



Upcoming Meeting Dates

Brown Bag Agenda, January 15, 2015

Artificial Turf Field Data

FLHS BC Special Meeting 12/30/14 – Draft Minutes

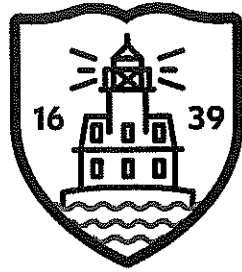
OHS BC Meeting 12/18/2014 – Draft Minutes

January 5, 2015 FPS Enrollment



### UPCOMING MEETING DATES

January 13	7:30 PM – Board of Education Meeting Regular Meeting 501 Kings Highway East 2 <sup>nd</sup> Floor Board Conference Room
January 15	12:00 PM – Brown Bag Lunch 501 Kings Highway East 2 <sup>nd</sup> Floor Board Conference Room
January 20	7:30 PM – Board of Education Meeting Special Meeting/Budget 501 Kings Highway East 2 <sup>nd</sup> Floor Board Conference Room
January 26	4:15 PM – Board of Education Meeting Policy Committee 501 Kings Highway East Superintendent's Conference Room
January 27	7:30 PM – Board of Education Meeting Special Meeting/Budget 501 Kings Highway East 2 <sup>nd</sup> Floor Board Conference Room
January 29 Thursday	7:30 PM – Board of Education Meeting Regular Meeting/Budget Adoption 501 Kings Highway East 2 <sup>nd</sup> Floor Board Conference Room



# **FAIRFIELD PUBLIC SCHOOLS**

Brown Bag Agenda  
2<sup>nd</sup> Floor Board Conference Room  
501 Kings Highway East, Fairfield CT 06825

Thursday, January 15, 2015  
**12:00 P.M.**

1. Welcome and Introductions
2. Discussion of Superintendent's Recommended 2015-2016 Operating Budget
3. Question and Answer Session
4. Adjournment

# **Fairfield Public Schools**

Fairfield, CT 06825

**TO:** Dr. David Title and Members of the Board of Education

**FROM:** Thomas P. Cullen

**DATE:** January 6, 2015

**RE:** Artificial Turf Field Data

Attached please find some helpful fact sheets and information regarding our request for the Fairfield Ludlowe High School artificial turf field replacement in our proposed 2015-2016 Non-Recurring Budget request. I spoke to the Fairfield Director of Health and his recommendation was to review the State of Connecticut Department of Public Health reports and fact sheets which are very helpful. This will provide some information for you related to the health effects of the most common artificial turf fields being installed today.

If you have any questions or concerns regarding this information, please feel free to contact me at (203) 255-8373. Thank you for your continued support with the non-recurring projects for 2015-2016.

Thank you.

c: Meg Brown

**Technical Fact Sheet • October, 2007**

## **Health Questions about Artificial Turf Fields**

### **Background**

Cities and towns across Connecticut have increasingly opted for replacement of grass fields with a form of artificial turf that uses recycled rubber tires. The tires are processed into crumb rubber and used as an infill material to cushion the playing surface. Purported advantages over natural grass fields are reduced watering and maintenance, avoiding the need for pesticides, reduced injuries, and ability to play on the fields in a wider variety of weather conditions. However, the fields may not be maintenance-free and involve some grooming. Also, there are sources that recommend anti-static and antimicrobial treatments.

Questions have been raised regarding health, safety and environmental aspects of the rubber infill material (Brown, 2007). Rubber contains a variety of industrial chemicals that, in small quantities, can be released into the air during playing and which may run off into the environment in rainwater. This fact sheet focuses upon the potential health effects to athletes and spectators using these fields, many of who are school-age children.

### **What Chemicals Can Be Released By The Rubber Infill Material?**

***A mixture of particles and volatile chemicals can be released.***

Rubber is a complex mixture of chemicals, some of which readily vaporize to form a gas (volatile organic chemicals or VOCs), while others remain in the solid-phase (e.g., metals, polycyclic aromatic hydrocarbons or PAHs). Given the variety and types of chemicals involved,

it is not surprising that some have toxic or carcinogenic activity when tested in laboratory animals. Studies at indoor soccer fields in Norway under active use conditions have shown that artificial turf can release numerous chemicals into the air, some as gases and others as particles. The VOCs included benzothiazole and toluene, while PAHs and phthalates were in the particles (Dye, et al., 2006). A laboratory study of vapor release from crumb rubber at the Connecticut Agricultural Experiment Station identified 3 additional chemicals (butylated hydroxyanisole, hexadecane, octylphenol) and traces of other unidentified constituents (CAES, 2007). California EPA evaluated the potential for chemicals to be absorbed into the body if the rubber were swallowed by children (CalEPA/OEHHA, 2007). They found that 22 chemicals leached out of the rubber when subjected to a gastric acid solution intended to simulate the human stomach. Thirteen different metals were leached with zinc and copper the most abundant. Organic chemicals were also extracted from the rubber with aniline and benzothiazole the most common. Benzene, toluene and PAHs were not found in the extract.

