

# Newark Processing Company

## A Case Study

Carnoustie

Consulting, Ltd.

Engineering & Environmental Services

# Dross Sites in the US (Examples)

- Heglur-Kronquist (Kaiser) – Mead, WA
- Green River Disposal – Maceo, KY (NPL)
- Brantley Landfill – Island, KY (NPL)
- Aluminum Recycling – Trentwood, WA
- Jacks Creek/Sitkin Smelting – Maitland, PA (NPL)
- Red River Aluminum – Stamps, AR (NPL)
- Smokey Mountain Smelter Site – Knoxville, TN (NPL)
- At least a dozen more ...

# Basis for CERCLA Listing – Dross Sites

- Some sites have PCBs from furnace electrodes
- Some sites have dioxins
  - Flux in aluminum melt enhanced by TCE
- Some sites received mixed drosses, including brass and bronze
- Many sites have high lead concentrations

# Site History

- Operations began 1980
- Moved from smaller location in downtown Newark
- Prior use of Property included farming, nursery
- Separated from East Main Street by railroad
- Processing of aluminum smelting dross and salt cake to recover aluminum metal

# Operations History

- Processed 20,000 T/yr dross
- Produced 3,500 T/yr recovered aluminum
  - Four wet mills
  - Two dry rotary mills
  - Three (?) melting furnaces
- Zero-discharge wastewater management (claimed)

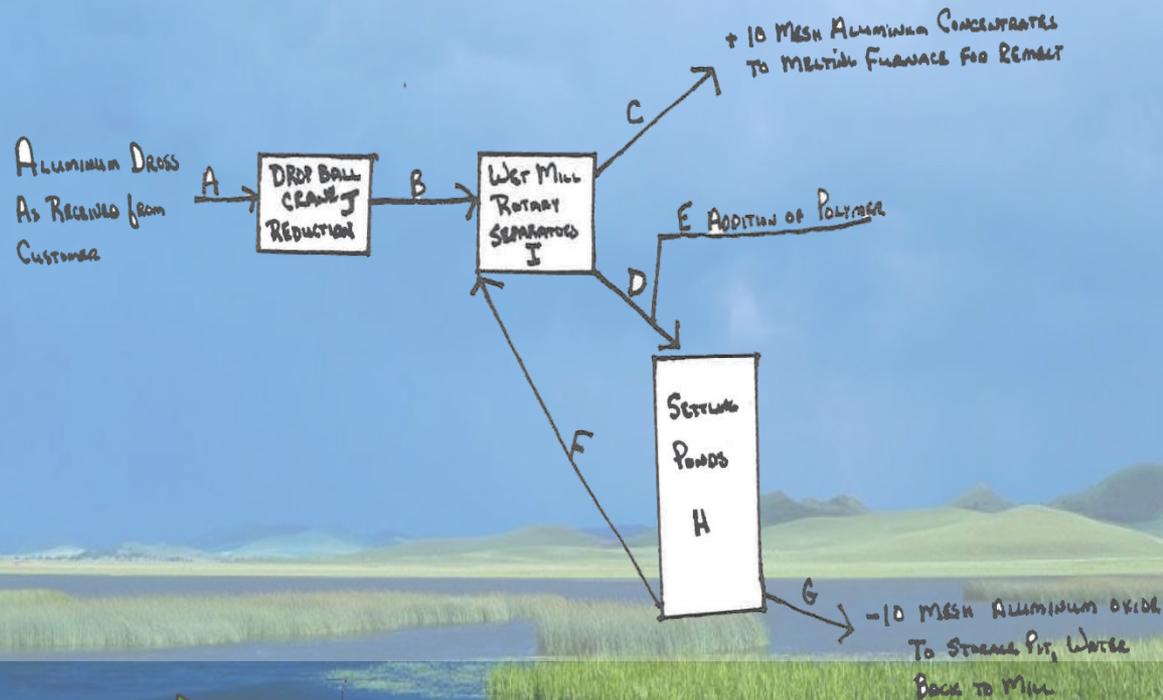
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# Operations Flowchart per NPC

Block Diagram - Proposed Milling System - 1601 E. MAIN ST. - NEWARK PROCESSING Co. Inc.



