



# Riley Avenue Fuel Distribution System Investigation Update

**Neighborhood Information Session**

**May 17, 2018**

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# Welcome & Introductions



# Why Are We Here?

- Investigation and regulatory activities that took place since our November 2017 meeting
- No soil vapor intrusion risk in tested units
  - Sub-slab and soil vapor sampling results
  - Indoor and ambient (“outdoor”) air sampling results
- Timing for next steps
- Answer Questions





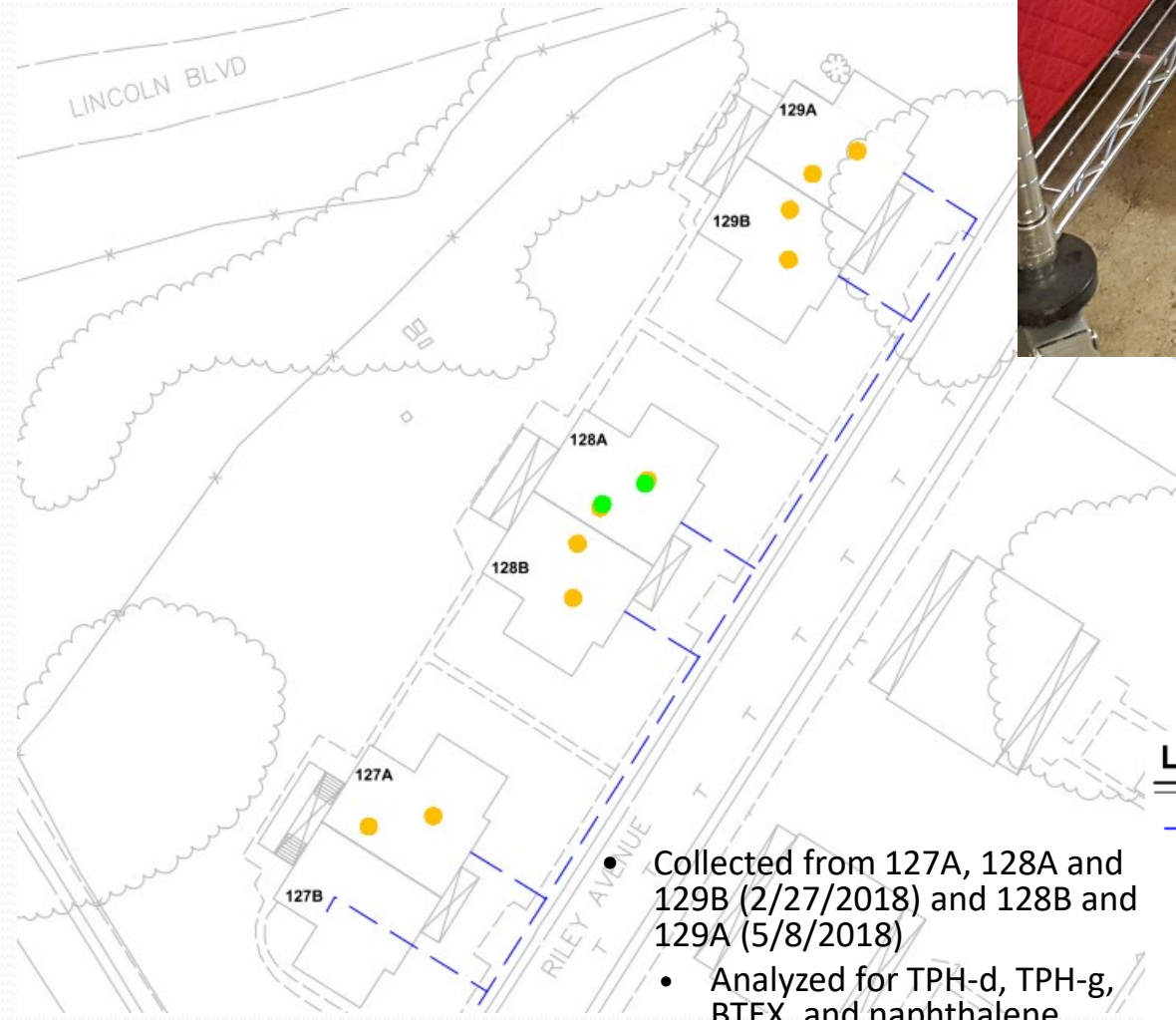
# Regulatory and Sampling Activities to Date