VOC release from crumb rubber infill would be expected to be greatest under sunny, hot weather conditions and the surface of artificial fields is known to become hotter than the ambient air. Temperatures of 150F or higher have been found under these conditions (McNitt, 2007). Particle release is expected to be affected by the number of athletes using the field at any given time, their body weight and the intensity of their exercise. Weather conditions such as temperature gradients and wind will affect gas and particle concentrations in the breathing zone of athletes; in general this is 3-6 feet above the surface. Temperature studies done by Pennsylvania State University indicate the rapid dispersal of heat with height above the fields with measurements 3 feet above the surface 40-60F less than the surface temperature (McNitt, 2007). This rapid atmospheric mixing suggests that VOCs emanating from the surface will also rapidly dilute and that the main potential for exposure is during brief periods where athletes are lying flat on the ground. Indoor fields will have less dilution effect (less wind and temperature gradient) and measurements at indoor soccer fields in Norway (height above field not specified) found a variety of rubber-related VOCs (Dye, et al., 2006).

## **How Can People Be Exposed To Rubber Chemicals At Artificial Turf Fields?**

*Inhalation and ingestion exposures are possible.*

Athletes using the fields can be exposed to VOCs and particles released from the rubber infill. Because their play may create airborne particles and because of their high ventilation rate, athletes are expected to receive the greatest exposure. As shown in the Norway indoor field study (Dye, et al. 2006), these particles can be in the respirable dust (<10 micron) range and can exist at concentrations of 1-10 microgram per cubic meter (ug/m<sup>3</sup>), which is somewhat higher than the urban background estimated for Los Angeles rubber dust (1-2 ug/m<sup>3</sup>) (Miguel, et al., 1996). Athletes may also inadvertently ingest dust particles that cling to the hands and clothing.

Those watching from the sidelines or grandstands will receive lower exposures to the particles and VOCs released by the rubber. It is also possible that if young children accompany parents to these fields, they may swallow the infill material itself, although the ingestion of whole granules is not likely to be a frequent occurrence. This possibility may increase if artificial turf fields are placed at elementary schools and playgrounds that have playscapes.

Since the particles cling to shoes and clothing, it is also possible for the infill material to be tracked into cars and homes after leaving the field. This can lead to some ongoing exposure to the athlete and other household members, as the particles become part of house dust. This is expected to be much less exposure than from the fields themselves.

## **Are People Exposed To These Chemicals In Other Ways?**

*Yes.*

Most of the chemicals emitted from the rubber granules are quite common in urban and suburban air. Part of the reason is that car and truck tires are constantly being worn down and release a similar array of gases and particles as can be released from crumb rubber. These chemicals are not just near roadways but spread around and become part of the background air. For example,

roughly 1-2% of the respirable dust in Los Angeles is estimated to come from the wearing of tires (Miguel, et al., 1996).

Other sources for these chemicals are also quite common. For example, outdoor air contains PAHs from car exhaust and home furnaces, while indoor air and consumer products can be a source of chemicals found in rubber: benzothiozoles (carpet padding, rubber-based flooring, wine, food flavorings – Bellavia, et al., 2000), latex allergens (rubber bands and latex gloves), phthalates (cosmetics, flooring), toluene (solvent in glues and other consumer products), butylated hydroxyanisole (food preservative), hexadecane (food packaging), and PAHs (wood smoke, char-broiled meat). A California study found that benzothiazole off gases from rubberized flooring that is commonly used in schools and estimated indoor air concentrations up to several hundred ug/m<sup>3</sup> (California Integrated Waste Management Board, 2003).

Rubber matting is commonly used beneath play equipment so that children have played on rubber surfaces for many years. However, the shredded nature of the tire crumbs causes a greater potential for exposure than is likely from intact rubber surfaces.

Thus background sources of exposure to the chemicals present in rubber infill are common and expected to be more continuous and at times greater than what is possible from playing on artificial turf fields. Possible exceptions to this are: 1) the ingestion of the infill material itself by small children, although this would be expected to be a one-time or sporadic event; 2) the contamination of the home environment with rubber granules and dust, which could lead to an ongoing, low-level exposure.

## **Is There A Health Risk?**

***Based upon the current evidence, a public health risk appears unlikely. DPH does not believe there is a unique or significant exposure from chemicals that can be inhaled or ingested at these fields. However, there is still uncertainty and additional investigation is warranted.***

Any risk assessment on chemical exposures from artificial turf fields will be limited by the fact that exposure pathways are still not well characterized and that for some chemicals, the



toxicology database is incomplete. A potential concern is the possibility of respiratory irritation and instigation of an asthma attack. Asthma is already a concern in youth sports, especially in hot weather. One of the main chemicals that can off gas from the rubber, benzothiazole, is an irritant and particulate matter and latex allergens are potential asthma triggers. Concerns have also been raised regarding cancer risks given that rubber contains PAHs, certain of which are carcinogenic. However, when judged within the context of background exposures to these chemicals as well as risk assessments conducted by other regulatory bodies, artificial turf fields do not appear to be a significant risk factor for asthma or cancer.

Several governmental bodies have reviewed the potential exposures and risks from the chemicals that can be released from artificial turf. The Norwegian government conducted a quantitative risk assessment based upon the data described above from several indoor turf fields and a review of the available toxicology data (Norwegian Inst Public Health, 2006). They used reasonably conservative assumptions for contact rates via inhalation and ingestion of pellets by athletes. Their analysis found no elevated health risks. They cautioned that their assessment was incomplete in several areas, particularly due to incomplete toxicology data and regarding the potential exposure to latex allergens. The Swedish government issued a qualitative review of health risks and leaching potential to the environment and also determined that the risk to public health was not a concern (KEMI, 2006). However, from a pollution prevention perspective, they recommended against new installations of artificial turf. Risk evaluations by the French government and by the State of NJ similarly did not find threats to public health with the NJ white paper concluding that there was no obvious toxicological concern raised by crumb rubber in its intended outdoor use (Moretto, 2007; LeDoux, 2007). The California EPA/OEHHA risk assessment of children ingesting 10 grams of rubber pellets on a one time acute basis did not find an elevated health risk (CalEPA/OEHHA, 2007). Other groups have done their own assessment and found concerns due to the types of exposure possible (Brown, 2007).