# Regulatory History

**OhioEPA**

Re: Newark  
Newark Processing Co.

Mr. William F. Campbell, President  
Newark Processing Co., Inc.  
P.O. Box 735  
Newark, Ohio 43055

March 24, 1981

Dear Mr. Campbell:

This is to confirm our discussion of March 4, 1981 regarding the status of your aluminum oxide storage/disposal area in Newark.

We concluded that:

1. Extraction Tests on the oxide indicate it to be non-EP Toxic and therefore non-hazardous as defined by the U.S. EPA.
2. The oxide material is being stored in a non-acidic environment.
3. Extraction Tests performed with de-ionized water show that, under neutral conditions, the oxide will leach only minute amounts of contaminants.
4. Dross (Slag) is exempted from the definition of solid waste.
5. Stream samples upstream and downstream of your facility have shown little or no contamination.

Based on the above information, we agreed that, at this point in time, no Solid Waste Permit or license would be required from the Ohio EPA or from the Newark City Health Department. You should still, of course, continue to operate your site in such a way as to minimize any discharges to the environment.

If, in the future, you decide to begin operation of a new site, you should contact us so we can review the regulatory requirements at that time and so that we can evaluate the geological conditions of the proposed site.

I would like to thank you for your cooperation in this matter. If I can be of any assistance, please do not hesitate to contact me.

Yours truly,

# Regulatory History

- 1981 Ohio EPA determination of non-RCRA status
- Operations continued 1981-83 without major issues
- 1984: oh-oh, the troubles begin ...

# Regulatory History

 **INTER-OFFICE COMMUNICATION**

TO: Steve Rath, Land, CDO

FROM: <sup>AH</sup> Anthony Hanes thru Bruce Goff and Bill McCarthy <sup>WMC</sup>

SUBJECT: Newark Processing Company, Inc.

DATE: May 25, 1984

RECEIVED  
MAY 29 1984  
OHIO DEPT.  
LAND POLLUTION CONTROL

The DWPC has had a number of complaints concerning the water quality of the Licking River near Newark.

There is a possibility that the Newark Processing Company, an aluminum byproducts company, could be responsible for some of the problems. This company stores large quantities of solid aluminum materials around the plant and operates its own land fill for the disposal waste aluminum oxides.

If you agree, I think that it would be useful for wastewater and land to schedule a joint inspection of this facility. Please contact me so that we may arrange an inspection date.

AH/BG/BM/rr

*TOLD HANES THAT DLPC HAS DETERMINED THAT IT DID NOT HAVE AUTHORITY TO REGULATE MATERIAL THAT IS WAITING FOR RECYCLE/RE-USE. ALSO POINTED OUT J. ADAR'S LETTER OF 2/24/81.*

# Regulatory History

- Numerous observed leachate breakouts to the Licking River 1984-87
- DFFO issued by Ohio EPA June 1988
  - Cease bypass of WW settling lagoon system
  - Conduct surface water monitoring in Licking River
- Violations and DSW enforcement continued
- Economic conditions worsened until –
- Bankruptcy declared by NPC May 1997

# Post-Bankruptcy Activities

- Sampling of site media conducted 1999 at direction of bankruptcy trustee
  - "Soil" (dross & salt cake)
  - Surface water
- Ohio EPA recovered funds from bankrupt company to address site restoration (~\$350k)
- CERCLA scoring completed in 2001, with result no NPL listing
- Civil & Environmental Consultants (CEC) began working with City of Newark to seek solutions

# Post-Bankruptcy Site Conditions



# CEC Activities 2001-05

- Actions initiated upon approval of State Issue 1 (Clean Ohio Fund)
- VAP Phase I Property Assessment funded by City
- Ohio EPA agreed to release funds from bankruptcy settlement to conduct Phase II
- CEC planned and conducted Phase II
  - Drilling provided through Ohio EPA TBA contractor
  - Ohio EPA conducted bio assessments of Licking River & Shawnee Run
  - Also included demo of site structures – threat of collapse

