

**UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF FLORIDA
ORLANDO DIVISION**

MICHELLE IRIZARRY; VALERIE
WILLIAMS; JOANN NIXON; JOANN
ROBINSON; and BRANDON LITT,

Plaintiffs,

v.

Case No. 6:19-cv-268-Orl-37EJK

ORLANDO UTILITIES COMMISSION;
LENNAR CORPORATION; LENNAR
HOMES, LLC; U.S. HOME
CORPORATION; AVALON PARK GROUP
MANAGEMENT, INC., d/b/a/ AVALON
PARK GROUP; BEAT KAHLI; BORAL
RESOURCES, LLC; and PREFERRED
MATERIALS, INC.,

Defendants.

**DEFENDANT ORLANDO UTILITIES COMMISSION'S
RESPONSE IN OPPOSITION TO
PLAINTIFFS' MOTION TO EXTEND DEADLINES (DOC. 119)**

Defendant Orlando Utilities Commission ("OUC") opposes Plaintiffs' Motion to Extend Deadlines (Doc. 119) for an additional 90 days, which they filed just four days before an already-extended expert disclosure deadline for class certification.

Plaintiffs have failed to show the diligence required to justify *an additional* 90-day extension of the class certification-related deadlines given their failure to prosecute the technical allegations in their Complaints. Plaintiffs' lack of diligence is evidenced by their resistance to complying with this Court's Amended Case Management and Scheduling Order deadlines (Doc. 107) despite having (a) made detailed technical allegations they were obligated to investigate prior to filing their original Complaint a year and a half ago, (b) performed almost

7,000 analytical measurements between April 2018 and October 2019, (c) litigated their allegations in the media since the inception of this lawsuit, (d) challenged the findings of a Florida Department of Health (“FDOH”) report discrediting their allegations, and (e) already sought and been granted an almost three-month enlargement of time to meet their original expert disclosure deadline.

Plaintiffs cannot show that 90 additional days are necessary because of the pandemic as opposed to their lack of diligence. Accordingly, Plaintiffs’ motion to extend the Amended CMSO class certification deadlines by 90 days is not supported by good cause and should be denied. Nevertheless, OUC does not object to the extension of *all* Amended CMSO deadlines for an additional 30 days.

BACKGROUND

I. Plaintiffs alleged in this Court and made representations to the media that their claims were based on sampling, technical investigation and analysis, and modeling.

On December 20, 2018, Plaintiffs filed a 44-page Complaint, which OUC removed to this Court under the Price-Anderson Act (Doc. 1). Plaintiffs alleged, among other things, that (a) Stanton Energy Center (“SEC”) contaminated the putative class area with chemicals and radiological elements (*id.* at pp. 18-23), (b) there have been life threatening exposures to these contaminants (pp. 26-29), (c) human exposures to radionuclides resulted in a cancer cluster (pp. 29-35), and (d) human exposures to PAHs and metals cause cancer (pp. 35-38).

Plaintiffs alleged in their Complaint that the putative class area was “defined by soil sampling and laboratory analysis, modeling procedures of the Environmental Protection Agency, and the power plant’s own monitoring data” (*Id.* at p. 11, n.1.) They alleged

that “[t]he danger of [] exposure is borne out by an epidemiologic analysis and a site investigation.” (*Id.* at p. 2, ¶ 3.) They alleged that “[l]aboratory analysis of soil samples from the Class Area found coal dust and fly ash with levels of Contaminants exceeding regulatory standards, including polynuclear aromatic hydrocarbons (“PAHs”) such as BaP; heavy metals; and gross alpha radiation from radionuclides including radium and plutonium.” (*Id.* at p. 18, ¶ 24.) They alleged that “[a]ir modeling of the power plant’s air emissions from its coal combustion ash piles using the EPA’s air dispersion modeling software referred to as ‘AERMOD’ . . . demonstrate that particulates from the Stanton Power Plant settle onto the Class Area.” (*Id.* at p. 20, ¶ 29.) Plaintiffs’ allegations have been of a technical and scientific nature since the inception of this action, purportedly based on sampling, technical investigation and analysis, and modeling—necessarily based on work performed by experts.

Following their filing, Plaintiffs’ counsel represented in the media: “We’ve done a tremendous amount of investigation and testing of the soil. After months and months of testing the results say a lot[.]” Zach Schlein, *Lawsuit Accuses Orlando Utilities Commission of Not Protecting Residents From Coal Plant Contaminants*, Daily Business Review (Dec. 21, 2018).¹

On February 19, 2019, Plaintiffs’ counsel held a town hall meeting at the Doubletree by Hilton Orlando near the UCF campus at which they gave a technical presentation purporting to represent the results of Plaintiffs’ “investigation,” which, like their Complaint, publicized their alleged technical conclusions. At that meeting, Plaintiffs’ counsel and a retained expert

¹ Available at <https://www.law.com/dailybusinessreview/2018/12/21/lawsuit-accuses-orlando-utilities-commission-of-not-protecting-residents-from-coal-plant-contaminants/>.

represented that (a) there were high rates of pediatric cancer, (b) independently-retained epidemiologists and toxicologists stated the cause was coal ash, (c) soil sampling and air modeling established that SEC was a source of contamination, and (d) their investigations would be ongoing. Plaintiffs announced that meeting with a press release stating: “Test results of soil samples conducted by experts on behalf of the plaintiffs’ legal team revealed that pollution from the power plant has contaminated homes” Plaintiffs’ press release is attached as Exhibit A. Following that meeting, Plaintiffs’ counsel represented in the media: “Although [Plaintiffs] have done a tremendous amount of investigation in the last 12-plus months and testing and we are in litigation, that does not mean that were [*sic*] not going to continue to both test, investigate and add additional communities into this litigation[.]” Kevin Spear, *Lawsuit Alleging Contamination from Orlando Coal Plants May Take in More East Orange Neighborhoods*, Orlando Sentinel (Feb. 20, 2019).²

Plaintiffs also published a website at <http://www.orlandocoalcase.com/> reproducing media coverage of the town hall meeting and providing an FAQ page stating, among other things, that their “allegations are based on epidemiological data [] obtained from the state and analysis by our independent experts.” Plaintiffs also represented that data and modeling were relied on to outline the putative class area:

The class area alleged in the original complaint was determined using standard air modeling analysis approved by the EPA, together with results of samples taken from properties within the class area. The modeling and data showed elevated concentrations of (1) polyaromatic hydrocarbons (PAH) including Benzo(a)Pyrene (BaP), (2) harmful heavy metals, and (3) gross alpha radiation, including the radionuclide Polonium-

² Available at <https://www.orlandosentinel.com/news/os-ne-orlando-coal-lawsuit-meeting-20190220-story.html>.

210 (Po-210) within approximately 5.5 miles from the Stanton Energy Center. We are continuing to investigate the appropriate scope of the area that should be included in this lawsuit, including the issue of whether the lawsuit should include communities south of the plant, and will amend the complaint if we conclude it would be appropriate to do so.

<http://www.orlandocoalcase.com/faq/> (“How was the class area determined?”).

On March 27, 2019, presumably based on their “tremendous amount of investigation,” Plaintiffs filed an Amended Complaint (a) expanding their technical allegations (Doc. 43 ¶¶ 68-92, 156-250), and (b) enlarging the putative class area to include neighborhoods south of SEC (¶ 252).

On May 3, 2019, Plaintiffs made Rule 26 disclosures representing that they possessed “files concerning environmental testing in Class Area properties” and “files acquired from the Florida Department of Health regarding health statistics.” Plaintiffs’ Rule 26 disclosures are attached as Exhibit B.

In addition, between April 5, 2018 and October 16, 2019, Plaintiffs’ experts collected 228 soil and wipe samples, tested for 75 constituents, and their laboratories performed 6,917 analytical measurements. Plaintiffs collected and analyzed samples from neighborhoods to the northeast, north, northwest, west, southwest, and south of SEC and within an approximate five-mile radius of the facility over a one and a-half year period. Plaintiffs also collected and analyzed samples from an undeveloped area *20 miles* southeast of SEC in an effort to establish comparable backgrounds—which they are not. And finally, OUC voluntarily permitted Plaintiffs’ experts to inspect and collect samples from SEC over a two-day site visit on October 14 and 15, 2019. These data collections and analyses were available to Plaintiffs more than

six months before the current expert disclosure deadline. The data, however, belie Plaintiffs' allegations, which is the likely reason for their requested 90-day extension.

II. Plaintiffs made additional technical representation to the media after FDOH discredited Plaintiffs' allegations when it concluded: "radiologic test findings and the review of cancer data in addition to current scientific knowledge on the potential health risks associated with polonium and PAHs does not provide evidence to substantiate a suspected cancer cluster of pediatric brain cancers."

One of the boldest of the unsubstantiated allegations Plaintiffs make is that "an epidemiologic analysis and a site investigation . . . found a correspondingly higher incidence of pediatric brain and blood cancers in the Class Area, including two exceedingly rare pediatric cancers—Diffuse Intrinsic Pontine Glioma and Ewing's Sarcoma—that occur repeatedly in the Class Area." (Doc. 43, ¶ 13.) OUC believes that Plaintiffs based this allegation on erroneous data produced by the Florida Cancer Data System ("FCDS") that accidentally ascribed all pediatric brain and central nervous system cancers and diffuse intrinsic pontine gliomas *in the entire state* to the 32828-zip code in the vicinity of SEC.

FCDS corrected its data and subsequently produced corrected cancer counts and explained that "all counts from [the] state were added for Site 61 [and] there were some cases diagnosed in the geographic area but the majority were not." A copy of the corrected FCDS data is attached as Exhibit C. Importantly, FCDS explained that its erroneous data counts were at least an order of magnitude greater than the actual results.

Given the seriousness of the allegations and the public forum in which Plaintiffs have litigated them, Orange County requested that FDOH analyze the allegations regarding a potential cancer cluster in the area. Accordingly, FDOH analyzed "[t]he number of brain and central nervous system cancers for persons age 19 or younger for the current time period 2005

to 2014 and for historical reference the time period from 1981 to 2005 for the following zip codes: 32803, 32806, 32822, 32825, and 32828 and for Orange County, Seminole County, and the entire state of Florida.” A copy of the FDOH review dated July 13, 2019, is attached as Exhibit D. FDOH also conducted “approximately 7,700 gamma exposure rate measurements” around SEC and found that “all readings were within the normal expected radiation background for Florida. No unusual levels were noted.” (*Id.* at 2.) FDOH’s final analysis concluded: “In summary, the radiologic test findings and the review of cancer data in addition to current scientific knowledge on the potential health risks associated with polonium and PAHs does not provide evidence to substantiate a suspected cancer cluster of pediatric brain cancers.” (*Id.*)

When FDOH’s report and conclusions were publicly reported in December 2019, Plaintiffs heightened their media assault based on purported technical and scientific criticisms of FDOH. Plaintiffs issued the following media statement: “Upon what we have seen, the testing that was reported is based upon incomplete sampling and an incorrect protocol, thus it could not and would not have captured the contaminants which we allege have been released from the Power Plant into the community.” Curtis McCloud, *Watchdog: Study Finds No Evidence of Cancer Cluster Near Stanton Energy Plant*, Spectrum News 13 (Dec. 13, 2019)³; *see also* Emilee Speck, *No Evidence of Avalon Park Cancer Cluster, Florida Department of Health Report Finds*, News 6 (Dec. 13, 2019).⁴

³ Available at <https://www.mynews13.com/fl/orlando/news/2019/12/14/no-evidence-of-cancer-cluster-near-stanton-energy-plant>.

⁴ Available at <https://www.clickorlando.com/news/local/2019/12/13/no-evidence-of-avalon-park-cancer-cluster-florida-department-of-health-report-finds/>.

To another media outlet, Plaintiffs' counsel represented: "the health department's testing for airborne radioactive contamination was simplistic and 'not what we did.'" Kevin Spear, *Data on East Orange Cancer Cases Near OUC Coal Plant Was Bungled, State Says*, Orlando Sentinel (Dec. 20, 2019).⁵ Plaintiffs' counsel continued: "This was 18th century testing versus 21st century that we did. We didn't put what looks like a missile on top of a vehicle and just ride around and get air samples. We tested the soil. Our data and measurements came from yards." *Id.* These public statements confirm that Plaintiffs have been relying on their technical consultants regarding these specific radiological issues for at least six months, and likely far longer based on the allegations in their Complaints.

III. Plaintiffs previously requested and were granted a substantial extension of these same expert report disclosure deadlines.

