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Redevelopment as a Moving Target:

How Remedies Change
with Development Plans

3 Case Studies

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Cuyahoga Falls: State Road Shopping Center



- Approx. 25 acre Property



- Multi-tenant retail shopping center plazas used historically from the 1960's.



- The property is the location of multiple sites of potential environmental concerns including:

- Auto body shops
- Dry cleaners
- Filling stations



***Awarded CORF (Clean Ohio Revitalization Fund) Round 8 funds**

Work Completed to Date:



- VAP Phase I Property Site Assessment



- VAP Phase II Property Site Assessment



- Significant Asbestos abatement



- Complete Demolition of existing building structures



- Remediation of contaminated soils - dig & haul

Groundwater:

- Groundwater investigation revealed a contamination plume of Chlorinated Solvents such as Tetrachloroethene (PCE), Trichloroethene (TCE), Vinyl Chloride & others.
- Plume occupies a significant portion of site.
- Over the last 4 years, plume movement towards N/NE observed
- More degradation products found now than 4 years ago

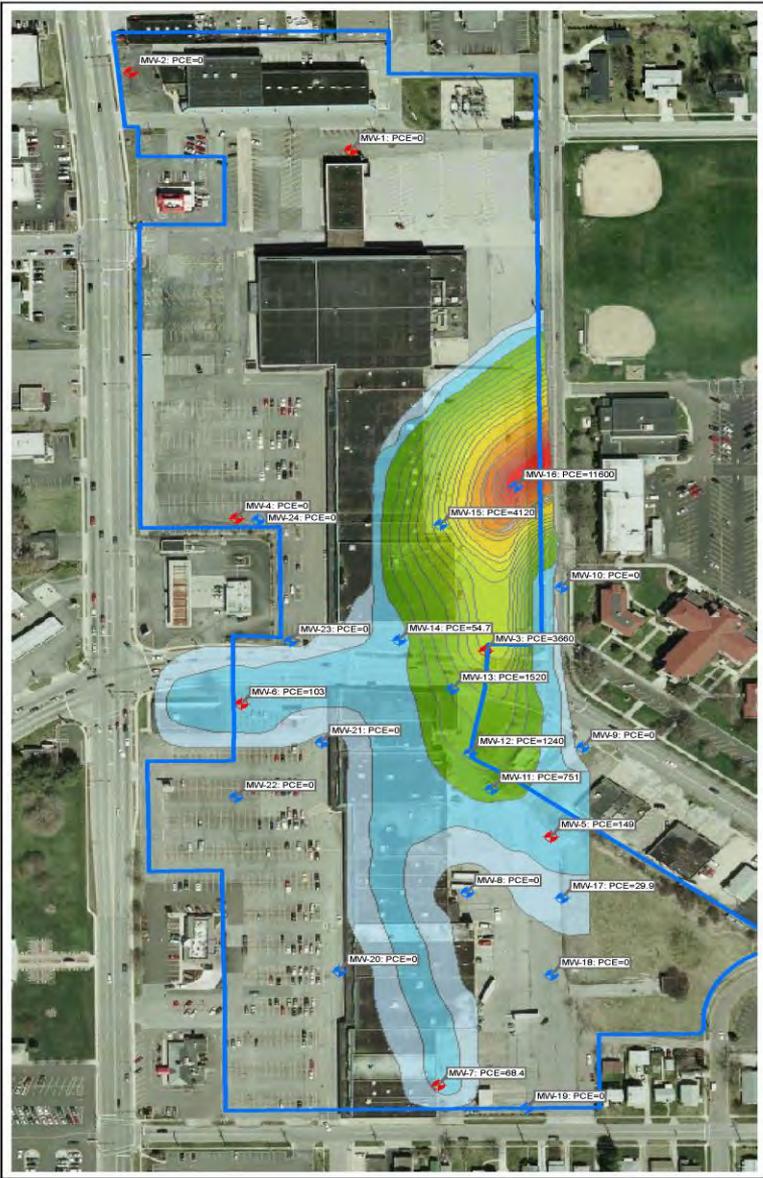
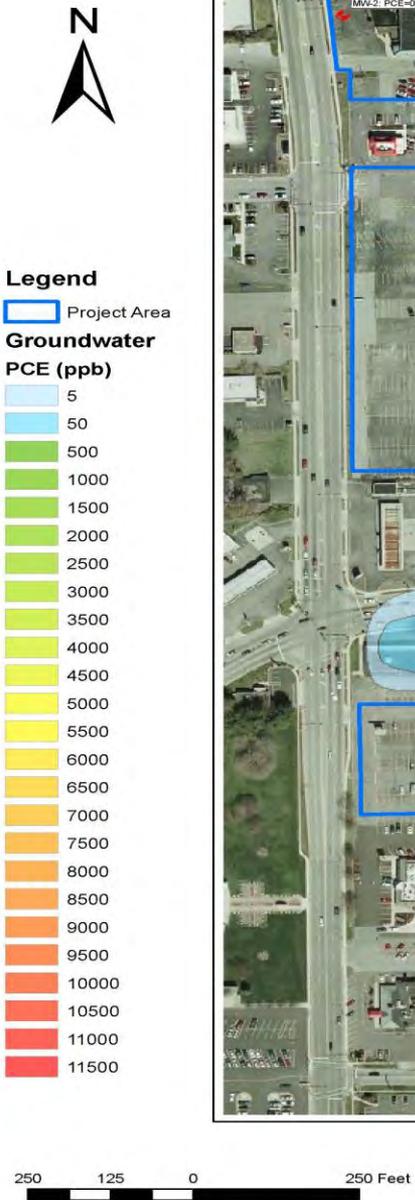


