her mistake, she started to surface but was greeted by a barrage of depth charges from the escort. *Whale* dove again but again came under attack – this time from the air – when she attempted to return to examine the wreckage. The submarine suffered extensive damage during this attack. This was by far *Whale's* closest escape.. It is now 31 March 1943: "The Rag" No. 14.

"A bald headed man has less hair to comb, but more face to wash....."

WHO DONE WHAT ON THE SEAT OF THE AFTER BATTERY SEA HEAD?

Tonight one of the members of the crew discovered that some person of a low animal like nature had defecated all over the seat of the sea head in the after battery, leaving it for some other luckless person to clean up. Now,-----it is a known fact that often times we have trouble in answering the calls of nature, but, if the call is so urgent, that we can't make it to the receptacle provided, the least we can do, is to clean up the mess. The person who did it, was either born with a silver spoon in his mouth and had others take care of his dirty work or he is just one of the type sometimes found that just doesn't give a damn. Then again, it may have been an accident while blowing the head, a flare back you might say. But, it should have been cleaned up.

Yuhas, the ship's yeoman, will gladly let anyone use his typewriter-----But, this is probably what you'll find.

Oh, typing!
The yeoman at his best!
He rushes to his seat,
But everything's messed!
The machin's too high,
It tilts to and fro.
The ribbon's dry,
The seat's too low!
The e's are o's
The space bar skips,
The noise grows,
and the rooler trips!
The writing blurs,
The carriage rocks.
The tabulator alurs,
The shift key looks!
The margin's release,
The keys don't work!
I'll have no peace
Until I find the jerk,
Who left this mess for me.
..Written by ODIN, A.W.....

MINUTE BIOGRAPHIES

or
WHO'S WHO ON THE WHALE
.....By Bundy.....

No. 7 CREEPER CANTOR

Listen, youse guys, and I will give wid de dope on de Creeper. I guess all of youse jerks tink dat just because de creeper don't make wid de lip dat he is a dope. But bend an ear and I will give youse de business on him.

De Creeper is a Brooklyn boy from over on de north side by Rat Alley, and he is a big noise in de North Brooklyn Benevolent and Protective Association. He is a guy what has plenty on the marbles and is also able to make wid de schmals.

When de big brawl begun out here in Poill Harbor, de Creeper decides to join wid de Navy. Of course dis makes de gang back in brooklyn very proud of de Creeper, but to make de story right I will have to tell de real reason why the Creeper enlists. Youse see, being a great admirer of such various tings like tommy guns, pineapples and such, de Creeper figures dat dere ain't no place like de Navy to furnish him wid an education on such articles. He is going to bone up on all dis gear so dat when he gets back home he can stream line de Association. For example, de Creeper has decided dat such lovely tings like dat 20MM would be de cat's meow for cracking de Foist National.

And de Creeper also has a debt to pay off to Big Feet O'Brien, over in Jolsey. It seems dat Big Feet told de Creeper dat being a Gunner's Mate in de Navy was sissy stuff, so wen de war is over de Creeper will take a couple of de boys and pay Big Feet a call. Perhaps dey will spray a liddle lead around and about Jolsey or maybe even fix up Big Feet wid a nice cement coffin in de East River.

So from now on don't anybody tink dat de Creeper is a liddle lilly or maybe even a pansy. He is a tough guy from de old days.

TOMORROW: DGC.....

Washington: Shoppers found many of the nation butcher shops bare as meat rationing began Monday. Bu, there were promises of adequate supplies by misweek of April demands that tapered off after a week end of frantic buying. Most sections had ample supplies of butter, hard cheese and shortening oils.

DATED PACIFIC WAR:

American ground and sea commanders have decided at a Washington conference on the strategy to pulverize Japan and the Generals and Admirals went back to the Pacific theater to start dealing out the medicine the treacherous Japanese asked for when they bombed Pearl Harbor. The war department disclosed today the meeting which was held in Washington began three weeks ago at the call of the U.S. joint chiefs of staff. It was called to quote acquaint commanders in the Pacific with the policies and plans decided upon at the recent Casablanca conference which concern the future actions in which their theaters will be involved unquote. No hint of the nature of plans for an offensive was contained in the brief announcement but it was recalled that the decisions of the Casablanca conference already had been reported to commanders in China and India by General H.H. Arnold commanding the Army Air Forces and Field Marshal Sir John Bill British member of the combined chiefs of staffs in Washington.

The Navy announced today that American bombers attacking Japanese air fields at Buin and Kahili three hundred miles northwest of Guadalcanal in the Solomons scored hits on a runway and protected dispersal areas then returned safely to their base.

The R.A.F. set Stizwe eight miles north of Akyab in Burma ablaze. General MacArthur's Tuesday communique reported that six Japanese bombers raided Oro Bay allied base on the eastern Papuan coast Monday. It was the second successive assault on the base which is located fifty miles south of Buna. A mass raid by forty fighter escorted bombers Sunday cost the enemy at least thirteen planes and probably twenty five. In the Kai Islands allied bombers pounded the Japanese occupied town of Toel. Heavy units bombed the airdrome at Gasmata New Britain and medium units executed a night raid on the airdrome at Gloucester. The communique said the Japanese raid on Oro Bay caused slight damage and no casualties.

NEWYORK:

Major Gen. James A. Ulio Adjutant General of the U.S. Army said Monday that the eight million two hundred thousand men planned for the Army by the end of 1943, "should be regarded from the present outlook as a minimum".

ALGIERS:

Gen. Henri Geraud and Gen. George Catroux have already agreed on numerous points for political rebuilding of the French Empire overseas De Gaulle's circulars here said Monday night. Sources close to Catroux said a complete ground work for French unity would be laid within the next eight or ten days after which De Gaulle himself would come to Algiers to give his approval.

Washington:

A Bill to empower the government to seize and operate plants where war work is halted by labor disputes quote or other causes unquote was revised Monday the Senate judicial committee voting unanimously to recommend its passage.

NEWYORK:

A Tokyo dispatch broadcast Monday by the Berlin Radio reported that Japanese boys from fifteen to seventeen years of age would be included in a broadened program of military aviation training.

CHUNGKING:

The Chinese High Command announced Monday that Chinese forces in Hupeh province had recaptured a town on the south bank of the Yangtze river. of successes which once more expose Japanese communications to the Base of Ichang to Chinese attacks.

MOSCOW:

Red Army troops battling toward the great German base at Smolensk now only thirty two miles from the closest Soviet columns have recaptured four more villages and on the southern front have repulsed two German attempts to break the defensive line on the upper Donets the Russians reported Monday. Fighting over the long fronts appeared to be mainly local engagements and there were "NO MATERIAL CHANGES" the midday communique declared. One of the villages in the Smolensk sector was taken after hand to hand fighting by a column pushing westward from Vyazma and more than one hundred Germans were killed in this battle the communique said

Washington: President Roosevelt has filled out his corps of half a dozen white house administrative assistants by selection of Jonathan Daniels of Raleigh N.C. The precise duties of the new assignment were not stated.

WASHINGTON: A medium sized Norwegian merchant vessel was torpedoed and sunk by an enemy submarine late in February, in mid atlantic the Navy announced Monday. The survivors were landed at Boston.

WASHINGTON: Leaders of major farm organization boards were expected at a white house conference Tuesday to urge President Roosevelt to give food administrator, Chester C. Davis great authority over farm prices.

NEW YORK: Three students of Munich University have been executed for distributing leaflets and anti-nazi slogans the British radio said in a German language broadcast recorded here by C.B.S.

LONDON: American and British soldiers have formed an "Anglo American Legation" in London, and other chapters will be organized in Britain where Tommies and Yanks congregate.

WASHINGTON: Secretary of State Hull and British foreign Secretary Anthony Eden arranged another conference Monday prior to a formal dinner given by Hull for the visitor.

WASHINGTON: Chester C. Davis officially became war time food administrator Monday and promptly tackled his big job in a series of conferences on production and distribution problems.

BERN: A Berlin dispatch to the Basel National Zeitung said Monday the German population has been warned that use of counterfeit food cards dropped by R.A.F. bombers would be punished severely, perhaps by the death penalty.

LONDON: Maj. Gen. Sir Percy Robert Laurie provost martial of Great Britain and former assistant commissioner of London metropolitan police was charged in Bow Street court Monday with food and ration book offense.

LONDON: The British government will unveil a proposed scheme for post war international trade possibly embodying some form of international currency and a world clearing house, in a white paper to be published soon it was disclosed Monday.

LONDON: Smoke still was coiling nearly a thousand feet high over the Nazi submarine base at St. Nazaire Monday mushrooming from fires estimated to cover a quarter of the battered city, as fresh relays of allied day bombers shuttled across the channel toward occupied France, in a bombing continuation of the new all out offensive against Hitler's Europe. The air ministry declared Sunday night raid on St. Nazaire as "heavy and concentrated."

ANKARA: Extensive battles between Wugo-slav patriots and German forces and the arrival of fresh German troops in Belgrade were reported Monday in well informed Balkan quarters. In northern Serbia guerrillas were said to have destroyed a railway bridge near Kracougevatich in southern Serbia. Patriots were reported battling along a thirty five mile line between Nish and Pirot against both German and Bulgarian resistance.