One year ago, on May 19, 2019, this Court entered its original CMSO (Doc. 71). The CMSO set Plaintiffs' "Disclosure of Expert Reports Pertinent to Class Certification" deadline at March 2, 2020. (*Id.*) The CMSO stated this Court would grant motions to extend deadlines "only upon showing of good cause or manifest injustice." (*Id.*)

Well before January 2020, OUC had responded to extensive discovery and produced tens of thousands of pages of discovery documents, including specifically targeted technical documents and third-party contracts that encompassed OUC's key landfill operational, management, maintenance and control plans, Florida Department of Environmental Protection regulatory materials, and OUC annual operating reports. Plaintiffs, however, made a late push for additional electronic discovery and requested a 120-day extension two months before their

⁵ Available at <https://www.orlandosentinel.com/news/os-ne-orlando-coal-lawsuit-cancer-data-20191220-xlyiejfek5djjay2tpjwveeyxu-story.html>.

initial expert disclosure deadline. OUC agreed to an accelerated review and production schedule as part of a negotiated compromise for an 81-day extension to allow Plaintiffs adequate time to complete their reports. The result was this Court's Amended CMSO (Doc. 107), which extended Plaintiffs' Disclosure of Expert Reports Pertinent to Class Certification to May 22, 2020. OUC held up its end of the bargain by reviewing more than 160,000 emails and attachments and making rolling productions every week for six weeks from late January to March 5, 2020, at substantial effort and expense. Plaintiffs made no objection to OUC's production, issued no further discovery, and took no depositions of OUC or any other party or witness during this first extension.

STANDARD

“A Scheduling Order ‘is not a frivolous piece of paper, idly entered, which can be cavalierly disregarded by counsel without peril.’” *Moyer v. Walt Disney World Co.*, 146 F. Supp. 2d 1249, 1252 (M.D. Fla. 2000) (quoting *Payne v. Ryder Sys., Inc. Long Term Disability Plan*, 173 F.R.D. 537, 540 (M.D. Fla. 1997)). Indeed, motions to amend scheduling orders are “distinctly disfavored” in this District. *See* Local Rule 3.05(c)(2)(E); *see also* Doc. 107 at 6 (“the Court generally denies motions to extend such deadlines”). Accordingly, a scheduling order “may be modified only for good cause and with the judge’s consent.” Fed. R. Civ. P. 16(b)(4). To establish “good cause,” Plaintiffs must show that “the schedule cannot ‘be met despite the diligence of the party seeking the extension.’” *Sosa v. Airprint Sys., Inc.*, 133 F.3d 1417, 1418 (11th Cir. 1998) (quoting Fed. R. Civ. P. 16 advisory comm. note). “The burden of establishing good cause/diligence rests squarely on the party seeking relief from the scheduling order.” *Clark v. Macy’s Credit & Customer Servs., Inc.*, No. 6:17-cv-692-Orl-

41TBS, 2018 U.S. Dist. LEXIS 2889, at *5 (M.D. Fla. Jan. 8, 2018) (quoting *Northstar Marine, Inc. v. Huffman*, No. 13-0037-WS-C, 2014 WL 3720537, at *3 (S.D. Ala. July 28, 2014)).

ARGUMENT

Having (a) made detailed technical and scientific allegations they were obligated to investigate prior to filing their original Complaint a year and a half ago, (b) performed almost 7,000 analytical measurements between April 2018 and October 2019, at SEC and in surrounding communities, (c) made technical representations to the public and in the media since the inception of this action, (d) challenged FDOH findings discrediting their allegations in December 2018, (e) demanded and received more than a million pages of technical documents in discovery between May 2019 and March 2020, and (f) previously requested and been granted an almost three-month enlargement of time to meet their expert disclosure deadline, Plaintiffs have not and cannot carry their burden of showing that 90 additional days are necessary because of the pandemic.

I. Plaintiffs cannot demonstrate good cause under Rule 16 because their failure to diligently prosecute their technical allegations is the cause of their delay.

Plaintiffs assert that “a 90-day extension . . . is necessary for Plaintiffs to complete work on their report under the exceptional circumstances posed by the COVID-19 pandemic” (Doc. 119 at 2). OUC is sympathetic to the effects of the pandemic on members of the Plaintiffs’ legal team and the public at large. However, Plaintiffs’ failure to “devote the time needed to formulate a complex expert report” (*id.*) to substantiate technical allegations made in December 2018, which they repeated in the media for the last year and a half clearly did not arise in the last two weeks and cannot be attributed as a sole consequence of current events.

Moreover, Plaintiffs' team of counsel includes two multi-state firms with more than 200 lawyers between them. Consequently, they have the resources to have complied with their obligations under the Amended CMSO.

The Eleventh Circuit has "often held that a district court's decision to hold litigants to the clear terms of its scheduling orders is not an abuse of discretion" when, as here, Plaintiffs have not shown good cause to avoid enforcement of its terms. *Peter E. Shapiro, P.A. v. Wells Fargo Bank N.A.*, 795 F. App'x 741, 751 (11th Cir. 2019) (quoting *Josendis v. Wall to Wall Residence Repairs, Inc.*, 662 F.3d 1292, 1307 (11th Cir. 2011)). "The Eleventh Circuit has examined three factors in considering whether a party was diligent: (1) whether the party failed to ascertain facts before filing a pleading; (2) whether information supporting an amendment requiring modification of the scheduling order was available earlier; and (3) whether the party delayed in requesting to amend after obtaining the relevant information." *Plate v. Pinellas Cty.*, No. 8:18-cv-2534-T-36CPT, 2020 WL 428948, at *5 (M.D. Fla. Jan. 28, 2020) (citing *Cont'l Cas. Co. v. Monaco Beach Club, Inc.*, No. 2:11-cv-336-FtM-29DNF, 2012 WL 13097993, at *1 (M.D. Fla. May 7, 2012)). Plaintiffs have not met this standard with respect to their requested 90-day extension.

A. Plaintiffs have long possessed the technical information necessary to file their action and prepare expert disclosures.

Plaintiffs are the masters of their case and are obligated to investigate the facts before filing an action. In this case, Plaintiffs pled myriad technical and scientific grounds for the allegations in their Complaint and Amended Complaint. Plaintiffs doubled down on these allegations in their statements to the media, including in their statements challenging evidence presented by FDOH refuting Plaintiffs' allegations. And more than a year ago, Plaintiffs made

Rule 26 disclosures representing that they possessed “files concerning environmental testing in Class Area properties” and “files acquired from the Florida Department of Health regarding health statistics.” Ex. B.

Additionally, between April 5, 2018 (half a year before the Plaintiffs’ Complaint was filed) and October 16, 2019, Plaintiffs’ experts collected 228 soil and wipe samples, tested for 75 constituents, and their laboratories performed 6,917 analytical measurements. OUC also consented to a two-day inspection of SEC by Plaintiffs’ experts, which occurred on October 14 and 15, 2019. During this inspection Plaintiffs’ experts collected numerous samples on which they performed more than 1,600 of their nearly 7,000 analytical measurements.

In addition, between May 2019 and March 2020, OUC produced in discovery more than one million pages of documents that Plaintiffs demanded regarding various technical issues. Having first made their technical allegations a year and a half ago, having repeated them in the media throughout this litigation, having started sampling more than two years ago, having completed the last of their four sampling events more than six months ago, and having had full access to all the documents they requested, Plaintiffs fail to show good cause for why they have not completed their expert disclosures for class certification or cannot submit them within 30 days.

B. The information Plaintiffs claim justifies an additional 90-day extension of this Court’s Amended CMSO was available earlier.

OUC acknowledges that the pandemic has created challenges for all of us. On January 30, 2020, the World Health Organization announced that COVID-19 constituted a public health emergency. Plaintiffs, however, only requested an extension from OUC for the first time on May 8—*twelve days ago*. And in their motion, Plaintiffs failed to explain which of

their expert reports have been affected by the pandemic and how (Doc. 119). In short, Plaintiffs provide no logical nexus between the COVID-19 pandemic and their claimed need for an additional 90 days to comply with this Court's Amended CMSO.

In addition, Plaintiffs' past actions do not support their contention that the pandemic's recent challenges support a further 90-day extension of the expert disclosure deadlines. When Plaintiffs requested the first extension in January 2020, they were already within 90 days of when their reports were due and they were required to meet that deadline had it not been extended. And after receiving a nearly three-month extension, Plaintiffs made no mention of a need for additional time until less than two weeks from the amended May 22 deadline.

Preparation of technical expert reports takes significant amounts of time. Accordingly, their last-minute request for an additional 90-day extension demonstrates either (a) Plaintiffs were not diligent in preparing their expert reports, or (b) the data Plaintiffs collected over the last two years do not support the conclusions they hoped their experts would reach. Either way, this establishes that Plaintiffs failed to diligently use the time this Court granted in the Amended CMSO to either finalize their reports or revise their conclusions.

C. Plaintiffs delayed in requesting an extension of this Court's Amended CMSO.

Plaintiffs first requested an additional 90-day extension of an impending expert disclosure deadline only twelve days ago and sought relief just four days before that deadline. This hardly demonstrates the requisite diligence.

Plaintiffs' lack of diligence is further evidenced by their repeated failures to meet basic discovery obligations to OUC. These failures began well before COVID-19 restrictions in Florida and have continued for months without good cause and often without explanation. For

example, Plaintiffs failed to provide a detailed computation of damages as required under Rule 26(a) in their initial disclosures—information that has been due for over a year and remains outstanding. Plaintiffs also failed to timely produce documents responsive to OUC’s two requests for production. When the Plaintiffs eventually made productions, they were partial, and it was months after the documents were due. Even then, key documents, including air modeling and sampling data that they alleged they performed pre-suit were conspicuously missing from their late productions and were produced only after repeated follow-up requests by OUC. These delays and failures by Plaintiffs to comply with their discovery obligations have and continue to prejudice OUC and further demonstrate Plaintiffs’ lack of diligence.

II. Plaintiffs’ request for an additional three-month delay is prejudicial to OUC and the other Defendants.

OUC is a public entity serving an important public purpose during the COVID-19 pandemic while continuing to face Plaintiffs’ unsubstantiated allegations. OUC is entitled to the timely disclosure of Plaintiffs’ purported evidence supporting class certification. Plaintiffs’ request for an additional 90-day extension of the class certification deadlines would push the delay in the production of those disclosures to almost six months.

Moreover, Plaintiffs are proposing to extend only the class-certification related deadlines but no other dates in this Court’s Amended CMSO. This will significantly compress all post-certification deadlines previously set by this Court. For example, it will compress the time to conduct merits discovery in this complex case from 165 days to only 92 days. This is unlikely to be feasible and only foreshadows a request for yet another extension in the future. The deadlines in the Amended CMSO were carefully negotiated by the parties and approved

by this Court. They should not now be compressed to OUC's and the other defendants' detriment by Plaintiffs' lack of diligence in meeting their expert disclosure deadlines.

CONCLUSION

Plaintiffs filed this action alleging myriad technical and scientific issues. They have had a year and a half to prepare expert disclosures based on "investigations" they purport to have performed before filing this action and during the course of litigation. The reality, however, is that Plaintiffs have failed to diligently prosecute the technical and scientific allegations they have been making in this Court and the media since the inception of this action. Accordingly, for the reasons set forth above, Plaintiffs' request to extend this Court's class-certification deadlines should be denied. OUC, however, does not object to the extension of *all* Amended CMSO deadlines for an additional 30 days.

May 20, 2020

Respectfully submitted,

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*Attorneys for Defendant
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CERTIFICATE OF SERVICE

I certify that on May 20, 2020, I electronically filed the foregoing with the Clerk of the Court by using the CM/ECF system, which will send a notice of electronic filing to counsel of record.

/s/ David Weinstein
Attorney

ACTIVE 50396672

EXHIBIT A



Lawyers, Scientific Expert to Host Townhall on Allegations of Toxic Coal Plant Pollution in Orlando Communities

FEBRUARY 19, 2019

Event to host discussion on potential health, legal impacts of allegations that local utility agency, developers are contaminating communities with cancerous toxins

On Tuesday, February 19, leading lawyers and a scientific expert will host a townhall meeting to discuss health and legal ramifications tied to allegations that local utility authorities and real estate developers are polluting Orlando communities with dangerous contaminants. The event will be led by **Theodore J. Leopold** of **Cohen Milstein Sellers & Toll PLLC** and Steve Morrissey of Susman Godfrey LLP, lead counsel in a property damage class action suit alleging the Orlando Utilities Commission (OUC) contaminated the properties of more than 30,000 residents with toxic byproducts from the utility's coal-fired power plants at the Curtis H. Stanton Energy Center. The attorneys will also be joined by Dr. Stephen B. Ellingson, an expert on testing and human and ecological risk assessment with over 30 years of experience in environmental issues.

WHAT: Townhall meeting to discuss potential health and legal impacts of accusations that OUC and developers are polluting local communities with cancerous toxins

WHEN: February 19, 2019; 6 PM EST

WHERE: Double Tree by Hilton Orlando East-UCF
12125 High Tech Ave, Orlando, FL 32817

WHO: **Theodore J. Leopold, Cohen Milstein Sellers & Toll PLLC**
Steve Morrissey, Susman Godfrey LLP
Dr. Stephen B. Ellingson, Vatten Associates

RSVP (Required): If you are interested in attending, email cohenmilstein@berlinrosen.com to RSVP

BACKGROUND:

On December 20, 2018, a **class action lawsuit** was filed in Florida state court alleging that the Orlando Utilities Commission (OUC), a municipally owned public utility providing electric and water service to Orlando citizens, contaminated the properties of more than 30,000 residents with toxic byproducts from the utility's coal-fired power plants at the Curtis H. Stanton Energy Center. The lawsuit, brought by residents of Stoneybrook, Avalon Park, Eastwood and other communities in the area immediately north of the power plant, argues that residents have been deprived of fair use of their properties and need remediation to prevent future harm. The plaintiffs also allege that developers of this area — including Lennar Corporation, U.S. Home Corporation, Avalon Park Group Management, Inc., and the principal of Avalon Park Group, Beat Kahli— are liable for property damage as they marketed, developed, built, and managed neighborhoods in the shadow of the OUC's coal plant without warning residents of the severe health risks while also failing to address the significant pollution.