It is also important to consider possible exposures in relation to background sources of the chemicals that can be released from the rubber infill. While this type of comparison is still limited, we do know that there is frequent and considerable background exposure to particulate matter, PAHs, latex allergens and phthalates in outdoor air, consumer products, food and the

indoor home environment. Some of this exposure comes from rubber itself as the wearing of tires is a significant contributor to air pollution.

Exposures to benzothiazole and other VOCs at artificial turf fields are expected to be low as off-gassing in cool weather may not be great and off-gassing in hot weather will be more significant but may be readily diluted with height above the field due to wind and as the heat from the field disperses. However, careful measurements of this have not been made.

While DPH does not believe there is a unique or significant health threat from chemical releases that can be inhaled or ingested, the uncertainties warrant further investigation.

## **Should Towns Continue To Install This Type Of Artificial Turf Field?**

*DPH's review does not find any reason to stop installation of these fields.*

Currently there are no federal or state limits on the installation of crumb rubber-based turf fields. Therefore, it is up to towns to make a case-by-case decision on whether artificial turf is the right choice for a particular setting. DPH's review of the existing literature does not find any reason to stop installation of these fields, but acknowledges that much of this information is very recent and this area is rapidly evolving. Additionally, the potential exposures and risks have not been fully characterized. DPH recommends that towns consider these uncertainties as part of the array of issues evaluated when deciding whether to install artificial turf fields (e.g., cost, maintenance, public acceptability).

## **Where Can I Get More Information?**

Health Questions? Contact the Environmental and Occupational Health Assessment unit at CTDPH at 860- 509-7740

## References

- Bellavia, V., Natangelo, M, Fanelli, R and Rotilio, D (2000) Analysis of benzothiazole in Italian wines using headspace solid-phase microextraction and gas chromatography-mass spectrometry. *J Agric Fd Chem* 48: 1239-1242.
- Brown, D. (2007) Exposures to Recycled Rubber Tire Crumbs Used on Synthetic Turf Fields, Playgrounds and Gardening Mulch. Available at [http://www.ehhi.org/turf/pr\\_turf\\_report.shtml](http://www.ehhi.org/turf/pr_turf_report.shtml).
- CAES (Connecticut Agricultural Experimental Station) (2007) Examination of Crumb Rubber Produced from Recycled Tires. AC005 – 8/07.
- CalEPA/OEHHA (2007) Evaluation of Health Effects of Recycled Waste Tires in Playground and Track Products. Prepared for the California Waste Management Board, January, 2007.
- California Integrated Waste Management Board (2003) Building Material Emission Study. Available at <http://www.ciwmb.ca.gov/Publications/GreenBuilding/43303015.doc>.
- Dye, C., Bjerke, A., Schmidbauer, N. and Mano, S. (2006) Measurement of Air Pollution in Indoor Artificial Turf Halls. Norwegian Inst Air Res Report NILU OR 03/2006.
- KEMI (Swedish Chemicals Agency) (2006) Synthetic Turf from a Chemical Perspective – A Status Report. Available at [http://www.kemi.se/upload/Trycksaker/Pdf/PM/PM3\\_06\\_eng.pdf](http://www.kemi.se/upload/Trycksaker/Pdf/PM/PM3_06_eng.pdf)
- LeDoux, T (2007) Preliminary Assessment of the Toxicity from Exposure to Crumb Rubber: its use in Playgrounds and Artificial Turf Playing Fields. [New Jersey Department of Environmental Protection, Division of Science, Research and Technology](#)
- McNitt, AS (2007) Evaluation of Playing Surface Characteristics of Various In-filled Systems. Penn State University. Available at <http://cropsoil.psu.edu/mcnitt/infill.cfm>.
- Miguel, AG, Cass, GR, Weiss, J and Glovsky, MM (1996) Latex allergens in tire dust and airborne particles. *Environ Health Perspect* 104: 1180-1186.
- Moretto, R (2007) Environmental and Health Evaluation of the Use of Elastomer Granulates (Virgin and from used Tyres) as Filling in Third-Generation Artificial Turf. ADEME/ALIAPUR/FIELDTURF TARKETT
- Norwegian Inst of Public Health and Radium Hosp (2006) Artificial turf pitches – an assessment of the health risks for football players.