# Riverbank Erosion Problem



February 2007



April 2007

# Why the erosion?

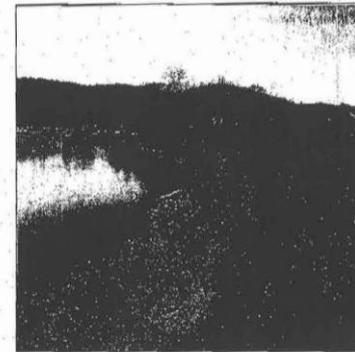


# Riverbank Stabilization

- US Army Corps of Engineers tasked with design and construction of stabilizing bank of Licking River
- Funding provided by Ohio EPA – \$2.8 M
- TAB Construction – contractor
- Construction began March 2008, completed Sept. 2009



U.S. ARMY CORPS  
OF ENGINEERS



## PROPOSED REMEDIAL ACTION PLAN

LICKING RIVER BANK STABILIZATION  
FORMER NEWARK PROCESSING PLANT, NEWARK, OHIO

PREPARED FOR: THE OHIO EPA AND THE CITY OF NEWARK, OHIO  
PREPARED BY: THE USACE, HUNTINGTON DISTRICT, WEST VIRGINIA

JUNE 2005

# Clean Ohio Rounds 3 – 7

- CORF application Round 3 – failed because low economic benefit score
- CORF Application Round 6 – failed because End User (photovoltaic farm developer) commitment fell through at 11<sup>th</sup> hour
- CORF Application Round 7 – confusion: is this a landfill closure or is it a VAP NFA project?
  - Ohio EPA says landfill closure
  - We get the grant!
  - Then Ohio EPA says it's both: a LF closure and a VAP NFA
  - Of course, no additional funds ...

# CORF Project

- Project became, essentially, a public works project
- Engineer design, contractor bid process
- Key elements:
  - Regrade dross and salt cake
  - Construct soil cap (geocomposite layer option)
  - Vegetate surface
  - The usual erosion & sediment controls – several acres construction site

# CORF Project

**PROJECT MANUAL  
for  
CITY OF NEWARK**

**NEWARK PROCESSING SITE REMEDIATION**

Clean Ohio Revitalization Fund (CORF)

Inquiries and correspondence to the engineer shall be directed to:

Jeffrey P. Hullinger, PE, Ohio VAP CP #214

**Carnoustie Consulting, Ltd.**

6012 Kentigern Court South  
Dublin, OH 43017

[jhullinger@carnoustieltd.com](mailto:jhullinger@carnoustieltd.com)  
(614) 467-9252

September 23, 2011

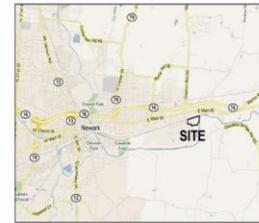
Carnoustie Project No. 10-028

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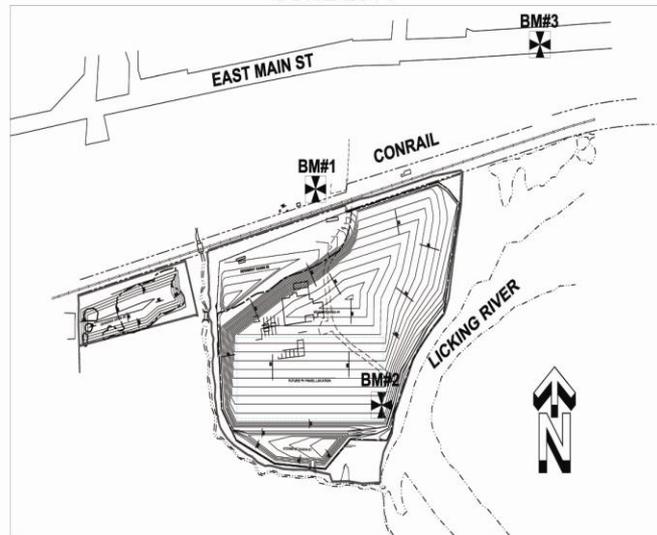
City of Newark  
Newark Processing Site Remediation

# CORF Project

CITY OF NEWARK, OHIO  
**NEWARK PROCESSING COMPANY  
 SITE REMEDIATION PROJECT**  
 CLEAN OHIO REVITALIZATION FUND PROJECT  
 JUNE 2011



VICINITY MAP  
 NOT TO SCALE



INDEX MAP  
 SCALE 1"=200'