The lawsuit—the first of its kind in the state—was filed after months of investigation and testing. Test results of soil samples conducted by experts on behalf of the plaintiffs' legal team revealed that pollution from the power plant has contaminated homes in these communities with carcinogenic toxins at levels in excess of state and federal regulatory standards critical to protecting human health. In addition, studies also found the presence of high levels of polonium—a highly radioactive byproduct of coal ash associated with a range of cancers, genetic disorders, and other adverse health effects.

RELATED PROFESSIONALS

- Theodore J. Leopold
- Leslie M. Kroeger

RELATED CASES

- Irizarry, et al. v. Orlando Utilities Company, et al.

RELATED PRACTICE AREAS

- Complex Tort Litigation
 - Environmental Toxic Torts
-

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EXHIBIT B

UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF FLORIDA
ORLANDO DIVISION

MICHELLE IRIZARRY, VALERIE WILLIAMS,
JOANNE NIXON, JOANN ROBINSON, and
BRANDON LITT,

Plaintiffs,

v.

Case No: 6:19-cv-268-Orl-37TBS

ORLANDO UTILITIES COMMISSION;
LENNAR CORPORATION; U.S. HOME
CORPORATION; AVALON PARK GROUP
MANAGEMENT, INC., d/b/a AVALON PARK
GROUP; BEAT KAHLI; BORAL RESOURCES,
LLC and PREFERRED MATERIALS, INC.,

Defendants.

PLAINTIFFS' RULE 26(a)(1) INITIAL DISCLOSURES

Pursuant to Federal Rule of Civil Procedure 26(a)(1), Plaintiffs, MICHELLE IRIZARRY, VALERIE WILLIAMS, JOANNE NIXON, JOANN ROBINSON, and BRANDON LITT, hereby provide to Defendants, ORLANDO UTILITIES COMMISSION, LENNAR CORPORATION, U.S. HOME CORPORATION; AVALON PARK GROUP MANAGEMENT, INC. d/b/a AVALON PARK GROUP, BEAT KAHLI, BORAL RESOURCES, LLC, and PREFERRED MATERIALS, INC., the following initial disclosures:

These initial disclosures are based solely on the information available to Plaintiffs at the present time based on a reasonable search and are made without prejudice to Plaintiffs' right to present additional evidence, including, but not limited to, evidence

obtained through discovery or through continued investigation in this action or any future filing or proceeding, including, but not limited to, at trial. Plaintiffs accordingly reserve the right to supplement or amend these initial disclosures in the future.

Information or materials protected by the attorney-client privilege and/or the work product doctrine will not be disclosed as a part of these initial disclosures. Plaintiffs reserve the right to object in this action or any other action to the production and/or introduction into evidence of these disclosures, any document within the categories described below and/or testimony by way of the disclosed witnesses on any proper ground, and reserves the right to object on any proper ground to any discovery request or proceeding involving or relating to the subject matter of these disclosures.

I. IDENTIFICATION OF INDIVIDUALS

Pursuant to Federal Rule of Civil Procedure 26(a)(1)(A), Plaintiffs identify the following individuals likely to have discoverable information that they may use to support their prosecution in this case, and the general subject matter of that information. By providing a general subject matter for each individual listed below, Plaintiffs do not limit in any way their right to depose such individuals on other relevant topics and/or to call them to testify on other relevant topics. Plaintiffs reserve the right to supplement or amend their identification of individuals.

1. Michelle Irizarry
c/o Cohen Milstein Sellers & Toll, PLLC
2925 PGA Boulevard Suite 200
Palm Beach Gardens, FL 33410

Plaintiff Michell Irizarry is a homeowner in the Stoneybrook development. Mrs. Irizarry is a Class Representative, as well as a Subclass Representative for the residents within the Stoneybrook neighborhood, and is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those

contaminants on the property values. Ms. Irizarry is expected to testify regarding the nature of the Developer Defendants development and any representations or expectations created or made by the Developer Defendants.

2. Valerie Williams
c/o Cohen Milstein Sellers & Toll, PLLC
2925 PGA Boulevard Suite 200
Palm Beach Gardens, FL 33410

Plaintiff Valerie Williams is a homeowner in the Stoneybrook development. Ms. Williams is a Class Representative, as well as a Subclass Representative for the residents within the Stoneybrook neighborhood, and is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Ms. Williams is expected to testify regarding the nature of the Developer Defendants development and any representations or expectations created or made by the Developer Defendants. Additionally, Ms. Williams is expected to testify regarding the negative health impacts the contaminates have had upon her family.

3. Joanne Nixon
c/o Cohen Milstein Sellers & Toll, PLLC
2925 PGA Boulevard Suite 200
Palm Beach Gardens, FL 33410

Plaintiff Joanne Nixon is a homeowner in the Eastwood development. Mrs. Nixon is a Class Representative, as well as a Subclass Representative for the residents within the Eastwood neighborhood, and is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Ms. Nixon is expected to testify regarding the nature of the Developer Defendants development and any representations or expectations created or made by the Developer Defendants. Additionally, Mrs. Nixon is expected to testify regarding the negative health impacts the contaminates have had upon her family.

4. Joann Robinson
c/o Cohen Milstein Sellers & Toll, PLLC
2925 PGA Boulevard Suite 200
Palm Beach Gardens, FL 33410

Plaintiff Joann Robinson is a homeowner in the Avalon Park development. Ms. Robinson is a Class Representative, as well as a Subclass Representative for the residents within the Avalon Park neighborhood, and is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Ms. Robinson is expected to testify regarding the nature of the Developer Defendants development and any representations or

expectations created or made by the Developer Defendants. Additionally, Ms. Robinson is expected to testify regarding the negative health impacts the contaminates have had upon her family.

5. Brandon Litt
c/o Cohen Milstein Sellers & Toll, PLLC
2925 PGA Boulevard Suite 200
Palm Beach Gardens, FL 33410

Plaintiff Brandon Litt is a homeowner in the Storey Park development. Mr. Litt is a Class Representative for the residents within the Storey Park neighborhood and is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values.

6. Dr. Alvaro Blandon
14570 Dover Forest Drive
Orlando, FL 32828

Dr. Alvaro Blandon is a homeowner within the Stoneybrook development. Dr. Blandon is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Dr. Blandon is expected to testify regarding the negative health impacts the contaminates have had upon his family.

7. Maria Blandon
14570 Dover Forest Drive
Orlando, FL 32828

Maria Blandon is a homeowner within the Stoneybrook development. Mrs. Blandon is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Blandon is expected to testify regarding the negative health impacts the contaminates have had upon her family.

8. John Giachino
14534 Dover Forest Drive
Orlando, FL 32828

John Giachino is a homeowner within the Stoneybrook development. Mr. Giachino is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mr. Giachino is expected to testify regarding the negative health impacts the contaminates have had upon his family.

9. Deborah Giachino

14534 Dover Forest Drive
Orlando, FL 32828

Deborah Giachino is a homeowner within the Stoneybrook development. Mrs. Giachino is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Giachino is expected to testify regarding the negative health impacts the contaminates have had upon her family.

10. Alexander Hofmeister
2361 Dryburgh Court
Orlando, FL 32828

Alexander Hofmeister is a homeowner within the Stoneybrook development. Mr. Hofmeister is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values.

11. Sherry Hofmeister
2361 Dryburgh Court
Orlando, FL 32828

Sherry Hofmeister is a homeowner within the Stoneybrook development. Mrs. Hofmeister is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values.

12. Andrea Holcomb
14598 Saint Georges Hill Drive
Orlando, FL 32828

Andrea Holcomb is a homeowner within the Eastwood development. Mrs. Holcomb is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Holcomb is expected to testify regarding the negative health impacts the contaminates have had upon her family.

13. Douglas Holcomb
14598 Saint Georges Hill Drive
Orlando, FL 32828

Douglas Holcomb is a homeowner within the Eastwood development. Mr. Holcomb is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values.

Additionally, Mr. Holcomb is expected to testify regarding the negative health impacts the contaminates have had upon his family.

14. Donna Wash
133 Ringtail Court
Orlando, FL 32828

Donna Wash is a homeowner within the Eastwood development. Mrs. Wash is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Wash is expected to testify regarding the negative health impacts the contaminates have had upon her family.

15. Lisa Peck
13121 Jupiter Hills Court
Orlando, FL 32828

Lisa Peck is a homeowner within the Eastwood development and a former homeowner in the Waterford Lakes community. Ms. Peck is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Ms. Peck is expected to testify regarding the negative health impacts the contaminates have had upon her family.

16. Lori Carr
13034 Royal Fern Drive
Orlando, FL 32828

Lori Carr is a homeowner within the Avalon Park development. Mrs. Carr is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Carr is expected to testify regarding the negative health impacts the contaminates have had upon her family.

17. Robert Carr
13034 Royal Fern Drive
Orlando, FL 32828

Robert Carr is a homeowner within the Avalon Park development. Mr. Carr is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mr. Carr is expected to testify regarding the negative health impacts the contaminates have had upon his family.

18. Dallas Christopher

c/o Cohen Milstein Sellers & Toll, PLLC
2925 PGA Boulevard Suite 200
Palm Beach Gardens, FL 33410

Mr. Christopher is a law enforcement officer and his address is confidential

Dallas Christopher is a homeowner within the Avalon Park development. Mr. Christopher is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mr. Christopher is expected to testify regarding the negative health impacts the contaminates have had upon his family.

19. Lauren Christopher
c/o Cohen Milstein Sellers & Toll, PLLC
2925 PGA Boulevard Suite 200
Palm Beach Gardens, FL 33410

Mrs. Christopher is a law enforcement officer and her address is confidential

Lauren Christopher is a homeowner within the Avalon Park development. Mrs. Christopher is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Christopher is expected to testify regarding the negative health impacts the contaminates have had upon her family.

20. Angely Nunez
14204 Amelia Island Road
Orlando, FL 32828

Angely Nunez is a homeowner within the Avalon Park development. Mrs. Nunez is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Nunez is expected to testify regarding the negative health impacts the contaminates have had upon her family.

21. Brandon Robert
13841 Red Mangrove Drive
Orlando, FL 32828

Brandon Robert is a homeowner within the Avalon Park development. Mr. Robert is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values.

22. Mailin Robert
13841 Red Mangrove Drive
Orlando, FL 32828

Mailin Robert is a homeowner within the Avalon Park development. Mrs. Robert is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values.

23. Tasha Saucedo
13661 Cygnus Drive
Orlando, FL 32828

Tasha Saucedo is a homeowner within the Avalon Park development. Mrs. Saucedo is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Saucedo is expected to testify regarding the negative health impacts the contaminates have had upon her family.

24. Ratna Chandra
3795 Cassia Drive
Orlando, FL 32828

Ratna Chandra is a homeowner within the Avalon Park development. Mrs. Chandra is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Chandra is expected to testify regarding the negative health impacts the contaminates have had upon her family.

25. Rhetta Peoples
3811 Marsh Lilly Drive
Orlando, FL 32828

Rhetta Peoples is a homeowner within the Avalon Park development. Mrs. Peoples is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Peoples is expected to testify regarding the negative health impacts the contaminates have had upon her family.

26. Oscar Peoples
3811 Marsh Lilly Drive
Orlando, FL 32828

Oscar Peoples is a homeowner within the Avalon Park development. Mr. Peoples is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mr. Peoples is expected to testify regarding the negative health impacts the contaminates have had upon his family.

27. John Suddeth

14000 Chicor Crossing
Orlando, FL 32828

John Suddeth is a homeowner within the Avalon Park development. Mr. Suddeth is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mr. Suddeth is expected to testify regarding the negative health impacts the contaminates have had upon his family.

28. Tara Vincent
c/o Cohen Milstein Sellers & Toll, PLLC
2925 PGA Boulevard Suite 200
Palm Beach Gardens, FL 33410
Mr. Vincent is a law enforcement officer and his address is confidential

Tara Vincent is a homeowner within the Avalon Park development. Mrs. Vincent is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Vincent is expected to testify regarding the negative health impacts the contaminates have had upon her family.

29. Lorraine Kitzman
14154 Mailer Blvd.
Orlando, FL 32828

Lorraine Kitzman is a homeowner within the Avalon Park development. Ms. Kitzman is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Ms. Kitzman is expected to testify regarding the negative health impacts the contaminates have had upon her family.

30. Aileen Jones
2812 Afton Circle
Orlando, FL 32825

Aileen Jones is a homeowner within the Andover Lakes development. Mrs. Jones is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Jones is expected to testify regarding the negative health impacts the contaminates have had upon her family.

