

# Shell to WRB Refining



- **Shell/Equilon/Tosco/ConocoPhillips/WRB Refining**
  - Open around 1918
  - The Wood River Refinery is currently owned by WRB Refining LP a 50/50 joint venture between ConocoPhillips and Cenovus Energy

# Permit



- **A Resource Conservation and Recovery Act Permit was issued to Shell on November 3, 1989**
- **RCRA Permit renewed in September 2010**
- **This RCRA Permit requires Shell and WRB Refining LLC to control and clean up the groundwater below the refinery**

# AREAS OF CONCERN



- **Historical groundwater and subsurface soil contamination along the western fence line of the North Property (below ground contamination).**
- **1986 Benzene Releases at Route 111 and Rand Ave.**

# Investigation Area



# 1986 Benzene Release



- **January 30, 1986 approx. 8,500 gallons released**
- **February 22, 1986 approx. 420 gallons released**
  
- **From an underground pipe line that ran from the refinery to the river dock**
- **Surface contamination was cleaned up**
- **Pipe line was abandoned in place**

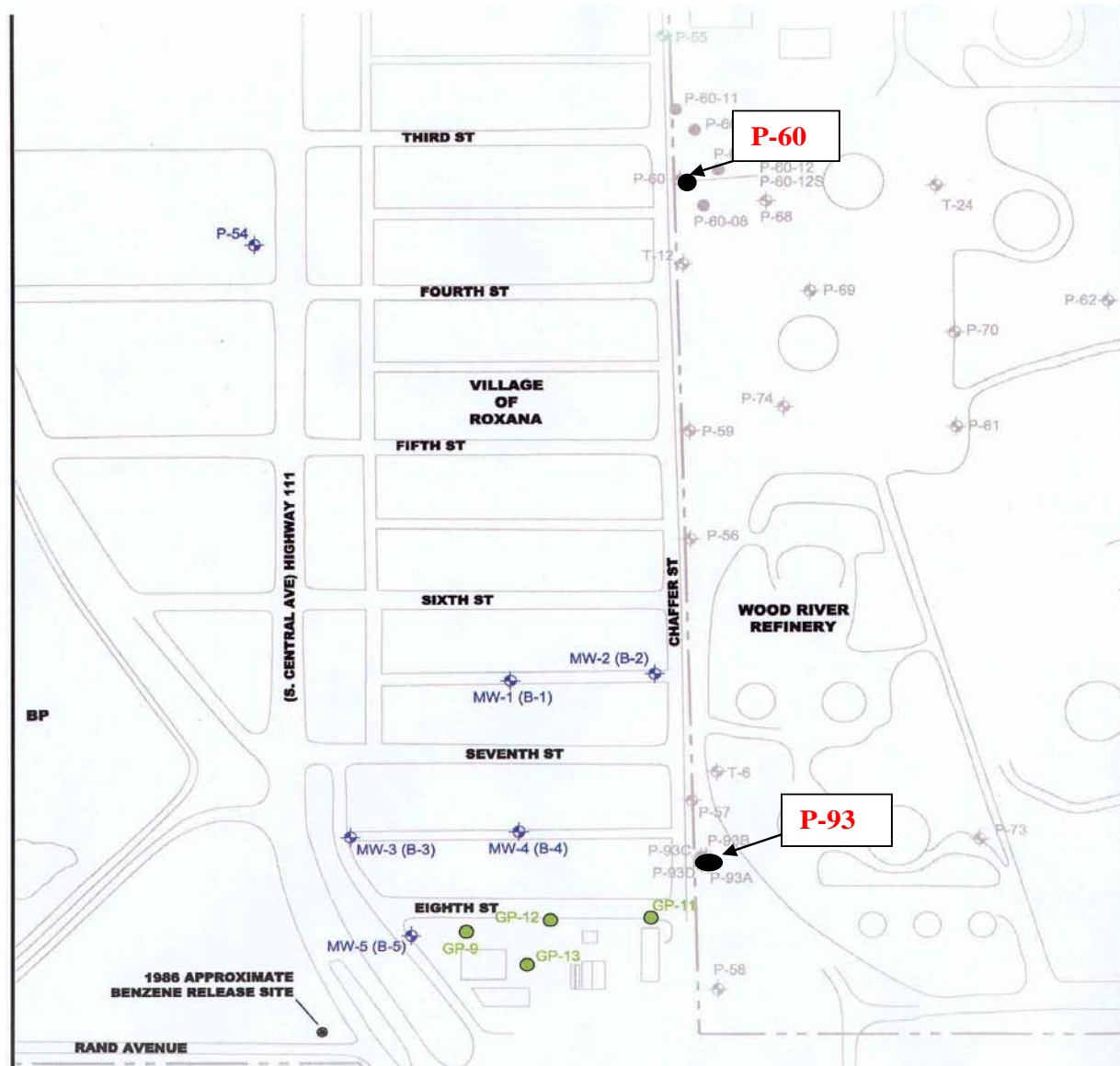
## 2005 - 2008

Dissolved benzene showed up in the groundwater in well P-93

Shell conducted soil, groundwater and soil vapor studies

Shell found increased levels of contamination along the western fence line about 800 feet from release site