WASHINGTON: A worthwhile peace is possible only if Americans try to understand the Soviet and its "place in the scheme of things to follow the war" Gardner Cowles Jr. of the office of war information said Monday night.

LONDON: An Algiers radio broadcast said Monday that general Jean Marie Bergeret whose resignation as general Henri Girauds deputy in command of civilian affairs in north Africa was announced March 16 had been appointed commander of air forces in French West Africa.

NEW YORK: A broadcast by the Moscow radio that Hans Volker described as a chief of the Nazi elite troops detachments on the German Russian front had been killed was reported Monday by the federal communications commission.

LONDON: The German radio Monday quoted Ferdinand de Brinon representative of Pierre Laval's government in Paris as saying that four thousand persons had been killed and seven thousand injured in British and American air raids on

4
France during the past eighteen months.

LONDON: The great electrical engineering plant of Siemens and Halske and other big industrial establishments were among targets badly damaged in the RAF raid on Nuremberg on the night of March 3 the air ministry office said Mon.

.fials.

The after battery is a place to sleep and rest. What say we kinda keep it that way. Youse guys what have catch as catch can lessons and Judo can go in the engine rooms just as well. REMEMBER----Rest and sleep are needed to kick the Axis in the Pantzes.

Hunter's Point Naval Shipyard

A History of pollutants, toxic waste and nuclear radiation contamination

By Wayne T. Nelson

Note: During the research of my book I stumbled upon the story of the cleanup of the shipyard for future housing and about the incredible amount of contamination including nuclear waste buried around the base. A look into the current situation revealed subsequent media investigations, as recent as last year, that turned up more contamination, cover-ups and false reports since areas were approved for housing. Since I did not do these investigations I won't cover anything more on that and this report will only cover the previous material as it pertains to those of us who spent time there and our possible exposure to these harmful elements.

I could start the story with the current cleanup that has basically been going on since the facility was decommissioned in 1974, but I prefer to give the history to show how it occurred and how I came to be involved.

THE EARLY DAYS

Long before the age of diesel engines and even steam engines and so on, San Francisco was a sea port to the sail driven ships and was instrumental in the settling of the West. Gold rushes made it prosperous as Easterners sailed to California and others came from around the world to strike it rich. But it was the businesses that supplied items and services who made the money.

Investors AW Von Schmidt and Thomas Hardy saw a need for a shipyard facility and in 1860 purchased 29 acres of land that would become Hunter's Point--records do not say who it was purchased from but because of later developments, I believe it was from the US government. The first dry dock was completed in 1866 and the 450 foot dry dock was open for business in 1870. Why it took a decade to open is not noted.

About this time, the Chinese immigrants who settled along the shoreline of Hunter's point created a lucrative shrimp fishing industry by combining their efforts; and the area later known as Bayview Hunter's Point attracted additional industry by including the fabric mills of Levi - Strauss in addition to a brewery to name just two.

THE EARLY YEARS OF WORLD WAR TWO

The shipyard grew and prospered as did the shrimp industry. By 1938 the U.S. Government had acquired the now called Bethlehem Steel Dry Docks Company. By means of the legal process of eminent domain, the government had acquired all of the other properties including the Chinese shrimp factories. By 1939 they had acquired all the properties of Bay View where they then build 12,000 homes for defense workers. In 1941 the official name of the area is changed to Hunter's Point Naval Shipyard.

THE SHIPYARD DURING 1967

I reported aboard the USS Medregal SS-480 in February 1967 in Pearl Harbor Hawaii. Fresh out of submarine school, Medregal was my first and only service boat.

She had returned from a West Pac deployment a couple of months earlier and was now tied to the pier and referred to as "building 480!" Apparently she came home to port with the engines and other equipment needing major repairs. From the time that I reported on board until May, when we left for the shipyard, we



USS Medregal home port Pearl Harbor Hawaii in February 1967

were working on the engines. Before our voyage to the shipyard, the skipper got tired of the "building 480 " title and decided to take the boat to sea for some unnecessary reason. It was then that we discovered that we really had more than just engine troubles; specifically, other equipment—for example, the drain pump—failed when we sprang a leak in maneuvering and were sinking. With flooded motors and zero propulsion we worked to recover from the scenario. We finally managed to make an airless surface from 400 feet once the motors were on line. Then they flooded again due to the steep angle. But the low pressure blow kept us afloat and we hand bailed out the maneuvering room with a bucket line to topside. After the captain was relieved of command the repairs began once more. They were only intended to get us to San Francisco under our own

power in order to avoid the embarrassment of being towed--which was under consideration by the base brass. At least we achieved this goal and only needed an escort vessel to make sure that we made it safely.

About mid-May we sailed under the Golden Gate Bridge into San Francisco Bay on our way to Hunter's Point and the dry dock in the Submarine repair facility later to be referred to as Parcel B on the contaminates plot map.

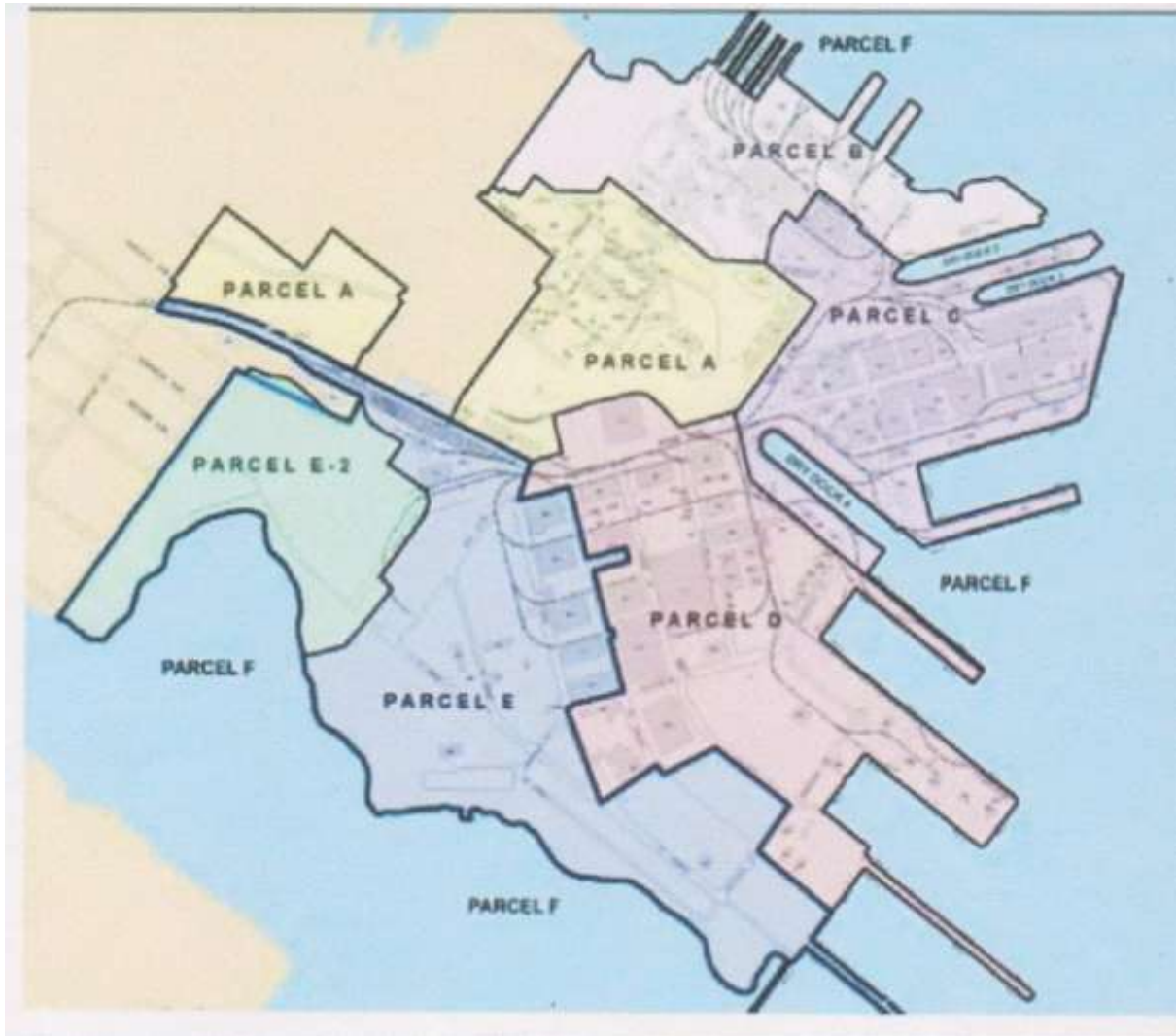
And so began an overhaul period that would take us to early December of 1967.