31. Christopher Jones
2812 Afton Circle
Orlando, FL 32825

Christopher Jones is a homeowner within the Andover Lakes development. Mr. Jones is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mr. Jones is expected to testify regarding the negative health impacts the contaminates have had upon his family.

32. James McDonald
13338 Summer Rain Drive
Orlando, FL 32828

James McDonald is a homeowner within the Avalon Lakes development. Mr. McDonald is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mr. McDonald is expected to testify regarding the negative health impacts the contaminates have had upon his family.

33. Maria McDonald
13338 Summer Rain Drive
Orlando, FL 32828

Maria McDonald is a homeowner within the Avalon Lakes development. Mrs. McDonald is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. McDonald is expected to testify regarding the negative health impacts the contaminates have had upon her family.

34. Michelle Brown
10113 Garden Rose Ct.
Orlando, FL 32825

Michelle Brown is a homeowner within the Cypress Springs development, and a former homeowner in the Waterford Lakes community. Mrs. Brown is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area. Additionally, Mrs. Brown is expected to testify regarding the negative health impacts the contaminates have had upon her family.

35. Mickey Matthews
16105 Michel Road
Orlando, FL 32828

Mickey Matthews is a homeowner within the Seaward Plantation Estates development. Mrs. Matthews is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Matthews is expected to testify regarding the negative health impacts the contaminates have had upon her family.

36. Pedro Sanchez
1006 Chatham Break Street
Orlando, FL 32828

Pedro Sanchez is a homeowner within the Spring Isle development. Mr. Sanchez is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mr. Sanchez is expected to testify regarding the negative health impacts the contaminates have had upon his family.

37. Nidia Sanchez
1006 Chatham Break Street
Orlando, FL 32828

Nidia Sanchez is a homeowner within the Spring Isle development. Mrs. Sanchez is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Sanchez is expected to testify regarding the negative health impacts the contaminates have had upon her family.

38. Vijay Ramrattan
16342 Birchwood Way
Orlando, FL 32828

Vijay Ramrattan is a homeowner within the Timber Isles development. Mr. Ramrattan is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mr. Ramrattan is expected to testify regarding the negative health impacts the contaminates have had upon his family.

39. Sharlene Ramrattan
16342 Birchwood Way
Orlando, FL 32828

Sharlene Ramrattan is a homeowner within the Timber Isles development. Mrs. Ramrattan is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Ramrattan is expected to testify regarding the negative health impacts the contaminates have had upon her family.

40. Virana Mohamed
16374 Tudor Grove Drive
Orlando, FL 32828

Virana Mohamed is a homeowner within the Tudor Grove at Timber Springs development. Mrs. Mohamed is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Mohamed is expected to testify regarding the negative health impacts the contaminates have had upon her family.

41. Arif Mohamed
16374 Tudor Grove Drive
Orlando, FL 32828

Arif Mohamed is a homeowner within the Tudor Grove at Timber Springs development. Mr. Mohamed is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mr. Mohamed is expected to testify regarding the negative health impacts the contaminates have had upon his family.

42. David Guasp
1030 Horseshoe Falls Drive
Orlando, FL 32828

David Guasp is a homeowner within the Waterford Lakes development. Mr. Guasp is expected to testify regarding his knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values.

43. Debra Solomon
556 Land Haven Circle
Orlando, FL 32828

Debra Solomon is a homeowner within the Waterford Lakes development. Mrs. Solomon is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Solomon is expected to testify regarding the negative health impacts the contaminates have had upon her family.

44. Joel Glass
503 Canary Island Court
Orlando, FL 32828

Joel Glass is a homeowner within the Waterford Lakes development and a former homeowner in the Eastwood community. Mr. Glass is expected to testify regarding his knowledge of the contaminants. Additionally, Mr. Glass is expected to testify regarding the negative health impacts the contaminates have had upon his family.

45. Stephany Dove
1646 Algonkin Loop
Orlando, FL 32828

Stephany Dove is a homeowner within the Waterford Trails development. Mrs. Dove is expected to testify regarding her knowledge of the contaminants affecting the property values within the Class Area and the effect of those contaminants on the property values. Additionally, Mrs. Dove is expected to testify regarding the negative health impacts the contaminates have had upon her family.

46. Jay Bratter
3509 Coronet Avenue
Orlando, FL 32823

Jay Bratter is a homeowner within the Wedgefield development and a former homeowner in the Waterford Chase community. Mr. Bratter is expected to testify regarding his knowledge of the contaminants. Additionally, Mr. Bratter is expected to testify regarding the negative health impacts the contaminates have had upon his family.

47. Pamela Bratter
3509 Coronet Avenue
Orlando, FL 32823

Pamela Bratter is a homeowner within the Wedgefield development and a homeowner in the Waterford Chase community. Mrs. Bratter is expected to testify regarding her knowledge of the contaminants. Additionally, Mrs. Bratter is expected to testify regarding the negative health impacts the contaminates have had upon her family.

48. Lori Moore
2608 Alabaster Avenue
Orlando, FL 32833

Lori Moore is a homeowner within the Wedgefield development and a former homeowner in the Stoneybrook community. Mrs. Moore is expected to testify regarding her knowledge of the contaminants. Additionally, Mrs. Moore is expected to testify regarding the negative health impacts the contaminates have had upon her family.

49. Zhenia Rubi Cardona
11349 Carabelee Circle
Orlando, FL 32825

Zhenia Rubi Cardona is a resident of the Andover Lakes development. Mrs. Cardona is expected to testify regarding the negative health impacts the contaminates have had upon her family.

50. Michael Bataglia
13034 Royal Fern Drive
Orlando, FL 32828

Michael Bataglia is a resident of the Avalon Park development. Mr. Bataglia is expected to testify regarding the negative health impacts the contaminates have had upon his family.

51. Ricardo Vasquez
3531 Peppervine Drive
Orlando, FL 32828

Ricardo Vasquez is a resident of the Avalon Park development and former homeowner in the Stoneybrook community. Mr. Vasquez is expected to testify regarding the negative health impacts the contaminates have had upon his family.

52. Midy Vasquez
12628 Victoria Place Circle
Apt. 11222
Orlando, FL 32828

Midy Vasquez is a resident of the Avalon Park development and former homeowner in the Stoneybrook community. Ms. Vasquez is expected to testify regarding the negative health impacts the contaminates have had upon her family.

53. Melinda Ramos
4503 Trescott Drive
Orlando, FL 32817

Melinda Ramos is a former homeowner in the Andover Lakes development. Mrs. Ramos is expected to testify regarding the negative health impacts the contaminates have had upon her family.

54. Edwin Ramos
4503 Trescott Drive
Orlando, FL 32817

Edwin Ramos is a former homeowner in the Andover Lakes development. Mr. Ramos is expected to testify regarding the negative health impacts the contaminates have had upon his family.

55. Lynne Cuna
1716 Seneca Blvd.
Winter Springs, FL 32708

Lynne Cuna is a former homeowner in the Avalon Park development. Mrs. Cuna is expected to testify regarding the negative health impacts the contaminates have had upon her family.

56. Francisco Cuna
1716 Seneca Blvd.
Winter Springs, FL 32708

Francisco Cuna is a former homeowner in the Avalon Park development. Mr. Cuna is expected to testify regarding the negative health impacts the contaminates have had upon his family.

57. Robert McConaughy
418 Belo Court
Fort Mill, SC 29715

Robert McConaughy is a former homeowner in the Avalon Park development. Mr. McConaughy is expected to testify regarding the negative health impacts the contaminates have had upon his family.

58. Andrea McConaughy
418 Belo Court
Fort Mill, SC 29715

Andrea McConaughy is a former homeowner in the Avalon Park development. Mrs. McConaughy is expected to testify regarding the negative health impacts the contaminates have had upon her family.

59. William Roberts
141 Champions Vue Loop
Unit 101
Davenport, FL 33897

William Roberts is a former homeowner in the Avalon Park development. Mr. Roberts is expected to testify regarding the negative health impacts the contaminates have had upon his family.

60. Michele Roberts
141 Champions Vue Loop
Unit 101
Davenport, FL 33897

Michele Roberts is a former homeowner in the Avalon Park development. Mrs. Roberts is expected to testify regarding the negative health impacts the contaminates have had upon her family.

61. Millicent Roberts
15401 Southern Martin Street
Wintergarden, FL 34787

Millicent Roberts is a former homeowner in the Avalon Park development. Mrs. Roberts is expected to testify regarding the negative health impacts the contaminates have had upon her family.

62. Gillon Helman
890 S. Cedar Avenue
Orange City, FL 32763

Gillon Helman is a former homeowner in the Bridge Water and Avalon Lakes developments. Mr. Helman is expected to testify regarding the negative health impacts the contaminates have had upon his family.

63. Virginia Helman
890 S. Cedar Avenue
Orange City, FL 32763

Virginia Helman is a former homeowner in the Bridge Water and Avalon Lakes developments. Mrs. Helman is expected to testify regarding the negative health impacts the contaminates have had upon her family.

64. Kevin Joy
2420 Landmark Drive
Apt. 411
Raleigh, NC 27607

Kevin Joy is a former resident of the Avalon Park development. Mr. Joy is expected to testify regarding the negative health impacts the contaminates have had upon his family.

65. Kimberly Bias
7477 Bluemink Lane
Vierra, FL 32940

Kimberly Bias is a former homeowner in the Spring Isle development. Ms. Bias is expected to testify regarding the negative health impacts the contaminates have had upon her family.

66. Christopher Blanton
3707 N. 56th Street
Tampa, FL 33619

Christopher Blanton is a former resident of the Stoneybrook development. Mr. Blanton is expected to testify regarding the negative health impacts the contaminates have had upon his family.

67. Anthony Capra
178 Palomino Pass
Trumbull, CT 06611

Anthony Capra is a former homeowner in the Stoneybrook development. Mr. Capra is expected to testify regarding the negative health impacts the contaminates have had upon his family.

68. Shari Chuchla
34448 Windley Circle
Eustis, FL 32736

Shari Chuchla is a former homeowner in the Stoneybrook development. Ms. Chuchla is expected to testify regarding the negative health impacts the contaminates have had upon her family.

69. Kayla Griffith
2401 Sandstone Drive
Woodbury, MN 55129

Kayla Griffith is a former resident of the Stoneybrook development. Ms. Griffith is expected to testify regarding the negative health impacts the contaminates have had upon her family.

70. Jamie Medina
2685 Bongart Road
Winter Park, FL 32792

Jamie Medina is a former resident of the Tudor Grove and Avalon Park developments. Ms. Medina is expected to testify regarding the negative health impacts the contaminates have had upon her family.

71. Jenelle Crespo
31 Moses Wheelock Lane
Westborough, MA 01581

Jenelle Crespo is a former resident of the Wedgefield development. Ms. Crespo is expected to testify regarding the negative health impacts the contaminates have had upon her family.

72. Graham Myers
7796 Purple Finch Street
Winter Garden, FL 34787

Graham Myers is a former resident of the Wedgefield development. Mr. Myers is expected to testify regarding the negative health impacts the contaminates have had upon her family.

73. Rebecca Myers
7796 Purple Finch Street
Winter Garden, FL 34787

Rebecca Myers is a former resident of the Wedgefield development. Mrs. Myers is expected to testify regarding the negative health impacts the contaminates have had upon her family.

74. Orlando Utilities Commission
100 W. Anderson Street
Orlando, FL 32801

Unknown representatives of the Orlando Utilities Commission are expected to testify regarding their knowledge of the operations at the Curtis Stanton Energy Center with respect to the procurement, transport, burning, and storage management of coal used at the facility and the residual fly ash.

75. Lennar Corporation
700 NW 107th Avenue
Suite 400
Miami, FL 33172

Unknown representatives of Lennar Corporation are expected to testify regarding their knowledge of the development of the neighborhoods within the Class Area as defined in the Amended Class Action Complaint (DE 43).

76. U.S. Home Corporation
700 NW 107th Avenue
Suite 400
Miami, FL 33172

Unknown representatives of U.S. Home Corporation are expected to testify regarding their knowledge of the development of the neighborhoods within the Class Area as defined in the Amended Class Action Complaint (DE 43).

77. Avalon Park Group Management, Inc.
d/b/a Avalon Park Group
3680 Avalon Park East Blvd.
Suite 300
Orlando, FL 32828

Unknown representatives of Avalon Park Group Management, Inc. d/b/a Avalon Park Group are expected to testify regarding their knowledge of the development of the neighborhoods within the Class Area as defined in the Amended Class Action Complaint (DE 43).

78. Beat Kahli
c/o Avalon Park Group Management, Inc.
d/b/a Avalon Park Group
3680 Avalon Park East Blvd.
Suite 300
Orlando, FL 32828

Beat Kahli is the President and CEO of Avalon Park Group and is expected to testify regarding his knowledge and involvement in the development of the neighborhoods within the Class Area as defined in the Amended Class Action Complaint (DE 43).

