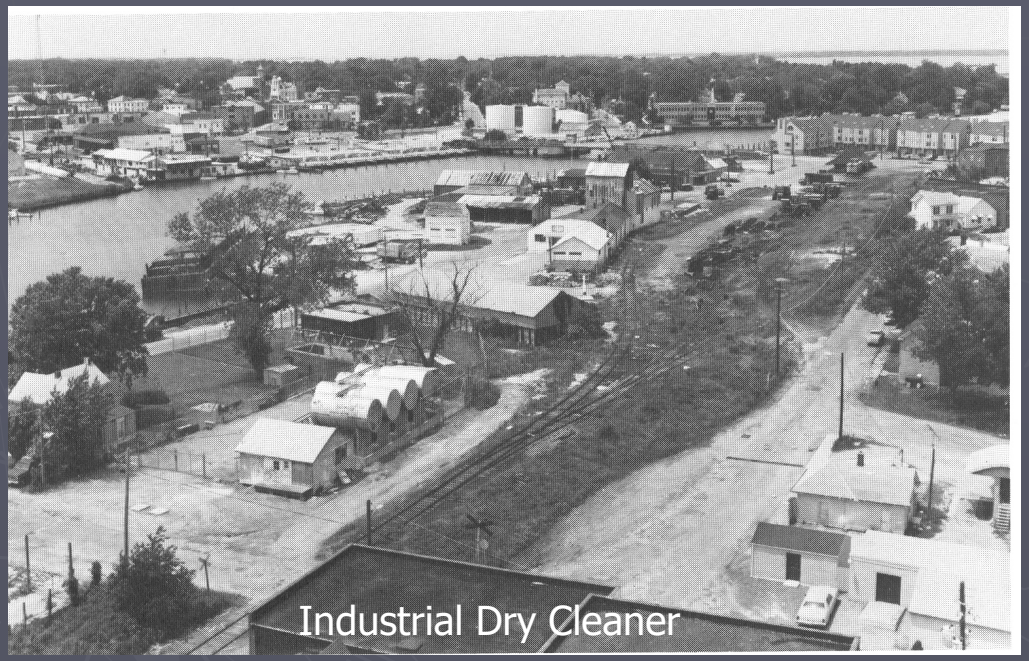
PCE Drycleaner Contamination (The Basics)

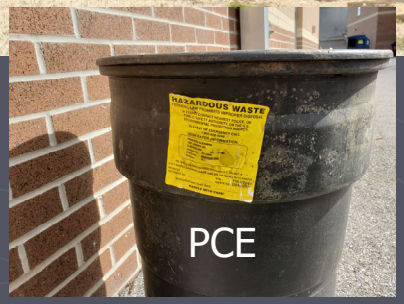
Industrial Dry Cleaners

Presented by Paul H. Hayden, P.G., L.R.S., R.S.M.

Industrial Dry Cleaners



Industrial Dry Cleaner



PCE

Geo-Technology Associates, Inc.

Geotechnical and Environmental Consultants

- Founded in 1985
- 20 offices in New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, North Carolina, and Ohio
- Over 450 employees
- Clients include commercial and residential developers, investors, builders, banks, brokers, industry, government agencies, telecom, other engineers
- Hundreds of Phase I ESAs and other environmental studies performed every year, mostly related to property transactions and developments

Deep Harbour
Case Study and Lessons Learned

Case Study

"Cleaner Contamination?"

- Historical Uses
  - Fertilizer Plant

Case Study

"Cleaner Contamination?"

- Historical Uses
  - Fertilizer Plant
  - Bulk Fuel Storage

Case Study

"Cleaner Contamination?"

- Historical Uses
  - Fertilizer Plant
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  - Auto Repair/Junkyard

Case Study

"Cleaner Contamination?"

- Historical Uses
  - Fertilizer Plant
  - Bulk Fuel Storage
  - Auto Repair/Junkyard
- Adjacent Properties
  - Bulk Fuel Storage
  - Industrial Dry Cleaning