I suppose at the time we knew that the shipyard was a pretty dirty place. One could have probably used an air filter mask 24/7 when down by the docks and exposed to all the sand blasting dust. As enginemen, we were always exposed to diesel fuel, lubricating oil, various solvents and often paint remover whose fumes would get you high (and if you got it on your skin, burn the hell out of you). It seemed we were always stripping the paint in order to re-do something. The problems which resulted from being confined in the engine room also included exposure to asbestos from torn heat protector pads on the exhaust pipes. We were always sweeping up little piles of the stuff from forward of the engines. Of course we didn't know of any dangers at the time as you hear about now with possible links to lung cancer. So handling of asbestos in the shipyard was not given any special procedure and that was only one of the toxic substances present.

Below is a photo of the USS Medregal in dry dock at Hunter's Point during the overhaul period of 1967.



As I noted before I kind of stumbled upon the contamination issue just finding the information about the history of Hunter's Point based on a report from a friend who said the shipyard was closed years ago. In my book I cover a bit more about what happens at shipyards but because all of you pretty much know that I will get right to the core in a hurry.



The parcel map above was made to show and designate degrees of contamination on the base for cleanup and future housing site purposes. Interesting tidbit: Where the shoreline goes off the map at parcel B some shipmates and I found a Chinese tomb stone half buried in the sand. The birth and death dates were from the 1800s.



USS Indianapolis sailing into San Francisco, at Mare Island July 1945 and at sea.

MORE WW2 HISTORY TILL BASE CLOSES

In July 1945 atomic bomb parts were loaded on the USS Indianapolis at Hunters Point to be taken overseas for the bombing of Hiroshima and Nagasaki Japan. After Operation Cross Roads as it was called, the ships involved were decontaminated at Hunter's Point. Because of this and other nuclear testing, there was widespread radioactive contamination at the shipyard. I also discovered that from 1945 to 1969, the Naval Radiological Defense Laboratory (NRDL) operated at Hunter's Point. Apparently it was a secret operation as during my stay there I never saw a building or directional sign for this lab. Or perhaps it was just oversight—it is a big base. But the worst thing is that they buried radium and other radioactive waste on Parcel E. These wastes included the radioactive isotopes of Strontium, Plutonium and Cesium among others. If you have been to the shipyard you can see by the Parcel map that the area was the location of the Base Exchange, restaurants, the bowling alley and smack in the middle the baseball and athletic fields which were the main dumping areas. Parcel E is the most contaminated of the shipyard parcels. I spent some hours on Parcel E including some beer ball games on the fields but luckily most of my time was over on the other side of the base in Parcel B which was less contaminated. As it turns out the Naval Radiological Defense Laboratory was located in building 815 on Crisp Road in parcel A.



Sets from a Horror movie? No just the Naval Radiological Defense Laboratory

The following section is from an article published in the San Francisco Weekly in May 2001. The source of the information is from declassified historical documents. I think it explains a lot.

These are the reported activities of the NRDL from 1945 to 1969.

1. Oversaw the dumping of huge amounts of contaminated sand and acid into San Francisco Bay after they were used in attempts to clean irradiated ships.
2. Spread radioactive material on and off base as if were fertilizer to practice decontamination.
3. Burned radioactive fuel oil in a boiler, discharging the smoke into the atmosphere.
4. Sold radioactive ships as scrap metal to a private company in Alameda Calif.
5. Hung a source of cobalt-60, a nuclear isotope that emits high energy electromagnetic radiation similar to X-rays in San Francisco Bay for 2 weeks apparently just to see what happens.
6. Conducted human experiments that included requiring people to drink radioactive elements.
7. Experimented with significant amounts of a wide variety of long lived radiological poisons, including plutonium, cesium, uranium, thorium and radium.
8. Studied and disposed of thousands of irradiated mice, rats, dogs, goats, mules and pigs, among other animals. At one time the lab owned a ranch in Contra Costa County used specifically to raise animals for radiation testing.
9. Sought permission to dump 1,000 gallons of liquid waste containing "small amounts of fission products" into San Francisco Bay, as an experiment to study how tidal action would dilute the radioactivity. The

experiment was meant as a precursor to dispose of 1,000 gallons of liquid radioactive waste in the bay every day. (The documents do not say whether the experiment or the daily dumping occurred).

Lisa Davis SF Weekly

But this is known information!: From 1946-1970 an estimated 47,000 steel drums of nuclear waste from the NRDL were dumped in the ocean 30 miles west of San Francisco. The Navy also sank the heavily contaminated WW2 ship, the USS Independence, packed with nuclear waste from the NRDL at the same site in 1951.



The USS Independence during a better time. She was used in the atomic bomb test and after testing later sank off the California coast. Note that the hull was intended for a cruiser.

BACK TO 1967

We might have figured that radiation had something to do with the facility because during the summer of 1967 the nuclear powered USS Enterprise was in the big dry dock for the purpose of adding missile launchers. Or so we were told. Ours in addition to other ship overhaul budgets were cut to accommodate those additions.

Below is a photo of the USS Enterprise in dry dock that I took shortly after her arrival in July 1967. Security was tight during her stay and you couldn't get much closer. Note the security hut at the base of the gangway.



THE DEADLY LIST

The following is a list of the toxins and contaminants found at the shipyard.

LEAD

ABSESTOS

HEAVY METALS

SOLVENTS

PETROLIUM PRODUCTS

PCB'S

VINAL CLORIDE

RADIUM AND THE OTHER RADIOACTIVE WASTE

HUNTER'S POINT CLOSES

The Navy closed the shipyard to business in 1974 but it wasn't until 1991 that the Navy finally left the base; and in 1994 with the Base Closing Act the government started liquidating the property. But before this occurred in 1983 the buildings of the shipyard became the studios of artists and an artist community thrived. After a few years of the Artist Colony the Navy had one more plan to reclaim the base and build a facility for the battleship

Missouri but changed their minds and as you know chose Pearl Harbor instead. And later the shipyard was officially returned to the city of San Francisco.

In 2013 ground was broken for the building of 88 townhouses and condominiums. I am not sure as to what parcel but in reports from as recent as last year ago contaminated materials are still being dug up mere yards from these occupied residential buildings in spaces already reported as being clean. I don't find that as being surprising as it took nearly 150 years to dirty the place and who knows to the extent of underground contaminates and how deep. Per a map there must have been several hundred miles of just sewer pipes in the shipyard and those alone are a serious health hazard and danger. And so the cleanup continues.

If you want to find out more I suggest you go on line and search Hunter's Point Shipyard. Material about the current scene and past history will come up. The purpose of this article was to inform; and if you spent any considerable time at the shipyard you may have been exposed to these dangers. If your health seems to indicate a problem from possible exposure, be sure to get it checked out.

Current News

"Plataginet, I will; and like thee, Nero,
Play on the lute, beholding the towns burn" (*Henry VI*, Shakespeare)

The Navy's Tomahawk Cruise Missile Is Becoming More Lethal, More Versatile

Loren Thompson, Forbes, October 23

One lesson the U.S. Navy has learned in dealing with emergent threats is that it is a lot easier to adapt what you already have to new challenges than start over with a completely new solution.

The Tomahawk cruise missile, carried on 145 U.S. warships, is a striking example of this principle at work. Tomahawk first joined the fleet in 1983 and figured prominently in both Persian Gulf wars, but today's Tomahawk is very different from the cruise missiles used in those conflicts, and tomorrow's Tomahawks will be something else again.

Superficially, the weapon doesn't look much different. It still resembles the "flying torpedo" first imagined by futurists shortly after the Wright Brothers flew at Kitty Hawk. But internally, Tomahawk has been repeatedly transformed as new technology and operating concepts added capabilities.

These generational updates are referred to by the Naval Air Systems Command, which oversees Tomahawk acquisition, as "blocks." The current Block IV configuration joined the fleet in 2004, adding features such as in-flight reprogramming of targets via satellite links and the ability to loiter for long periods over war zones.

But as the thousands of Block IV Tomahawks in the Navy's inventory now begin their 15-year recertification—the weapon has a shelf life of 30 years—the Navy is using

that process to once again update the weapon's capabilities with new technologies not available in 2004.

Recertification requires that every component in the missile be inspected and tested to assure readiness for combat, so it provides an opportunity to switch out parts if new features are desired. Tomahawk's modular design facilitates such insertions, and recertification will thus drive modernization of the weapon to a new Block V configuration.

All of the Tomahawks in the fleet will retain their land-attack capability, which enables precise destruction of high-value targets deep in defended territory with minimal collateral damage. Whether they are launched from a surface warship or a submarine,

Tomahawks typically hit within ten yards of intended targets using a variety of guidance methods including GPS, inertial navigation, and terrain contour matching.

What makes Block V different is that contractor Raytheon (a contributor to my think tank) is adding an anti-ship capability and a hard-target kill capability to specific lots of the missile. The “maritime strike” variant will have a new seeker capable of precisely identifying and targeting moving warships at sea. The hard-target kill version will carry an advanced warhead capable of destroying densely-constructed enemy assets previously requiring more specialized munitions.

The need for both capabilities was dictated by emerging threats in Eurasia. For instance, the Navy increasingly finds itself facing Russian and Chinese adversaries with longer-range anti-ship munitions than those carried on U.S. warships. The maritime strike version of Tomahawk will rectify that disparity with a munition that can strike hostile, maneuvering warships over a thousand miles away.