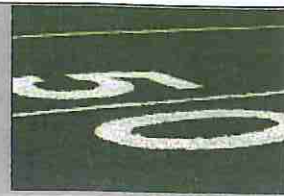


# FACT SHEET

Connecticut Department of Public Health  
Environmental & Occupational Health Assessment Program  
Environmental Health Section  
410 Capitol Avenue, MS # 11EOH, PO Box 340308  
Hartford, CT 06134-0308  
Telephone: (860) 509-7740 Fax: (860) 509-7785  
<http://www.ct.gov/dph/>

August 2010

## The CT DPH Risk Assessment of Artificial Turf Fields



### Background

A new study of artificial turf fields containing crumb rubber infill has just been completed through a joint agreement between the CT Department of Environmental Protection (DEP), the University of Connecticut Health Center (UCHC), the CT Agricultural Experiment Station (CAES) and the CT Department of Public Health (DPH). The table below shows the main areas of responsibility for each of these participating agencies. This fact sheet focuses upon the risk assessment performed by DPH which draws upon the UCHC findings from five fields tested in Connecticut in July 2009. The overall report containing each of the individual agency reports can be obtained at [www.ct.gov/dep/artificialturf](http://www.ct.gov/dep/artificialturf). Also shown in the table is the fact that the Connecticut Academy of Science and Engineering (CASE) reviewed a draft of these reports and their comments were incorporated into the final reports.

### Components of the State of Connecticut Artificial Turf Study

Agency	Activity	Methods
DPH	Human health risk assessment	Convert air concentrations measured by UCHC to the level of health risk to users of the fields from inhaling emitted chemicals
UCHC	Human exposure field investigation	Measured air concentrations of approximately 200 chemicals at 5 fields during active play
DEP	Environmental field investigation	Measured leaching of metals from fields during rain events
CAES	Laboratory study	Measured offgassing and leaching of chemicals from crumb rubber under defined laboratory conditions
CASE	Document review	Assembled 9 member expert panel to review all aspects of the State of CT reports on artificial turf fields

### Why This Study

Some Connecticut municipalities have opted for or are considering artificial turf fields to replace natural grass fields. The most common type of field to date uses recycled rubber from tires as a crumb rubber infill to cushion the playing surface. Advantages over natural grass fields are reduced watering and maintenance, avoiding the need for pesticides, reduced injuries, and ability to play on the fields in a wider variety of



weather conditions.

Questions have been raised regarding health, safety and environmental aspects of the rubber infill material. Rubber contains a variety of industrial chemicals that, in small quantities, can be released into the air on warm days and from sports activities on the fields. Previous studies in Europe and the United States have tested a limited number of fields for the release of chemicals of potential concern (COPCs). The current study was designed to evaluate outdoor and indoor fields in Connecticut for airborne chemicals that are emitted from the crumb rubber under summertime active play conditions. The artificial grass blades were also tested for lead content due to concerns raised in New Jersey that the plastic blades can contain lead. This study enhances the database on crumb rubber fields by increasing the number of fields tested, by evaluating an indoor field, something that has not previously been done in the US, by using personal monitoring techniques to better assess the exposure of players on the fields, and by expanding the risk assessment by focusing on acute health risks in general and benzothiazole, in particular. Benzothiazole is the main chemical that vaporizes from the crumb rubber.



## What Was Done

### A. The Field Investigation

UCHC sent a team of researchers to four outdoor fields and one indoor field spread across CT. Sampling occurred on warm, sunny and low wind days in July 2009. Sampling equipment was set up on the field as well as at upwind background locations to determine what was coming off the field. Three soccer players at each field were equipped with personal monitoring devices and these results together with the stationary samplers (on field and background) were used to characterize the possible exposures. Overall, approximately 200 chemicals were tested for at each field including 60 volatile organic chemicals (VOCs), 22 polycyclic aromatic hydrocarbons (PAHs), 7 nitrosamines, 5 specially targeted rubber-related chemicals, 93 miscellaneous air pollutants, lead and particulate matter (PM<sub>10</sub>). The samples were sent to a laboratory in Wisconsin that is capable of detecting even very small amounts of chemicals in air samples. In addition, bulk samples of crumb rubber and turf fibers were analyzed for lead by a laboratory in Connecticut.

### B. The Risk Assessment

DPH reviewed the UCHC data to identify chemicals that were coming from the field rather than from background sources of air pollution. Any chemical found to be 25% higher on the field than upwind was considered to be field-related. A total of 27 COPCs were identified on this basis and run through the human

health risk assessment. The table below shows the four hypothetical exposure scenarios evaluated. The outdoor fields were combined into one assessment by using the highest concentration of each chemical found at any of the outdoor fields to represent what is possible regardless of where it was found. The indoor field was analyzed separately because conditions indoors and outdoors were considerably different. Two different groups were analyzed, children aged 6-18 and adults. The greater breathing rate associated with active sports was incorporated into exposure equations for children and adults.