Case Study

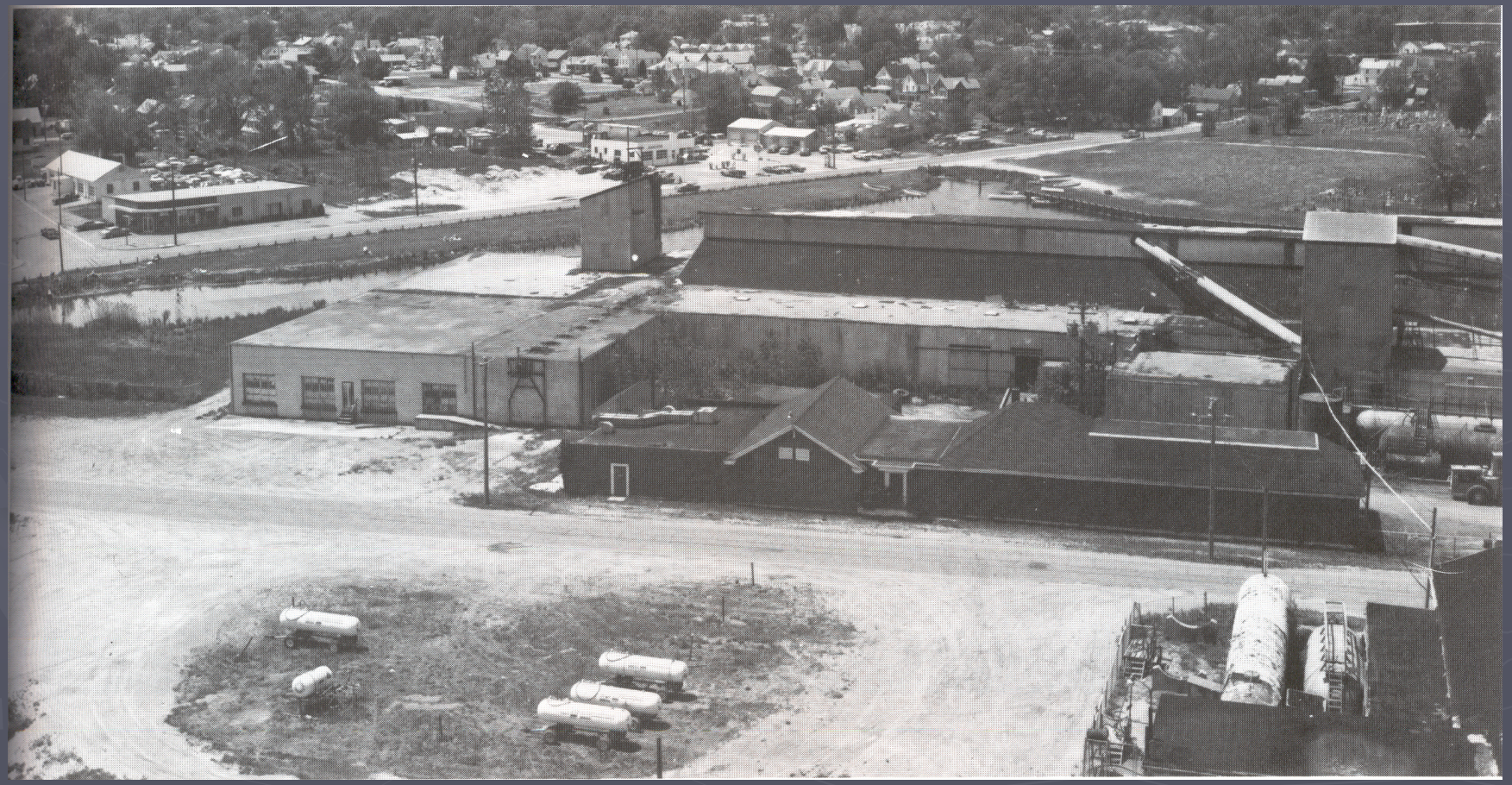
"Cleaner Contamination?"

Case Study

"Cleaner Contamination?"

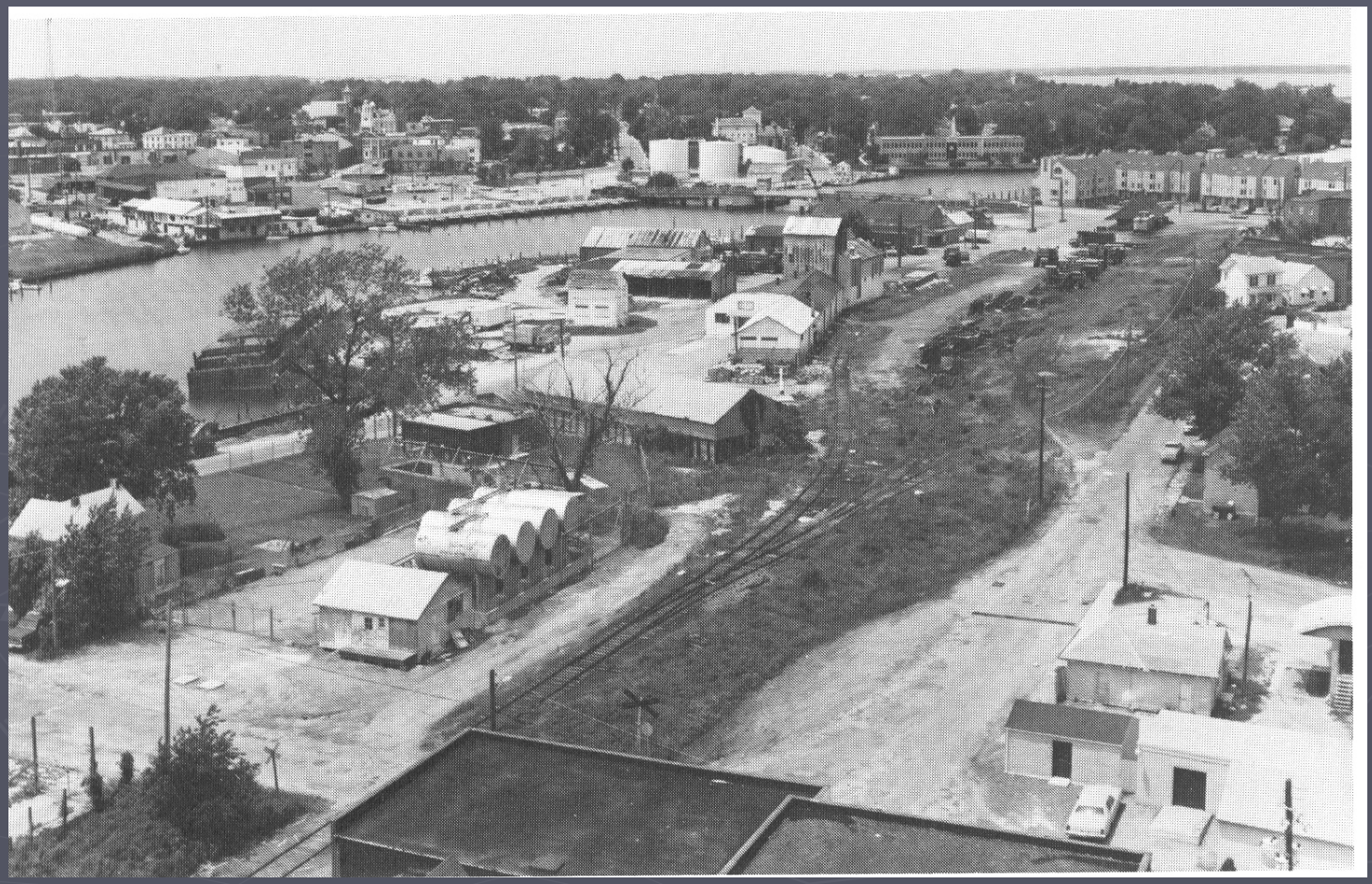
Case Study

"Cleaner Contamination?"