The hard-target version will be able to take out reinforced concrete command posts and other super-strong structures that otherwise might have provided sanctuary for enemy forces. The Navy has other ways of addressing such targets—most notably with the strike fighters of carrier air wings—but by using Tomahawk the Navy will be able to destroy a diverse array of targets even when carriers are not nearby, or when they are nearby but combatant commanders do not want to risk pilots and their planes.

Block V Tomahawk thus presents itself as the most affordable option for bolstering the Navy’s arsenal of long-range precision strike munitions without having to introduce a new weapon into the fleet. The basic footprint of the missile will not change—it will still fit into vertical launchers on surface warships, torpedo tubes on submarines, and other launch systems already extant that the joint force may elect to deploy in the future. (A land-based version of Tomahawk was successfully flight-tested in August.)

The Navy has taken delivery of over 4,000 Block IV Tomahawks since 2004, about a tenth of which have been used in combat and testing. Naval Air Systems Command intends to update the arsenal to the Block V configuration by purchasing a mix of new missiles and existing missiles that have been enhanced via recertification. Some of the Block Vs will be maritime-strike variants, some will be hard-target killers, and some will be “basic” Block V Tomahawks delivering targeting flexibility and lethality similar to Block IVs.

One issue that arises in equipping the fleet for a future of great-power competition is the survivability of existing munitions in attacking well-defended targets. The Navy is contemplating purchase of a stealthy cruise missile adapted from an Air Force munition that would be exceptionally difficult for enemy defenders to counter. However, a recent internal government study found that Tomahawk is likely to remain highly viable for many years to come. The Navy does not talk much about features built into Tomahawk designed to enhance its survivability—such as its ability to perform evasive maneuvers at extremely low altitudes—but the fact that the Navy is investing in a new generation of Tomahawks speaks for itself. Survivability does not seem to be a major concern.

Block V Tomahawks are likely to cost about a million dollars each, which arguably is a bargain for a munition that can reliably take out diverse targets over a thousand miles away worth many times that amount without causing major collateral damage. The fact that new or recertified Tomahawks can be sent to the fleet without major modifications to existing launch systems is undoubtedly a plus at a time when defense spending is likely to peak and then gradually decline.

But the most important feature of Block V Tomahawk isn’t the weapon’s price-tag. It is the ability of the Navy to address emerging threats quickly, rather than having to develop entirely new weapons with all of the uncertainties that implies.

The U.S. Navy Has Orca Robot Submarines on the Way that Could Transform Naval Warfare

Sebastien Roblin, The National Interest, October 20

North Korea urges US to act wisely through year-end deadline
King Tong-Hyung, Associated Press, October. 24

SEOUL, South Korea — North Korea on Thursday accused U.S. officials of maintaining hostility against Pyongyang despite a “special” relationship between leader Kim Jong Un and President Donald Trump and urged Washington to act “wisely” through the end of the year.

The statement issued by Foreign Ministry adviser Kim Kye Gwan was clearly referring to an end-of-year deadline set by Kim Jong Un for the Trump administration to offer mutually acceptable terms for a deal to salvage their diplomacy.

“Contrary to the political judgment and intention of President Trump, Washington political circles and DPRK policy makers of the U.S. administration are hostile to the DPRK for no reason, preoccupied with the Cold War mentality and ideological prejudice,” Kim Kye Gwan said in the statement, referring to North Korea by its formal name, the Democratic People’s Republic of Korea. “We want to see how wisely the U.S. will pass the end of the year.”

Nuclear negotiations between Washington and Pyongyang have faltered after the collapse of a February summit between Kim Jong Un and Trump where the U.S. side rejected North Korean demands for broad sanctions relief in exchange for a piecemeal deal toward partially surrendering its nuclear capabilities.

The North made a series of short-range missile tests while Kim Jong Un said he would “wait with patience until the end of the year for the United States to come up with a courageous decision.”

Washington and Pyongyang resumed working-level discussion in Sweden earlier this month, but the meeting broke down amid acrimony with the North Koreans calling the talks “sickening” and accusing the Americans of maintaining an “old stance and attitude.”

The North has since threatened to resume nuclear and long-range missile tests it suspended last year while pursuing diplomacy with the United States, while Kim Jong Un vowed to overcome U.S.-led international sanctions he said has both pained and infuriated his people.

Kim Kye Gwan said Kim Jong Un considers his relationship with Trump as “special” and that trust between the leaders was still intact.

“I sincerely hope that a motive force to overcome all the obstacles between the DPRK and the U.S. and to advance the bilateral relations in the better direction will be provided on the basis of the close relationship,” Kim Kye Gwan said.

In his mid-70s, Kim Kye Gwan is a veteran diplomat who led the North Korean delegation at much of the now-dormant six-nation nuclear disarmament talks held in Beijing in 2003-2008.

The North Korean statement came after Trump during a Cabinet meeting on Monday said he continues to have a good relationship with the North Korean leader and claimed that the United States might have gone to war with the North if it were not for his presidency.

“I like Kim, he likes me,” Trump said. “We get along. I respect him, he respects me.”

When asked about Kim Kye Gwan’s comments during a news conference, South Korean Foreign Minister Kang Kyung-wha said it was encouraging that the leaders of North Korea and the United States are expressing mutual trust and that Seoul hopes for the nuclear talks to produce substantial results.

South Korean President Moon Jae-in lobbied hard for the revival of nuclear diplomacy between Washington and Pyongyang, but the North in recent months has suspended virtually all dialogue and cooperation with the South amid the stalemate in nuclear negotiations. Pyongyang has demanded Seoul break away from Washington and restart inter-Korean economic activities held back by U.S.-led sanctions against the North.

Kim Jong Un has signed vague statements calling for the “complete denuclearization” of the peninsula in his meetings with Trump and Moon. But the North’s hardball attitude in past months have raised doubts on whether Kim Jong Un would ever voluntarily give away his nukes he may see as his strongest guarantee of survival.

North Korea for decades has been pushing a concept of denuclearization that bears no resemblance to the American definition, with Pyongyang vowing to pursue nuclear development until the United States removes its troops and the nuclear umbrella defending South Korea and Japan.

Moscow cut off monitor to cover up nuke blast

Bill Gertz, Washington Times, October 21

Russia covered up the deadly nuclear reactor explosion in August during the salvage at sea of one of Vladimir Putin's new superweapons, a nuclear-powered cruise missile called Skyfall, a senior State Department official disclosed.

The reactor exploded Aug. 8 off the coast of the northern Russian town of Nenoska, killing seven Russians on a barge in the White Sea as they were overseeing the recovery of a sunken Skyfall. The missile had been sitting on the seafloor for about year after a failed flight test, said State Department official Thomas G. DiNanno.

"The explosion was caused by the Skyfall experiencing a criticality accident, an uncontrolled nuclear reaction that released a burst of radiation while Russian personnel retrieved it from the seafloor," Mr. DiNanno said in an interview with The Washington Times.

The reactor exploded in the Arkhangelsk region in Russia's far north near populated areas and triggered concerns about fallout spreading to the Baltic states of

Latvia, Estonia and Lithuania, as well as in Sweden, Denmark and Finland, he said.

"The missile sat on the seabed since its failed test early last year in close proximity to a major population center," Mr. DiNanno said.

"What really concerns us, No. 1, is the disinformation; No. 2, that it sat at the bottom of the ocean for a year; and No. 3, their first reaction was to cover it up," he added.

Mr. DiNanno is deputy assistant secretary of state and senior official in the Bureau of Arms Control, Verification and Compliance. He first disclosed the Skyfall incident Oct. 10 in a speech to the United Nations General Assembly First Committee.

In the interview, Mr. DiNanno revealed further details about the incident. As part of the cover-up, he said, Moscow cut off Russian nuclear monitoring station data gathered near the blast that is supplied to the International Monitoring System, a technical group based in Vienna that operates as a unit of the Comprehensive Test-Ban-Treaty Organization.

The blast was set off after the fuel in the missile reactor was no longer cooled by seawater.

Skyfall, which when deployed will be armed with either nuclear or conventional warheads, could strike at a nearly limitless range. It is one of five strategic nuclear weapons that President Putin announced in March 2018 "very bombastically," Mr. DiNanno said.

Another superweapon under development is the Poseidon drone torpedo, also nuclear powered, which will carry a warhead up to 450 kilotons in yield that the State Department arms official described as a "doomsday weapon."

The other three weapons are the Sarmat multiwarhead intercontinental ballistic missile, the Avangard hypersonic missile and the Kinzhal air-launched ballistic missile.

"These are extremely destabilizing systems. A nuclear powered cruise missile could stay seemingly aloft for a long time," Mr. DiNanno said.

U.S. monitoring agencies estimated that the environmental impact of the reactor blast was confined locally. "From what I understand, the actual radiation cloud was not dangerous per se," Mr. DiNanno said, "but our issue is with the lack of transparency and the cover-up and the misinformation."

The blast was measured to be 2.4 magnitude on the seismic scale, he said.