79. Boral Resources, LLC
f/k/a Headwaters, Inc.
f/k/a VFL Technology, Inc.
10701 S. River Front Parkway, Suite 300
South Jordan, UT 84095

Unknown representatives of Boral Resources, LLC are expected to testify regarding their operations, maintenance, and marketing of the Stanton Power Plant's combustion residuals as well as fly ash transported to, stored at, and marked from the Stanton Power Plant.

80. Preferred Materials, Inc.
4001 S. Alafaya Trail
Orlando, FL 32831

Unknown representatives of Preferred Materials, Inc. are expected to testify regarding the use of contaminant-laced fly ash from the Stanton Power Plant to manufacture concrete and its use in the development of the subject neighborhoods and building of homes within the Class Area as defined in the Amended Class Action Complaint (DE 43).

II. DOCUMENTS AND THINGS

Pursuant to Federal Rule of Civil Procedure 26(a)(1)(B), Plaintiffs identify the following categories and location of documents, electronically stored information or tangible things that are in the possession, custody and control of the Plaintiffs, and may be used by them to support one or more claims in Plaintiffs' Amended Class Action Complaint and Demand for Jury Trial:

- a. Electronic and hard-copy files concerning environmental testing in Class Area¹ properties in the possession of Plaintiffs' counsel;
- b. Electronic and hard-copy files acquired from the Florida Department of Health regarding health statistics in the possession of Plaintiffs' counsel;
- c. Electronic and hard-copy files acquired from the Florida Department of Environmental Protection regarding the Orlando Utilities Commission and Preferred Materials, Inc. f/k/a Prestige AB Ready Mix in the possession of Plaintiffs' counsel;
- d. Electronic and hard-copy files acquired from former employees of the Orlando Utilities Commission in the possession of Plaintiffs' counsel;
- e. Electronic and hard-copy files acquired from publicly-available historical aerial photography or satellite imagery databases in the possession of Plaintiffs' counsel;
- f. Electronic and hard-copy files acquired from the Florida Department of Environmental Protection regarding the Orlando Utilities Commission and Preferred Materials, Inc. f/k/a Prestige AB Ready Mix; and
- g. Electronic and hard-copy files acquired from Class Area residents regarding the Developer Defendants'² marketing materials in the possession of Plaintiffs' counsel.

III. CALCULATION OF DAMAGES

The full scope of damages that the Plaintiffs and the putative class and subclass members are entitled to recover are set forth in Florida Statute § 376.313 and further will be established through discovery in this case. Based on current information, and as set forth

¹ As defined in Plaintiffs' March 27, 2019 Amended Class Action Complaint and Demand for Jury Trial.

² As defined in Plaintiffs' March 27, 2019 Amended Class Action Complaint and Demand for Jury Trial.

in Plaintiffs' Amended Class Action Complaint and Demand for Jury Trial, Plaintiffs allege that the unlawful discharge and condition of pollution created by Defendants caused the contamination of Plaintiffs' and putative class and subclass members' properties, requiring compensation for (1) the testing, assessment, excavation, and removal of all contaminants; (2) diminution of Plaintiffs' and putative class and subclass members' property values, (3) loss of use and enjoyment of their property and destruction of their community; and (4) attorneys' fees under Florida Statute § 376.13. Plaintiffs further seek permanent injunctive relief regarding the discharge of contaminants and the condition of pollution created by the defendants, and, in the alternative to certain categories of damages, the prompt testing, assessment, excavation, and removal of all contaminants to levels otherwise representative of background levels from the properties of the Plaintiffs and class and subclass members.

IV. INSURANCE

Plaintiffs are unaware of any insurance agreements that must be disclosed pursuant to Fed. R. Civ. P. 26(a)(1)(A).

V. INCORPORATION BY REFERENCE

Plaintiffs refer to and incorporates by reference all individuals identified in Defendants' Initial Disclosures.

VI. RESERVED RIGHTS

Plaintiffs reserve the right to supplement the disclosures set forth herein, including the identification of individuals, identification of additional documents and materials and

computation of damages, if such information comes to their attention through further investigation, discovery or otherwise.

Dated this 3rd day of May 2019.

Respectfully submitted,

Cohen Milstein Sellers & Toll, PLLC
2925 PGA Boulevard, Suite 200
Palm Beach Gardens, FL 33410
T: (561) 515-1400
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By: s/Leslie M. Kroeger
LESLIE M. KROEGER, ESQ.
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CERTIFICATE OF SERVICE

I hereby certify that on this 3rd day of May 2019, the foregoing document is being served this day on all counsel of record identified on the Service List via email.

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EXHIBIT C

Table 1**Brain & CNS Tumors (FCDS Site 60 & 61)* , Age <= 19, DX Years 2005-2014**

Frequency	Geographic region at Diagnosis.			
	Zip Code 32828	Orange County	Seminole County	State of Florida
2005	1	10	2	159
2006	0	10	0	157
2007	1	8	4	147
2008	0	11	4	176
2009	1	8	2	154
2010	4	11	4	166
2011	3	6	5	147
2012	1	9	3	137
2013	1	20	1	153
2014	0	6	4	159
Total	12	99	29	1555

*Primary Site C71.0-C71.9 Histology excluding 9050-9055, 9140, 9530-9539, 9590-9992

Primary Site C71.0-C71.9 Histology 9530-9539

Primary Site C70.0-C70.9, C72.0-C72.9 Histology excluding 9050-9055, 9140, 9590-9992

Table 2**Primary Site C71.7, Histology 9380-9480 & Behavior =3, Age at DX <= 19, DX Years 2005-2014**

Frequency	Geographic region at Diagnosis.			
	Zip Code 32828	Orange County	Seminole County	State of Florida
2005	0	0	0	27
2006	0	0	0	22
2007	0	0	2	22
2008	0	1	0	20
2009	0	1	0	25
2010	0	2	0	22
2011	0	1	2	28
2012	0	4	1	26
2013	0	3	1	27
2014	0	1	1	22
Total	0	13	7	241

ERROR explanation

Was missing a parenthesis around FCDS site 60 or FCDS site 61.

So all counts from state were added for Site 61 there were SOME cases diagnosed in the geographic area but the majority were not.

There were only 2 cases of Site Code 61 diagnosed in 32828 1 in DX year 2010 and 1 in DX year 2011 for **Zip code 32828 the counts were over counted by 166**, below are the over counts per year

dxyear	Over counted
2005	21
2006	13
2007	15
2008	20
2009	20
2010	18
2011	9
2012	14
2013	19
2014	17

There were only 15 cases of Site Code 61 diagnosed in Orange county; 3 diagnosed in 2005; 2 in 2007; 3 in 2008; 1 in 2009; 2 in 2010; 2 in 2011; 1 in 2012 and 1 in 2013 for **Orange County the counts were over counted by 153**, below are the over counts per year

dxyear	Over counted
2005	18
2006	13
2007	13
2008	17
2009	19
2010	17
2011	8
2012	13
2013	18
2014	17

There were also only 2 cases of Site Code 61 diagnosed in Seminole County 1 in DX year 2008 and 1 in DX year 2012 for **Seminole County the counts were over counted by 166**, below are the over counts per year

dxyear	Over counted
2005	21
2006	13
2007	15
2008	19
2009	20
2010	19
2011	10
2012	13
2013	19
2014	17

EXHIBIT D

Mission:

To protect, promote & improve the health of all people in Florida through integrated state, county & community efforts.



Ron DeSantis
Governor

Scott A. Rivkees, MD
State Surgeon General

Vision: To be the **Healthiest State** in the Nation

July 16, 2019

Jerry L. Demings
Orange County Mayor
201 South Rosalind Avenue
P.O. Box 1393
Orlando, FL 32802-1393

Dear Mayor Demings:

The Florida Department of Health takes health concerns brought forward by the community very seriously and strives to ensure the health and safety of our residents each day through public health action in preventing health threats and promoting healthy lifestyles.

In response to your request that the state conduct additional data review and testing for a local area in Orange County, please find enclosed the following materials:

- **Attachment A** – The number of brain and central nervous system cancers for persons age 19 or younger for the current time period 2005 to 2014 and for historical reference the time period from 1981 to 2005 for the following zip codes: 32803, 32806, 32822, 32825, and 32828 and for Orange County, Seminole County, and the entire state of Florida.
- **Attachment B** – Radiologic test findings within proximity of a local utility facility in East Orlando.
- **Attachment C** – A consumer-friendly Frequently Asked Questions document (FAQ) about polonium, polycyclic aromatic hydrocarbons (PAHs), and the occurrence of cancer and what constitutes a cancer cluster.

In an effort to reduce the morbidity and mortality due to cancer, the Florida Legislature under Section 385.202 *Florida Statutes* established the state cancer registry, the Florida Cancer Data System (FCDS), to collect annually the number of new cancers diagnosed among Florida residents to track trends. However, there are limitations to using FCDS data. Although FCDS data can be provided by select geographical area, these data represent a retrospective account of the burden of cancer for an area. The FCDS collects outcome data. The case information submitted by medical reporters to the FCDS describes “who”, “what”, “when”, and “where” of the cancer case. The FCDS does not collect data as to “why” nor can analyses of FCDS data alone determine why the occurrence of cancer in a specific area or population is happening.

Cancer can occur randomly among populations. For the requested zip codes, Attachment A tables shows that the number of cancers fluctuated each year from no cases to a few cases. The number of cancer cases may vary from year to year even if there is no change in the population or environment¹. Among children age 0 to 14 or 0 to 19, cancers of the brain and blood are the top cancer types occurring in Florida as a whole and nationally². Please note that a true comparison between two or more geographical areas is done by comparing the rate of occurrence, the number of cancers per a specified population, which takes into account the demographics and size of the population of interest.

Florida Department of Health

Division of Disease Control & Health Protection • Bureau of Environmental Health
4052 Bald Cypress Way, Bin A-08 • Tallahassee, FL 32399
PHONE: 850/245-4250 • FAX: 850/487-0864

FloridaHealth.gov



Accredited Health Department
Public Health Accreditation Board

Page Two
Mayor Demings

In regards to radiologic testing, approximately 7,700 gamma exposure rate measurements were taken. The data was processed and a map of the survey was completed (Attachment B). As indicated on the map, all readings were within the normal expected radiation background for Florida. No unusual levels were noted.

In summary, the radiologic test findings and the review of cancer data in addition to current scientific knowledge on the potential health risks associated with polonium and PAHs does not provide evidence to substantiate a suspected cancer cluster of pediatric brain cancers.

As you stated earlier, we too are appreciative of the partnership between Orange County Government and the Florida Department of Health in Orange County as this partnership has consistently worked to address public health priorities locally. Should you have further questions on the information provided, please feel free to contact Dr. Kendra Goff, State Toxicologist and Chief of the Bureau of Environmental Health, at Kendra.Goff@flhealth.gov.

Warm regards,



Carina Blackmore, DVM, PhD, Dipl ACVPM
State Epidemiologist & Director
Division of Disease Control and Health Protection
Florida Department of Health

CB/th
Enclosures

Reference

1. Centers for Disease Control and Prevention. Investigating Suspected Cancer Clusters and Responding to Community Concerns, Guidelines from CDC and the Council of State and Territorial Epidemiologists. MMWR 2013;62(No. 8).
2. Florida Department of Health. Florida Annual Cancer Report: Incidence and Mortality Annual Epidemiological Series.