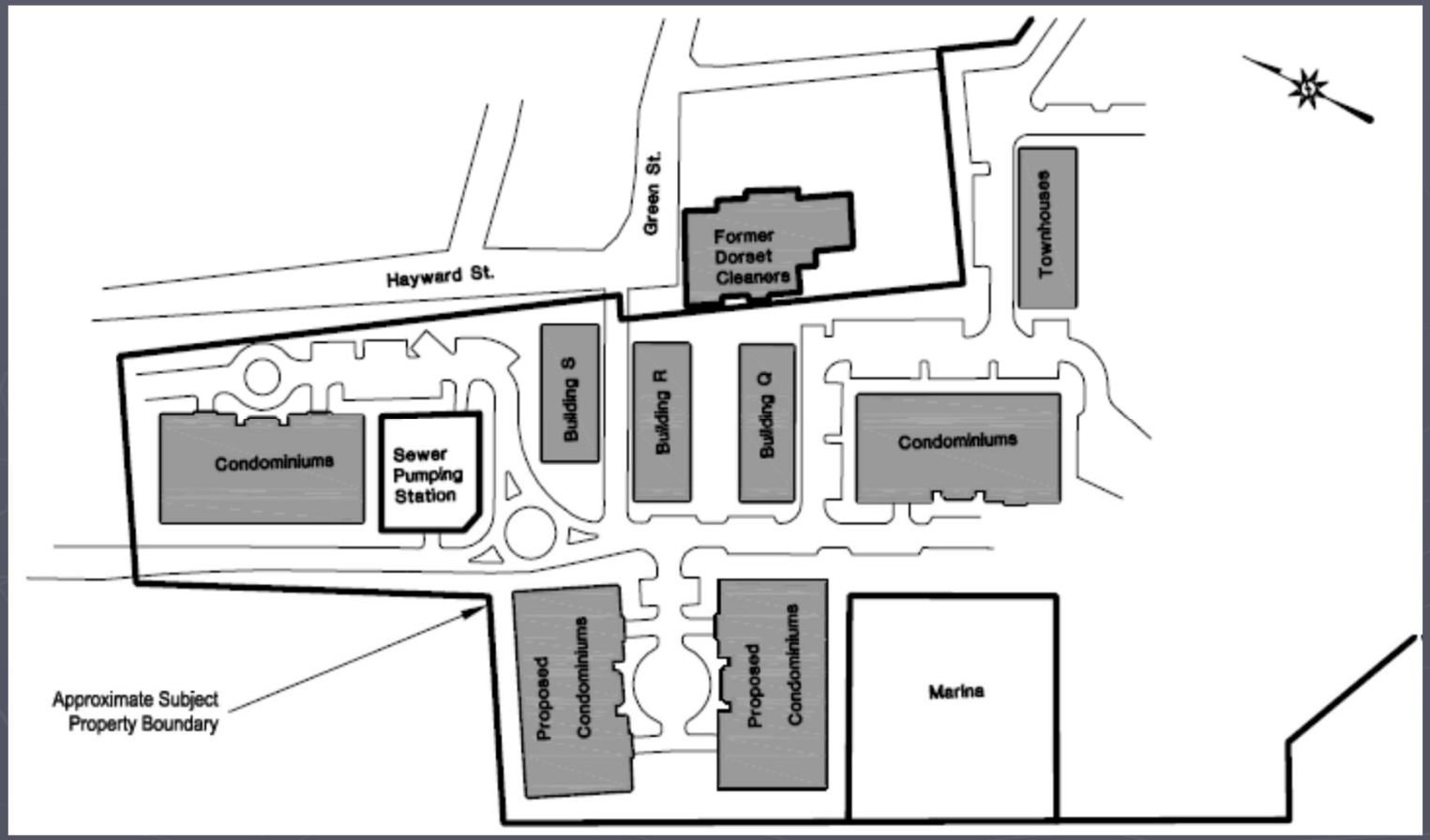
Case Study

"Cleaner Contamination?"



Case Study

"Cleaner Contamination?"



Case Study

"Cleaner Contamination?"

- Phase II ESA identified "minor contamination"
- Legal advice – no Voluntary Cleanup Program (VCP)
- Client acquires the property
- Full construction begins

Case Study

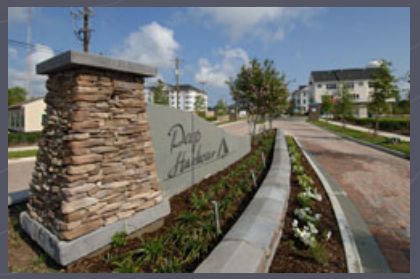
"Cleaner Contamination?"

- "Major" contamination found
- Changed legal counsel and entered the VCP
- Eventually, eight USTs, hundreds of linear feet of product piping, and over 6,000 tons of impacted soil were removed
- Now a "Responsible Party" (no public funds or BF Tax Credits available)
- Delay charges due to contamination
- Perception issues
- Potential reduction in sale price of residential units

Case Study

"Cleaner Contamination?"

- Worked with MDE to:
  - Address contamination



Case Study

"Cleaner Contamination?"

- Worked with MDE to:
  - Address contamination
  - Address public perception
  - Identify off-site issues impacting the site

Case Study

"Cleaner Contamination?"