Figure 1
Tetrachloroethene (PCE)
Plume Map
December 2008
State Road Shopping Center
Cuyahoga Falls, Ohio

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South of Portage Trail



Response Requirements:

- As Indoor Air risk thresholds are exceeded, the building will require a vapor barrier with an appropriate venting system to ensure building occupants are protected.
- The venting system and the vapor barrier system or components of these systems are subject to an Operation & Maintenance agreement to be maintained as engineering controls to show compliance with applicable standards.
- An Activity & Use Limitation (AUL) in the form of an Environmental Covenant (EC) needs to be recorded on the property as a whole to ensure that prior to occupancy of FUTURE building structures, they will either a) shown to comply with indoor air applicable standards, or b) a remedy would be instituted to comply with indoor air standards (similar to the building constructed pre NFA issuance)
- Groundwater response requirements for the appropriate groundwater classification apply as always to the whole property. This would also include a prohibition on future groundwater use which is part of the EC.

North of Portage Trail

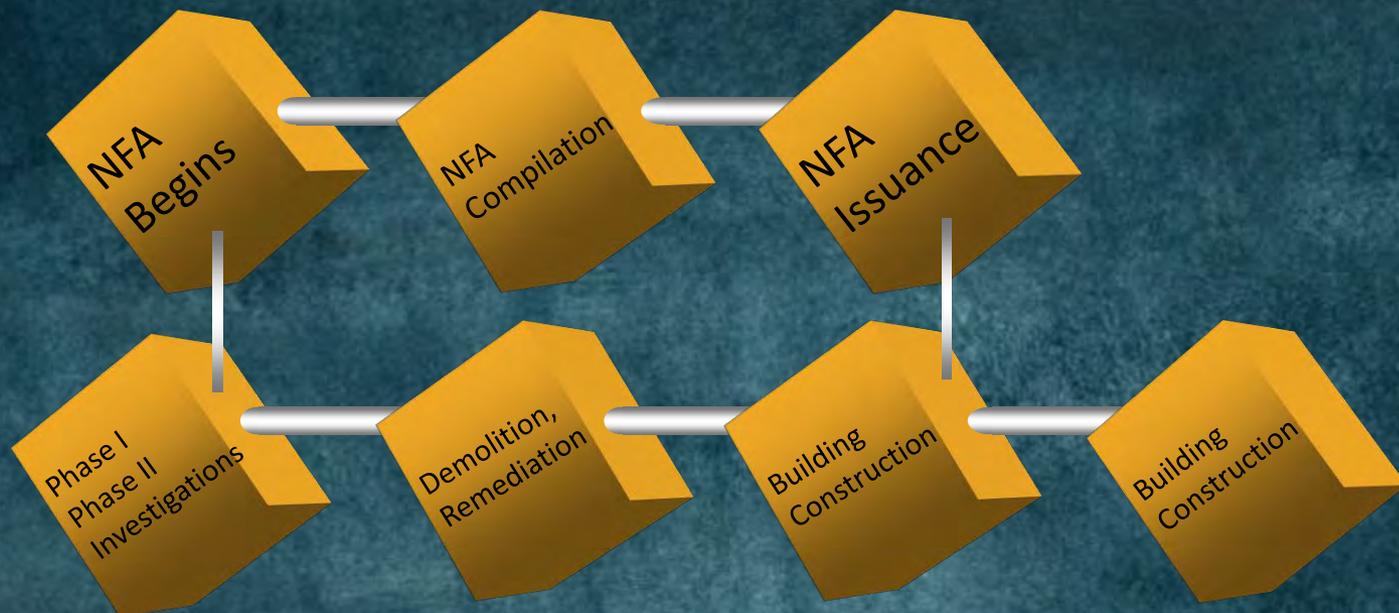


Response Requirements:

- Per the AUL as presented in the EC, the building would either need a remedy such as a vapor barrier with a venting system or a demonstration would have to be made that such a remedy is not required.
- If needed and once constructed, the O&M plan would have to be modified to operate and maintain this remedy for the north building
- All other response requirements remain the same for this portion of the property as the whole property including groundwater response requirements.
- Any demonstration must be made under CP affidavit.

When Development Timelines Don't Match NFA Timelines

- First, recognize there is a problem when timelines do not match and they rarely do.
- Communication is key – with VAP staff, with Client, and other Stakeholders
- Achieving CNS is not the last step in the process
- Document, document, document



Former Jaeger / Union Tools Property



- Property is located just west of downtown Columbus and the arena district



- Location of manufacturing facilities for commercial and industrial equipment since the early 1900's.



- The property is the location of multiple sites of potential environmental concerns including:
 - Machine / forge shops
 - ASTs / USTs
 - Foundries
 - Drum Storage

***Original location for Columbus Casino prior to ballot initiative.**

Work Completed to Date:



- VAP Phase I Property Site Assessment



- VAP Phase II Property Site Assessment



- Asbestos abatement

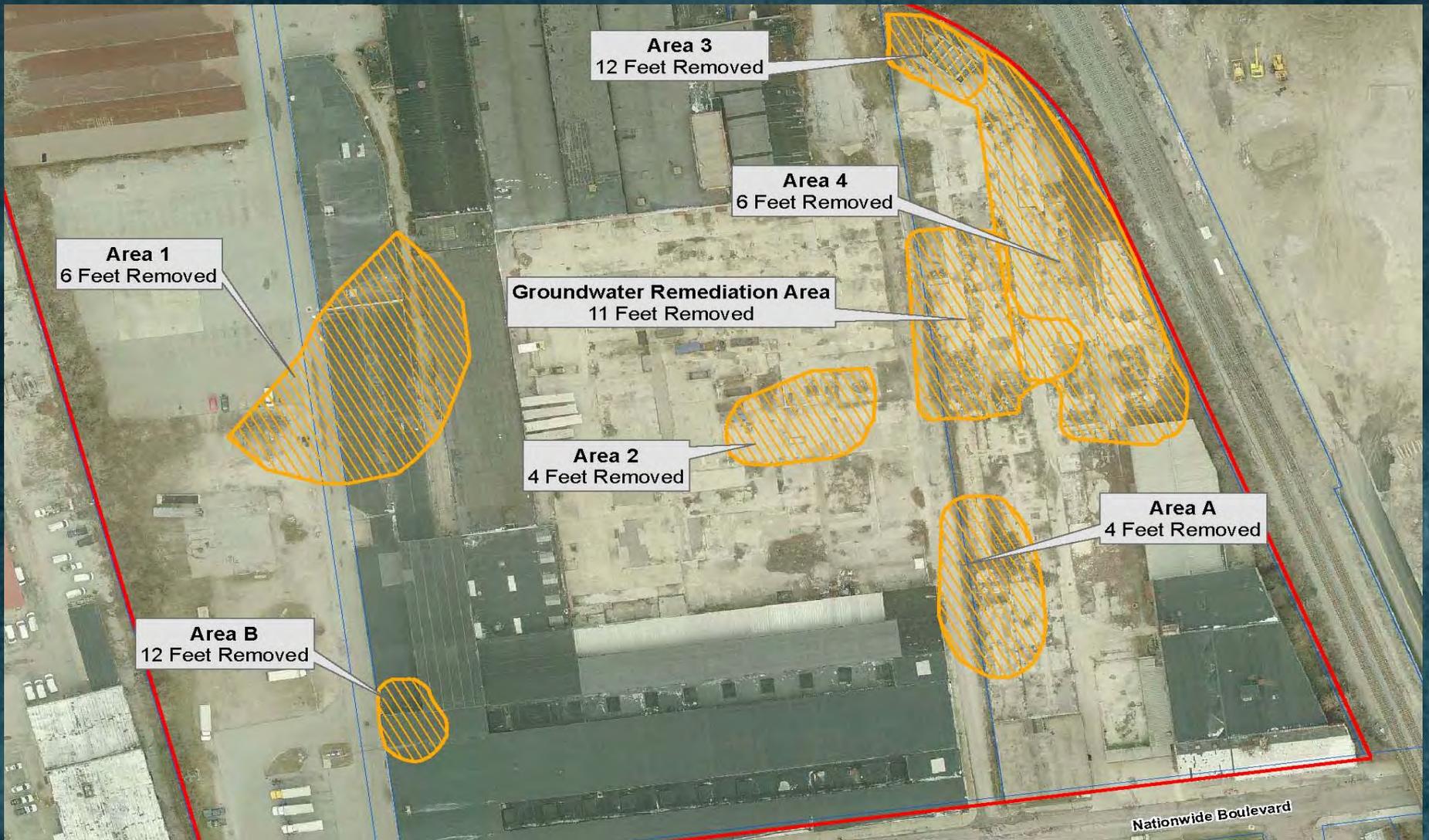


- Demolition of all existing building structures