#### **Exposure Scenarios Analyzed in DPH's Risk Assessment**

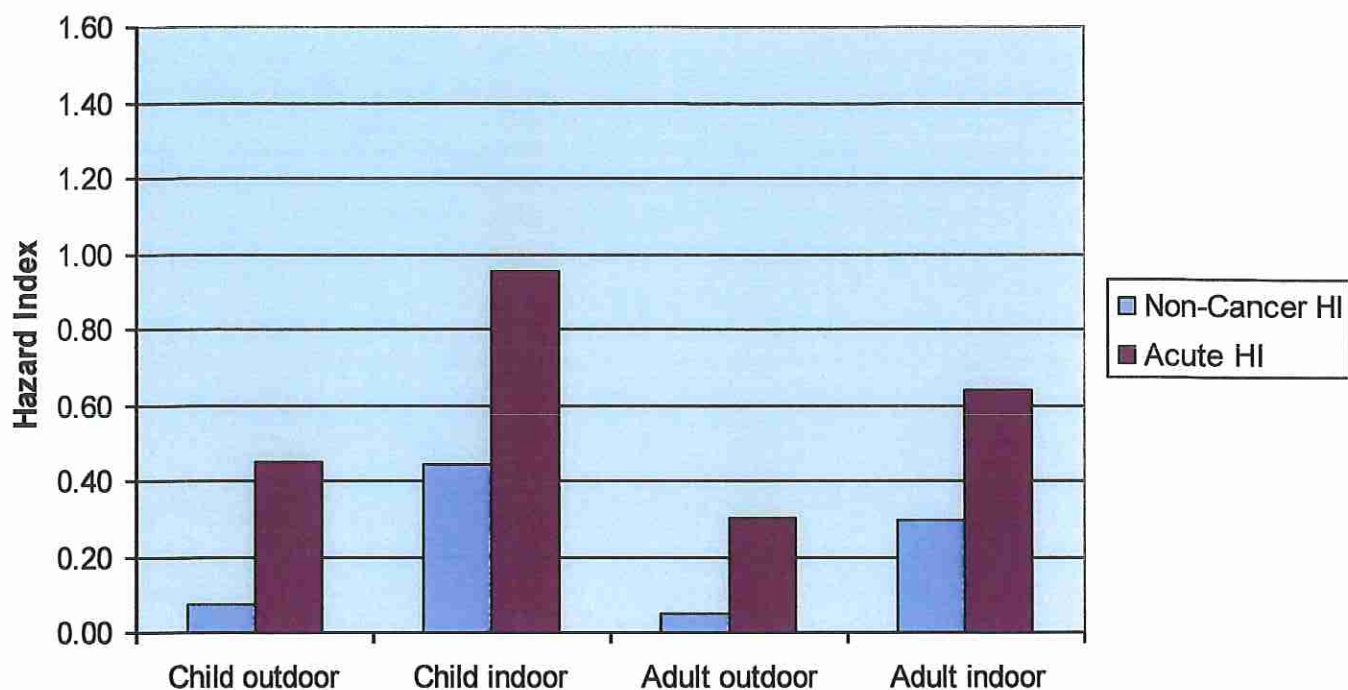
<b>Field Type</b>	<b>Exposure Group</b>	<b>Exposure Frequency</b>
Outdoor	Child 6-18 yr old	3 hr/day, 138 day/year, 12 yr
Outdoor	Adult	3 hr/day, 138 day/year, 30 yr
Indoor	Child 6-18 yr old	3 hr/day, 138 day/year, 12 yr
Indoor	Adult	3 hr/day, 138 day/year, 30 yr

The DPH risk assessment represents a screening analysis in which high end assumptions were used for the amount of exposure possible from playing on the fields. Our worst case approach included the use of the maximum detection found at any field across all chemicals, assessing risks for benzene and methylene chloride even though they were only detected in the personal monitors and thus may not be coming from the fields, and the use of sunny low wind conditions to represent every day of playing. A screening level risk assessment is used to determine whether there is the potential for elevated risks when using worst case assumptions. If this is not the case, no further analysis is needed.

### **What Did We Find?**

Risk estimates were not elevated into a range of health concern for cancer or non-cancer endpoints for children or adults at the outdoor fields. Risk levels were somewhat higher indoors because the concentrations of benzothiazole and naphthalene were greater indoors. These risks were still below a health concern (see Figure below) but the acute risk to children playing indoors is borderline (Hazard Index almost 1) resulting in a greater amount of uncertainty over whether an adverse effect is possible. The theoretical concern is an acute irritation response from benzothiazole and other volatile compounds released from crumb rubber indoors. The indoor field tested had no ventilation which presents a worst case condition. Regarding the potential concern raised in New Jersey over lead in the crumb rubber or blades of artificial grass, the UCHC results showed that lead levels were low and not a health concern at the five fields tested.

## Hazard Indices for Non-Cancer and Acute Risk at Artificial Turf Fields



(The Hazard Index is the ratio between actual exposure and the safe exposure level; an index below 1 signifies no increase in risk)

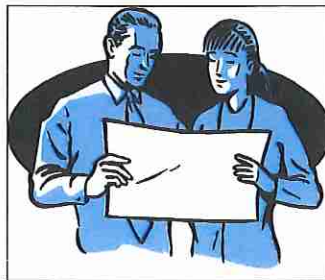
Another area of uncertainty is that this study did not evaluate newly installed fields under peak summer heat conditions. UCHC tested a range of newer (less than 2 years old) and older fields. However, the CAES data demonstrate that crumb rubber rapidly ages and emits much lower levels of chemicals after several weeks of being outdoors. Thus it is possible that greater exposures on outdoor fields are possible if the rubber infill is brand new during the summer months. Since this exact scenario was not tested, its health implications are unknown although if there was a risk, it would be short lived.

## CASE Review

The main areas of CASE comments were that 1) the cancer risks calculated by DPH may have been overestimates because of the inclusion of benzene detections that are likely not coming from the playing field but from the players themselves; 2) the uncertainty with respect to the benzothiazole risk assessment since so little toxicology data are available for benzothiazole; and 3) the potential for allergic reactions to occur due to the presence of latex antigen in natural rubber. To address these comments, the risk assessment



describes the issues and finds that they do not change the overall conclusions and are unlikely to present added risk. For example, the public is commonly exposed to rubber particles in street dust without obvious reactions to the latex in these particles, so this does not appear to be a major risk at crumb rubber fields. Nevertheless, those who think they are experiencing an allergic reaction to the fields (skin rash, breathing difficulty) should report this to their doctor and to local health officials.