“A relatively small explosion but dangerous enough when a nuclear reactor explodes,” Mr. DiNanno said. “The point here is why was this system flying around in the first place, why after the crash it sat there for a year and why it took a recovery operation to sort of expose the original accident.”

In the immediate aftermath of the blast, Russia state-controlled media gave varying explanations for closures of areas on land and at sea without saying they were the result of a missile.

The misinformation included statements that the mishap involved a military exercise, a malfunction in a storm warning system and a toxic chemical spill at sea. State-controlled outlets also provided false reports that radiation levels were not elevated.

The disinformation surrounding the Skyfall incident is eerily similar to Moscow’s cover-up of the deadly 1986 Chernobyl nuclear power plant explosion in what is now Ukraine.

The first acknowledgment of the Skyfall accident was the state nuclear agency Rosatom’s announcement two days later about the deaths of five scientists.

Mr. DiNanno said Skyfall and other superweapons weapons are destabilizing because they are not covered by any arms treaty. The Trump administration is seeking to include the arms in any extended New START accord or a new arms treaty with Russia and China, he said.

“Technology has rapidly changed, and it’s important that we point out not what New START does, but what it doesn’t do in the 2020 deteriorating security environment. It doesn’t cover these systems,” he said.

Another major worry is the large number of nonstrategic nuclear weapons held by Russia and China. Any new arms accord should address those weapons, he added.

Asked why the State Department decided to disclose the latest information, Mr. DiNanno said, “We felt it was important we tell the truth, share what we understood had happened in Nenoska.”

The department worked with other government agencies to sift through classified data and imagery and then downgraded its classification so it could be shared with allies and partners, and ultimately the public, he said.

The information about the missile has been known for some time, but the government wanted to make sure it was confident about the accuracy before announcing it to the world.

“We’d like to see that get a little faster, but getting it right is more important,” Mr. DiNanno said.

Mr. DiNanno said the goal of announcing the Skyfall incident at the United Nations was to put the Russians and the Chinese on notice that “we’re serious about expanding and modernizing the arms control architecture.”

Mark Schneider, a former Pentagon nuclear policy official who is now a senior analyst with the National Institute for Public Policy, called the nuclear-powered missile “a monument to Putin’s irresponsibility” and something that “should never have been created.”

“The concept of this weapon is foolish. Russia does not need its unlimited range potential to penetrate the virtually nonexistent U.S. strategic air defenses. The probability of successful development was always low, and radiation release was inevitable,” he said.

Russia has been questioned about the superweapons, and China so far has rebuffed Trump administration appeals to enter into strategic arms negotiations.

One clue investigators discovered about the reactor blast was local detection of cesium-137, a nuclear byproduct of fission, a State Department official said.

That radioactive material is related to a nuclear reactor. Reports from Russia suggested that the radiation near Nenoska may have been the result of plutonium-fueled batteries. The official said that was incorrect.

Another official described Skyfall as a “flying Superfund site” — a reference to places the Environmental Protection Agency designates as hazardous waste sites that pose a risk to human life.

The Russian Embassy did not return an email request for comment.

Emboldened Erdogan Seeks Nuclear Bomb

David E. Sanger and William J. Broad, New York Times, October 21

Turkey's president, Recep Tayyip Erdogan, wants more than control over a wide swath of Syria along his country's border. He says he wants the Bomb.

In the weeks leading up to his order to launch the military across the border to clear Kurdish areas, Mr. Erdogan made no secret of his larger ambition. "Some countries have missiles with nuclear warheads," he told a meeting of his governing party in September. But the West insists "we can't have them," he said. "This, I cannot accept."

With Turkey now in open confrontation with its NATO allies, having gambled and won a bet that it could conduct a military incursion into Syria and get away with it, Mr. Erdogan's threat takes on new meaning. If the United States could not prevent the Turkish leader from routing its Kurdish allies, how can it stop him from building a nuclear weapon or following Iran in gathering the technology to do so?

It was not the first time Mr. Erdogan has spoken about breaking free of the restrictions on countries that have signed the Nuclear Nonproliferation Treaty, and no one is quite sure of his true intentions. The Turkish autocrat is a master of keeping allies and adversaries off balance, as President Trump discovered in the past two weeks.

"The Turks have said for years that they will follow what Iran does," said John J. Hamre, a former deputy secretary of defense who now runs the Center for Strategic and International Studies in Washington. "But this time is different. Erdogan has just facilitated America's retreat from the region."

"Maybe, like the Iranians, he needs to show that he is on the two-yard line, that he could get a weapon at any moment," Mr. Hamre said.

If so, he is on his way -- with a program more advanced than that of Saudi Arabia, but well short of what Iran has assembled. But experts say it is doubtful that Mr. Erdogan could put a weapon together in secret. And any public move to reach for one would provoke a new crisis: His country would become the first NATO member to break out of the treaty and independently arm itself with the ultimate weapon.

Already Turkey has the makings of a bomb program: uranium deposits and research reactors -- and mysterious ties to the nuclear world's most famous black marketeer, Abdul Qadeer Khan of Pakistan. It is also building its first big power reactor to generate electricity with Russia's help. That could pose a concern because Mr. Erdogan has not said how he would handle its nuclear waste, which could provide the fuel for a weapon. Russia also built Iran's Bushehr reactor.

Experts said it would take a number of years for Turkey to get to a weapon, unless Mr. Erdogan bought one. And the risk for Mr. Erdogan would be considerable.

"Erdogan is playing to an anti-American domestic audience with his nuclear rhetoric, but is highly unlikely to pursue nuclear weapons," said Jessica C. Varnum, an expert on Turkey at Middlebury's James Martin Center for Nonproliferation Studies in Monterey, Calif. "There would be huge economic and reputational costs to Turkey, which would hurt the pocketbooks of Erdogan's voters."

"For Erdogan," Ms. Varnum said, "that strikes me as a bridge too far."

There is another element to this ambiguous atomic mix: The presence of roughly 50 American nuclear weapons, stored on Turkish soil. The United States had never openly acknowledged their existence, until Wednesday, when Mr. Trump did exactly that.

Asked about the safety of those weapons, kept in an American-controlled bunker at Incirlik Air Base, Mr. Trump said, "We're confident, and we have a great air base there, a very powerful air base."

But not everyone is so confident, because the air base belongs to the Turkish government. If relations with Turkey deteriorated, the American access to that base is not assured.

Turkey has been a base for American nuclear weapons for more than six decades. Initially, they were intended to deter the Soviet Union, and were famously a negotiating chip in defusing the 1962 Cuban Missile Crisis, when President John F. Kennedy secretly agreed to remove missiles from Turkey in return for Moscow doing the same in Cuba.

But tactical weapons have remained. Over the years, American officials have often expressed nervousness about the weapons, which have little to no strategic use versus Russia now, but have been part of a NATO strategy to keep regional players in check - and keep Turkey from feeling the need for a bomb of its own.

When Mr. Erdogan put down an attempted military coup in July 2016, the Obama administration quietly drew up an extensive contingency plan for removing the weapons from Incirlik, according to former government

officials. But it was never put in action, in part because of fears that removing the American weapons would, at best, undercut the alliance, and perhaps give Mr. Erdogan an excuse to build his own arsenal.

For decades, Turkey has been hedging its bets. Starting in 1979, it began operating a few small research reactors, and since 1986, it has made reactor fuel at a pilot plant in Istanbul. The Istanbul complex also handles spent fuel and its highly radioactive waste.

"They're building up their nuclear expertise," Olli Heinonen, the former chief inspector for the International Atomic Energy Agency, said in an interview. "It's high quality stuff."

He added that Ankara might "come to the threshold" of the bomb option in four or five years, or sooner, with substantial foreign help. Mr. Heinonen noted that Moscow is now playing an increasingly prominent role in Turkish nuclear projects and long-range planning.

Turkey's program, like Iran's, has been characterized as an effort to develop civilian nuclear power.

Russia has agreed to build four nuclear reactors in Turkey, but the effort is seriously behind schedule. The first reactor, originally scheduled to go into operation this year, is now seen as starting up in late 2023.

The big question is what happens to its spent fuel. Nuclear experts agree that the hardest part of bomb acquisition is not coming up with designs or blueprints, but obtaining the fuel. A civilian nuclear power program is often a ruse for making that fuel, and building a clandestine nuclear arsenal.

Turkey has uranium deposits -- the obligatory raw material -- and over the decades has shown great interest in learning the formidable skills needed to purify uranium as well as to turn it into plutonium, the two main fuels of atom bombs. A 2012 report from the Carnegie Endowment for International Peace, "Turkey and the Bomb," noted that Ankara "has left its nuclear options open."

Hans Rühle, the head of planning in the German Ministry of Defense from 1982 to 1988, went further. In a 2015 report, he said "the Western intelligence community now largely agrees that Turkey is working both on nuclear weapon systems and on their means of delivery."

In a 2017 study, the Institute for Science and International Security, a private group in Washington that tracks the bomb's spread, concluded that Mr. Erdogan's efforts to consolidate power and raise Turkey's regional status were increasing "the risk that Turkey will seek nuclear weapons capabilities."