**HORIZONTAL & VERTICAL CONTROL**

SOURCE: BM IS PID - A47845  
 COUNTY - LICKING  
 MONUMENT - SURVEY DISK SET IN CONCRETE  
 STAMPED - WADSWORTH MAP 6, 1998

SPC OHIO SOUTH  
 NORTHING - 746678.1412 US FT  
 EASTING - 2015676.9707 US FT  
 ELEVATION - 825.52 US FT (NAVD88)

0.2 MILE (0.3 KM) EAST OF THE INTERSECTION OF SLEEPY HOLLOW ROAD (T-294) AND CROSS ROAD (T-296) ON THE SOUTH SIDE OF THE ROAD, ACROSS FROM 1694R SLEEPY HOLLOW ROAD. THE MONUMENT IS 62.4 FEET (19.0 M) AZIMUTH 260 DEGREES TO A POWER POLE WITH THE NUMBER 508-128, 46.5 FEET (14.3 M) AZIMUTH 320 DEGREES TO A POWER POLE WITH THE NUMBER 0178-024, AND 28.0 FEET (8.6 M) AZIMUTH 40 DEGREES TO A NAIL BOX WITH THE NUMBER 10848.

BM#1 - PIN w/ CAP PHIRAS  
 NORTHING - 750768.99  
 EASTING - 2020943.72  
 ELEVATION - 816.41

BM#2 - PIN w/ CAP PHIRAS  
 NORTHING - 748941.87  
 EASTING - 2010256.12  
 ELEVATION - 808.9372

BM#3 - PIN w/ AERIAL, CTL CROSS  
 NORTHING - 751317.83  
 EASTING - 2011017.05  
 ELEVATION - 813.6705



**Carnoustie**  
 Consulting, Ltd.  
 Engineering & Environmental Services

JEFF HILLINGER, PE DATE

**OWNER/CONTACT**

CITY OF NEWARK  
 DEPARTMENT OF RECREATION  
 STUART MONTANAN  
 40 WEST MAIN STREET #407  
 NEWARK, OH 43055  
 (740) 670-7546

**PREPARED BY:**

CARNOUSTIE CONSULTING, LTD.  
 JEFF HILLINGER, PE  
 MAP CERTIFIED PROFESSIONAL #214  
 COLUMBUS, OH 43231  
 (614) 487-9252

**UTILITIES**

CITY OF NEWARK  
 DIVISION OF WATER AND WASTEWATER  
 34 S. FIFTH ST.  
 NEWARK, OH 43055  
 (740) 670-7940  
 WATER@CITYOFNEWARKOHIO.WATER.NET

COLUMBIA GAS OF OHIO  
 2550 JOHNNY APPLESEED CT.  
 COLUMBUS, OH 43231  
 SCOTT RUSSELL (614) 480-2169

AMERICAN ELECTRIC POWER COMPANY  
 850 TECH CENTER DRIVE  
 GAHANNA, OH 43230  
 TM WELCH (614) 883-6851

**SHEET INDEX**

- SHEET 1: COVER
- SHEET 2: SITE CONDITIONS
- SHEET 3: FINISH GRADING PLAN (TOP OF CAP)
- SHEET 4: ROUGH GRADING PLAN (TOP OF WASTE)
- SHEET 5: GRADING DETAILS
- SHEET 6: PROFILES & X-SECS
- SHEET 7: X-SECS
- SHEET 8: X-SECS
- SHEET 9: EROSION CONTROL DETAILS

Carnoustie  
 Consulting, Ltd.  
 6020 Kingston Rd.  
 Dayton, OH 45424  
 Tel: 614-750-1800  
 Fax: 614-750-2000

DATE	DESCRIPTION

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CITY OF NEWARK  
 40 WEST MAIN STREET #407  
 NEWARK, OH 43055  
 (740) 670-7546

**NEWARK PROCESSING CO.  
 SITE REMEDIATION PROJECT**

PROJECT #10-028

COVER SHEET  
 1 of 9

# Project Design & Bidding

- Design was completed under budget
- Project bidding went without glitches or challenges
- Base bid range \$1.14M to \$1.69M
- Low bid TAB Construction (had also completed USACE riverbank stabilization project)
- Bid appeared to accommodate addition of geocomposite layer to cap

# Project Construction Phase

- Mobilization went without major incident
- Question arose about rail crossing
  - Railroad had required fulltime flagman during USACE construction project
  - Crossing had historically been used by farm, nursery, NPC
  - USACE had elected not to challenge railroad, but thought they had no valid basis for flagman
  - Project budget did not permit fulltime flagman to be provided by railroad
- What to do about the railroad?