- **May 2017** – Heating oil release discovered in 127B during maintenance work
  - Source of contamination was the subsurface portion of the Fuel Distribution System (FDS) line that serviced the former furnace
- **May-June 2017** - The abandoned fuel line and adjacent soil were removed, initial soil and water sampling performed
- **July 2017** - Water Board re-opened FDS segment BR11-1 case
- **September 2017** – First Neighborhood Meeting to provide project information to residents.
- **October 2017** - Additional soil and groundwater investigation in and around unit 127B and sub-slab and soil vapor investigation beneath the basements of 127A, 128A/B and 129A/B
- **November 2017** – Second Neighborhood meeting to provide project update to residents

# Regulatory and Investigation Activities to Date

- **November 2017** - Temporary vapor barrier and basement ventilation system installed in basement of 127B
- **December 2017** - Trust submitted a work plan to investigate possible soil vapor intrusion in 127A, 128A, and 129B
- **January 2018** - Water Board approved the work plan
- **February to March 2018** – Conducted soil vapor intrusion investigations in 127A, 128A, and 129B and collected ambient air samples
- **April 2018** – Conducted second, expanded round of ambient air sampling as requested by the Water Board
- **April 30, 2018** - Water Board provided preliminary concurrence that no unacceptable soil vapor intrusion risk is present in 128B and 129A based on first round of sub-slab/soil vapor sampling results
- **May 8, 2018** - Conducted a second round of sub-slab/soil vapor sampling at 128B and 129A

# Interior Sub-Slab Vapor Locations



- Collected from 127A, 128A and 129B (2/27/2018) and 128B and 129A (5/8/2018)
- Analyzed for TPH-d, TPH-g, BTEX, and naphthalene



## LEGEND

- FORMER BR11-1 FDS LINE
- SUB-SLAB VAPOR SAMPLING LOCATIONS
- SOIL VAPOR PROBE SAMPLING LOCATIONS

# Indoor Air Sampling Locations (February 2018)

(Shown for 127A)