In response to the German assertion and other similar assessments, Turkey has repeatedly denied a secret nuclear arms effort, with its foreign ministry noting that Turkey is "part of NATO's collective defense system."

But Mr. Erdogan's recent statements were notable for failing to mention NATO, and for expressing his long-running grievance that the country has been prohibited from possessing an arsenal of its own. Turkey has staunchly defended what it calls its right under peaceful global accords to enrich uranium and reprocess spent fuel, the critical steps to a bomb the Trump administration is insisting Iran must surrender.

Turkey's uranium skills were highlighted in the 2000s when international sleuths found it to be a covert industrial hub for the nuclear black market of Mr. Khan, a builder of Pakistan's arsenal. The rogue scientist -- who masterminded the largest illicit nuclear proliferation ring in history -- sold key equipment and designs to Iran, Libya and North Korea.

The most important items were centrifuges. The tall machines spin at supersonic speeds to purify uranium, and governments typically classify their designs as top secret. Their output, depending on the level of enrichment, can fuel reactors or atom bombs.

According to "Nuclear Black Markets," a report on the Khan network by the International Institute for Strategic Studies, a London think tank, companies in Turkey aided the covert effort by importing materials from Europe, making centrifuge parts and shipping finished products to customers.

A riddle to this day is whether the Khan network had a fourth customer. Dr. Rühle, the former German defense official, said intelligence sources believe Turkey could possess "a considerable number of centrifuges of unknown origin." The idea that Ankara could be the fourth customer, he added, "does not appear far-fetched." But there is no public evidence of any such facilities.

What is clear is that in developing its nuclear program, Turkey has found a partner: President Vladimir V. Putin of Russia. In April 2018, Mr. Putin traveled to Turkey to signal the official start of construction of a \$20 billion nuclear plant on the country's Mediterranean coast.

Part of Russia's motivation is financial. Building nuclear plants is one of the country's most profitable exports. But it also serves another purpose: Like Mr. Putin's export of an S-400 air defense system to Ankara -- again, over American objections -- the construction of the plant puts a NATO member partly in Russia's camp, dependent on it for technology.

U.S., Russia and Europe Hold Back-to-Back Nuclear War Games Across the Globe

Tom O'Connor, Newsweek Online, October 18

The United States, Russia and Europe have all planned near-concurrent nuclear war games across the globe, testing their strategic capabilities in the event of a conflict.

U.S. Strategic Command commenced on Friday its "annual command and control exercises" "Global Thunder" and "Vigilant Shield 20" alongside the North American Aerospace Defense Command and U.S. Northern

Command. The drills were designed to "assess all USSTRATCOM mission areas and joint and field training operational readiness, with a specific focus on nuclear readiness."

"This exercise employs global operations in coordination with other combatant commands, services, appropriate U.S. government agencies, and allies to deter, detect and, if necessary, defeat strategic attacks against the United States and its allies," U.S. Strategic Command said in a statement.

Meanwhile, in Russia, President Vladimir Putin just wrapped up his own "Thunder 2019" exercise, involving some 12,000 troops, five nuclear submarines, 105 aircraft and 213 missile launchers. The three-day, cross-continental display that concluded Thursday included the firing of nuclear-capable ballistic and cruise missiles at Russia's Komi Republic, Arkhangelsk province and the far-eastern Kamchatka Peninsula.

The Russian military tested a variety of weapons including the RS-24 Yars intercontinental ballistic missile (ICBM), the 3M-54 Kalibr cruise missile, the Sineva ballistic missile, and the Iskander-K short-range mobile cruise missile system—all capable of being equipped with nuclear weapons. The advanced S-400 surface-to-air missile system was also tested.

The following day, as the Pentagon announced its own nuclear training, the Russian Ministry of Defense said it would provide new simulators of the Typhoon-M combat anti-sabotage vehicle that guards its nuclear-capable missiles. The units would

reportedly be able "to simulate in virtual space the dynamics of the movement of the unit in any extreme conditions, taking into account the terrain, various road surfaces, and other obstacles."

Elsewhere in Europe, however, much more secretive nuclear-related maneuvers were taking place, and the U.S. was again involved. The NATO Western military alliance conducted the "Steadfast Noon" exercise involving German Tornado warplanes transporting U.S. B-61 nuclear bombs, Deutsche Presse-Agentur reported Friday.

Aircraft from Italy and other NATO nations were involved in the drills that included aircraft taking off from Germany's Büchel Air Base and the Netherlands' Volkel Air Base. Hans Kristensen, director of the Federation of American Scientists' Nuclear Information Program, noted to the outlet that U.S. B-52 bombers had just arrived in Europe shortly before the exercise.

NATO has released no official information about this exercise, and has never even confirmed whether or not there were U.S. nuclear weapons at Büchel Air Base. The site, however, was among those included in an accidentally-released NATO report published in July by Belgian newspaper De Morgen.

Another was Incirlik Base in Turkey, something that has grown controversial due to the recently-strained relations between Washington and Ankara, especially over the latter's purchase of Russia's S-400 and its invasion of northern Syria. Asked about the security of up to 50 B-61 bombs there, President Donald Trump said Wednesday that "we're confident, and we have a great air base there, a very powerful air base."

The series of tests came as decades-long deals ensuring the non-proliferation of such nuclear weapons collapsed. In August, the U.S. left the Intermediate-range Nuclear Forces (INF) Treaty, a deal struck with the Soviet Union in 1987 to ban the deployment of land-launched missiles ranging from 310 to 3,420 miles, after claiming Moscow's Novator 9M729, an Iskander-compatible weapon, violated the deal.

Russia denied this and counterclaimed that the Mark-41 Vertical Launch Systems used in Romanian and Polish sites of the Pentagon's Aegis Ashore missile defense system could be used offensively as well. Just after leaving the agreement, the U.S. tested a Tomahawk Land Attack Missile that flew over 310 miles.

Both Russia and China charged the Trump administration with attempting to instigate an "arms race."

With Washington and Moscow worlds apart in their attempts to reconcile their many, overlapping policy disputes, the deadline was gradually approaching for another major arms control pact—the New Strategic Arms Reduction Treaty (START). The deal, which expires in 2021, limits the number of nuclear warheads and launchers maintained by the U.S. and Russia. Putin recently said he was still attempting to negotiate the agreement with "no answer so far" from Trump.

Russia offers Philippines help to build submarine

Riyaz ul Khaliq, Anadolu Agency, October. 22

Russia on Tuesday offered the Philippines help to build a submarine for the country.

The offer came by Russia's ambassador in Manila Igor Khovaev during a news conference with a group of journalists in Makati city.

"Being an archipelagic nation, the Philippines has the right to develop its submarine force," Philippines News Agency (PNA) quoted Khovaev as saying.

"[It] needs a submarine fleet to protect its waters," he said, claiming that Russian submarines are the "best in the world."

"We are willing to help you [Philippines] like [what we did in] Vietnam," Khovaev said.

Manila had conflict with Beijing over its waters in past and it even won the case in international arbitration court over violation of its maritime territories in South China Sea.

However, Philippines President Rodrigo Duterte said during his last trip to China that his country was ready to move forward for a joint collaboration and to overlook the ruling of the international court.

Moscow supplied Vietnam with six Kilo-class submarines.

The Philippines Navy had paid its first-ever port visit to Vladivostok in Russia last year and also took an inspection tour.

The PNA reported that Russia was willing to provide advanced versions of its Kilo-class submarines to the Philippines through "soft loans."

Secondary circuit of Iran's Arak nuclear reactor to be operational within two weeks – official

Babak Dehghanpisheh, Reuters, October 20

The secondary circuit of the Arak heavy water nuclear reactor will be operational within two weeks, Ali Asghar Zarean, a special assistant to the chief of Iran's Atomic Energy Organization, was quoted as saying on Sunday by the semi-official Tasnim news agency.

The starting of the secondary circuit will not violate restrictions placed on Iran's nuclear program under a landmark 2015 deal with world powers.

Last week, Iranian President Hassan Rouhani said Tehran will continue to reduce its commitments to the deal, removing curbs on its nuclear program, until European parties to the pact protect Iran's economy from U.S. penalties.

Iran has the capacity to produce up to 25 tonnes of heavy water per year, Zarean said, noting that the Islamic Republic currently produces 20 tonnes of heavy water annually, which is exported to other countries.

Heavy water can be employed in reactors to produce plutonium, a fuel used in nuclear warheads.

Despite having nuclear technology, Iran has never pursued building or using nuclear weapons, which its religion forbids, the country's highest political authority, Ayatollah Ali Khamenei, said earlier this month.

Iran has responded to U.S. "maximum pressure" by scaling back commitments to the nuclear deal since May. Britain, France and Germany, all signatories to the pact, have urged Iran to refrain from any concrete act breaching the agreement.

The reduction of commitments can be reversed, Iranian officials have said, if the remaining parties to the deal uphold their promises.

The Russo-Chinese alliance emerges

Stephen Blank, The Hill Online, October 21

While the media remain preoccupied with the Syria crisis and the impeachment inquiry, equally if not more consequential events are happening elsewhere that deserve America's urgent attention.

