Soil Cleanup IRM #2

Former Sperry Remington – North Portion Site
NYS Brownfield Cleanup Program

May 2, 2018
The Involved Parties:

- **NYS Department of Environmental Conservation**
  - Environmental Regulatory Agency
  - Division of Environmental Remediation

- **NYS Department of Health**
  - Public Health Regulatory Agency
  - Bureau of Environmental Exposure Investigation

- **Unisys Corporation**
  - Corporate Successor to Remington Rand Corporation

- **Elmira City School District**
  - Environmental Management and Facilities Maintenance
New York State
Department of Environmental Conservation
&
Department of Health Representatives

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Meeting Agenda

• Introduction
• General Overview & Historic Site Use - NYSDEC
• Previous Environmental Activities at EHS – NYSDEC
• Health Overview – NYSDOH
• Site Characterization & Response Actions at EHS– Unisys
• Proposed Interim Remedial Measure #2 - Unisys
• Next Steps – NYSDEC
• Questions and Answers - All
General Overview
Environmental Cleanup Process

• Environmental Investigation
  ▪ Defines the nature and extent of contamination

• Interim Remedial Measures
  ▪ Address defined contamination prior to the site remedy

• Environmental Remediation
  ▪ Evaluates & implements effective cleanup & mitigation techniques

• Site Management
  ▪ Monitors and maintains the effectiveness of remedy
Historic Background of Industrial Site Use
Morrow Manufacturing Co. from 1909-1935

Post Card rendering circa 1930
Historic Background of Industrial Site Use
Remington Rand Corp. from 1936-1972

Photo circa 1944-48
Current Configuration

Elmira High School circa 1979

Southern Tier Commerce Center
Environmental Findings at Former Sperry Remington Site #808043
Investigation of Pipes, Structures, Sediments & Surface Waters
Environmental Studies & Response Actions at Sperry Remington- North Portion #808022

• 2013 - DEC Identified Areas of Environmental Concern

Environmental Areas of Concern
• Below Ground
• Low Risk of Exposure
• Response Actions Will Be Taken to Reduce Potential Exposures

Environmental Management
• Maintains Protective Covers
• Maintains Soil Vapor Mitigation
• Reduces Exposures During Excavation & Construction
Environmental Characterization at Sperry Remington- North Portion #808022

- 2017 – Primary Contaminant of Concern – PCBs
Interim Remedial Measure #1 at Sperry Remington- North Portion #C808022

- 2017 – IRM #1 Soil Cleanup Areas
Proposed Interim Remedial Measure #2 at Sperry Remington- North Portion #C808022

- 2018 – IRM #2 Soil Cleanup Areas
Role at Elmira High School

Assess how people can be exposed to contamination at the site and assess ways to prevent that exposure.
Potential Exposure Pathways

- **Direct contact** – Touching contaminated soil, groundwater or surface water
- **Ingestion** – Drinking or eating contaminated water or other substance
- **Inhalation** – Breathing contamination in the form of chemical vapors or dust
Direct Contact

• Contaminated soil is covered, therefore direct contact is not occurring.
• Plans are in place to maintain the cover.
• Procedures are in place for proper handling of soils that are disturbed.
Ingestion

- Public water is supplied to the surrounding area, therefore ingestion of contaminated groundwater is not occurring.
Inhalation

• Soil vapor intrusion, also know as SVI, is a process where chemical vapor under a building move into the building.

• The HVAC system has been adjusted to provide “positive pressure” throughout the building.

• A sub-slab depressurization system (SSDS) has been installed and continues to operate in portions of the building.

• A community air monitoring plan is implemented when there is digging into contaminated soil.
How are potential exposures being addressed?

- Environmental Management Plan
  - Soils Management Plan
  - Indoor Air Quality Action Plan
  - Operation, Monitoring and Maintenance Plan

- Potential exposure pathways are re-evaluated whenever new information become available or conditions change.

- The interim remedial measures are removing soil that is known to be contaminated from the site.
During construction?

- Community Air Monitoring Plan – Monitors the air for dust and calls for measures if the levels of dust go above our action levels.

- Engineering controls will be in place to minimize dust generation and prevent access to the work area.

- Health and Safety Plan – Implemented to protect workers and the school community.
Going Foreword

• Continued maintenance of cover system, operation and maintenance of HVAC system and SSDS, and routine pressure monitoring.

• Implementation of any other actions necessary to prevent exposures to staff, students and the community
Historic Background of Industrial Site Use

Morrow Manufacturing Co. from 1909-1935

Post Card rendering circa 1930
Recent Timeline of Unisys Response Actions

- **June 2013**: NYSDEC contacts Unisys regarding EHS and requests Indoor Air Quality (IAQ) sampling.
- **July 2013**: Unisys conducts HVAC assessment and IAQ sampling.
- **December 2013**: Unisys conducts IAQ sampling during heating season.
- **July 2014**: Unisys begins Site Characterization of soil, groundwater, and former combined storm sewer.
- **July 2014**: Unisys conducts comprehensive indoor air and sub-slab sampling.
- **August 2014**: Unisys installs sub-slab depressurization system under Room-127 (F-Wing). Air monitoring performed on regular basis.
Timeline of Unisys Response Actions

- **March 2015**: At request of NYSDEC/DOH, Unisys installs temporary STRA to minimize potential PCB exposure.
- **July 9, 2015**: NYSDEC Public Meeting.
- **July 2015**: Site Characterization continues.
- **Spring & Summer 2016**: Site Characterization continues to address data gaps.
- **January 2017**: Nature of work shifts from Site Characterization to IRM Design and Implementation to accommodate EHS construction.
Timeline of Unisys Response Actions