Attachment A. Florida Cancer Data System (FCDS) Data



**Table 1. Brain and Central Nervous System Cancer Counts
Age 19 or Younger by Diagnosis Year and by Geography, 2005-2014**

Year	Geographic Region at Time of Diagnosis							
	Zip Code 32803	Zip Code 32806	Zip Code 32822	Zip Code 32825	Zip Code 32828	Orange County	Seminole County	State of Florida
2005	1	0	2	1	1	10	2	162
2006	0	0	1	2	0	10	0	157
2007	0	0	0	0	1	8	4	147
2008	0	0	0	0	0	11	4	179
2009	0	0	1	0	1	8	2	156
2010	0	0	1	0	4	11	4	167
2011	1	0	0	0	3	6	5	147
2012	0	1	0	0	1	9	3	139
2013	0	1	2	0	1	20	1	155
2014	0	0	0	0	0	6	4	162
Total	2	2	7	3	12	99	29	1571

Source: Florida Department of Health, Florida Cancer Data System (FCDS) as of 3/5/19

*Primary Site C71.0-C71.9 Histology excluding 9050-9055, 9140, 9530-9539, 9590-9992

Primary Site C71.0-C71.9 Histology 9530-9539

Primary Site C70.0-C70.9, C72.0-C72.9 Histology excluding 9050-9055, 9140, 9590-9992

**Table 2. Diffuse Intrinsic Pontine Glioma (DIPG) Cancer Counts
Age 19 or Younger by Diagnosis Year and by Geography, 2005-2014**

Year	Geographic Region at Time of Diagnosis							
	Zip Code 32803	Zip Code 32806	Zip Code 32822	Zip Code 32825	Zip Code 32828	Orange County	Seminole County	State of Florida
2005	0	0	0	0	0	0	0	28
2006	0	0	0	0	0	0	0	22
2007	0	0	0	0	0	0	2	22
2008	0	0	0	0	0	1	0	21
2009	0	0	0	0	0	1	0	26
2010	0	0	0	0	0	2	0	23
2011	1	0	0	0	0	1	2	28
2012	0	1	0	0	0	4	1	26
2013	0	0	0	0	0	3	1	27
2014	0	0	0	0	0	1	1	22
Total	1	1	0	0	0	13	7	245

Source: Florida Department of Health, Florida Cancer Data System (FCDS) as of 3/5/19

Primary Site C71.7, Histology 9380-9480 & Behavior =3 (Malignant)

**Table 3. Brain and Central Nervous System Cancer Counts
Age 19 or Younger by Diagnosis Year and by Geography, 2005-2014**

Year	Geographic Region at Time of Diagnosis							
	Zip Code 32803	Zip Code 32806	Zip Code 32822	Zip Code 32825	Zip Code 32828	Orange County	Seminole County	State of Florida
1981	0	0	0	0	0	3	3	65
1982	0	0	0	0	0	6	2	80
1983	0	0	0	0	0	1	0	67
1984	0	0	0	0	0	1	2	85
1985	0	0	1	0	0	3	2	86
1986	2	1	0	0	0	6	0	89
1987	0	1	1	0	0	9	0	95
1988	0	1	0	0	0	9	1	81
1989	1	0	1	0	0	11	1	103
1990	0	0	0	0	0	5	3	113
1991	0	0	0	0	0	4	1	93
1992	0	0	1	0	0	3	3	108
1993	0	0	0	1	0	6	3	121
1994	0	0	0	0	0	3	4	119
1995	0	0	0	0	0	6	6	119
1996	0	0	0	2	0	6	2	115
1997	0	0	0	0	0	3	2	128
1998	0	0	1	1	0	7	3	132
1999	0	0	1	1	0	12	2	139
2000	0	0	0	0	0	4	5	158
2001	0	1	1	1	0	7	4	127
2002	2	0	1	2	0	18	3	155
2003	0	0	0	0	0	8	4	156
2004	0	0	0	1	1	16	5	158
2005	1	0	2	1	1	10	2	162
Total	6	4	10	10	2	167	63	2854

Source: Florida Department of Health, Florida Cancer Data System (FCDS) as of 3/5/19

*Primary Site C71.0-C71.9 Histology excluding 9050-9055, 9140, 9530-9539, 9590-9992

Primary Site C71.0-C71.9 Histology 9530-9539

Primary Site C70.0-C70.9, C72.0-C72.9 Histology excluding 9050-9055, 9140, 9590-9992

**Table 4. Diffuse Intrinsic Pontine Glioma (DIPG) Cancer Counts
Age 19 or Younger by Diagnosis Year and by Geography, 2005-2014**

Year	Geographic Region at Time of Diagnosis							
	Zip Code 32803	Zip Code 32806	Zip Code 32822	Zip Code 32825	Zip Code 32828	Orange County	Seminole County	State of Florida
1981	0	0	0	0	0	0	0	2
1982	0	0	0	0	0	3	0	8
1983	0	0	0	0	0	0	0	4
1984	0	0	0	0	0	1	1	9
1985	0	0	0	0	0	0	0	10
1986	0	0	0	0	0	0	0	8
1987	0	0	0	0	0	0	0	14
1988	0	0	0	0	0	1	0	13
1989	0	0	1	0	0	4	0	13
1990	0	0	0	0	0	2	0	23
1991	0	0	0	0	0	0	0	11
1992	0	0	0	0	0	1	0	18
1993	0	0	0	0	0	1	0	22
1994	0	0	0	0	0	0	0	16
1995	0	0	0	0	0	2	0	20
1996	0	0	0	0	0	0	1	20
1997	0	0	0	0	0	1	1	19
1998	0	0	0	1	0	4	2	29
1999	0	0	0	0	0	1	0	23
2000	0	0	0	0	0	1	0	17
2001	0	0	0	0	0	1	0	25
2002	0	0	1	0	0	4	2	22
2003	0	0	0	0	0	2	1	21
2004	0	0	0	0	0	5	0	25
2005	0	0	0	0	0	0	0	28
Total	0	0	2	1	0	34	8	420

Source: Florida Department of Health, Florida Cancer Data System (FCDS) as of 3/5/19
Primary Site C71.7, Histology 9380-9480 & Behavior =3 (Malignant)



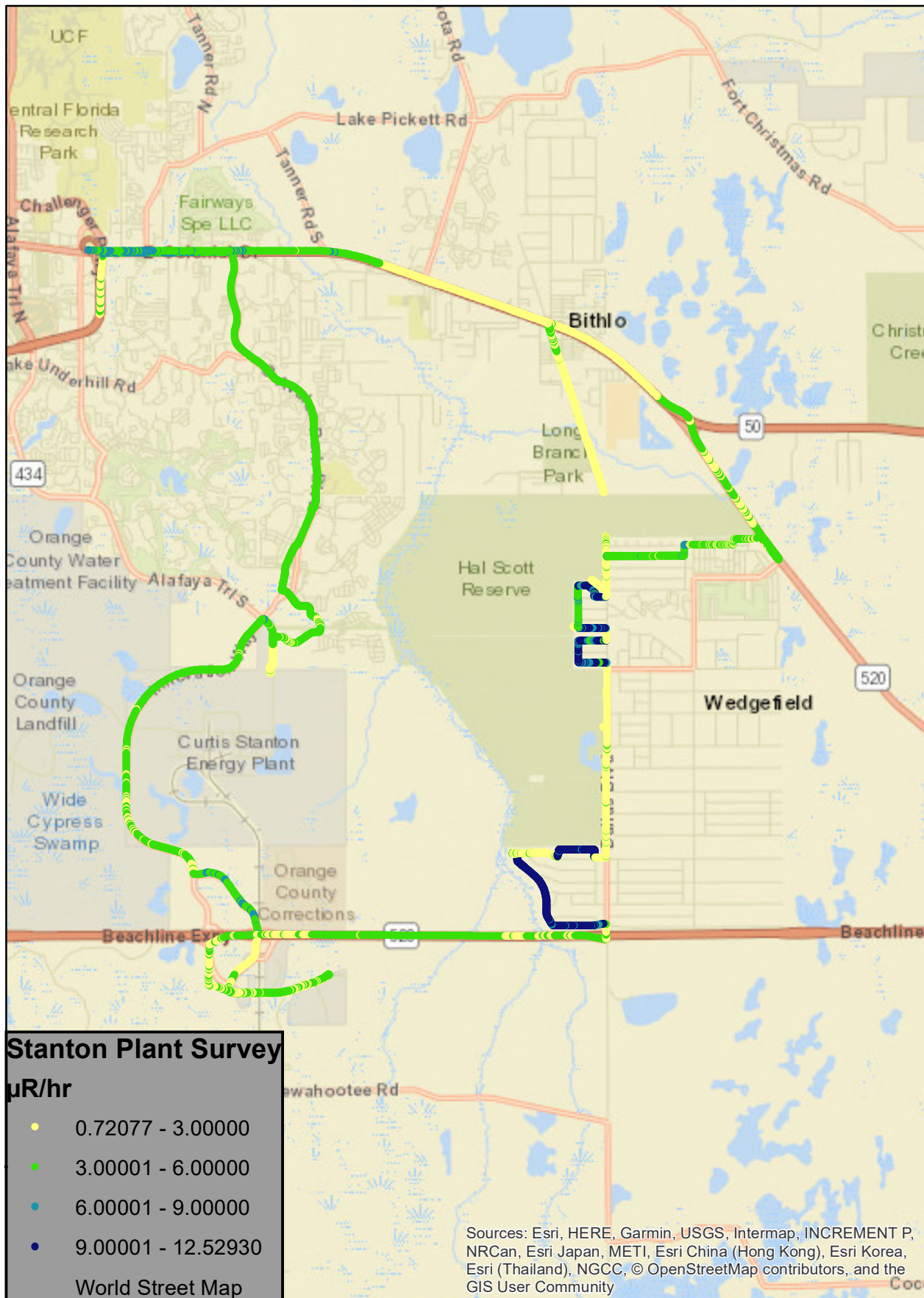
Attachment B. Radiologic Testing

On March 6, 2019, the Florida Department of Health's Bureau of Radiation Control conducted gamma radiation surveys of the vicinity of the Stanton Energy Complex using Radiation Solutions Inc. (RSI) mobile radiation survey detection systems. The RSI equipment is identical to the equipment used by the Department of Energy Radiological Assistance (RAP) teams and the U.S. Environmental Protection Agency for conducting large area gamma radiation surveys including Aerial Measurement Surveys used for surveying after the Fukushima nuclear power plant accident. Bureau personnel were trained in the use of the systems by the Department of Energy.

Approximately 7,700 gamma exposure rate measurements were taken. The data was processed and a map of the survey was completed (see attached). As indicated on the map, all readings were within the normal expected radiation background for Florida. No unusual levels were noted. The Bureau uses guidance provided by the National Council on Radiation Protection (NCRP) #116 to determine if gamma radiation levels are within safe levels.

The levels in NCRP #116 are set at 100 millirem and 500 millirem a year above normal background. Typical occupancy rates are 16 hours per day indoors and 2 hours outdoors for a residential setting (50 weeks per year). Based upon that, a reading of 22 micro rem per hour would yield an exposure of 100 millirem in one year. No actions would be recommended at that exposure level. At 85 micro per hour, yearly dose would be 500 millirem above background and remediation would be recommended. Between the 22 and 85 values, the Department would look at each situation on an individual basis to determine the recommended course of action.

Attachment B - Radiologic Testing Map



Mission:

To protect, promote & improve the health of all people in Florida through integrated state, county & community efforts.



Ron DeSantis
Governor

Scott A. Rivkees, MD
State Surgeon General

Vision: To be the **Healthiest State** in the Nation

- FREQUENTLY ASKED QUESTIONS -

Coal Combustion Wastes

[Coal Burning](#)

[Fly Ash](#)

[Bottom Ash](#)

[Regulation](#)

What happens during the coal burning process?

Coal is generally used as a fuel to produce steam that drives turbine and/or power generators. During the steam production process, coal is burned to heat water boilers. The steam is produced in the boilers at very high temperatures and pressure. Coal is a combustible black or brownish-black sedimentary rock that consists mostly of carbon and other elements such as hydrogen, sulfur, oxygen, and nitrogen. Radioactive materials, such as uranium and thorium, are naturally occurring in coal. When coal is burned, these elements concentrate at up to 10 times higher than their original levels, and that could pose a threat to the environment and to human health.

What are the byproducts of coal burning power plants?

Coal combustion products (CCPs) are byproducts generated from burning coal in coal-fired power plants. The byproducts include fly ash, bottom ash, and boiler slag among other substances.

Are there any risks associated with coal burning?

Coal burning waste can contain several hazardous chemicals, thus having the potential to cause air pollution. It also has the potential to pollute other environmental media.

What is coal ash?

Coal ash is the byproduct of the coal burning process at power plants managed by electric utilities and independent power companies. Its components include both fly ash and bottom ash.

What is the difference between fly ash and bottom ash?

Fly Ash are small particles which can be carried up boiler stacks with the gases exiting to the atmosphere through a pipe used for exhaust flow, like from a fireplace or oven. Most of the coal burning ash is fly ash.

Bottom Ash is ash that is too heavy to be carried through an exhaust pipe, and thus settles to the bottom. The amount of bottom ash created during coal burning will depend on the contents of the coal and the equipment being used.

Can coal ash be used for anything?

The U.S. Environmental Protection Agency (EPA) supports the responsible use of coal ash for recycling or reuse instead of disposal. Coal ash has been used to manufacture concrete as well as wallboard.

Benefits of Coal Combustion Products?

The benefits of coal combustion products include improvements in issues related to environmental, economic, and product performance. Environmental benefits include the reduction of greenhouse gas releases and a decrease in the need for disposal in landfills. Economic benefits include reduced costs for coal ash disposal, an increase in revenue from the sale of coal ash, and potential savings by using coal ash instead of other more expensive materials. The use of coal combustion products has shown that with their use, there is an increase in the strength and durability of building materials which helps with the sustainability of construction materials.

Can you put coal ash in your garden?

So far as benefits in the garden, coal ash can help break up compacted clay, improve drainage, and probably add at least small amounts of nutrients (although not as much as wood ash). The coal was mined from the earth and burned, so it is akin to lime, greensand, and other similar minerals used in gardening.

How is coal ash disposal regulated?

The U.S. EPA signed the Disposal of Coal Combustion Residuals from Electric Utilities final rule on December 19, 2014. This rule finalized guidelines for the safe disposal of coal ash from coal-fired power plants. The rules address risks from coal ash disposal leaking into groundwater and blowing into the air as dust.

Polonium (Po-210)

[General](#)
[Regulations and Advisory](#)
[Biomonitoring and Testing](#)

General Information

What is polonium?

Polonium-210 is a radioactive element that occurs naturally and is normally present in the environment at very low concentrations. It is a byproduct of the radioactive decay of uranium-238, which decays to radon-222, and then to polonium.

Where do you find polonium?