- Worked with MDE to:
  - Address contamination
  - Address public perception
  - Identify off-site issues impacting the site
  - Implement a Remedial Action Plan

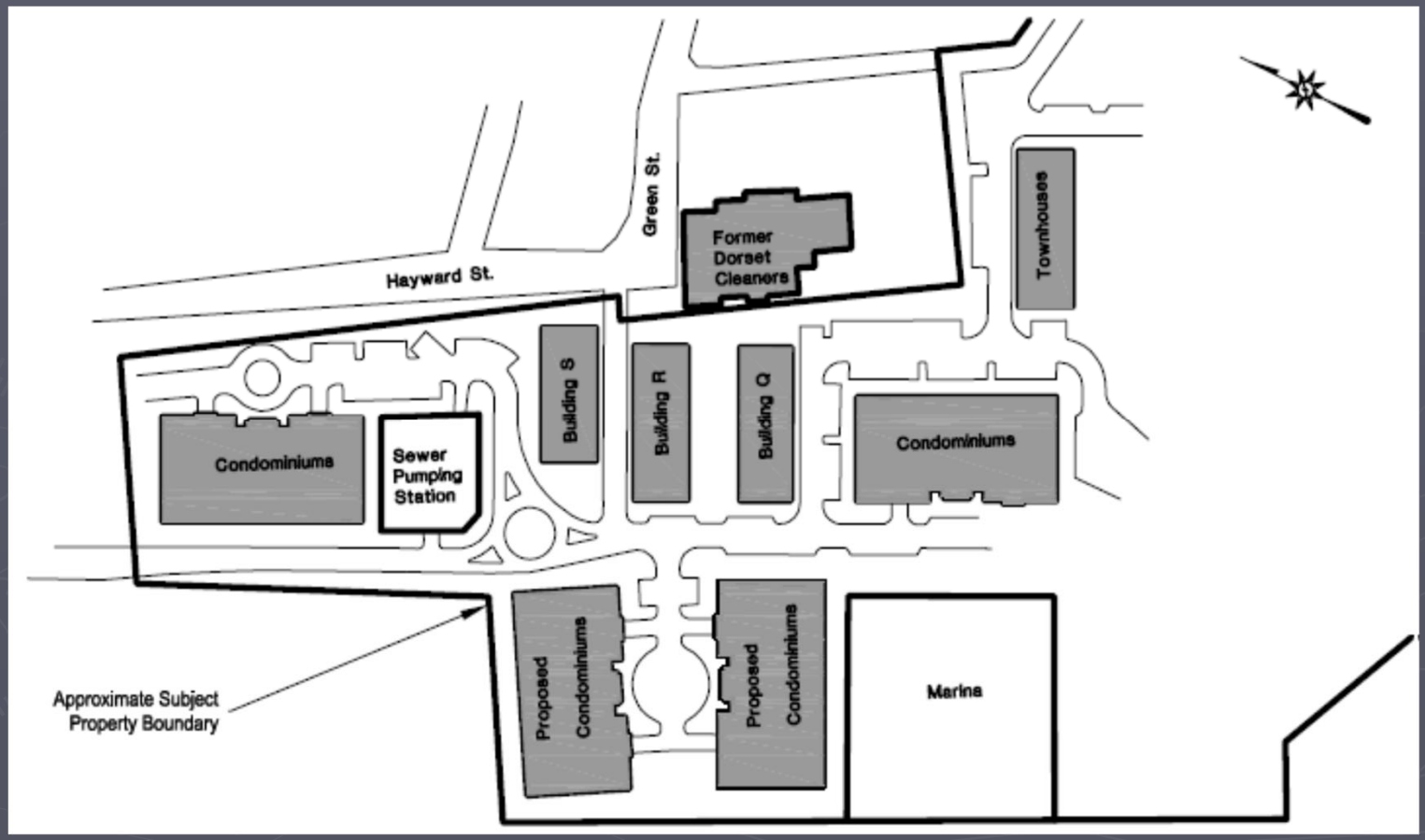
Case Study

"Cleaner Contamination?"

- Worked with MDE to:
  - Address contamination
  - Address public perception
  - Identify off-site issues impacting the site
  - Implement a Remedial Action Plan
  - Received Closure Letter

Case Study

"Cleaner Contamination?"



Case Study

"Cleaner Contamination?"

Case Study

"Cleaner Contamination?"

Case Study

"Cleaner Contamination?"

- Environmental remediation in excess of $1.7 Million dollars
- WHY?
  - PCE groundwater treatment system
  - Remediated vapor issues in Buildings Q & R
  - Petroleum impacts (e.g. USTs, soil, piping, etc.)
  - Eliminated all remaining exposure pathways during the effort to get site closure

McCord Laundry and Cleaning, Inc.
The Beginning

McCord Laundry and Cleaning, Inc. The Beginning

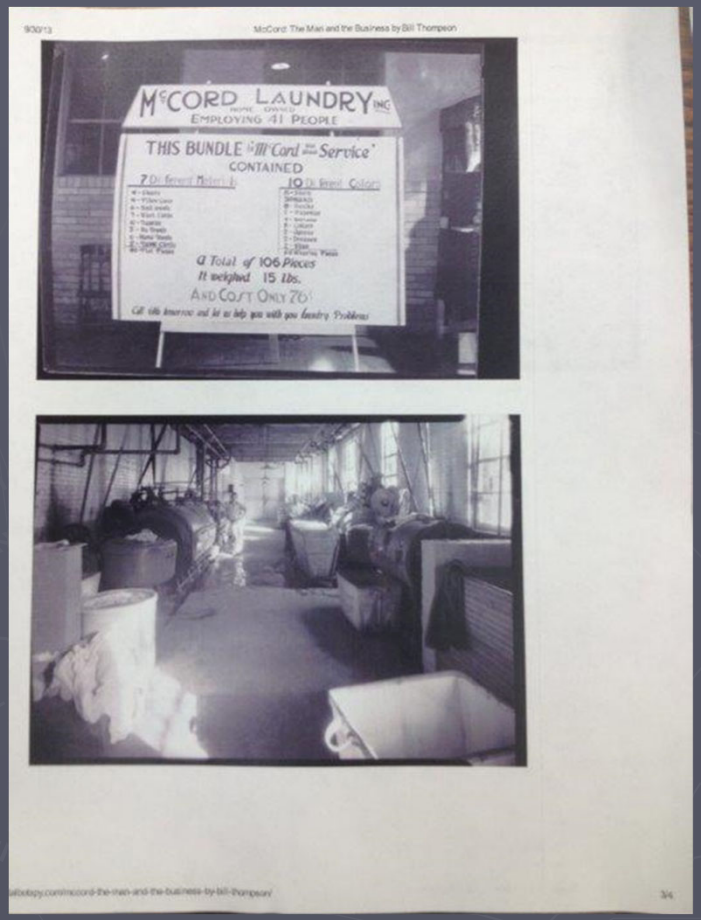
- 2012 Phase I ESA Opinion: "No environmental site assessment can eliminate all uncertainty and Professional judgment and interpretation are inherent in the process. It is not possible to eliminate all uncertainty with regards to environmental contamination. However, the information obtained and observations made during this assessment indicate that the risk of significant or widespread contamination or environmental problems with this site is moderate."

