

**Pride and Shame: how the Grumman/Navy Toxic Plume devastated the town Grumman
called home**

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It's been said that at one point, not so long ago, one could scratch the cheek of any Long Islander, and beneath the surface would be Grumman blue. For 65 years, the aerospace giant called Long Island home and was its top employer. Schools would let out children based on when the work shifts at Grumman's Naval Weapons Industrial Reserve Plant (NWIRP) sites in Bethpage ended, and the facility had its own dedicated Long Island Railroad station just for its employees. These employees all had a hand in developing, manufacturing, and maintaining a fleet of some of the finest and most durable military aircraft ever to take flight, as well as make invaluable contributions to every human-crewed space mission from Apollo to the Space Shuttle. Talk to a Long Islander today, and their opinions are much less one-sided.

The Grumman/Navy toxic plume is a vein of pollution first discovered in ground water samples in 1986. The approximately 3.5 by 4.5 mile Toxic Plume is advancing rapidly southeast from the former Grumman production facility in Bethpage. The towns affected include but are not limited to East Meadow, Hicksville, Levittown, Old Bethpage, Plainview, Farmingdale, Syosset, Seaford and Massapequa.

It was only after the company merged with California based Northrop Aviation to become Northrop-Grumman in 1994, that the environmental cost of the manufacturing done there became known to the greater public. Only after the company closed all but one of its Long Island facilities and laid off 90% of the 20,000 plus workforce did it become clear just what Grumman had done to the place that it called home.

Before the 2010s, many residents of Bethpage had never heard the term "toxic plume". By decades end, it had become an environmental disaster which has come to define the reputation of the town. As residents grew louder and louder in their demands for answers. Many

began pointing the blame at the manufacturing processes and the improper disposal of the waste which came from the work done at Grumman Aerospace.

Jeanne O'Connor is the founder of the Bethpage-Massapequa plume coalition, a Facebook group consisting of over 600 residents of towns in Nassau County affected by the toxic plume. Members attend regular county and state meetings which provide updates on the advancement and attempted containment of the plume. Their goal is to provide the perspective of regular citizens as they face an environmental disaster unfolding right underneath their feet.

“I remember when I was very young, this is the late 70s, early 80’s mind you, hearing that there might be an issue with the water supply,” O'Connor said. She and other members make an effort to attend the town meetings held by Nassau County and occasionally Northrop Grumman and the Navy.

“By the time Grumman left town, I’d say by the late 90’s that the local park and baseball field had been used as a dumping ground by Grumman, and by the early 2000’s the ballpark was shut down,” O'Connor said. The ballpark still stands on the property of the Bethpage Community Park at 1001 Stewart Ave. After 15 years of neglect, the park resembles a post-apocalyptic ghost town. Mesh fencing separates foot traffic from the contaminated soil, on top of which the once-proud ballfield rusts into the ground.

The compound most associated with the toxic plume is a molecule called 1,4 dioxane or more commonly known as just dioxane. It was a popular compound used widely as a solvent for aircraft paint and other manufacturing applications in the early to mid 20th century. The chemical is banned in all manufacturing by the European Union and has mostly fallen out of favor with most domestic manufacturers. Dioxane isn't the only culprit; a wide array of different compounds found in various wells reach hundreds of feet down into the soil. Other chemicals

discovered include radium, popularly used to illuminate instruments on the dials and panels in aircraft and tanks in the early '30s to mid 40's

“At that point, it was pretty obvious that there was a big issue. Then in 2013 or 14, they found Radium in one of the wells, that still isn't solved.” Jeannie said. County regulators have since deemed the radium contamination as, “Naturally occurring and non-toxic to humans,”. Jeannie isn't buying any of that. “ I think that’s laughable,” she said. After all these people get cancer all at the same time, and they come out and say the ground pollution had nothing to do with it? It's impossible.”

The accusations against Grumman hit especially close to home for O'Connor, who had several relatives work for the company over four decades. “Grumman used to be the crown jewel of the whole town. My mother and grandfather, who worked on the Lunar Module and four or five relatives all worked for Grumman up until the layoffs in the '90s”. Jeanne remarked. “People used to rave about how Grumman was helping keep property taxes down in the area, all while they dumped all kinds of chemicals into the ground right beneath our feet.”