Polonium can be found in small amounts in the human body, due to low levels in the normal environment and the food chain, especially in seafood. Natural polonium is rare. Smokers (tobacco) have more polonium in their body because smoking causes it to accumulate in the lungs.

In the industry, polonium is used in static eliminators (e.g., making tapes, rolling paper). It is also used to keep sensitive environments, such as computer chips, dust free.

Can polonium travel in the air?

Normally, alpha particles are not able to pass through other materials, thus, the particles can be blocked by a sheet of paper, skin, or even a few inches of air. However, alpha particles have the potential to be dangerous if inhaled or swallowed. External exposures generally do not pose a risk.

Why is polonium a concern?

Though polonium occurs naturally in the environment at very low concentrations, if ingested or inhaled it has the potential to have toxic effects on the body.

What are the main sources of polonium exposure?

Ingestion and inhalation are the main sources of exposure. You can be exposed to polonium by:

- Breathing air contaminated with polonium
- Eating or drinking contaminated food
- Contact through an open cut on the skin

What are the other sources of polonium exposure?

Polonium is a very rare natural element; however, other sources include its production in the decay of radon-222 gas and in uranium decay.

How can polonium potentially affect health?

Polonium emits alpha particles and is very radioactive. Alpha particles do not have enough energy to penetrate the outer layer of skin, thus exposure to the outside of the body is not a major concern. However, inside the body, they can be very harmful. It is important to also note that exposure to polonium and other types of radiation can occur through normal daily activities as well. Once it enters the body and the central nervous system is attacked, death could occur. According to the U.S. Nuclear Regulatory Commission (NRC), most people are exposed to radiation through both food ingestion and medical procedures.

The health effects from exposure to polonium depend on how a person is exposed (chemical concentration, exposure times, duration, and frequencies). If the chemical is inhaled, swallowed, or gets into the body through a cut, the alpha particles could potentially damage sensitive living tissues and cells inside the body. Exposure to low levels of radiation encountered in the environment does not cause immediate health effects, but could potentially increase overall cancer risk.

What are the symptoms of a polonium contamination?

Because polonium occurrence is rare, diagnosing a polonium poisoning is difficult. Symptoms depend on the strength of the polonium exposure - the higher the dose the faster the effect will be. Acute symptoms could include the following: nausea, vomiting, anorexia, hair loss, lowered white blood cell count (lymphopenia), diarrhea, and/or damages to bone marrow. After the acute symptoms appear, chronic damages affecting various body organs, the gastrointestinal system, and the cardiovascular and central nervous system are often seen. If exposure occurs in high doses, and the central nervous system is attacked, symptoms will appear such as confusion, convulsion, and ultimately a coma.

What happens to polonium after it enters the body?

Between 50% and 90% of ingested polonium goes through the gastrointestinal (GI) tract and leaves the body through feces. The amount that remains in the body goes to the bloodstream. It then goes to various tissues. The tissues that can potentially be affected include those of the spleen, kidneys, liver, and bone marrow.

How long does polonium remain in the body?

On average, polonium has a half-life of 50 days, which is a measure of the time to eliminate one-half of the polonium retained by the body.

Does polonium cause cancer?

Because polonium is a radioactive compound, once in the body it has the potential to alter tissue and cells, and thus could potentially lead to an increased risk of cancer. Polonium is not a hazard to the outside of the body; however, when inhaled, it can increase the risk of lung cancer and when ingested, it can cause genetic damage and increase the risk of certain types of cancer (e.g., bladder, leukemia, and liver).

Am I at risk if I come in close contact with a polonium contaminated person?

You are not exposed to radiation just by being near a person who is internally contaminated with polonium. You are at risk if you inhale or ingest polonium contaminated bodily fluids.

How can I protect myself from and/or reduce exposure to polonium contamination?

Normal hygiene practices will protect you from polonium contamination. Showering and changing clothes regularly reduces your exposure to environmental chemicals. Make sure you wash your hands and your children's hands with soap and warm water, especially before eating and after being outside. Also, wash things that children put in their mouths, such as pacifiers, bottles, and sippy-cups, especially if they come in contact with soil or household dust. Taking off shoes before going into your house will help reduce the amount of dust or dirt brought into the household that might contain slight amounts of polonium.

If the private drinking water well is suspected to be contaminated with polonium, the use of other water sources is suggested for both drinking and irrigation.

Is there a treatment for polonium poisoning?

Polonium poisoning can be treated via supportive care with monitoring and treatment of symptoms, preventing and treating infections, and having blood transfusions as needed. There is also the potential for chelating therapy where a medication is given to attach to the polonium in the body and prevent it from being absorbed.

Regulation and Advisories

What is considered a safe concentration of polonium in water?

The EPA has yet to establish drinking water standards for polonium. Generally, polonium concentrations in groundwater are not greater than 1 pCi/L (picocurie per liter). The maximum concentration for alpha radioactivity in drinking water is 15 pCi/L. Maximum concentrations are determined by the EPA. The determination considers the effects from a person drinking 2 liters of water per day for 70 years and it is protective of public health.

What is the current Health Advisory Level (HAL) for polonium in drinking water?

The EPA has not established a Health Advisory Level (HAL) for polonium in drinking water.

What is the current Health Advisory Level (HAL) for polonium in soil?

The EPA has not established a Health Advisory Level (HAL) for polonium in soil.

If the drinking water level is above the HAL, what should I do?

If the drinking water contains polonium above the maximum concentration of alpha radioactivity, alternative water sources for drinking, food preparation, cooking, brushing teeth, and other activities may be preferable.

Should I use irrigation water contaminated with polonium to water my lawn?

Polonium contaminated irrigation water used for activities like watering a lawn with non-edible plants and grass, and washing a car or pressure washing a home may pose a low health risk. With the main polonium exposure routes being ingestion and inhalation, activities that could use irrigation water such as filling a pool or other recreational uses could pose a potential health risk.

Is it safe to use water with polonium for irrigation of my home produce?

It is not recommended to use water with polonium for irrigation of home produce as polonium could potentially enter the body.

Biomonitoring and Testing

Is there a test to determine whether a person has been exposed to polonium [*polonium poisoning*]?

To determine polonium poisoning the rate of reduction in lymphocyte counts is assessed using serial blood counts. Also, the analysis of chromosomes (e.g. dicentric count) helps to establish radiation effects and provides an estimation of exposure dose. Furthermore, polonium can be detected in urine and feces. In general, if exposure is not known, polonium poisoning is difficult to diagnose as the symptoms show a variety of similarities to other health related conditions.

Polycyclic aromatic hydrocarbons (PAHs)

[General](#)
[Regulations and Advisory](#)
[Biomonitoring and Testing](#)

General Information

What are PAHs?

PAHs are a group of more than 100 chemicals which can occur naturally in the environment from the burning of coal, oil, gas, wood, garbage, or other organic substances, such as tobacco and charbroiled meat.

Where do you find PAHs?

PAHs are found in the production or use of coal tar or asphalt. They can also be found in coal gasification plants, municipal waste incinerators, smokehouses, and aluminum production facilities.

Can PAHs travel in the air?

PAHs can be found in air and they tend to bind to surfaces of small solid particles. PAHs can travel long distances via air/wind transportation when bound to dust particles.

Why are PAHs a concern?

They are a global group of several hundred chemically related compounds, which are persistent in the environment. PAHs have toxic effects in the body and its effects occur through various actions. PAHs enter the environment through many routes and are usually found as a mixture of two or more compounds. PAHs are commonly detected in air, soil, and water.

How have PAHs been used?

Some of the PAHs are used in medicines and to make dyes, plastics, and pesticides. PAHs can also be found in asphalt, e.g. for road construction. PAHs can also be found in substances like crude oil, coal, coal tar pitch, creosote, and roofing tar.

What are the main sources of PAH exposure?

Ingestion, inhalation, and contact with the skin are the routes of exposure. You can be exposed to PAHs by:

- Breathing contaminated air
- Eating or drinking contaminated food
- Contact with any PAH contaminated media (air, water, soil, sediment) through the skin

What are other sources of PAHs?

Another source of PAH exposure is from the consumption of grilled or charred meats.

What are the potential health effects of exposure to PAHs?

These compounds can potentially cause asthma, bronchitis, or other respiratory problems. Exposure to PAHs can affect the developing fetus, reduce fertility, and impact hormones in the body. PAHs are known to increase cancer risk.

Are health effects caused by PAHs in animals the same as in humans?

The carcinogenicity of certain PAHs is well established in laboratory animals. There have been reported increases in the rates of skin, lung, bladder, liver, and stomach cancers among animals exposed to PAHs. Animal studies also show that certain PAHs can impact the blood and immune systems and cause reproductive, neurological, and developmental effects.

How long do PAHs remain in the body?

Results from animal studies show that PAHs do not tend to be stored in your body for a long time. Most PAHs that enter the body leave within a few days, primarily in feces and urine.

Do PAHs cause cancer?

The U.S. Environmental Protection Agency (EPA) has determined that PAHs are cancer causing (Table 1). Some people who have inhaled or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer. Some PAHs have caused cancer, such as lung, stomach, and skin cancer in laboratory animals when they inhaled PAH contaminated air, ingested PAH contaminated food, or had skin contact with PAH contaminated media, respectively (Table 1).

Table 1: Carcinogenic classification by agency.

Agency	PAH	Compound(s) Carcinogenic Classification
U.S. Department of Health and Human Services (HHS)	<ul style="list-style-type: none"> • benz(a)anthracene • benzo(b)fluoranthene • benzo(a)pyrene • dibenz(a,h)anthracene • indeno(1,2,3-c,d)pyrene 	known animal carcinogens
International Agency for Research on Cancer (IARC)	<ul style="list-style-type: none"> • benz(a)anthracene • benzo(a)pyrene 	probably carcinogenic to humans
	<ul style="list-style-type: none"> • benzo(a)fluoranthene • benzo(k)fluoranthene • ideno(1,2,3-c,d)pyrene 	possibly carcinogenic to humans
	<ul style="list-style-type: none"> • anthracene • benzo(g,h,i)perylene • benzo(e)pyrene • chrysene • fluoranthene • fluorene • phenanthrene • pyrene 	not classifiable as to their carcinogenicity to humans
U.S. Environmental Protection Agency (EPA)	<ul style="list-style-type: none"> • benz(a)anthracene • benzo(a)pyrene • benzo(b)fluoranthene • benzo(k)fluoranthene • chrysene • dibenz(a,h)anthracene • indeno(1,2,3-c,d)pyrene 	probable human carcinogens
	<ul style="list-style-type: none"> • acenaphthylene • anthracene • benzo(g,h,i)perylene • fluoranthene • fluorene • phenanthrene • pyrene 	not classifiable as to human carcinogenicity

*** source <https://www.atsdr.cdc.gov/csem/csem.asp?csem=13&po=11> ***

How can I protect myself from and/or reduce exposure to PAH contamination?

Normal hygiene practices will protect you from PAH contamination. Showering and changing clothes regularly reduce your exposure to environmental chemicals. Make sure you wash your hands and your children's hands with soap and warm water, especially before eating and after being outside. Wash items that children put in their mouths, such as pacifiers, bottles, and sippy-cups, especially if they contact soil or household dust. Taking off shoes before going into your house will help reduce the amount of dust or dirt brought into the household that might contain slight amounts of PAHs.

If a private drinking water well is suspected to be contaminated with PAHs, the use of other water sources is suggested, for both drinking and irrigation.

Regulations and Advisories

How are PAHs regulated?

PAHs are regulated under The Emergency Planning and Community Right-to-Know (EPCRA) standards of 40 CFR Subpart J. EPCRA requires owners and operators of certain facilities that manufacture, import, process, or otherwise use these chemicals to report annually their release of those chemicals to any environmental media. Out of all PAHs, 16 are considered to be priority pollutants by the U.S. EPA. The harmful effects of each of these PAHs to human health can vary. DEP in Florida assess soil considering a combined effect of seven of those PAHs and their various ways of causing harm to human health.

The Agency for Toxic Substance and Disease Registry (ATSDR) developed health and environmental guidelines based on toxicology to use when conducting the analysis and evaluation of exposures to substances found at various sites. For PAHs, the most protective value to use for comparison of concentrations is the Cancer Risk Evaluation Guide (CREG). CREGs are comparison values that are used to identify concentrations of cancer-causing substances which are unlikely to cause an increase of cancer in those exposed.

The United States Occupational Safety and Health Administration (OSHA) assures safe and healthful working conditions for men and women by setting and enforcing standards and by providing training, outreach, education, and assistance. OSHA has not established a substance-specific standard for occupational exposure to PAHs. Exposures are regulated under OSHA's Air Contaminants Standard for substances termed coal tar pitch volatiles (CTPVs) and coke oven emissions. Employees exposed to CTPVs in the coke oven industry are covered by the coke oven emissions standard.

The Florida Department of Environmental Protection (FDEP) has promulgated cleanup target levels (CTLs). The CTLs for the specific members of the PAH family in groundwater and soil (Chapter 62-780, Florida Administrative Code) are shown in Tables 2 and 3, respectively. Other chemical specific CTLs can be found in the "*Technical Report: Development of Cleanup Target Levels for Chapter 62-777*" <https://floridadep.gov/waste/district-business-support/content/waste-management-rules>.