McCord Laundry and Cleaning, Inc.

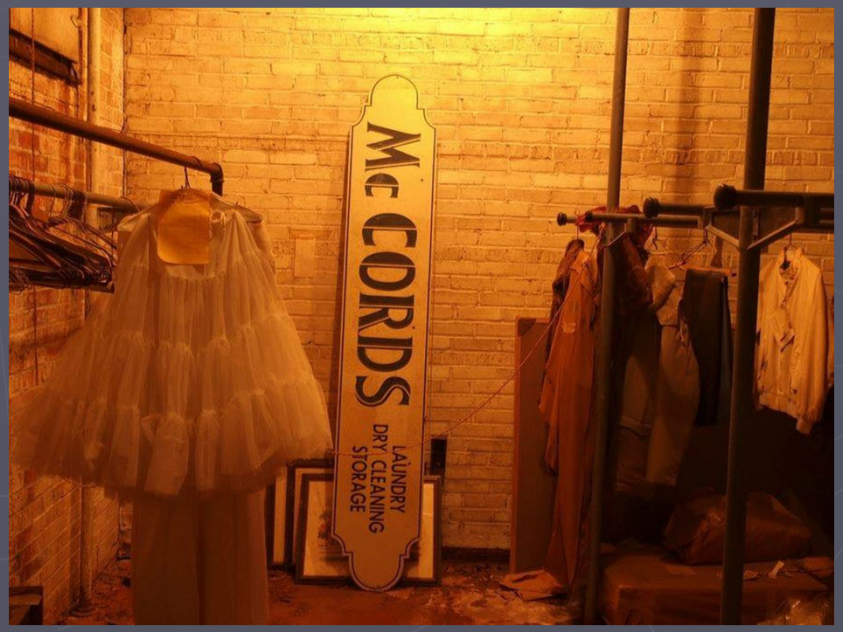
- Commercial Laundry from 1925-2009
  - Added industrial dry cleaning services in 1933

Historical photos courtesy of the Historical Society of Talbot County

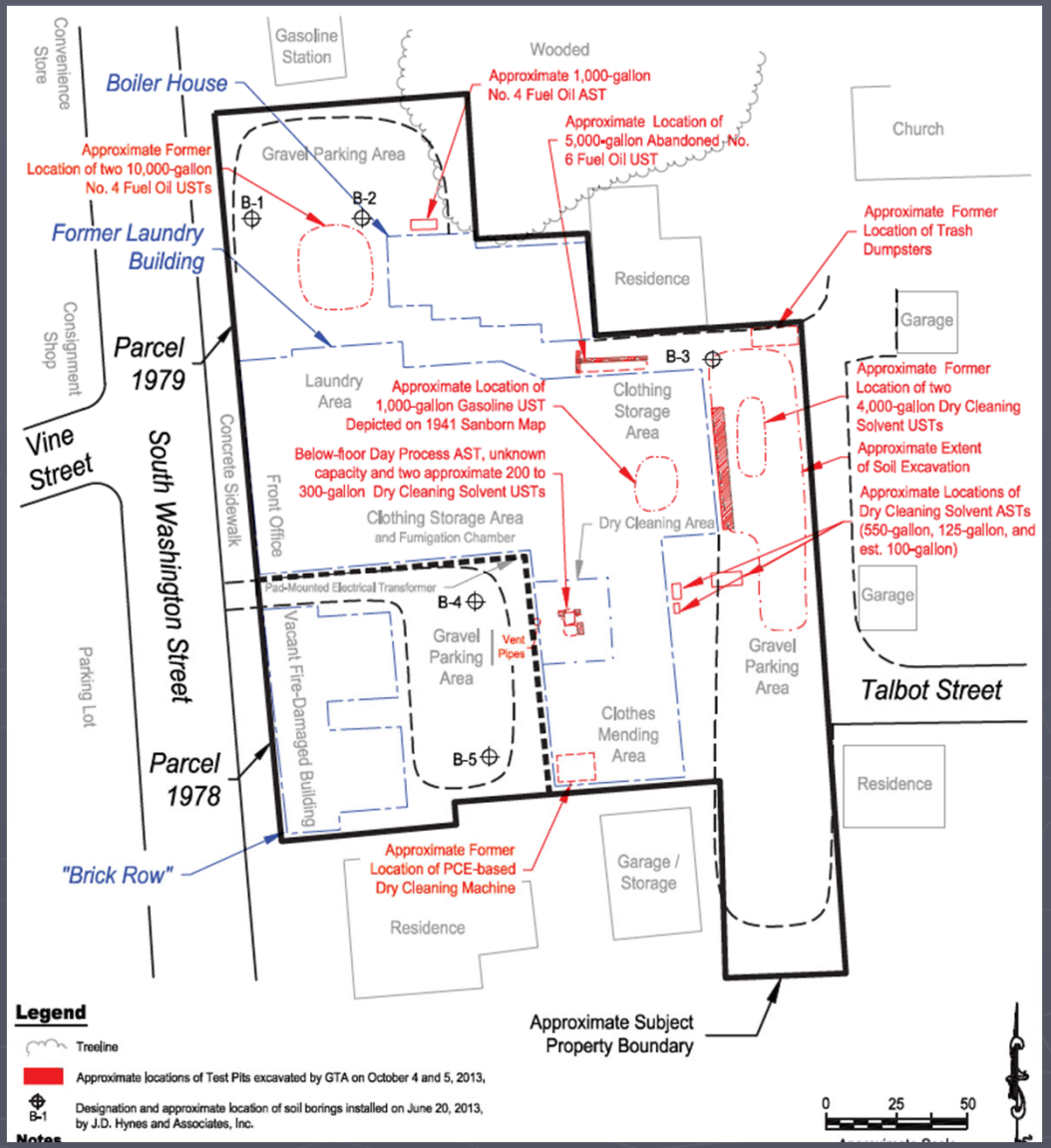
McCord Laundry and Cleaning, Inc.