She had a unique opinion of her new found status as an online activist. “I definitely think I'm a reluctant activist for sure. For me, it started with a Nassau County Department of Health study that I thought was just poorly executed and inaccurate in a lot of ways. That really upset me. I think that was the day I said enough is enough. Alone, my voice is pretty useless, but with 600 plus people with me, maybe soon that will change,”. One of her groups members, who also attends scheduled town meetings, has a lot of questions and no answers for what she believes Grumman did to her and her family.

Denise Iannuzzi-Florio thought she had it made when she moved to Bethpage from Queens in 2003. Eight short years later, her peaceful tranquility was shattered with a shocking breast cancer

diagnosis—one of an alarmingly high amount of cancer diagnoses in the town. Iannuzzi-Florio, who's nine years post-diagnosis and still fighting, is confident that the Grumman/Navy toxic plume is to blame.

"We were so happy to live in Bethpage when we first moved here," said the 49-year-old mother of two. "The school district was supposed to be one of the best in the area, my kids could play at the state park, and it just seemed like a great place to raise a family,".

It was in 2011 that Iannuzzi-Florio's suburban paradise was lost forever. "There were no words to describe the day I was diagnosed except for complete shock," she said. Her name is on a list of dozens in a recent class-action lawsuit against the Navy and the now Northrop-Grumman Corporation. "There was a period of denial because I had no family history of cancer. Chemo took a lot out of me, but the worst part was having to see my then nine-year-old son having to watch his mother's hair fall out and be in all this pain from all of the treatments, the chemo, and the mastectomy. That was the hardest part of all of it for me,".

Iannuzzi-Florio had her treatments covered through her job's health insurance but says the people responsible for her condition got away with it.

"All of a sudden, I get sick, and then my neighbor in his mid-40s who never smoked a cigarette in his life gets stage 4 lung cancer. One family my son is friendly with has a 19-year-old son with advanced-stage cancer as well. All these insane things were happening all at once. There's only one logical explanation, and it's that we've all been living with contaminated water for years now."

"We all drank, cooked, and showered in that water. Whether you tried to avoid using it or not, you eventually have to shower, and you have to water your lawn. There really is no escape. Ten

years go by, and now suddenly they decide to give the water district money to fix it. Where were they ten years ago when I got sick?"

Iannuzzi-Florio, like many others in her position, feels frustrated at the lack of progress in the plumes clean up, and in compensation for its victims " The water district has meetings nearly every month," Denise said. I go to everyone that I can, but it's almost always half or three-quarters empty apart from members of the coalition that are there. If people make their voices heard, they can at least say that they did all they could to improve their community, but right now, it feels like there's no help on its way any time soon."

There is one member of the community who does have the ability and the wherewithal to be the town's front line of defense against water contamination.

Michael Boufis, Superintendent of the Bethpage Municipal Water District, strolled through the treatment plant at 42 Motor Lane in nothing but a sweatshirt, jeans, and a pair of white running shoes. As he walked among countless men in hard hats and high visibility jackets who all referred to him as the boss, his deep, bellowing New York accent gave the feel of a mafia don a la Vito Corleone, chatting with his subordinates.

Make no mistake though, Boufis' goals are no way malicious and underneath his rugged New Yorker exterior is a kind-hearted Long Island gentleman who just wants to serve his community, far more hero than villain.

Like any good hero, Boufis has a sworn enemy, a toxic plume that his district has been fighting tooth and nail every single day for six decades.

Evaluations by the New York State Department of Health have pointed to abnormal patterns of cancer occurring in residents of Bethpage. An official statement said these abnormal patterns

include “1)an unusually large number of cases of the same kind of cancer; 2) two or more cases of the same particularly rare cancer; 3) cancers occurring in people of ages where that cancer is not typically seen; 4) many cases in a short time period (one or two years)”

After years of deliberations between Bethpage Water District and representatives from the U.S. Navy and what is now Northrop Grumman, only a small fraction of the money promised to the cleanup effort has been delivered to the town, necessitating the use of bonds from the town of Oyster Bay to keep construction of the approximately 2-acre facility on schedule. This funding is separate from the 585 million dollar environmental cleanup stimulus package introduced by Governor Cuomo in late 2019. This state stimulus package sought to form a containment perimeter which would stop the spread of the plume. An official memo from December memo details how New York State wants to hold the navy and Northrop Grumman accountable for "The construction of 24 groundwater extraction wells, five treatment plants, four recharge basins and approximately 24 miles of conveyance piping”, Of which the Motor Lane facility is not included.