## **What Does It All Mean?**

Outdoor Fields: DPH's assessment finds no health concern from inhaling chemicals at outdoor crumb rubber fields. It is important to note that these fields are typically hotter than natural grass fields and so summer users of these fields should take added precautions to avoid heat exhaustion (more frequent rest breaks, hydration). Further, it would be best to install new crumb rubber in cooler months to avoid the peak exposure that might occur with fresh rubber in hot weather.

Indoor Fields: DPH's assessment finds that exposures can be considerably greater indoors than out and this creates an uncertainty in terms of the potential for acute risks for children playing indoors. It is prudent for building operators to ventilate the indoor fields to decrease these exposures. The level of ventilation needed will vary from field to field. New indoor fields should consider alternatives to crumb rubber infill as a cushioning agent.

While allergic reactions on the skin or in the lungs are not anticipated from outdoor or indoor fields, anyone experiencing such reactions should report the incident to their doctor and the local health department.

## **Limitations And Relationship To Other Studies**

Like all scientific studies, our evaluation of artificial turf fields has limitations. It did not specifically evaluate the risks from dermal exposure or ingestion of the crumb rubber, two pathways which are expected to be of lower concern and have received some attention in previous studies. The data are still from a small number of fields and days of sampling. Finding VOCs such as benzene only in personal monitoring samples raises questions about the utility of those data that could not be resolved in the current study. The default



approach was to include the questionable data for this screening level risk assessment. The potential for allergic reactions at these fields was not a focus and in general is difficult to analyze.

While there are still some uncertainties with crumb rubber fields, they have been tested more than many other products. Neither the testing done here in Connecticut nor that done by New York City, New York State, California, USEPA or the Norwegian government have found data supporting a health concern, especially at outdoor fields where exposures are generally lower than what has been found at indoor fields.

## Where To Get More Information:

Previous DPH fact sheets on crumb rubber provide more background on the issue and can be found at:

- ◆ [http://www.ct.gov/dph/lib/dph/environmental\\_health/pdf/artificial\\_turf\\_\(2\).pdf](http://www.ct.gov/dph/lib/dph/environmental_health/pdf/artificial_turf_(2).pdf)
- ◆ [http://www.ct.gov/dph/lib/dph/environmental\\_health/eoha/pdf/artificial\\_turf\\_tech\\_fs\\_10-07.pdf](http://www.ct.gov/dph/lib/dph/environmental_health/eoha/pdf/artificial_turf_tech_fs_10-07.pdf)

⇒ For health questions contact DPH at 860-509-7740.

⇒ For questions about the UCHC study contact UCHC at 860-679-4634.

⇒ For questions about the environmental aspects of artificial turf fields contact DEP at 860-424-3867.



FAIRFIELD LUDLOWE HIGH SCHOOL BUILDING COMMITTEE—SPECIAL MEETING

Wednesday, December 30, 2014 5:30 p.m.

Sullivan Independence Hall, 1<sup>st</sup> Floor Conference Room

611 Old Post Rd.

Fairfield, CT 06824

DRAFT MINUTES

Present: Marc Donald, Chair; Donna Ertel, Vice Chair; Joseph Pagnozzi, Secretary; Terri Leopold, Robert Sickeler, Marc Andre, David Weber

Also Present: Sal Morabito (BOE), Twig Holland (Purchasing), Judy Ewing, Joe Costa (Perkins Eastman), Michael Dell'Accio (Arcadis), Peter Manning (Gilbane), Maureen Funke (Gilbane), Jessica Gerber (BOE liaison), Phil Dwyer (BOE Chair), Christine Vitale (FLHS PTA)

I. Call To Order

Mr. Donald called the meeting to order at 5:30pm.

II. Pledge of Allegiance

III. Project Update

Mr. Manning reported that bids were taken for the 3 packages (Concrete, Electric, & ??)

Ms. Funke reported that work started in the Webster Wing on December 24, the creation of openings for egress, and temporary walls were set up. The abated windows in the Webster Wing stairwell are an issue, and Jason Pringle from AMC will be there on December 31 to check things out. There was an issue with vandalism recently, as the key for the lift was left in the ignition outside---security measures will be looked into. The trailer has been placed, which displaced some parking spaces.

Ms. Holland reported that a meeting took place with First Selectman Tetreau regarding the results of the rebid packages; there is enough funding to do all of Phase 1 and Phase 2, but not enough for the windows (Phase 3). The timing for funding is important as there still needs to be EPA approval, and State approval for the abatement plan, and approval from OSF. A course of action would be to get those approvals in place and put out bids, then ask for additional funding for the windows.

IV. Discussion and Approval of Bids

Mr. Manning stated the following bid packages to be approved by the Committee, and discussion followed; a concern arose regarding A/C in the cafeteria---it was stated that the space is not only for school needs, but for public use as well.

Motion to approve the following made by Mr. Weber and seconded by Mr. Pagnozzi:

To award BP-03A Concrete to Waterbury Masonry and Foundations, Inc., in the amount of \$480,000. 7:0 in favor

Motion to approve the following made by Mr. Weber and seconded by Ms. Ertel:

To award BP-08A Glass and Glazing to J&G Glass Co. Inc. in the amount of \$240,627. 7:0 in favor

Motion to approve the following made by Ms. Leopold and seconded by Ms. Ertel:

To award BP-23A Mega Mechanical Systems Corp. in the amount of \$1, 172, 000; to reject alternate to delete A/C in the cafeteria (\$191,494), and to hold alternate to delete plumbing for walk-in cooler (\$1,100). 6:1 in favor, with Mr. Andre opposing.

