“AREA C”

Old Dump on Ford Motor Company’s River Parcel

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“AREA C” - OVERVIEW

- Located at base of bluff on the floodplain
- Industrial waste (paint sludge, solvents) disposed from c. 1940 to mid-1960s
- Industrial waste about 25 feet thick (average)
- Overlain and surrounded by 40+ feet of soil
- Surrounded by large demo debris
- Covered by concrete parking lot
Waste footprint

Area C

Hidden Falls Park
Anonymous phone call - October 1980:

“During the 1950s near the Ford Plant, waste solvents from the plant’s painting operation were dumped over the steep bluff overlooking the river, and waste in barrels was buried.”
Army Corp of Engineers rebuilt Ford Lock & Dam in late 1970s:

- 40+ feet of dredged material placed around and on top of industrial waste
- Huge concrete blocks around perimeter

These actions make the industrial waste very difficult to access and remove.
1981 to 1990: groundwater monitoring, no significant impact.

1984: Ford site listed on State Superfund list (for Area C and other main-parcel issues)

Limited surface cleanup at Area C (industrial waste had already been covered up by lock & dam debris)

1993: Ford site removed from State SF list
10 soil borings through top of parking lot to determine waste footprint

**Observations**
Starting at depths of 40 to 60 feet:
- Black smelly soil with glass, metal
- Solvent odor
NOTE:
1. AWW19 ELEVATION AND LAND SURFACE TOPOGRAPHY THROUGHOUT AREA C MEASURED ON JANUARY 17, 2012.
2. MISSISSIPPI RIVER ELEVATION IS APPROXIMATE (BASED ON AVERAGE ANNUAL ELEVATION).
3. GROUNDWATER ELEVATION DATA IS BASED ON 2011/2012 DATA COLLECTED FROM AWW19/30.
4. LOCATION B-4 IS A HISTORICAL BORING DRILLED PRIOR TO ADDING FILL IN AREA C
5. LOCATION OF TUNNEL SECTION IS 711 FT. ASL. ELEVATION OF TUNNEL ROOF IS 796 FT. ASL. PROJECTION IS APPROXIMATELY 70 FEET SOUTH OF A-A' SECTION LINE.
5 trenches dug into south slope

8 transects for sampling surface soil

**Observations:**
- Paint sludge and crushed barrels 2 feet below surface in trenches near bluff
WASTE & SOIL SAMPLING

Samples collected from:
- Buried industrial waste
- Overlying construction fill
- Surface soil on slopes

Samples analyzed for:
- Volatile organic compounds
- Semi-VOCs
- 23 metals
- Diesel range organics
- Gasoline range organics
- PCBs (waste only)
Buried waste

- VOCs from paint solvents (same type as found in gasoline)
- Metals from paint pigment (antimony, arsenic, barium, lead*, cadmium, chromium, copper)
- PCBs likely from paint pigment
- PAHs from petroleum, asphalt, incomplete combustion
  - characteristically hazardous in some samples

Construction fill and surface soil

- PAHs and petroleum
  - Levels typical of urban fill containing road debris
INVESTIGATION AT AREA C (2015-2016)

- 8 additional monitoring wells (total of 10 wells)

These wells are all completed in the water table aquifer.
Samples analyzed for:

- Volatile organic compounds
- Semi-VOCs
- 23 metals
- Diesel range organics
- Gasoline range organics
- PCBs
- Cyanide

Quarterly sampling of wells
Monthly during flood events

Results

- VOCs, cobalt consistently detected in GW near south slope.
- Other wells: intermittent detections of small numbers of contaminants that exceed WQ standard.
- All concentrations much less than what would pose risk to river.
Capitol Region Watershed District & Friends of Mississippi River requests:

9 additional wells, including bedrock wells

Test GW for PFAS compounds

This work is planned for 2020
PATH FORWARD

1. Investigation
   - Where is the contamination?
   - What are the risks?

2. Feasibility Study
   - Presents cleanup options

3. Community Meeting
   - MPCA overview of proposed cleanup options

4. 30-day comment period on cleanup options

5. Revise Feasibility Study as needed

6. MPCA Selects Cleanup Plan

7. Ford Implements Cleanup
The following cleanup actions are needed:

- Excavation on south slope (paint sludge, crushed barrels)
- Removal of physical hazards (rusty metal, surface debris)
- Clean soil buffer on slopes
- Slope stabilization to fix erosion problem

Final scope of work will be determined after additional wells installed and at least one more year of GW monitoring.

Re-openers: Cleanup decision will be based on current conditions. If conditions change (e.g. new information, change in GW quality, removal of lock & dam, etc.) we take a fresh look.
Is there a risk right now to people or the river?

- MPCA asked MN Department of Health (MDH) to do independent risk review of current conditions at Area C.
- MDH concluded that only minimal risks exist if trespassers contact contaminants in soil or physical hazards.
- There are no other ways for people to come into contact with the buried waste or to be exposed to harmful amounts of contaminants.
- MDH assessment is posted on MPCA Ford webpage
QUESTIONS?

- **MPCA Ford webpage:** Google “MPCA Ford site”
  https://www.pca.state.mn.us/waste/saint-paul-ford-site

  *This presentation and Q&As from this meeting will be posted on MPCA Ford webpage. Similar questions will be combined and edited for a common response.*

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