The chemical nature unique to the Grumman-Navy toxic plume necessitated a particular set of equipment and personnel. The prime suspect is 1,4 Dioxane, a compound used primarily as an industrial solvent by Grumman Corporation.

Boufis explained, “Dioxane hasn’t been proven by the E.P.A. definitively to be cancerous, but what we know for sure is that it is a likely carcinogen and that there’s too much of it in our groundwater. And remember, the town's drinking water supply is separate from its groundwater. If the groundwater is contaminated, then there will always be potential for some degree of cross-contamination, and that’s what we try to prevent at this facility.”

The front door of an unassuming two-story building hid the pride and joy of the facility. A central screen at the side of the room gave readouts in real-time as to how much water was being treated at this plant as well as every other treatment plant in the municipality. A set of pipes and pumps two stories tall whirred above his head as he scrolled from screen to screen.

“From this screen, I can see in parts per million just what’s been removed from the water that comes into the facility,” Boufis said, scrolling through screens which showed different aspects of the water treatment process. “Behind us is the mechanism that filters out 1,4 dioxane. The trouble with dioxane is that once it mixes with the groundwater, the molecules are so small that it's challenging to take out of suspension in that water,” Boufis said. He walked to the far end of the room where a separate panel was located for that specific machine.

“What happens here is a two-stage procedure. It starts with a process called advanced oxidation process or AOP, which uses compressed oxygenated air to chemically agitate the 1,4 dioxane molecules out of suspension in the water," he explained.

"After this process, the water is subjected to a series of ultra-violet lights that run through the incoming groundwater and excite the dioxane molecules enough to where it can then be removed.”

Contamination from aircraft manufacturing is nothing new for the town of Bethpage. The water districts' first encounter with Grumman came in 1938 when the area immediately around the Grumman factory tested positive for high concentrations of nickel and chromium soil deposits.

“The first sign of the toxic plume as we know it first showed in the late '70s, around 1977 to 1978. It started when Grumman employees started getting sick with all kinds of strange illnesses,” Boufis remarked as he walked up a flight of stairs.

"It's been roughly known in the community that there was some form of contamination in the area, but I do think the Flint, Michigan water crisis shined a light onto cases of contamination elsewhere."

The perforated metal stairs revealed the room below as Mike walked up to the second floor; a large pipe rose through a hole in the floor and out the roof of the building where the air stripping machine vented clean air out of the building. Window holes with no glass revealed the cul de sac next to which the facility sits.

"I feel like some people misunderstand the goal I'm trying to achieve here. I have nothing against the people who worked for Grumman or necessarily even Grumman itself," Boufis explained, citing a long history of goodwill between Grumman and the water district before the discovery of the plume. "The relationship between Grumman and the water district has been solid for many decades. There was once a long time ago where if we found contamination and could link it specifically to what Grumman was doing, they'd have representatives come and meet with us, and we'd get the problem solved,".

Boufis assumed the superintendent position in 2008 and has been flanked by an experienced and well-respected board of directors. A group spearheaded by Chairman John R. Sullivan, who serves as President of the Nassau-Suffolk Water Commissioners' Association. Board Treasurer John Coumatos owns B.K Sweeney's Tavern, a pub in downtown Bethpage that once thrived on business from Grumman employees.

"Over the past ten years, I've gone and tried to speak with state and county legislatures many times. I even tried to meet in Albany with the people at the New York State Department of Health. Sometimes we get somewhere, most of the time we don't. That puts more pressure on us

to pay back the bonds given to us by the town. It's frustrating, but it all comes with the job in this town," Boufis explained.