Motion to approve the following made by Ms. Leopold and seconded by Ms. Ertel:

To award BP-26A Electrical to Interstate Electrical Services in the amount of \$573,295; to reject alternate to delete electrical work for A/C in the cafeteria (\$13,550), to hold alternate to delete electrical for walk-in cooler (\$3,400), and to reject alternate to delete temp service drop for Webster Wing (\$0). 7:0 in favor

#### V. Discussion of Communications and Funding Plan

Mr. Donald will update First Selectman Tetreau and will be reaching out to the Board of Finance and RTM to inquire about setting up a time to give a project update.

#### VI. Old Business

The emergency generator has been upgraded.

The submission of the GMP will be taking place after the New Year, approval by January 14, 2015.

The next Regular Meeting of the Building Committee will take place on January 14, 2015.

#### VII. Adjourn

Motion was made to adjourn the meeting at 6:33pm by Mr. Pagnozzi and seconded by Ms. Leopold. 7:0 in favor

Respectfully submitted,

Jennifer Hochberg

FLHS Building Committee Recording Secretary

**OSBORN HILL SCHOOL BUILDING COMMITTEE MEETING DRAFT MINUTES**

**December 18, 2014**

**Osborn Hill Elementary School**

**760 Stillson Road, Fairfield, CT 06824**

**Library**

Members Present: Bill Dunn, Kim Marshall (chair) Susie Cardona

Others Present: Sal Morabito, Frank Arnone, Jessica Gerber (BoE), Larry Secor (OCR) and Judy Ewing, Robin Orriss (PTA), Dustin Lombardi (Silver and Petrucelli).

**Call to Order**

Ms. Marshal called the meeting to order at 7:07 p.m.

**Nominations of 2015 Committee Members.**

Ms. Marshall called for nominations of 2015 members.

Mr. Dunn made a motion to nominate Ms. Marshall for Chairman. Ms. Carbona seconded the motion.

**The motions passed unanimously. 3:0.**

Ms. Carbona made a motion to nominate Steve White as Secretary, Mr. Dunn as Vice Chairman. Ms. Carbona made a motion to accept the nominations. Mr. Dunn seconded the motion.

**The motions passed unanimously. 3:0.**

**Schedule 2015 meetings**

The committee selected the following dates for the 2015 meetings, that will take place on the 3rd Thursday of each month, at 7:00 p.m. as follows:

1/15/15  
2/19/15  
3/19/15  
4/16/15  
5/21/15  
6/18/15  
7/16/15  
8/20/15  
9/17/15  
10/15/15  
11/19/15  
12/17/15

**Mr. Dunn made a motion** to accept the proposed dates for the 2015 meeting. Ms. Carbona seconded the motion.

**The motion passed unanimously. 3:0**

#### **Approval of meeting minutes**

Mr. Dunn made a motion to approve the minutes with one correction (order of motion). Ms. Carbona seconded the motion to approve the November minutes.

**The motion was approved unanimously. 3:0**

#### **Approval of invoices**

Three invoices were presented by Mr. Secor for approval (Nafis & Young letter of December 18, 2014).

- |   |             |
|---|-------------|
| 1. Gennarini Application and Certification for Payment No. 6 for            | \$53,533.45 |
| 2. Silver Petrucelli & Associates,<br>Invoice # 14-2339 for CA construction | \$2,072.40  |
| 3. Nafis and Young invoice #377-14  | \$3,240.00  |
| 4. AMC Environmental, LLC invoice P121411                                   | \$29,418.75 |

**Mr. Dunn made a motion to approve the above referenced 4 invoices.** Ms. Cardona seconded the motion.

**The motion was approved unanimously. 3:0**

#### **Old Business**

Mr. Morabito advised the committee that a motion is necessary to increase the existing AMC Purchase Order to include testing and continued monitoring of asbestos. The advice was made to address the following issue: while the current contingency funds available are insufficient to cover the entire amount necessary, an amount was needed to be allocated in order to continue progress towards the gymnasium's completion. After a discussion, an amount of \$40,000. was agreed upon.

Mr. Dunn made a motion to increase the AMC P.O. Ms. Carbona seconded the motion.

**The motion was approved unanimously. 3:0**

#### **Update from Architect**

Dustin Lombardi advised the committee that several change orders have been received from Gennarini, which are under review. The engineer's drawings have been received. Mechanical unites are presently en route to the job. Submittals for doors and hardware are under review for next summer's work. A completion date for the gym to be online is expected.

#### **Update from OCR**

Larry Secor advised the committee that he met with Mr. Tetreau, and Ms. Marshall, and he will go to the Board of Selectmen in January to advise them of the project status. Mr. Secor will prepare a

summary to present to Mr. Tetreau and the Board to inform them of the need for additional funds. Mr. Secor stated that until the roof of the gym is on, there remains potential for unknown complications. Ms. Marshall stated that the committee needs to provide clarity and detail on the change orders to present to Mr. Tetreau, and the Board. Ms. Marshall asked Mr. Secor whether the committee will know a realistic number for inclusion of the desired corridor in January. Mr. Morabito advised that the committee needs to approve a motion to present a request for addition funding to the Board of Finance on the January 13th meeting. Mr. Secor advised that abatement may not be complete until February, so anticipated cost may not be clear yet. Genarinni is working on a cost number for the corridor for performing the work in the coming summer. That number is expected shortly.