On October 3 Russian President Vladimir Putin announced the next step in the Russo-Chinese alliance, revealing that Russia is now helping China build an early warning system for its missile defenses.

In doing so, Putin confounded the complacent opinion of the many experts who assert that such an alliance was unlikely if not impossible. He also expanded the scope of Sino-Russian challenges to U.S. interests, values and allies.

The alliance, as Putin observed, is multi-faceted. China and Russia conduct joint exercises in Asia and Europe, hold regular and extensive staff talks and educate each other's officers. Some 3,600 Chinese officers have undergone training at Russian military academies.

Russia and China also sell each other and third parties weapons clearly intended to threaten U.S. forces and allies. Likewise, they are building what appears to be a coordinated missile defense system in Northeast Asia that will both protect them from the U.S. and allow them to threaten Japan and defend North Korea against what they now call a preemptive strike close to their borders.

China and Russia also are each threatening prized U.S. interests in the Freedom of the Seas — in the South China Sea, the Arctic, the Black Sea, Sea of Azov and Kerch Strait.

Simultaneously, they take part in an extensive range of inter-governmental meetings, jointly participate in global international organizations like the BRICS and the Shanghai Cooperation Organization, provide mutual economic benefits to each other (e.g. Russian providing energy to China in return for Chinese aid and investment) and sell arms to each other.

China has helped Russia develop its priority Arctic energy programs like the Yamal pipeline, and in return has been able to send its nuclear-missile submarines into the Arctic without opposition.

Globally, China and Russia either work together or in coordinated individual actions to challenge U.S. interests from Argentina to the Arctic and to undermine the hegemony of the dollar in international trade. There have also been cases of Russian information operations in Europe that are designed to support Chinese interests against the U.S.

China supports Russian policies in the Middle East, and the two nations cooperate in Central Asia. Moscow also follows Beijing's lead on issues related to the Korean peninsula and its tangled knot of challenges.

None of these developments are new. They have all been in place for years. The alliance has strengthened since 2014 as the United States' global presence has receded under the weight of the Iraq war and the 2008 financial crisis.

Yet few experts have been willing to call a spade a spade and depict the Russo-Chinese alliance for what it is.

Putin refuses to criticize President Trump, a telltale sign in a regime that is not shy about blackening the name of its political opponents. Putin ascribes Trump's unwillingness to cooperate with him to Trump's internal political struggle in the U.S., not to a sincere desire to take on Russia. Meanwhile, China clearly wants Trump to be reelected despite his rhetoric and sanctions, because he has proven to be so weak and mercurial.

Despite their many differences, and even with impeachment looming, the Trump administration and Congress must come to grips with the global and multi-dimensional challenges an allied Russia and China are now posing.

Moscow and Beijing have now effectively thrown down a gauntlet to Washington, and it must begin to respond now. At the very least, they must work together to strengthen our alliances across the globe.

Failing to rise to the challenge would not only put our alliances, values and interests at risk. It would also imperil future generations of Americans who will inherit the disasters we cavalierly leave behind.

Prepare for the Worst

William R. Graham, R. James Woolsey, Peter Pry, RealClearDefense.com, October 21

Among the most important findings of 2004, 2008, and 2017 reports by the congressionally mandated Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack is that millions of Americans could die and the loss of our electronic civilization to manmade or natural EMP catastrophe would be a national doomsday. Therefore, EMP is one of a very small number of existential threats that demands immediate high-priority attention from the U.S. Government. [i]

President Trump deserves the gratitude of every American for heeding EMP Commission warnings and issuing his “Executive Order on Coordinating National Resilience to Electromagnetic Pulses” on March 26, 2019. [ii]

However, the President’s executive order to protect the national electric grid and other life-sustaining critical infrastructures is in danger of being undermined by a small number of highly influential non-expert career bureaucrats in the Department of Homeland Security and the

Department of Energy. This cabal of about five members of the permanent federal bureaucracy were obstacles to national EMP preparedness during the Obama Administration— and today are entrusted by DHS and DOE with implementing President Trump’s EMP Executive Order.

Moreover, with the resignation of several key people at the top of the National Security Council staff, it is at best uncertain that the replacements will have the knowledge, experience, and drive to see that the President’s Executive Order is implemented, particularly in the face of resistance from career bureaucrats in league with domestic and foreign electric power monopolies.

Not having deep expertise in EMP themselves, and perhaps being part of “the resistance” to Trump Administration policies, these DHS and DOE actors are promoting EMP “junk science” by the Electric Power Research Institute (EPRI), a lobby for the electric power industry. EPRI alleges that even a worst-case nuclear EMP attack or solar superstorm is not an existential threat to electric power grids and U.S. society, would have merely localized effects, and be quickly recoverable. [iii]

If EPRI’s fantasy is accepted that a nuclear EMP attack or solar superstorm would have societal consequences no worse than a hurricane, then DHS, DOE, and the electric power industry can “implement” President Trump’s EMP Executive Order by doing little or nothing.

It appears to matter little to these DHS and DOE bureaucrats that EPRI’s EMP threat assessment has been debunked by the Defense Nuclear Agency, the EMP Commission and the U.S. Air Force Electromagnetic Defense Task Force. [iv]

Shocking that DHS and DOE would even trust EPRI, that has no expertise on EMP, serves not science but the financial and political interests of electric utilities, receives 25% of research monies from foreign sources, and includes China and Russia as members. [v]

At this crucial juncture in the implementation of President Trump’s EMP Executive Order, where DHS and DOE are re-assessing the EMP threat, they apparently need to be reminded that the EMP Commission threat assessment is not merely another opinion. Commissions established by the President or the Congress engage the best experts and are given extraordinary resources and powers to provide the best scientific and strategic threat assessment and recommendations, that are supposed to be definitive for purposes of public policy.

There are good reasons USAF EDTF endorses the EMP Commission: “EDTF...recommends that the Congressional EMP Commission Reports, supported by real-world data, be used by government and industry as the most accurate assessment of the high-altitude EMP threat. EDTF recommends that the Congressional EMP Commission’s recommendations be implemented.” [vi]

The EMP Commission had at its service the Free World’s foremost EMP experts, men who laid the foundations of EMP science, beginning with data from the last U.S. exo-atmospheric nuclear tests in 1962, and wrote the Department of Defense (DOD) EMP Military Standards; proved the vulnerability and guided protection of U.S. critical national infrastructures by the most comprehensive testing of modern electronics; testing performed on DOD and U.S. Government EMP simulators by the best DOD and USG technical personnel; and concluded with a process of evaluation, threat assessment, and policy recommendations performed more or less continuously over a period of 17 years—unlike EPRI.

Not only has the EMP Commission faced a long uphill battle advancing national EMP preparedness against a resistant federal bureaucracy, but against an irresponsible press that often misinforms the public with absurd claims— such as the preposterous falsehood the EMP Commission’s warning about an existential threat is derived from the novel One Second After. [vii]

Now, with the fate of President Trump’s EMP Executive Order hanging in the balance, and is at risk of being rendered meaningless, it may be helpful to remember what is at stake by revisiting EMP Commission warnings that America faces an existential threat, and why.

Existential Threat: EMP Commission 2004 and 2008 Reports

EMP manmade or natural is analogous to the Cold War nuclear threat that, although considered highly unlikely by most experts, nonetheless demanded and deserved the highest priority and vast resources to deter and prevent a nuclear World War III, since the survival of Western Civilization was at stake. Yet a potentially worldwide natural EMP event from a solar superstorm is inevitable, sure to happen someday, the best estimate being a 12% chance every decade of a solar EMP catastrophe—a far more likely threat than was Cold War nuclear Armageddon. [viii]

The biggest loss of life from natural or manmade EMP would be from starvation, disease, and societal collapse. EMP damage to the electric grid may not be repairable for months or years, or ever, if there is mass starvation and societal collapse. Almost irreplaceable equipment, like EHV transformers, require years to manufacture and replace and could require a decade or more to repair if destroyed in large numbers. And this is just one example of protracted damage to the national grid from EMP that could blackout electronic civilization.