"The one thing that gets me angry is when uninformed people try to blame the water district for the toxic spill. You wouldn't believe how many emails and letters I get every week from people who'll tell me it's my fault that their drinking water is contaminated or that the water district alone should be paying for all the cleanup. All while not knowing the difference between ground and drinking water. Some of these people had no idea there was ever a problem at all until they started watching stories about Flint, Michigan on the news, and now all of a sudden, that person thinks they know the full story," Boufis said.

"Sometimes these people were completely clueless to the fact there was even any problem at all. One newspaper article later they'll call my office and accuse me and my colleagues of all kinds of ridiculous things like I'm lazy, I let this problem go under the radar and that it's all the water district's fault that all these people in the town are getting sick," he said.

The main challenge for Boufis and his colleagues is a lack of responsiveness on the part of the U.S. Navy. This problem was compounded by the departure of Grumman in 1994 and subsequent mass layoffs.

"There is no straighter line to follow than what the Navy follows. In all my years of working with state and county legislators, no one gives me a harder time than the Navy in terms of communicating what their intentions are and how they plan to help us. The last payment they gave us was used in part to build this facility, but it took far too long to get here. As long as I have the funds, I have the capability of providing the cleanest water possible to the community that I serve."

Superintendent Boufis was skeptical about water filter systems like the Brita system and other popular water purification devices that claim to purify tap water. “I’m afraid to say that aftermarket water purifiers don’t do anything that the water district doesn’t already do. These filters that you buy at the grocery store or the hardware store are designed to eliminate small quantities of non-toxic material that might give an off taste to the final drinking product.”

The facility is slated to go fully online in early April of this year, with preliminary data readings from the air stripping and oxidation machines progressing on schedule, Michael Boufis is hopeful that the water district’s findings set a precedent for contaminations elsewhere. “The work we do here is a case study in how to contain and clean a toxic spill. We can argue on and on about who’s responsible, but at the end of the day, my job is to provide the safest and best-tasting drinking water that’s physically possible. I’m not a lobbyist, and I’m not a politician. This is what I signed up to do when I told my parents years ago that I was quitting veterinary school to take a job with the water district.”

Elsewhere in Nassau County, t people who once thought they were safe from dioxane contamination find themselves right beneath a toxic catastrophe creeping one foot south by southwest every day. Ten minutes south in Seaford and Levittown, the plume is just as dangerous.

Decades of pent up frustration about this environmental disaster boiled over on March 10th at East Broadway Elementary School Gymnasium in Seaford, when the Naval Facilities Engineering Command (NAVFAC) held a public presentation explaining a new project set to relieve heavily polluted areas outside the immediate vicinity of the plume. Meanwhile, residents are starting to lose their patience.

The meeting was coordinated by NAVFAC public affairs specialist Jeffrey Doepp and information director Brian Murray, as well as David Brayack, a structural engineer at Tetra Technologies, the private contractor chosen to carry out construction on behalf of the Navy.

The presentation regarded an especially contaminated stretch of Hicksville road called the RE-108 hotspot. A brief introduction by Jason Pelton of the New York State Department of Environmental Conservation started the meeting before Brian Murray took the microphone and began the presentation in front of a crowd of around 100.

“The plan to remediate the RE-108 hotspot will be divided into two phases. Phase one will include upgrades to wells used to extract groundwater, primarily Recovery Well 4 (RW4),” Murray explained. “From there, the pumped groundwater will be transported via pipeline east to the GM-38 Hotspot Groundwater Treatment Plant, where it will be treated up to drinking water standards in county-owned storm basins, which will be rejuvenated to accommodate the increased water capacity. This phase will begin sometime this year, pending agreements from property owners in the vicinity, and of course, this will all be funded through the Navy.”

Many prominent figures in the community were on hand this evening for the revealing of a plan that for many in the city has come far too late. This included Nassau County legislator Rose Walker, whose jurisdiction includes the Bethpage Navy Industrial Reserve Plant, the original source of the toxic plume. Also in attendance were familiar faces like Mike Boufis, Superintendent of the Bethpage Water District, who himself was fresh off the completion of a new 1,4 dioxane treatment facility on Motor Lane in Bethpage, due to go fully online in less than two weeks.