The Department of Health has developed Health Advisory Levels (HAL) for chemicals found in drinking water (Table 2). HALs ensure that no adverse human health effects are caused when consumed over a lifetime. It is a guidance level and is not enforceable.

What is the current health standard/advisory level for PAHs in drinking water?

The U.S. EPA has set an enforceable drinking water quality standard (maximum contaminant level - MCL) for some PAHs (Table 2). An MCL is a standard set by the U.S. EPA for drinking water quality. It presents a legal threshold limit on the amount of a substance that is allowed in public water systems under the Safe Drinking Water Act (SDWA). Drinking water at or below this standard for a lifetime is not expected to cause any harm to your health.

Table 2: Maximum contaminant level and Health Advisory Levels for specific PAHs in drinking water by agency.

Compound (milligrams per liter)	US EPA	ATSDR	DEP	DOH
	MCL	CREG	CTL	HAL
benz(a)anthracene	0.0001	NA	0.00005**	0.0002
benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene	0.0002*	0.012	0.0002*** 0.0005** 0.0005** 0.0048**	0.0002 0.0002 0.0005 0.0048
dibenz(a,h)anthracene	0.0003	NA	0.000005**	0.0002
indeno(1,2,3-c,d)pyrene	0.0004	NA	0.00005**	0.0002

* A concentration of 0.0002 mg/L (milligrams per liter) is the equivalent of 7 tablespoons of sand in an Olympic size pool
 ** Minimum criteria, no drinking water standard available, calculation based on health consideration and aesthetic factor
 *** Primary drinking water standard

- ATSDR - Agency for Toxic Substances and Disease Registry
- CTL - Cleanup Target Level
- CREG - ATSDR Cancer Risk Evaluation Guide
- DEP - Florida Department of Environmental Protection
- DOH - Florida Department of Health
- EPA - Environmental Protection Agency
- HAL - Health Advisory Level
- MCL - Minimal contaminant level
- NA - Not Available

What is the current health standard/advisory level for PAHs in soil?

When evaluating soil, PAH data are usually presented as carcinogenic equivalents (BaP-TEQ) for the sum of 8 specific PAHs by calculating the sum of the 8 PAHs weighted to their toxic equivalency. In other words, each of the 8 PAHs have a different “capability” in their toxic effects which needs to be accounted for prior summing. The U.S. EPA has set enforceable soil regional screening levels (RSL) for the 8 PAHs used to determine the BaP-TEQ (Table 3). The EPA’s regional screening level for other PAHs can be found here: <https://semspub.epa.gov/work/HQ/197418.pdf>.

Table 3: Screening/cleanup target level and Health Advisory Levels for specific PAHs in soil by agency.

Compound (milligrams per kilogram)	US EPA	ATSDR	DEP	DOH
	RSL (10 ⁻⁶ level)	CREG	CTL	HAL
benzo(a)pyrene, BaP-TEQ	0.11	0.11	0.1 (residential) 0.7 (industrial)	NA
benz(a)anthracene	1.1	NA	NA	
benzo(b)fluoranthene	1.1			
benzo(k)fluoranthene	11			
chrysene	110			
dibenz(a,h)anthracene	0.11			
indeno(1,2,3-c,d)pyrene	1.1			

- ATSDR - Agency for Toxic Substances and Disease Registry
- BaP - Benzo(a)pyrene
- CTL - Cleanup Target Level
- CREG - ATSDR Cancer Risk Evaluation Guide
- DEP - Florida Department of Environmental Protection
- DOH - Florida Department of Health
- EPA - Environmental Protection Agency
- HAL - Health Advisory Level
- NA - Not Available
- RSL - Regional Screening Level (based on 1x10⁻⁶ and Hazard Quotient= 1)
- TEQ - Toxic Equivalency

What is the current health standard/advisory level for PAHs in air?

The U.S. EPA has set regional screening levels (RSL) for PAHs in air (Table 4). For more information regarding screening levels of PAHs other than the one shown in Table 4, visit the following link: <https://semspub.epa.gov/work/HQ/197426.pdf>.

The OSHA permissible exposure limit (PEL) for PAHs in the workplace is 200 µg/m³. The limit is based on an 8-hour time-weighted average. The OSHA standard for coke oven emissions is 0.15 mg/m³. The National Institute for Occupational Safety and Health (NIOSH) has recommended that the workplace exposure limit for PAHs be set at the lowest detectable concentration, which was 100 µg/m³ for coal tar pitch volatile agents at the time of the recommendation.

Table 4: Screening levels and Health Advisory Levels for specific PAHs in air by agency.

Compound (microgram per cubic meter - µg/m ³)	US EPA	ATSDR	DEP	DOH	OSHA	
	RSL (10 ⁻⁶ level)	CREG	CTL	HAL	PEL	
benzo(a)pyrene	0.0017	0.0010	NA	NA	200	
benz(a)anthracene	0.017	NA			NA	NA
benzo(b)fluoranthene	0.026					
benzo(k)fluoranthene	0.17					
Chrysene	1.7					
dibenz(a,h)anthracene	0.0017					
indeno(1,2,3-c,d)pyrene	0.017					

- ATSDR - Agency for Toxic Substances and Disease Registry
- CTL - Cleanup Target Level
- CREG: - ATSDR Cancer Risk Evaluation Guide
- DEP - Florida Department of Environmental Protection
- DOH - Florida Department of Health
- EPA - Environmental Protection Agency
- HAL - Health Advisory Level
- NA - Not Available
- OSHA - Occupational Safety and Health Administration
- RSL - Regional Screening Level (based on 1x10⁻⁶ and Hazard Quotient= 1)
- PEL - Permissible Exposure Limit

If the drinking water is above the standard/advisory level, what should I do?

If the drinking water contains PAHs above the drinking water quality standard concentration, alternative water sources for drinking, food preparation, cooking, brushing teeth, and other activities may be preferable.

Should I use irrigation water with PAHs for watering the lawn?

Irrigation of a lawn with non-edible plants and grass poses potential risk if the water is contaminated with PAHs. Also, as previously stated, irrigation water is not potable water and should not be used for drinking. For this chemical, drinking is a potential route of exposure.

Is it safe to use water with PAHs for irrigation of my home produce?

It is not recommended to use water with PAHs for irrigation of home produce as PAHs could potentially enter the body.

Biomonitoring and Testing

Is there a test to determine whether a person has been exposed to PAHs?

There is a test that can measure the presence of PAHs in the urine, the body’s tissue, and/or blood. This test can only tell if you have been exposed; but it can’t determine the exposure source, how much a person is exposed, nor how harmful the effects of the exposure will be.

What can the test results tell me?

While the tests may be able to detect PAHs in the body, it does not:

- Provide information to pinpoint whether PAHs caused a health problem, nor will it provide information for treatment
- Predict or rule-out the development of future health problems related to a PAH exposure
- Identify how or where the PAH exposure occurred

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Cancer Clusters

Florida Cancer Data System (FCDS)

What is a cancer cluster?

A cancer cluster is defined as a greater-than-expected number of cancer cases that occurs within a group of people in a defined geographical area over a specified period of time. When people learn that several friends, family members, or neighbors have found out they have cancer, cancer clusters are often suspected. Cancer clusters are also sometimes suspected when people who work at the same place or have other factors in common get cancer.

What are the criteria for a group of cancer cases to be considered a cluster?

To be a cancer cluster, a group of cancer cases must meet the following criteria:

- Include a large number of cases of one type of cancer or types of cancer scientifically proven to have the same cause or etiology, rather than several different cancer types.
- The observed number of cases is higher than one would typically observe in a similar setting (e.g., in a group with a similar population, age, race, or gender).

Other important factors in evaluating reports of cancer clusters are:

- A rare type of cancer, rather than common types.
- An increased number of cases of a certain type of cancer in an age group that is not usually affected by that type of cancer.
- The type of cancer involved is a primary (original) cancer not a metastasized (spread from another organ) cancer.

How are suspected cancer clusters investigated?

Not all community concerns of excess cancer require investigation; oftentimes, community concerns can be resolved by providing general cancer educational information, facts and resources.

When needed, a local or state health department gathers information about the suspected cancer cluster. This commonly includes the types of cancer, number of cases, age, sex, race, address, and age at diagnosis of the individuals with cancer. The department reviews this available information and determines if analysis of cancer rates and other investigative steps are needed to better understand the situation.

If the department determines that analysis is needed, this involves confirming the number and types of cancers in the community and comparing this to what might be expected based on state or county rates of cancer. Specific analysis (such as investigating just childhood rates, or just among women in the case of breast cancer) may also be needed depending upon the type of concern. The department communicates and discusses the results of the analysis with the community.

Where do I go for additional information?

Centers for Disease Control and Prevention (CDC) Cancer Clusters

Agency for Toxic Substances and Disease Registry

National Cancer Institute (NCI) Cancer Clusters

What is FCDS (Florida Cancer Data System)?

The Florida Department of Health (DOH), Public Health Research has contracted with the University of Miami's Miller School of Medicine since 1979 for the day-to-day operations of the statewide cancer registry, the Florida Cancer Data System (FCDS). The FCDS is legislatively mandated to collect incidence data on all cancers diagnosed among residents in Florida per Section 385.202 *Florida Statute*. Since 1981, the FCDS has been collecting the number of new cancers diagnosed each year statewide (e.g., the annual incidence). The FCDS is used to observe cancer trends and provide a research base for studies into the possible causes of cancer.

The FCDS has been certified by the Centers for Disease Control and Prevention's National Program of Cancer Registries (CDC-NPCR) as a 'Registry of Excellence' for meeting all program standards. Furthermore, the North American Association of Central Cancer Registries (NAACCR) has certified the FCDS at its highest level, "Gold Certification" since 2002. Gold Certification is conferred on central registries that exceed standards for completeness, timeliness, and data quality.

What kind of cancer cases must be reported to FCDS?

Florida statute requires all malignant cancers reportable with the following *exceptions* - In situ carcinoma of the cervix (CIS), intraepithelial neoplasia grade III of the cervix (CIN III) and intraepithelial neoplasia of the prostate (PIN III) are *not reportable*. Basal and squamous cell carcinoma of non-genital skin sites are *not reportable* regardless of extent of disease at the time of diagnosis or the date of first contact with the reporting facility. *Reportable* on or after diagnosis date of 01/01/2001 are Intraepithelial neoplasia Grade III of vulva (VIN III), vagina (VAIN III) and anus (AIN III) and Myelodysplastic Syndrome (MDS). All patients with an active, benign or borderline brain or central nervous system (CNS) tumor, diagnosed on or after 01/01/2004, whether being treated or not *are reportable*. All cancer cases diagnosed and/or treated in Florida since 1981 must be reported to the FCDS.

What kind of data is collected by FCDS?

The FCDS requires that the data collected include information which indicates diagnosis, stage of disease, patient demographics, laboratory data, tissue diagnosis and methods of diagnosis or treatment for each cancer diagnosed or treated in Florida.

Who is required to report cancer cases to FCDS?

All facilities licensed under Chapter 395 and each freestanding radiation therapy center under Section 408.07; All ambulatory surgical centers as specified by Rule 64D-3.034; Any licensed practitioner in the state of Florida that practices medicine, osteopathic, chiropractic medicine, naturopathy or veterinary medicine are required to report under Chapter 381 or any laboratory licensed under Chapter 483 that diagnoses or suspects the existence of a cancer.

Are there limitations to using FCDS data for analyses?

Yes, there are limitations to using Florida Cancer Data System (FCDS) data. Although FCDS data can be provided by select geographical area, these data represent a retrospective account of the burden of cancer for an area. The FCDS collects outcome data. The case information submitted by medical reporters to the FCDS describes “who”, “what”, “when”, and “where” of the cancer case. However, the FCDS does not collect data as to “why” nor can analyses of FCDS data alone determine why the occurrence of cancer in a specific area or population is happening. Moreover, there is an inherent delay in collecting cancer incidence data as a reporting entity has up to six (6) months after the initial date of diagnosis to report the cancer case information to the Florida Department of Health. This six-month period permits the cancer case information to include the completed initial course of treatment. In addition, the FCDS must conduct external linkages with Department’s Bureau of Vital Statistics and the Florida Agency for Health Care Administration to ensure the completeness and accuracy for the diagnosis year. Therefore, cancer surveillance data from the FCDS is not available for official release until two years after the close of the diagnosis year.

Has information been released before from the Florida Department of Health in regards to zip code 32828?

Yes, the total number of pediatric brain cancers and a more specific brain cancer sub-type, diffuse intrinsic pontine glioma (DIPG) over the ten-year period from 2005 to 2014 was released for the zip code tabulation area (ZCTA) 32828, Orange County, and Seminole County under an approved data request. The number of pediatric brain cancers for ZCTA 32828 fluctuated each year from no cases to a few cases. This is a very typical pattern as cancer can occur randomly among populations. The number of cancer cases may vary from year to year even if there is no change in the population or environment. Among children 0-14 or 0-19, cancers of the brain and blood are the top cancer types occurring in Florida as a whole and nationally.