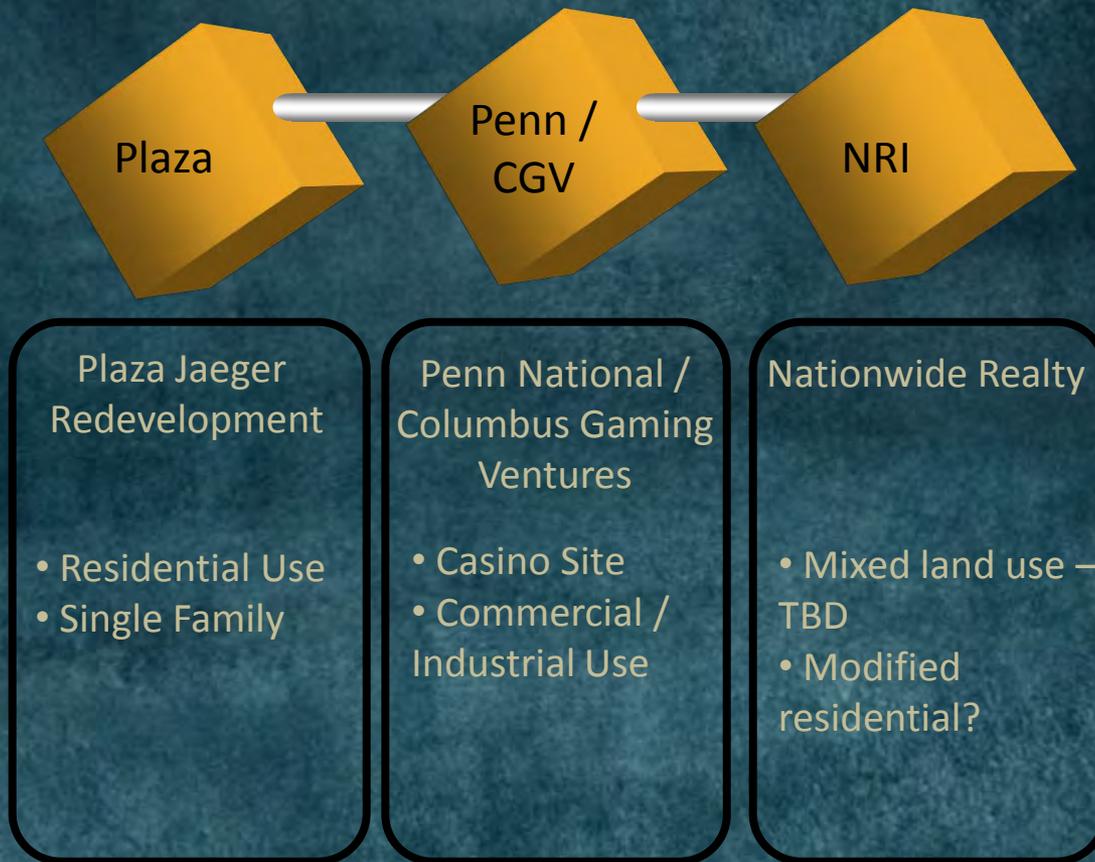


- Extensive remediation of contaminated soils and groundwater

Areas of soil & groundwater contamination remediated



Ownership Changes over the years (2007-2012)