“It’s important to understand that this is not a localized issue anymore. This issue now covers multiple towns south and southeast of Bethpage. That’s why we’re here today,” Boufis

said. “We’ve been getting by without financial support from the Navy for a good while. Now that this is changing, I’m excited to see how fast we can clean up the plume in places outside of Bethpage.”

Phase two will include the construction of a new treatment facility at 11 Union Ave in Seaford, which will serve as a hub for all of the pumping stations in the vicinity upon the demolition of the office building that sits there currently. New double-layered pipes will be installed four to six feet deep along the route to transfer water not treated in the phase one stage.

A question and answer session was held after the 30-minute presentation. It's then that residents unloaded on Legislator Walker and Mr. Murray from the Navy with a barrage of heated questions. Many of the questions revolved around the absence of the New York American Water Company. A private firm that handles residential water distribution payments and routine chemical treatment operations in Nassau and parts of Suffolk County. The company, according to residents, sent letters to the homes of those affected by the plume, urging them to attend this meeting in order to get information about the quality of their drinking water.

“New York American Water was never supposed to attend this meeting, and it’s clear that the people in this town have been lied to,” said Legislator Walker. “I’ve been very blessed to be represented by both the Bethpage and the Hicksville water districts,” Legislator Walker told the crowd. “I meet with them continuously, and they meet with the people in our community continuously. New York American Water has to step up and do the same.”

Suddenly, a bellowing voice echoed from the middle row of seats, that of Rich Catalano, a Seaford business owner whose father worked for Grumman on the lunar lander.

“The only reason we’re sitting here today is because of the gentleman sitting in front of me today from the local water districts. Their transparency with the press is the only reason we

even found out that there's a problem, and I applaud them for what they've done,". A round of applause rang through the gymnasium. " Grumman let us down, and our government let us down. This has been going on for 50 or 60 years. I've been going to these meetings for almost five years, and only now is this meeting taking place. It's absurd. We can't honor the work of my father and so many other great people because of this mess."

NAVFAC representative Jeffry Doepp declined to comment on questions regarding the Navy's perceived lack of urgency in notifying affected communities. But Legislator Walker offered her own opinion. " This community has suffered tremendously for over fifty years with the effects of this plume; it's awful. This meeting was planned to tell the people of this community exactly what's going to take place."

Another person in attendance was Bill Pavone, a four-year member of the Naval Recovery Advisory Board and 24 year resident of Seaford. Pavone is also a member of the Bethpage Massapequa Plume Coalition. "I think the twist to this whole meeting is the fact that it's in a town so far south of Bethpage. Usually, meetings take place at this one location in Bethpage on Grumman Road. This is the first time that a meeting is happening elsewhere, and here we were expecting New York American Water to be. They sent out a memo to get our information because they anticipated that their tests would exceed new state mandates for safe levels of 1,4 dioxane. The original notification from Brian Murray said that a presence from New York American Water was anticipated, but that never ended up happening," said Pavone.

Pavone's bombshell statement came after the meeting in a post to the Plume Coalitions Facebook page. "I was standing outside the school after the meeting when a New York American Water truck passed by the front entrance. I saw the truck slow down, the driver peaked his head

out of the window and then drove away. I couldn't get my phone out in time, but it would have been something to see. I swear I saw it, and I posted in the group as soon as I did.”

Pavone feels that the vitriol at tonight's meeting is misplaced, and cites years of frustration at the general lack of a prompt response whenever new developments in the plume were discovered. “ The new residents who don't know the backstory, they need to understand that the people in the front of that room tonight were there to help us fix this. We're so far past the point of the blame with this issue, it's time to come up with solutions, and that's what we finally have after tonight.”

There is a generational divide between those who think Grumman was a positive force for Long Islanders, one that helped America win a World War and put a man on the surface of the moon and younger people who've been given nothing but pain and suffering at their hands.

There's one place that puts a lens on the brighter side of what Grumman meant for Long Island in days long gone by. On the former site of Mitchel Air Force Base in Garden City, 20 minutes west of Bethpage. The museum has amassed an extensive collection of aircraft, memorabilia, and exhibits that explore the Islands century-plus long connection with the history of manned flight from the first manned flight of an air balloon over Brooklyn in the late 19th century, through two World Wars and beyond.