“The recovery of any one of the key national infrastructures is dependent on the recovery of others. The longer the outage, the more problematical and uncertain the recovery will be,” warns the EMP Commission 2004 Report, “It is possible for the functional outages to become mutually reinforcing until at some point the degradation of infrastructure could have irreversible effects on the country’s ability to support its population.” [ix]

The EMP Commission 2008 Report warns:

“Electrical power is necessary to support other critical infrastructures, including supply and distribution of water, food, fuel, communications, transport, financial transactions, emergency services, government services, and all other infrastructures supporting the national economy and welfare. Should significant parts of the electric power be lost for any substantial period of time, the Commission

believes that the consequences are likely to be catastrophic, and many people may ultimately die for lack of the basic elements necessary to sustain life in dense urban and suburban communities. In fact, the Commission is deeply concerned that such impacts are likely in the event of an EMP attack...” [x]

The EMP Commission 2008 Report in the chapter “Water Infrastructure” warns:

“Water and its system of supply is a vital infrastructure...(EMP) can damage or disrupt the infrastructure that supplies water to the population, agriculture, and industry of the United States...” [xi]

“By disrupting the water infrastructure, an EMP attack could pose a major threat to life, industrial activity, and social order. Denial of water can cause death in 3 to 4 days, depending on the climate and level of activity.” [xii]

“People are likely to resort to drinking from lakes, streams, ponds, and other sources of surface water. Most surface water, especially in urban areas, is contaminated with wastes and pathogens and could cause serious illness if consumed. If water treatment and sewage plants cease operating, the concentration of wastes in surface water will certainly increase dramatically and make the risks of consuming surface water more hazardous.” [xiii]

“Demoralization and deterioration of social order can be expected to deepen if a water shortage is protracted. Anarchy will certainly loom if government cannot supply the population with enough water to preserve health and life.” [xiv]

The EMP Commission 2008 Report in the chapter “Food Infrastructure” warns:

"An EMP attack that disrupts the food infrastructure could pose a threat to life, industrial activity, and social order. Absolute deprivation of food, on average, will greatly diminish a person's capacity for physical work within a few days. After 4 to 5 days without food, the average person will suffer from impaired judgment and have difficulty performing simple intellectual tasks. After two weeks without food, the average person will be virtually incapacitated. Death typically results after 1 or 2 months without food." [xv]

“Social order likely would decay if a food shortage were protracted. A government that cannot supply the population with enough food to preserve health and life could face anarchy.” [xvi]

“Blackouts of electric grids caused by storms or accidents have destroyed food supplies. An EMP attack that damages the power grid and denies electricity to warehouses or that directly damages refrigeration and temperature control systems could destroy most of the 30- day regional perishable food supply. Blackouts also have disrupted transportation systems and impeded the replenishment of local food supplies.” [xvii]

“Massive traffic jams are most likely in large cities, the very areas where rapid replenishment of the food supply at hundreds of supermarkets will be needed most urgently. Significantly, recent famines in the developing world have occurred, despite massive relief efforts by the international community, in large part because food relief could not reach victim populations through their underdeveloped transportation infrastructure. An EMP attack could, in effect, temporarily create in the United States the technological conditions in the food and transportation infrastructures that have resulted in developing world famines.” [xviii]

Existential Threat: EMP Commission Congressional Testimony

EMP Commissioners in congressional testimony—that constitutes part of the official record and findings of the EMP Commission—warned that, in a worst case scenario, most Americans could die in an EMP catastrophe, estimating possible fatalities ranging up to two-thirds of the population or more, perhaps as high as 90% perishing from starvation, disease, and societal collapse. On September 4th, 1882, when the first electric grid lit New York City, the population of the United States was 50 million, 85% smaller than the 330 million Americans sustained by our electronic civilization today. In 1882 most Americans were farmers, and civilization was sustained by coal-fired and horse-drawn technologies and critical infrastructures that no longer exist. Even in 1922, before the advent of national electrification in the 1930s, the technology and critical infrastructures of the time sustained a population of 110 million, two-thirds fewer people than today.

On July 22, 2004, at a hearing before the House Armed Services Committee, the EMP Commission Chairman, Dr. William R. Graham, and EMP Commissioner, Dr. Lowell Wood, explained why two-thirds or more of the American people could die from an EMP catastrophe:

BARTLETT: ...your characterization of this is a large continental time machine that would move us back a century in technology, and my question then was, “But Dr. Wood, the technology of a century ago could not support our present population and distribution,” and your unemotional response, “Yes, I know. The population will shrink until it could be supported by the technology.” When I look at the technology of a century ago and where we are today, Dr. Wood, I would imagine that that shrink might be a good two-thirds of our present population?”

WOOD: The population that this continent carried late in the 19th century, sir, was almost a factor of 10 smaller than it is at the present time. We went from where we had 70 percent of the population on the farms feeding 30 percent of the people in the villages and cities to where 3 percent of the population on the farms at the present time feeds the other 97 percent of the country. So just looking at it from an agricultural and food supply standpoint, if we were no longer able to fuel our agricultural machine in this country, the food production of the country would simply stop because we do not have the horses and mules that used to tow the agricultural gear around in the 1880s and 1890s. So the situation would be extremely adverse if both electricity and the fuel that electricity moves around the country, the diesel fuel, and so forth, if that went away and stayed away for a substantial interval of time, we would miss the harvest, and we would starve the following winter.

BARTLETT: Isn't it possible that the ultimate effects on our society from a robust EMP laydown, although

initially maybe few or no people would be killed, might be greater than the effects of ground-burst nuclear weapons in a nuclear exchange? I see Dr. Graham nodding his head in assent.

GRAHAM: Yes. In a way, we thought that was the threshold for our consideration because a determined adversary probably could manage to place a nuclear weapon on the surface, either by ballistic missile or other means, but, in fact, we concluded that, as you say, while producing no immediate fatalities, a high-altitude nuclear burst could over a period of time measured in weeks to months—and possibly, in some cases, even shorter—cause more fatalities than a nuclear burst directed at a population area. Of even greater concern is the fact that recovery from the high-altitude event could be more difficult. In a nuclear burst in a city, however devastating it would be—and it would certainly be devastating—we have the rest of the country that we can bring in from the periphery of the attacked area to try to help in the recovery and help the survivors as much as possible. But with a high-altitude nuclear burst, the area affected would be sufficiently large that it would not be possible to bring in enough support from the periphery in a rapid fashion to recover the area in a quick and responsive manner. So, if you will, the peripheral effect is much more difficult to take advantage of with a high-altitude nuclear burst, and, therefore, the overall effect could be much more devastating.[xix]

On March 8, 2005, at a hearing before the Senate Judiciary Subcommittee on Terrorism, Technology, and Homeland Security, EMP Commissioner Wood, substituting for EMP Commission Chairman Graham, warned that an EMP event could "literally destroy the American nation and might cause the deaths of 90 percent of its people and would set us back a century or more in time as far as our ability to function as a society....So when we stop to think about being attacked by North Korea, we shouldn't think about Hiroshima or Nagasaki. We should think about flavors of destruction that have never been seen before on this planet." [xx] Moreover:

WOOD: ...If the lights stay off for more than a year in this country, the Commission's estimate was the loss of life would run into the tens of millions, perhaps a great deal more. You miss the harvest. You have no refrigeration, no transportation, no anything except what we had in the country in the 1880s. Most Americans will die in that interval." [xxi]

At the July 10, 2008 hearing before the House Armed Services Committee on the EMP Commission 2004 and 2008 reports, the EMP Commission Chairman, Dr. William Graham, warned up to 90% of the American people could perish from an EMP catastrophe:

BARTLETT: I read a prepublication copy of a book called One Second After... The story runs for a year... At the end of the year, 90 percent of our population is dead... I understand that this is a realistic assessment of what a really robust EMP laydown could do to our country?

GRAHAM: We think that is in the correct range. We don't have experience with losing the infrastructure in a country with 300 million people, most of whom don't live in a way that provides for their own food and other needs. We can go back to an era when people did live like that. That would be—10 percent would be 30 million people, and that is probably the range where we could survive as a basically rural economy. [xxii]

Existential Threat: EMP Commission 2017 Reports

The EMP Commission 2017 Executive Report and Chairman's Report reaffirms the existential threat from natural and manmade EMP:

"The critical national infrastructure in the United States faces a present and continuing existential threat from combined-arms warfare, including cyber and manmade electromagnetic pulse (EMP) attack, as well as from natural EMP from a solar superstorm... Within the last decade, newly armed adversaries, including North Korea, have been developing the capability and threatening to carry out an EMP attack against the United States. Such an attack would give countries that have only a small number of nuclear weapons the ability to cause widespread, long-lasting damage to critical national infrastructures, to the United States itself as a viable country, and to the survival of a majority of its population." [xxiii]

"A long-term outage owing to EMP could disable most critical supply chains, leaving the U.S. population living in conditions similar to centuries past, prior to the advent of electric power. In the 1800s, the U.S. population was less than 60 million, and those people had many skills and assets necessary for survival without today's infrastructure. An extended blackout today could result in the death of a large fraction of the American people through the effects of societal collapse, disease, and starvation." [xxiv]

"Solar superstorms, like the 1859 Carrington Event, generate natural EMP that could blackout electric grids and other life-sustaining critical infrastructures over remarkably wide areas, putting at risk the lives of many millions." [xxv]

Better Safe Than Sorry

The most important message of 2004, 2008, and 2017 EMP Commission reports is that: "The current vulnerability of U.S. critical infrastructures can both invite and reward attack if not corrected; however, correction is feasible and well within the Nation's means and resources to accomplish." [xxvi]

We are very close to having five career DHS and DOE bureaucrats decide for 330 million Americans that the U.S. should not be protected against the real EMP threat. Frighteningly reminiscent of the bureaucratic politics that left New Orleans unprepared for a Category 5 Hurricane Katrina, because such was considered highly unlikely or impossible.

Those too naive to understand the real EMP threat should at least be guided by the time-proven adages: "Better safe than sorry" and "Hope for the best, but prepare for the worst."