# Railroad Issue

- CP went working on the railroad ...

**From:** [Matt Hannahs](#)  
**To:** [jhullinger@carnoustieltd.com](mailto:jhullinger@carnoustieltd.com); [tom.stapleton@rbjergens.com](mailto:tom.stapleton@rbjergens.com); [kristopher@nuwayservices.com](mailto:kristopher@nuwayservices.com); [bmcinnis@ncmgroup.com](mailto:bmcinnis@ncmgroup.com); [zzawila@astenvironmental.com](mailto:zzawila@astenvironmental.com); [bnoland@sealscoinc.com](mailto:bnoland@sealscoinc.com); [mclarv@emsonsite.com](mailto:mclarv@emsonsite.com); [jeff.hartlund@eaonline.com](mailto:jeff.hartlund@eaonline.com); [don.bergstrom@4earthinc.com](mailto:don.bergstrom@4earthinc.com); [pdavidson@envirocon.com](mailto:pdavidson@envirocon.com); [rfs@v-city.net](mailto:rfs@v-city.net); [jmock@microrolloff.com](mailto:jmock@microrolloff.com); [est@rfscurlrock.com](mailto:est@rfscurlrock.com); [jsutter@tolcc.com](mailto:jsutter@tolcc.com); [keshler@tolcc.com](mailto:keshler@tolcc.com); [pat.higgins@hisconstructors.com](mailto:pat.higgins@hisconstructors.com); [joe@markschaffer-excavating.com](mailto:joe@markschaffer-excavating.com); [matt.check@igelco.com](mailto:matt.check@igelco.com); [steven\\_claggett@windstream.net](mailto:steven_claggett@windstream.net); [aschill@newarkohio.net](mailto:aschill@newarkohio.net); [glennhalm@aol.com](mailto:glennhalm@aol.com); DOD-Stuart Moynihan  
**Subject:** RE: Newark Processing - Central Ohio Rail  
**Date:** Monday, October 10, 2011 4:16:16 PM

Mr. Hullinger

Central Ohio returned our call today and stated that we would be required to provide a full time railroad flagger (supplied by them) and additional railroad liability insurance in order to use their crossing into the NPC Site. Does the City of Newark have any pre-existing agreement to use that crossing or are we bound by Central Ohio's property rights?

Matthew Hannahs  
TAB Construction Company, Inc.  
Phone (740) 475-9975  
Fax (740) 928-2245

**From:** [Jeff Hullinger](#)  
**To:** ["DOD-Stuart Moynihan"](#)  
**Subject:** RE: Right of Way at Newark Processing Center Site  
**Date:** Tuesday, January 10, 2012 1:13:00 PM

Stu:

I remain at a loss as to what basis the railroad believes it has to compel the City to spend substantial monies as a precondition for continuing to use a grade crossing that has been in use for many years. The Agreement that Genesee & Wyoming (GWRR) sent to the City represents a contract in which one side (the railroad) benefits without providing any consideration in return. In addition, it seems to me that substantial legal ramifications could ensue from subjecting the NPC site contractor, TAB, to what amounts to additional contract terms and conditions (the GWRR Contractor Safety Rules appended by Mr. Layman).