- Used Stoddard Solvent initially
  - Added a small PERC machine in Mid-1980s



Brick Row built in 1885

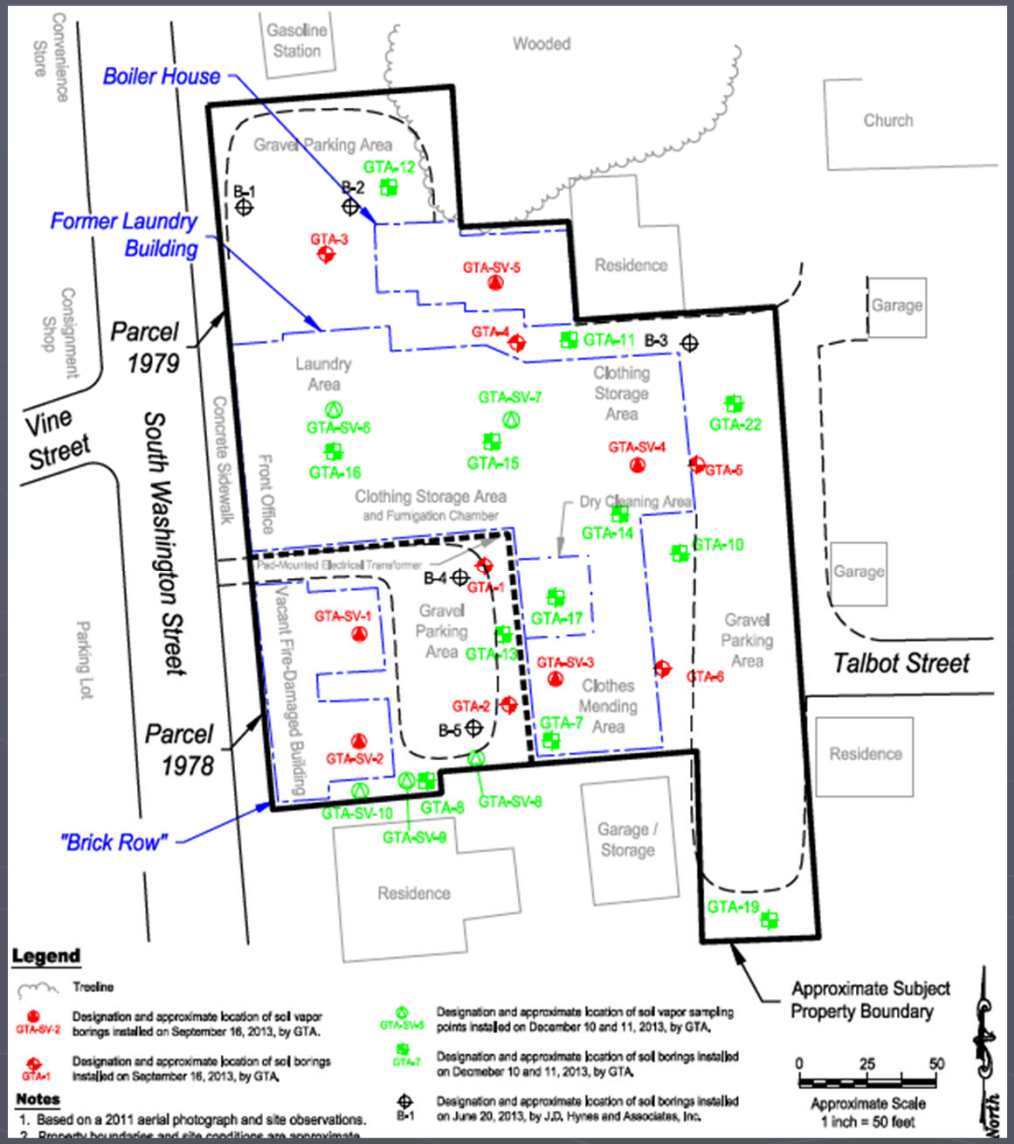


Stoddard Solvent USTs

McCord Laundry and Cleaning, Inc. Tour

McCord Laundry and Cleaning, Inc. Tour

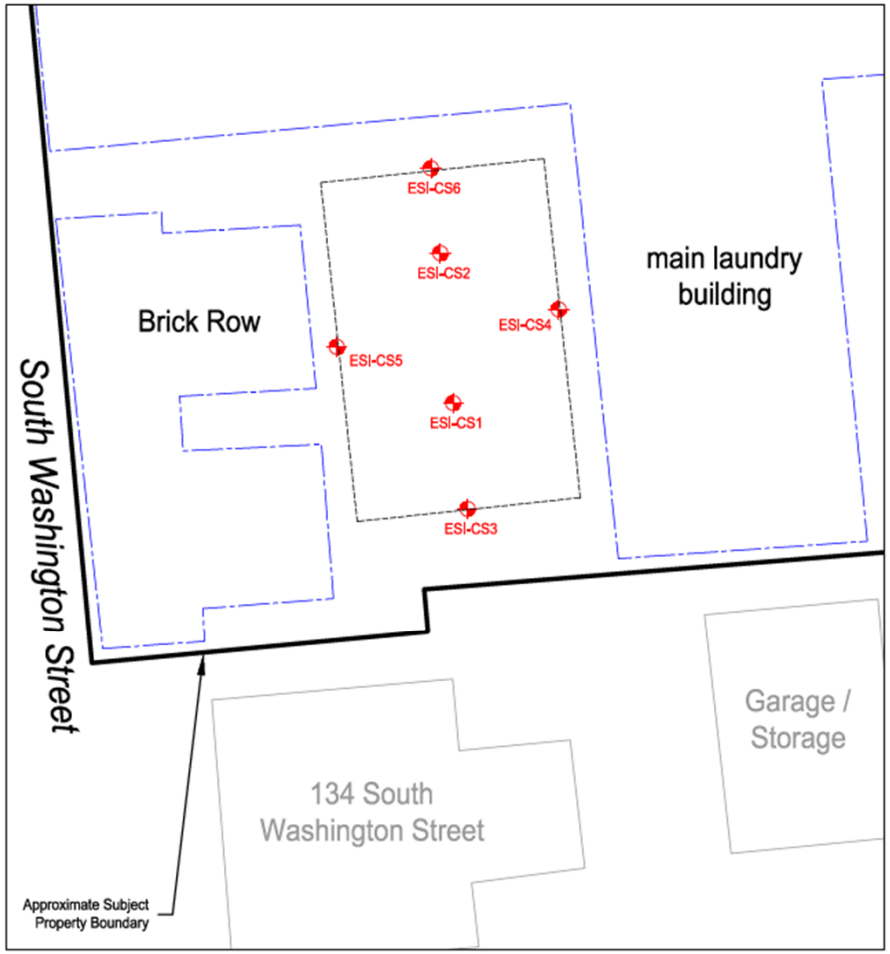
McCord Laundry and Cleaning, Inc. Tour


Gasoline Station
Wooded
Convenience Store
Boiler House
Church
Gravel Parking Area
GTA-12
B-1
B-2
Former Laundry Building
GTA-3
GTA-SV-5
Residence
Garage
Consignment Shop
Parcel 1979
GTA-4
GTA-11
B-3
Laundry Area
Clothing Storage Area
GTA-SV-7
GTA-22
Vine Street
South Washington Street
Concrete Sidewalk
GTA-SV-6
GTA-16
GTA-15
GTA-SV-4
GTA-5
Front Office
Clothing Storage Area and Fumigation Chamber
Dry Cleaning Area
GTA-14
GTA-10
Pad-Mounted Electrical Transformer
B-4
GTA-1
Garage
Vacant Fire-Damaged Building
GTA-SV-1
Gravel Parking Area
GTA-17
GTA-13
Gravel Parking Area
Talbot Street
GTA-SV-3
GTA-6
Clothes Mending Area
GTA-2
B-5
GTA-7
Parking Lot
Parcel 1978
GTA-SV-2
Residence
GTA-SV-10
GTA-8
GTA-SV-8
"Brick Row"
GTA-SV-9
Garage / Storage
Residence
GTA-19
Legend
Treeline
Designation and approximate location of soil vapor borings installed on September 16, 2013, by GTA.