## LEGEND

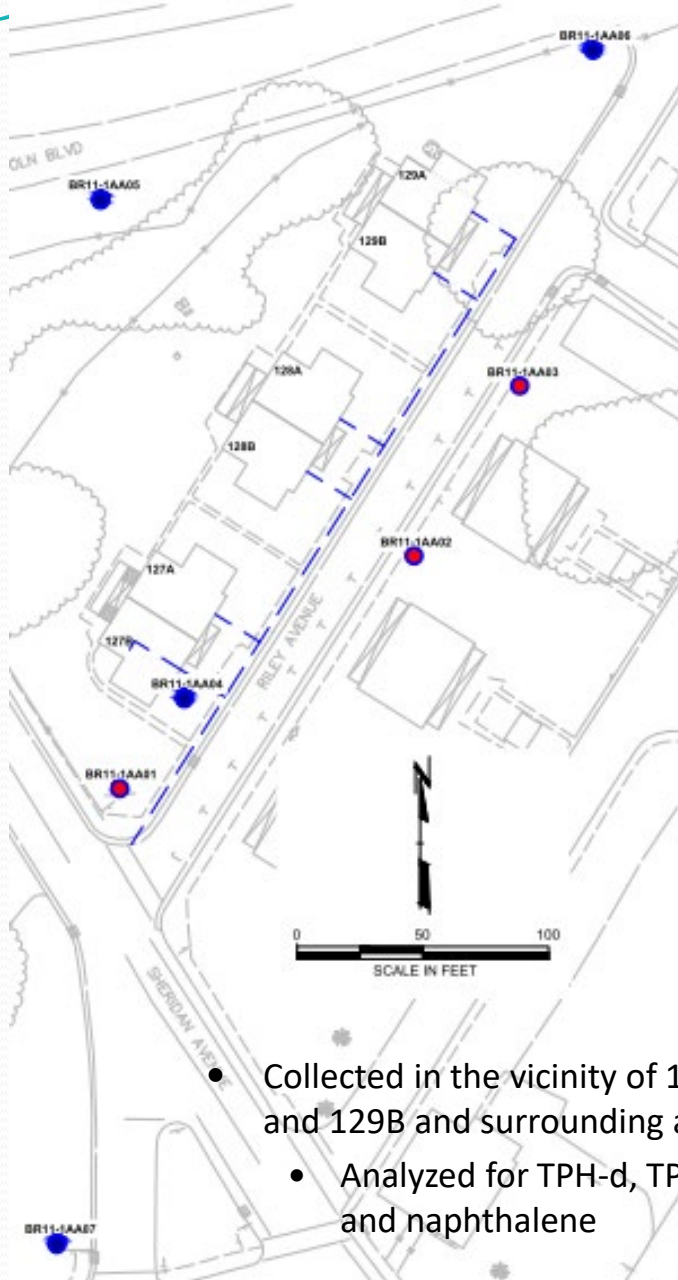
129BIA01



INDOOR AIR SAMPLING LOCATIONS

- Collected from 127A, 128A, and 129B, at four locations per unit.
- Analyzed for TPH-d, TPH-g, BTEX, and naphthalene

# Ambient Air Sampling Locations



Collected in the vicinity of 127A, 128A, and 129B and surrounding area.

- Analyzed for TPH-d, TPH-g, BTEX, and naphthalene



**BR11-1AA04 and Weather Station (127B Front Yard)**

## LEGEND

- BR11-1 FDS LINE
- BR11-1AA01 AMBIENT AIR SAMPLING LOCATIONS (February and April 2018)
- BR11-1AA04 ADDITIONAL AMBIENT AIR SAMPLING LOCATIONS (April 2018)



# Sub-Slab/Soil Vapor

(October 2017, February and May 2018)

Residential Unit	Date	Probe ID	Benzene (Method EPA TO-15SIM)		TPH-Gasoline (Method EPA TO-03M LL)	TPH-Diesel (Method EPA TO-17)
			Sub-Slab and Soil Vapor			
			ppbv	µg/m <sup>3</sup>		
127A	October-17	127ASSP01	6.57	21	N/A	39,000
	February-18		<2.5	<8.0	39,000	7,500
	October-17	127ASSP02	<2.5	<8.0	40,000	25,000
	February-18		<0.53	<1.7	N/A	<5,000
128A	October-17	128ASVP02	<0.53	<1.7	<930	<5,000
	February-18		0.94	3.0	N/A	10,000
129B	October-17	129BSSP01	<0.50	<1.6	<930	<5,000
	February-18		1.75	5.6	N/A	<5,000
128B	October-17	128BSSP01	<1.5	<4.8	<930	<5,000
	May-18		<0.56	<1.8	N/A	<5,000
	May-18		1.6	5.1	1,500	<5,000
129A	October-17	129ASSP01	<0.69	<2.2	<930	<5,000
	May-18		<0.5	<1.6	N/A	<5,000
	October-17	129ASSP02	<0.63	<2.0	<930	<5,000
	May-18		<0.59	<1.9	N/A	<5,000
Current Residential Tier 1 Screening Levels			<0.66	<2.1	<930	<5,000
Anticipated Future Residential Tier 1 Screening Levels			15	48	50,000	68,000
Anticipated Future Residential Screening Levels			1.0	3.2	3,333	4,667
Anticipated Future Residential Screening Levels			---	---	19,667	---

Results shown for detected COCs above screening levels. Other analyzed COCs were non-detect or below screening levels

<sup>a</sup> RWQCB ESLs are from RWQCB's February 2016 (Rev. 3) Summary Table of Vapor ESLs

N/A= not analyzed

<5,000 = not detected above show reporting limit

# Indoor Air

(February 2018)

Residential Unit	Location	Benzene (Method EPA TO-15SIM)	TPH-Gasoline (Method EPA TO-03M LL)	TPH-Gasoline (Method EPA TO-17)	TPH-Diesel (Method EPA TO-17)
		Indoor Air			
		µg/m <sup>3</sup>			
127A (February 2018)	Basement	0.27	<930	<91	<91
	Basement	N/A	N/A	<100	110
	Kitchen	0.33	<930	<100	110
	Sunroom	0.45	<930	<83	99
	Sunroom	0.32	<930	N/A	N/A
	Bedroom	0.33	<930	320	170
128A (February 2018)	Basement	0.87	<930	<91	<91
	Kitchen	0.29	<930	290	120
	Sunroom	0.27	<930	190	99
	Bedroom	0.30	<930	91	<91
129B (February 2018)	Basement	0.22	<930	310	170
	Kitchen	0.35	1400	340	180
	Sunroom	0.25	<930	<91	<91
	Bedroom	0.38	<930	140	170
Residential Screening Levels <sup>a</sup>		0.097	590	590	140