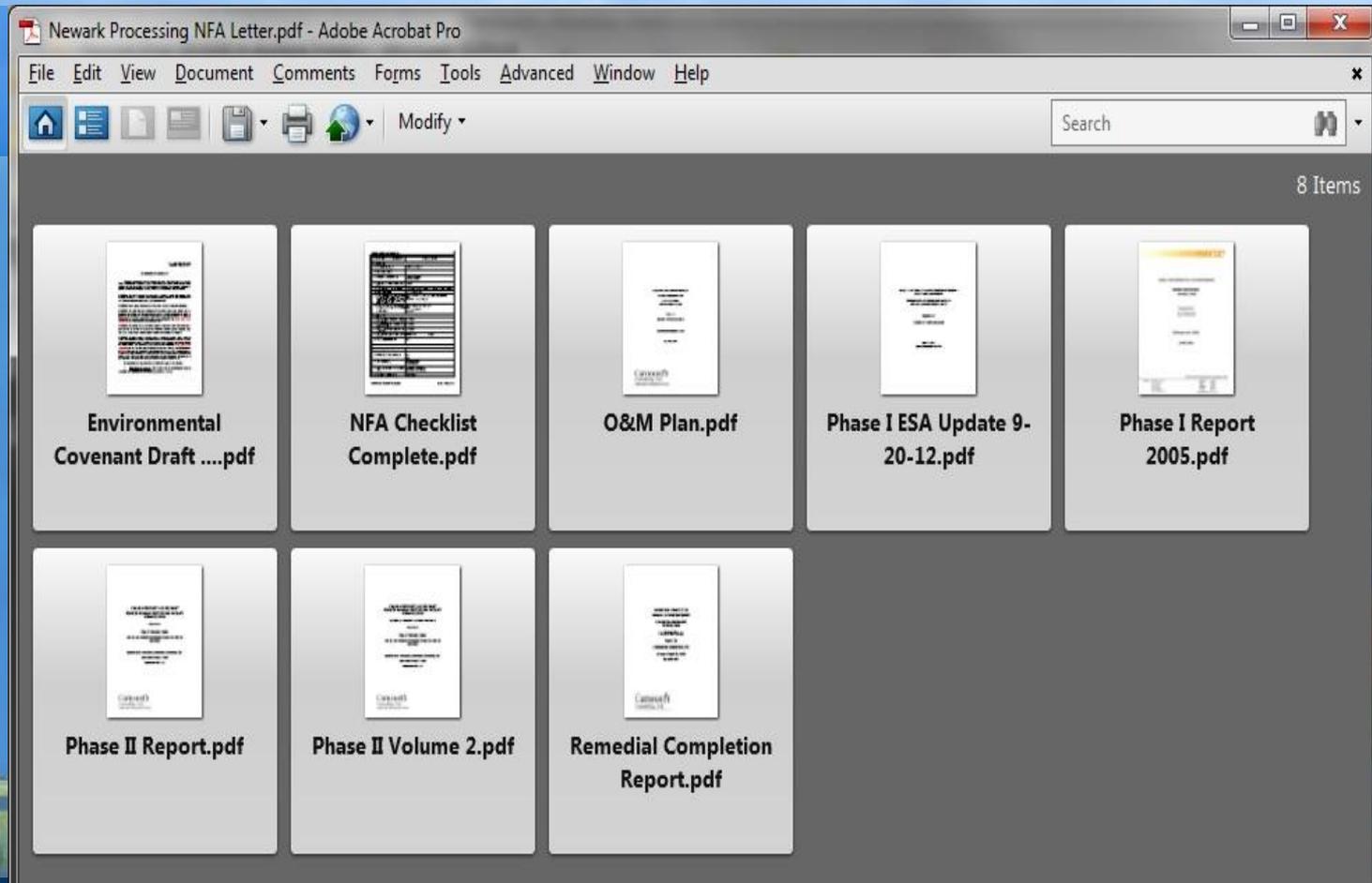
Just some thoughts. Please let me know if you or the City's legal department would like my input as this matter moves forward.

Jeffrey P. Hullinger, P.E.

# Project Construction Phase

- Construction completed successfully
- Zero change orders
- Vegetation the only issue
  - Seed mix was specified for shade to accommodate solar panels
  - Solar developer selected by City backed out
  - No solar cells -> no shade

# NFA Letter Prepared



# Environmental Covenant

- Issues resulted from survey discrepancies
  - None of historical surveys closed
  - Basis of Property description was internally consistent
  - Carnoustie had to resolve description to be consistent with CORF grant application
- Ohio EPA accepted the resolved description for use in the EC – after much discussion

# Final Details

- City's Law Director refused to be EC "preparer"
- Legal preparer of EC document was Carnoustie General Counsel, satisfying Ohio EPA
- CNS received August 13, 2013
- Project now to be audited! (random pool)
- CP labor will need to be pro bono ...