Designation and approximate location of soil borings installed on September 16, 2013, by GTA.
Designation and approximate location of soil vapor sampling points installed on December 10 and 11, 2013, by GTA.
Designation and approximate location of soil borings installed on December 10 and 11, 2013, by GTA.
Designation and approximate location of soil borings installed on June 20, 2013, by J.D. Hynes and Associates, Inc.
Approximate Subject Property Boundary
0 25 50
Approximate Scale 1 inch = 50 feet
Notes
1. Based on a 2011 aerial photograph and site observations.
North

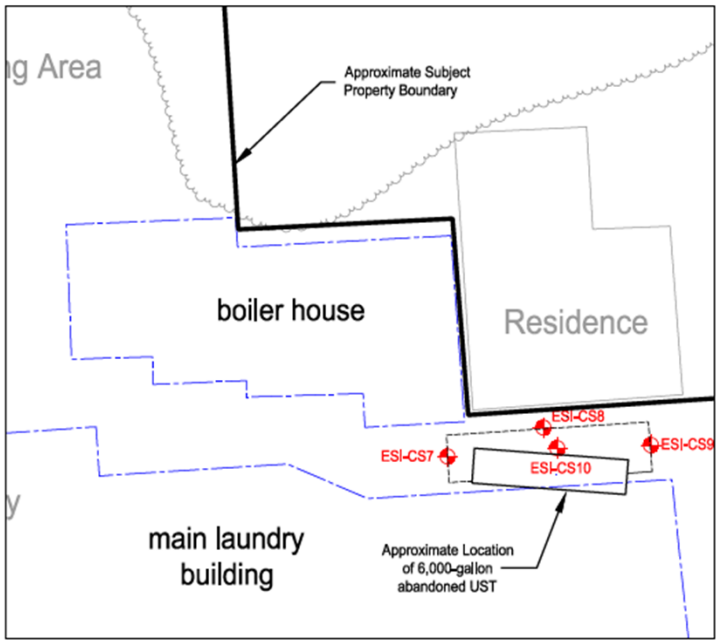
Corrective Action Plan Implementation

- Protection from impacted soil, groundwater, and soil vapor
  - Excavation and removal of impacted soil
  - Passive vapor mitigation system installation
  - Capping with MDE approved clean materials
  - Construction observation for correct CAP implementation
  - Post construction cap monitoring
  - Notification to MDE if future excavation is needed
  - Groundwater restriction

COURTYARD EXCAVATION



UST EXCAVATION



Legend

ESI-CS1 Identification and approximate location of soil samples collected by GTA ESI on January 7, 8, and 23, 2015.