Results shown for detected COCs above screening levels. Other analyzed COCs were non-detect or below screening levels

<sup>a</sup> RWQCB ESLs are from RWQCB's February 2016 (Rev. 3) Summary Table of Vapor ESLs

# Indoor and Ambient Air Comparison

Residential Unit	Location	Benzene (Method EPA TO-15SIM)	TPH-Gasoline (Method EPA TO-03M LL)	TPH-Gasoline (Method EPA TO-17)	TPH-Diesel (Method EPA TO-17)
		Indoor Air			
		µg/m <sup>3</sup>			
127A (February 2018)	Basement	0.27	<930	<91	<91
	Basement	N/A	N/A	<100	110
	Kitchen	0.33	<930	<100	110
	Sunroom	0.45	<930	<83	99
	Sunroom	0.32	<930	N/A	N/A
128A (February 2018)	Bedroom	0.33	<930	320	170
	Basement	0.87	<930	<91	<91
	Kitchen	0.29	<930	290	120
129B (February 2018)	Sunroom	0.27	<930	190	99
	Bedroom	0.30	<930	91	<91
	Basement	0.22	<930	310	170
129B (February 2018)	Kitchen	0.35	1400	340	180
	Sunroom	0.25	<930	<91	<91
	Bedroom	0.38	<930	140	170
Residential Screening Levels <sup>2</sup>		0.097	590	590	140
		Ambient Air			
		µg/m <sup>3</sup>			
	South of 127B	0.70	<930	470	450
	Southeast of 128A	0.79	1200	340	300
	Southeast of 129B	0.93	2100	350	290
	South of 127B	1.3	2600	340	200
	Southeast of 128A	0.99	3100	480	130
	Southeast of 129B	0.95	2000	310	150
	Front Yard of 127B	1.2	3300	370	170
	Northwest of 128A near Lincoln Blvd.	0.96	3400	320	120
	Northeast of 129A corner of Lincoln Blvd. and Riley Ave.	0.95	3100	280	150
	South of 127B corner of Infantry Terrace and Fisher Loop	0.92	3300	190	110
Residential Screening Levels <sup>2</sup>		0.097	590	590	140

Results shown for detected COCs above screening levels. Other analyzed COCs were non-detect or below screening levels

<sup>2</sup> RWQCB ESLs are from RWQCB's February 2016 (Rev. 3) Summary Table of Vapor ESLs

# Ambient Air Comparison

- Ambient air quality is consistent with the reported quality for the San Francisco Area

Benzene Concentration ( $\mu\text{g}/\text{m}^3$ )		
Location	Year	Maximum
San Francisco	2015	1.6
10 Arkansas Street- BAAQMD Monitoring Station <sup>1</sup>	2016	1.2
	2017	2.6
Riley Avenue	February 28, 2018	0.93
	April 17, 2018	1.3

<sup>1</sup>Data from <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report-hazardous-air-pollutants>  
BAAQMD – Bay Area Air Quality Management District



# In Closing

- Overall, the soil vapor intrusion sampling indicates that indoor air quality has not been impacted by the subsurface fuel release
- Levels of chemicals detected in ambient air samples collected from the Riley Avenue area are reflective of “urban air” in the San Francisco Bay area and are not related to the subsurface fuel release
- Petroleum hydrocarbons detected in soil and groundwater are not a direct contact exposure risk because they are below concrete barriers in basements or at depths unlikely to be accessed by residents

## In Closing (continued)

- The Trust continues to work alongside the Water Board to further evaluate soil and groundwater impacts from the fuel release beneath 127B and identify appropriate remedial strategy
- We are committed to providing the residents of Riley Avenue with timely information about the ongoing environmental evaluation
- Actively working to return units to full occupancy

# Timing of Next Steps

## Next six months

- **June 2018** - Expanded Soil and Groundwater investigation first week of June
- **July to September 2018** - Installation of vapor mitigation system and concrete slab in unit 127B
- **August – September 2018** - Second round of sub-slab/soil vapor and indoor air at 127A, 128A, and 129B, and outdoor/ambient air sampling
- **October – November 2018** - Status update at completion of investigation activities in October/November.
- **December 2018 to January 2019** - Establish Land Use Controls for the areas with identified soil impacts



# Project Contacts

- Remediation related
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# Questions?