How do you comply with applicable standards? What are they?

Meeting a Residential Standard:

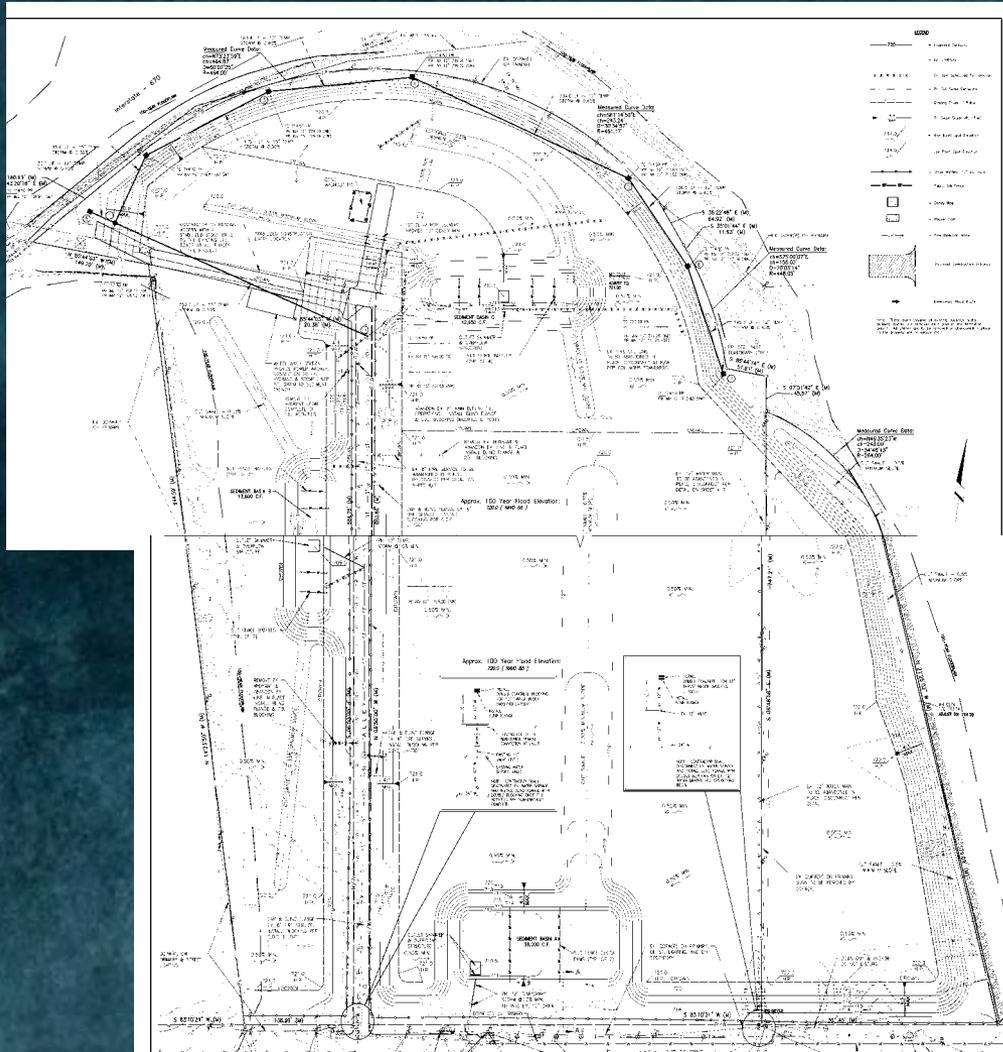


-Cap site with minimum of 10' of fill material:

- Puts site above flood plain which is needed
- Achieves greater than 10' point of compliance for residential land use in some instances



Meeting a Commercial / Industrial Standard:



- Cap site with 2' of fill materials:
 - Puts site still below the flood plain
 - Achieves 2' point of compliance for commercial / industrial land use.

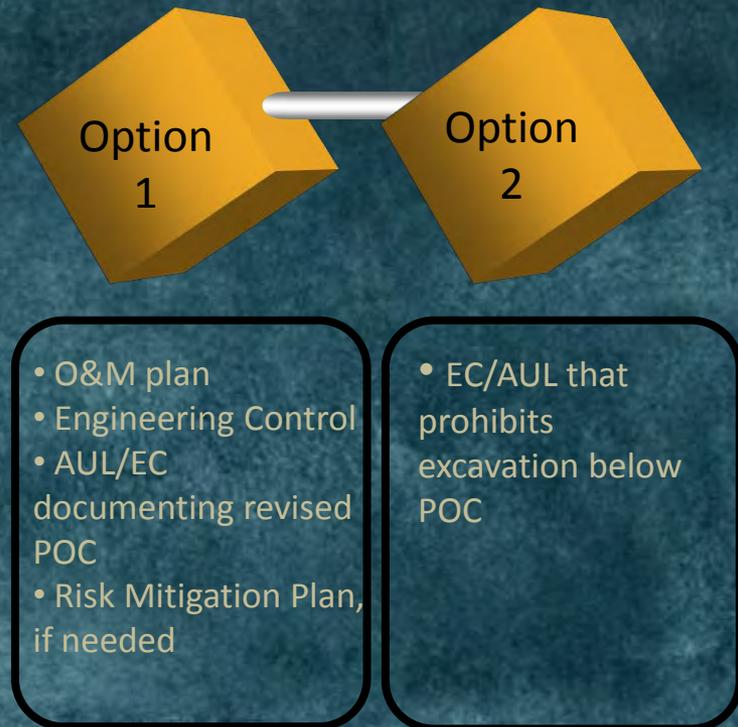
- An EC must be recorded to document the requirement of continued commercial/industrial use of the subject property.

- All other pathways must be evaluated independent of the soils – direct contact issue. Total overall risk still needs to meet $1E-5$ and 1 thresholds

Meeting a Modified Residential Standard:

- Cap site with 2' of fill materials:
 - Puts site still below the flood plain
 - Achieves 2' point of compliance for modified residential land use.
- The EC will limit the property to modified residential land use. A condo/apartment end use is allowed; no single family homes or fee simple dwellings allowed