• **May 22, 2017**: NYSDEC Public Meeting
• **Winter/Spring 2017**: Pre-Design Investigation for Summer 2017 Interim Remedial Measure (IRM) #1.
• **June-September 2017**: IRM #1 implemented – soil excavated at tennis courts, main parking lot area, and football field coordinating with EHS capital improvements.
• **Winter/Spring 2018**: Pre-Design Investigation for IRM #2.
• **May 2, 2018**: NYSDEC Public Meeting
• **June-September 2018**: IRM #2 planned in rear parking lot and coordinate with EHS capital improvements.
Indoor Air Quality at EHS: Air Monitoring and Mitigation
Approach to Protect Indoor Air at EHS

• The potential risk: vapor intrusion of organic compounds into indoor air

• The approach:
  – July 2013: Assess HVAC effectiveness to prevent vapor intrusion and IAQ sampling
  – December 2013: IAQ sampling
  – July 2014: Comprehensive air quality monitoring
  – August 2014: Sub-slab depressurization
June 2013: Existing HVAC System Is Protective

- Building investigation study indicates that when the HVAC system is operating, the building is positively pressurized preventing sub slab vapors from entering the school.

- Study repeated in July 2014 – similar results.
HVAC Pressure Differential Data
July 2014: Unisys Conducts Comprehensive Air Sampling

Indoor Air Sampling Location

Sub-Slab Vapor Sampling Location

23 indoor air and 23 sub-slab samples:

All indoor air below NYSDOH criteria

Summa® canister apparatus used for air sampling
August 2014: Unisys Installs SSD System

Conceptual diagram of SSD system.
SSD System Improves Indoor Air at EHS

TCE Concentrations in Indoor Air: Room 127 (F-Wing)

- NYSDOH Indoor Air Criteria (Before August 2015)
- SSD System Operational
- NYSDOH Indoor Air Criteria (After August 2015)
Soils at EHS: Investigation and Remedial Measures
A Comprehensive Soil Sampling Program

- 1,083 Borings, 2,658 Samples for PCBs, Metals, SVOCs, Pesticides/Herbicides, and VOCs
- Overall strategy: grid pattern to survey, bias sampling to historic industrial operations, dense sampling when compounds of concern found.
PCBs in Soil: Strategy

• ESH Environmental Management Plan (EMP)
  – Cover inspection
  – Soil disturbance program

• Mitigate potential exposure pathways while a permanent remedy is established
  – Mulch bed STRA
  – Shallow soil excavation in FB field
  – IRMs as Source Removal Strategy will be proposed as part of the final remedy

• Complete a comprehensive site investigation

• Work with stakeholders to develop a final remedial action program
PCBs in Soil: Protect Human Health

- Adequate cover between contaminated soil and surface is protective
  - EMP inspection program
  - Asphalt
  - Concrete
  - Well-established turf

- Minimize potential PCB exposure route via direct contact

- March 2015, Unisys installed mulch beds w/ geotextile in areas without well-established turf. Mulch refreshed annually at a minimum

Mulch bed to prevent direct contact between people and soil
In August 2017, surface soil excavated in south portion of FB field as further protective measure.

Turf restored following excavation.

Minimizes potential PCB exposure route via direct contact.
PCBs in Soil: Protect Human Health

STRA areas
Surface Soil Excavation and Backfill

Summer 2015
September 2018
PCBs in Soil: Longer-Term Solutions
Summer 2017 - Approximately 4,000 tons of soil excavated and transported off-site for disposal; excavations were backfilled for tennis court and parking lot construction and site restoration.
PCBs in Soil: Continue Site Investigation

- 190 borings already collected in 2018

- Sampling will continue as needed to refine delineation and complete remedial design

- Excavation is a precise process – dense sampling needed to guide dig
Other Investigations at EHS
Groundwater investigation is ongoing - 138 samples collected
Investigation of Site Sewers is Ongoing

- Sewer investigation is ongoing - samples collected from inside sewer, multiple camera surveys
- Soil borings adjacent to suspected sewer line breaks
Summer 2018 IRM
Protective Measures During Excavation

Worker PPE: Safety glasses, hard hat, steel toe boots, gloves, high-viz, training

All equipment is covered & decontaminated before leaving site

Traffic control on/off Main Street

Security fencing and signage

Worker and Community Safety is Priority Number One
Protective Measures During Excavation

Dust control and multiple air/dust monitoring points

Storm sewers protected from debris during construction

Excavated soil is covered prior to disposal

Worker and Community Safety is Priority Number One
Summer 2018 - Approximately 28,000 tons of soil estimated to be excavated and transported off-site for disposal; excavation will be backfilled for parking lot construction and site restoration.
Rear Parking Lot Excavation

Haul Roads mid-June through the end of August:

- **Offsite Transport and Disposal** - 35 loads per day
- **EHS to MSA** - 30-40 loads per day
Sheet Piling Used as Needed

Piling will be used to protect structures and ensure soil removal to design limits.
Next Steps

IRM #2 Work Plan

- DEC approves soil cleanup work plan
- Summer 2018 Cleanup Work:
  - Starts in June and will be completed by end of August
  - DEC will provide oversight of activities
  - Unisys will have full-time qualified environmental staff on-site to:
    - Manage soil excavation, storage, disposal and site restoration
    - Monitor dust / air quality and take actions to mitigate issues
    - Manage health and safety protocols
To Stay Informed

List-Serv Signup
www.dec.ny.gov/chemical/61092.html

NYSDEC Project Webpage
https://www.dec.ny.gov/chemical/102390.html

Document Repository
Elmira Steele Memorial Library
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QUESTIONS?