July 20, 2019, was supposed to be a day to celebrate at the Museum located on the former grounds of Mitchell Air Force Base in Garden City. The event was called Moon Fest, a day to remember the 50th anniversary of humanity's greatest achievement, putting a man on the moon.

Richard Kalen stood in front of the space shuttle exhibit near the end of the main exhibit hall. His Grumman Engineering Corps, ID badge number 120075, slung in a lanyard over his neck. In his left arm, he held a handful of laminated newspaper articles of which the subject was

his life's work being an aerospace structural engineer for the Grumman Corporation. A title he'd held for over three decades.

There's a growing divide among residents about the integrity of the company that largely brought the town into existence. Some argue that without the Hellcat and Wildcat fighter planes that Grumman manufactured, the allies may have never secured victory in the Pacific. Others say that the greed and neglectfulness the company practiced only destroyed the lives of the people who worked there.

Richard Kalen takes the accusations levied against Grumman very seriously. On top of being his 35-year long employer, Grumman's been an integral part of his life as it was for countless Long Island baby boomers. "I can remember as far back as when I was only nine years old; there were several people in my neighborhood growing up who worked on the Lunar Lander." Richard said, pushing his stylized round eyeglasses up against his face.

Kalen's most noteworthy achievement was 36 years as the lead structural engineer for all horizontal control surfaces on all six of the space shuttles, including the wings, flaps and aileron controls. "I can say with the utmost certainty that I worked with some of the most cunning, intelligent, and downright wonderful colleagues during my time at Grumman," he said, turning around to spread each laminated newspaper article out over a table for everyone to look at.

"I want you to realize something," Kalen said as he pointed in the direction of a late 1930's F3F Bi-Plane at the opposite end of the museum. The first in a line of naval fighter planes that made Grumman famous.

"Before the war, the U.S. Navy was flying these slow, antiquated Bi-Planes. Suddenly, the Axis threat necessitated dramatic technological innovation. When the war ended, the furious pace never stopped. In that time, there was certainly the possibility of some oversights, but I

don't believe there was any conscious effort to deliberately neglect anyone's safety at the level I worked at. That's not how Grumman operated. They took care of me, and they've taken care of countless other colleagues," Kalen said. His finger stopped at the other end of the exhibit, where a mid 50's era F9F Cougar stood. This remarkable swept-wing fighter jet was over three times faster than the Bi-Plane.

"All this innovation occurred in roughly 25 years; that's all it took to get from one end to the other. The people at Grumman were responding to our nation's call to action, which can also be said of the Apollo program and Grumman's contribution of the lunar module to that endeavor."

One of the iterations of the L.E.M., as it was designated by NASA, stood on display just 50 yards away. The cancellation of the Apollo missions by the Nixon administration doomed the spacecraft, never to complete its purpose of ferrying humans to worlds beyond. It was instead destined to be looked at in awe by countless people here on Earth.

"I believe that it was the bureaucracy of the Navy that allowed the toxic spill to happen in the first place," Richard explained. "No member of my team would have ever willingly exposed workers and the surrounding area to any chemicals that may be cancerous or harmful,". His face changed from an at ease malaise to firm and serious. He was defending the men and women who worked by his side since 1974.

"I'll defend the integrity of my colleagues now and forever. I'm a cancer survivor myself, and no I don't think Grumman had anything to do with it." Kalen closed his eyes briefly, took a breath, and said with sincerity, "Write this down when I say this, the employees at Grumman were the best ever, period."

Kalen's powerful testimony paints a different image of Grumman than what's been portrayed in the media over the last 30 years, and allows the other side of this issue, the people

who worked for Grumman, to tell their side of the story. This, coupled with the vast collection of wonderful machines in the Cradle of Aviation Museum, gives another sense of purpose to the cleanup of the toxic plume. The sooner the spill can be cleaned, the sooner we can more willingly appreciate these wonderful machines for the astonishing and bewitchingly beautiful feats of engineering they truly are, ones that had a hand in changing the world. Machines that Long Islanders can once again free of guilt, display for all the world to see, in full, deep, Grumman blue.

SOURCE LIST

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