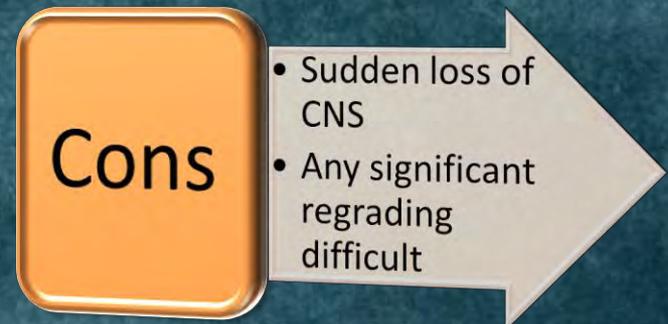
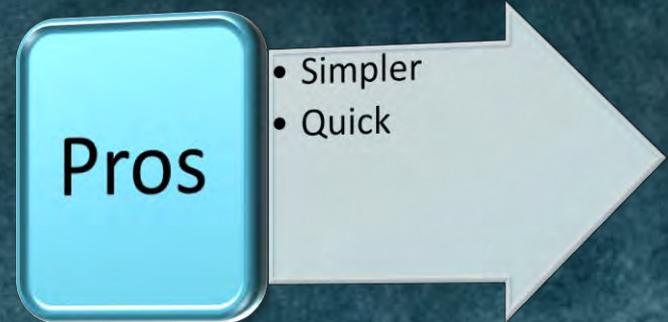
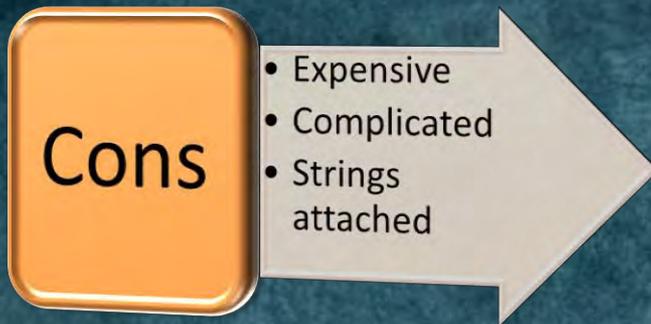
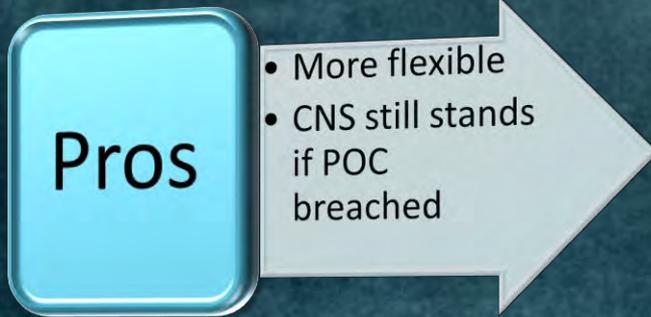
- 2 ways of meeting Modified Residential, see VAP TGC
- Option 1 – More extensive but may be preferred
- Option 2 – don't use if significant regrading is in the future for the property



Pros and Cons to Modified Residential Methods:

Method 1: O&M

Method 2: AUL





How do you do a Phase II to meet multiple
land uses and/or redevelopment plans?

Former CSX 7th and Watt St. Property



- Property is located in Chillicothe, Ohio.



- Location of rail car storage and maintenance yard for the CSX switching station.



- The property is the location of multiple sites of potential environmental concerns including:
 - Location of oil house
 - Rail car usage
 - Widespread slag/foundry sands

• Awarded 2 Covenants Not To Sue (2001 & 2011)

Work Completed to Date:



- VAP Phase I Property Site Assessment



- VAP Phase II Property Site Assessment



- Asbestos abatement



- Significant excavation of contaminated soils



- Remediation of free product in groundwater

Why Two Covenants?

- Initial Covenant Not To Sue was based on:
 - Lead standard of 2800 ppb
 - Commercial / Industrial use restriction
 - Groundwater use restriction
 - O&M plan that was very restrictive
 - Reuse very difficult – too many strings attached

- Second Covenant Not To Sue was based on:
 - CORF funds becoming available
 - Lead standard changing to 1600 ppb
 - Commercial / Industrial use restriction
 - NO O&M plan
 - Property can be redeveloped

What happens when a portion of the property gets sold?



*** How does this affect the Covenant Not To Sue?**

Steps Taken for New Owners:

- Separate risk assessment completed on the $\frac{3}{4}$ acre parcel to show applicable risk assumptions for the CNS continue to be valid.
 - Because of heterogeneous nature of fill at the property, risk needed to be redone to show risk is met at the $\frac{3}{4}$ acre property by itself.
- New owners informed about conditions of the CNS
 - Commercial / Industrial land use restriction
 - CNS at risk if soils disturbed below 2'
 - Construction worker activities anticipated to be only 6' below existing grade

Lesson Learned:

Be aware of sub parceling during development and what it means for the CNS and the new property owner.

A risk assessment may still be needed for the sub parcel to document that the CNS still continues to apply and it is valid

Education of new owners and keeping Volunteers and Ohio EPA informed is key

An NFA audit or a 5 yr review of the property may bring these to light

Thank You!



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