**Mr. Dunn made a motion** for the Chairman to contact the Chair of the Board of Finance and Mr. Tetreau to request the Building Committee to be placed on the agenda for the Board of Selectman January 8 meeting and the Board of Finance January 6 meeting and to request a special meeting for the BOF on January 13. Susie Cardona Seconded the Motion.

**The Motion Passed Unanimously. 3:0**

A Special Meeting of the OSH Committee is to be called for Dec. 30, 2014 at 7:00 p.m.

Mr. Secor stated that the project is one and a half to two months behind schedule. There are two potential changes (page 3 of the Nafis and Young Letter of Dec 18, 2015) for item 6 for \$4385.70. and item# 7 for \$992.31.

**Ms. Cardona made a motion** to accept the change #6 for \$4385.70. Mr. Dunn seconded the motion.

**The motion passed unanimously. 3:0**

**Ms. Cardona made a motion** to accept the change #7 for \$992.31. Mr. Dunn seconded the motion.

**The motion passed unanimously. 3:0**

### **New Business**

Mr. Dunn expressed gratitude to the Central Office for sending the parents of OSHS students the letter wherein AMC stated the anticipated asbestos abatement would be complete by February 3, 2015. He asked whether it is expected that that date will hold.

Kim Marshall asked whether remediation of PCBs is typically fraught with delays and cost overruns. Mr. Morabito stated that these problems are new issues for all of the agencies that deal with it, so issues that cause questions and delays do come up.

### **Adjournment**

**Ms. Cardona made a motion** to adjourn the meeting

Mr. Dunn seconded the motion.

**The motion passed unanimously. 3:0** The meeting adjourned at 8:38.



5-Jan-2015

FAIRFIELD PUBLIC SCHOOLS ENROLLMENT - ELEMENTARY

	PRE-K	KIND	1	2	3	4	5	TOTAL
<b>Burr</b>		16	18	22	22	24	21	
		20	17	22	23	23	20	
	17	19	18	21	22	23	21	
	17		18					
	34	55	71	65	67	70	62	424
<b>Dwight</b>		17	21	16	19	24	22	
		18	23	16	19	24	24	
	18	17		16	19			
	16							
	34	52	44	48	57	48	46	329
<b>Holland Hill</b>		23	18	18	20	21	23	
		23	21	18	19	19	22	
		23	19	18	19	21	22	
				19	21			
		69	58	73	79	61	67	407
<b>Jennings</b>		17	18	20	25	18	18	
		15	19	20	25	17	19	
		16	18		25	18	18	
		48	55	40	75	53	55	326
<b>McKinley</b>		18	18	17	20	20	20	
		16	18	17	18	21	19	
		17	19	17	18	20	20	
		17	19	18	19	20	20	
		68	74	69	75	81	79	446
<b>MIII Hill</b>		21	22	22	21	23	18	
		20	20	23	21	23	19	
		21	21	18	22	20	19	
					22		18	
		62	63	63	86	66	74	414
<b>No. Stratfield</b>		22	23	21	22	22	22	
		23	23	22	21	21	22	
		23	22	23	21	20	23	
					22	21		
		68	68	66	86	84	67	439
<b>Osborn Hill</b>		22	23	19	23	23	22	
		23	22	18	23	23	22	
		22	22	19	23	20	23	
			22	20	22	23	22	
		67	89	76	91	89	89	501
<b>Riverfield</b>		21	21	21	19	22	21	
		22	20	21	20	22	21	
		22	21	22	19	20	22	
					21			
		65	62	64	79	64	64	398

5-Jan-2014

FAIRFIELD PUBLIC SCHOOLS ENROLLMENT - ELEMENTARY

	PRE-K	KIND	1	2	3	4	5	TOTAL
Sherman		21	22	21	21	22	20	
		22	23	21	22	22	22	
		22	23	20	23	24	20	
			23	20	21		20	
		65	91	82	87	68	82	475
Stratfield		17	18	18	20	24	24	
		17	18	18	20	23	24	
		17	19	18	21	23	23	
		17	18	18	20	23		
		68	73	72	81	93	71	458
ECC	106							106
TOTAL PRE-K-5	174	687	748	718	863	777	756	4,723

FAIRFIELD PUBLIC SCHOOLS ENROLLMENT - SECONDARY

	6	7	8	9	10	11	12	TOTAL
Fairfield Woods	299	294	320					913
Ludlowe	254	271	282					807
Tomlinson	249	226	242					717
TOTAL 6-8	802	791	844					2,437
FWHS				391	364	388	314	1,457
Walter Fitzgerald Campus				3	3	7	5	18
FLHS				400	363	372	389	1,524
Walter Fitzgerald Campus				1	3	5	7	16
TOTAL 9-12				795	733	772	715	3,015

SUMMARY	Pre-K - 5	6 - 8	9 - 12	TOTAL
Current:	4,723	2,437	3,015	10,175
Difference: Current - October 1, 2014	13	(4)	6	15
October 1, 2014	4,710	2,441	3,009	10,160

\*\* Please inform the Supt. Office of any discrepancies at 255-8371.