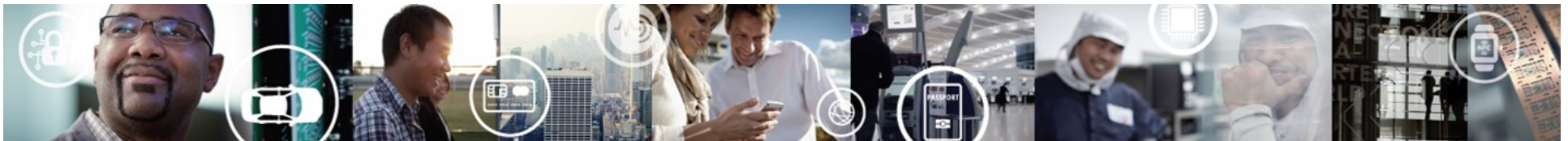


INDUSTRIAL VAPOR INTRUSION INVESTIGATION OPERABLE UNIT 1

MOTOROLA 52ND STREET SITE COMMUNITY INFORMATION GROUP

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EXTERNAL USE



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Industrial Vapor Intrusion Investigation – OU1

- Evaluate the soil gas to indoor vapor intrusion pathway through the collection of soil gas and indoor air samples
- Investigation timeline
 - Draft Work Plan submitted June 2015
 - Revised Work Plan September 2015
 - Final Work Plan October 2015
 - EPA, Freescale Site walk-through December 2015
 - Building Inventory Report January 2016
 - Soil gas investigation February-March 2016
 - Indoor Air Investigation March 2016

Industrial Vapor Intrusion Investigation – OU1

- Soil Gas Investigation Approach
 - Forty-one (41) temporary soil gas probes installed to nominal 15 feet depth
 - Probes installed February 15 through March 1
 - Soil gas samples collected around building perimeters on western side of campus
 - North-South soil gas transect on eastern (up-gradient) side of campus to determine if step-out sampling required
 - Primary and confirmation soil gas sampling conducted March 1 through March 8 using a mobile laboratory

Industrial Vapor Intrusion Investigation – OU1

- Soil Gas Investigation Results
 - A total of 89 samples collected from 41 locations and compared to Industrial Soil Gas Human Health Screening Levels (SGHHSLs)
 - Industrial SGHHSL for TCE = 2,500 $\mu\text{g}/\text{m}^3$
 - Industrial SGHHSL for PCE = 39,000 $\mu\text{g}/\text{m}^3$
 - TCE results:
 - All results were non-detect at 33 locations
 - Results were non-detect to below the SGHHSL for both samples at 3 locations
 - Results were equal to or above the SGHHSL in one or more samples at 5 locations
 - PCE results:
 - All results were non-detect at 31 locations
 - Results were non-detect to below the SGHHSL for both samples at 8 locations
 - Results were equal to or above the SGHHSL for one or more samples at 2 locations
 - Generally all other compounds were non-detect
 - 1,1-DCE detected near the laboratory reporting limit at 1 location
 - 1,000x below industrial SGHHSL

Soil Gas Results

Industrial Vapor Intrusion Investigation – OU1

- Indoor Air Investigation Approach
 - Work Plan set forth presumptive indoor air sampling for occupied enclosed buildings on western side of campus contemporaneously with soil gas sampling
 - Specific sampling locations were selected in consultation with EPA
 - Site walk through with EPA
 - Building construction and use information from Building Inventory Report
 - Consideration of HVAC / cooling system configuration and operations
 - Sampling conducted during lowest HVAC setting or HVAC off
 - Results compared to Industrial Regional Screening Levels (RSLs) for indoor air
 - RSL for TCE = 3 $\mu\text{g}/\text{m}^3$
 - RSL for PCE = 47 $\mu\text{g}/\text{m}^3$

Industrial Vapor Intrusion Investigation – OU1

- Indoor Air Investigation Results
 - 41 Primary and 5 duplicate indoor air plus 7 outdoor air samples collected during initial sampling event.
 - PCE detected below RSL and Non-detect (duplicate) in Treatment Plant control room
 - TCE detected above RSL and PCE non-detect and detected below RSL (duplicate) in one location (maintenance shop) in D Building Basement
 - Sampling conducted with HAVC off
 - Potential indoor air sources were inside shop area
 - All other results were non-detect across the entire campus

Industrial Vapor Intrusion Investigation – OU1

- Indoor Air Investigation
 - Maintenance Shop Location Re-Sampling
 - Potential indoor air sources removed from shop
 - HVAC returned to normal operations
 - Re-sample and duplicate sample collected from initial sampling location plus two additional locations collected in the shop area
 - All results from re-sampling were non-detect

Indoor Air Results

Industrial Vapor Intrusion Investigation – OU1

- Indoor Air Investigation Next Step
 - Warm season indoor air sampling to be scheduled during summer months



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