Approximate limits of soil excavation activities.

Notes

1. Based on a 2011 aerial photograph and site observations.
2. Property boundaries, site conditions, and sample locations are approximate.

0 10 20
Approximate Scale
1 inch = 20 feet

North

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www.mragta.com

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McCORD LAUNDRY AND CLEANING, INC.
EASTON, TALBOT COUNTY, MARYLAND
CONFIRMATORY SAMPLE LOCATION PLAN

PROJECT: 1321629ESI	DATE: JANUARY 2016	SCALE: 1" = 20'	DESIGN BY: ATM	REVIEW BY: KPP	FIGURE: 3

Corrective Action Plan Implementation

Corrective Action Plan Implementation

~1,400 tons of impacted soil removed

Corrective Action Plan Implementation

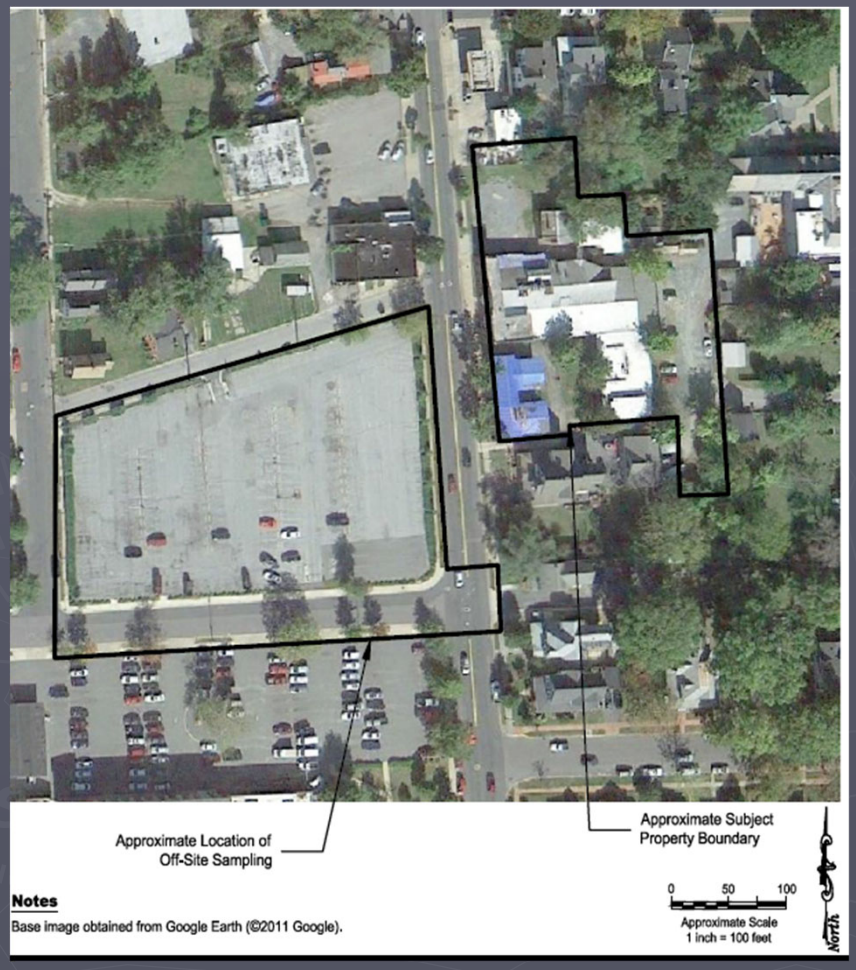
Epro System III MB vapor barrier was installed in each building.

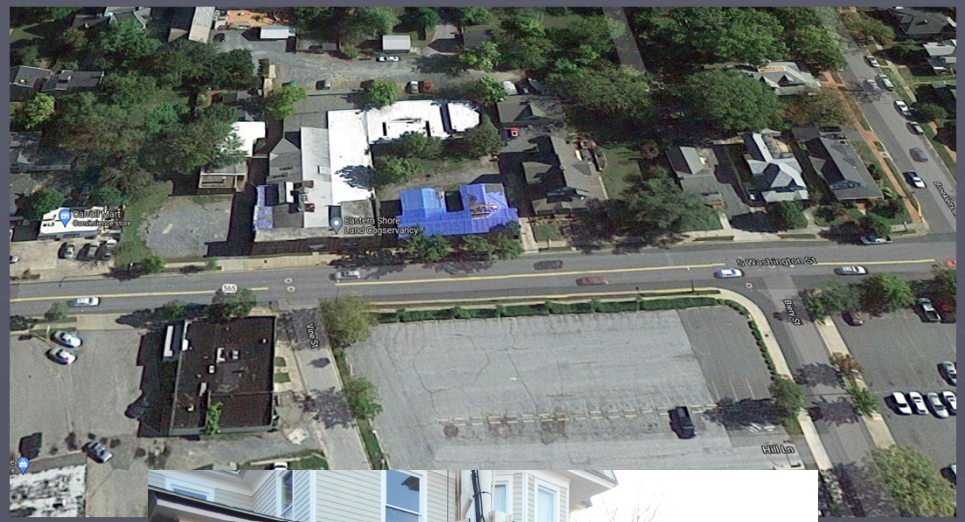
Corrective Action Plan Implementation

Corrective Action Plan Implementation

Corrective Action Plan Implementation

But wait… there's more





Questions?