The highest level of contamination was under the Roxana Public Works Yard



# 2008



- **IEPA sent Shell and ConocoPhillips a Violation Notice Letter for ground water violations in connection with the offsite contamination not covered by the RCRA Permit.**
- **Violations have been referred to the Illinois Attorney General for prosecution.**
- **Release clean up requirements added to 2010 RCRA Permit.**

# Historical Refinery Contamination



- In 1989 Shell notified the Illinois EPA of groundwater contamination along the western fence line of the North Property
- Investigation and remediation for this contamination was required by the Permit

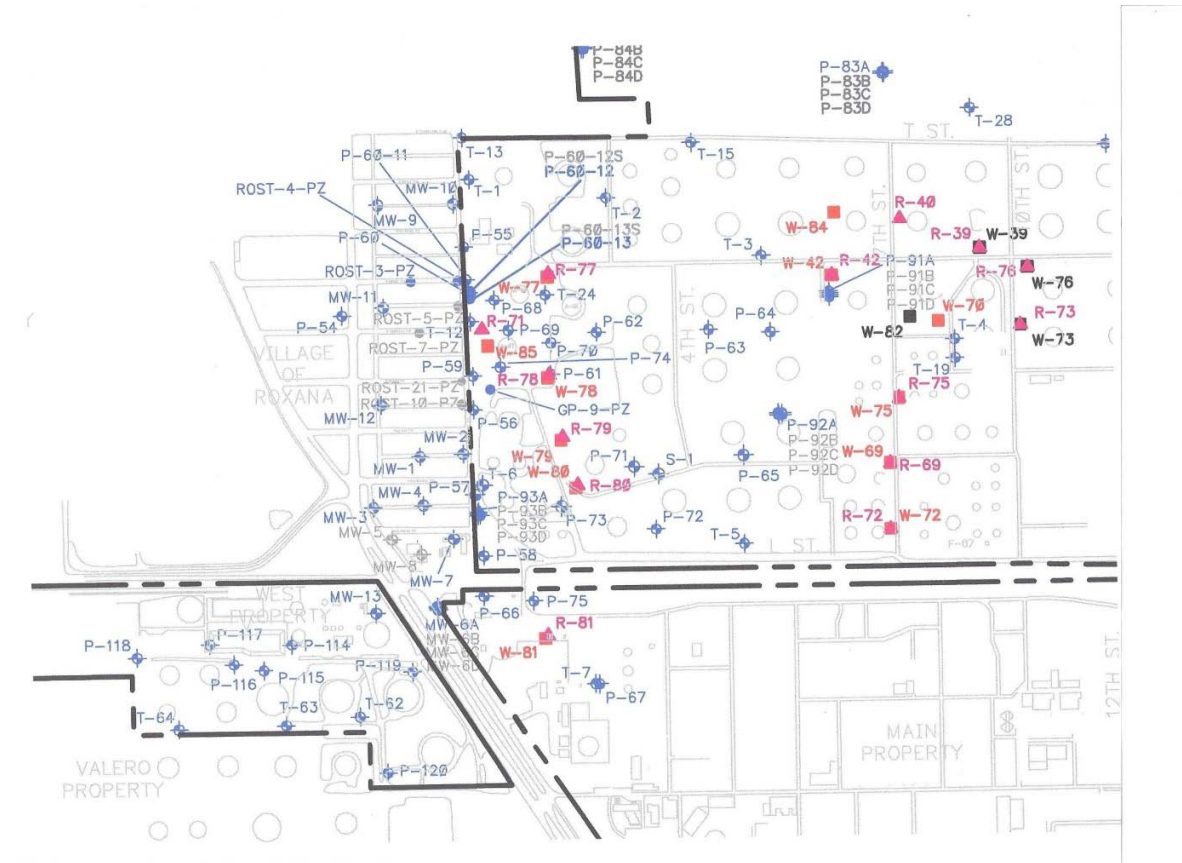


## 1990 - 2000

**Shell installed, maintained and operated a series of :**

**Oil recovery wells to removed hydrocarbons floating on the groundwater**

**Water production wells for refinery water needs and to maintain an inward flow of the ground water**



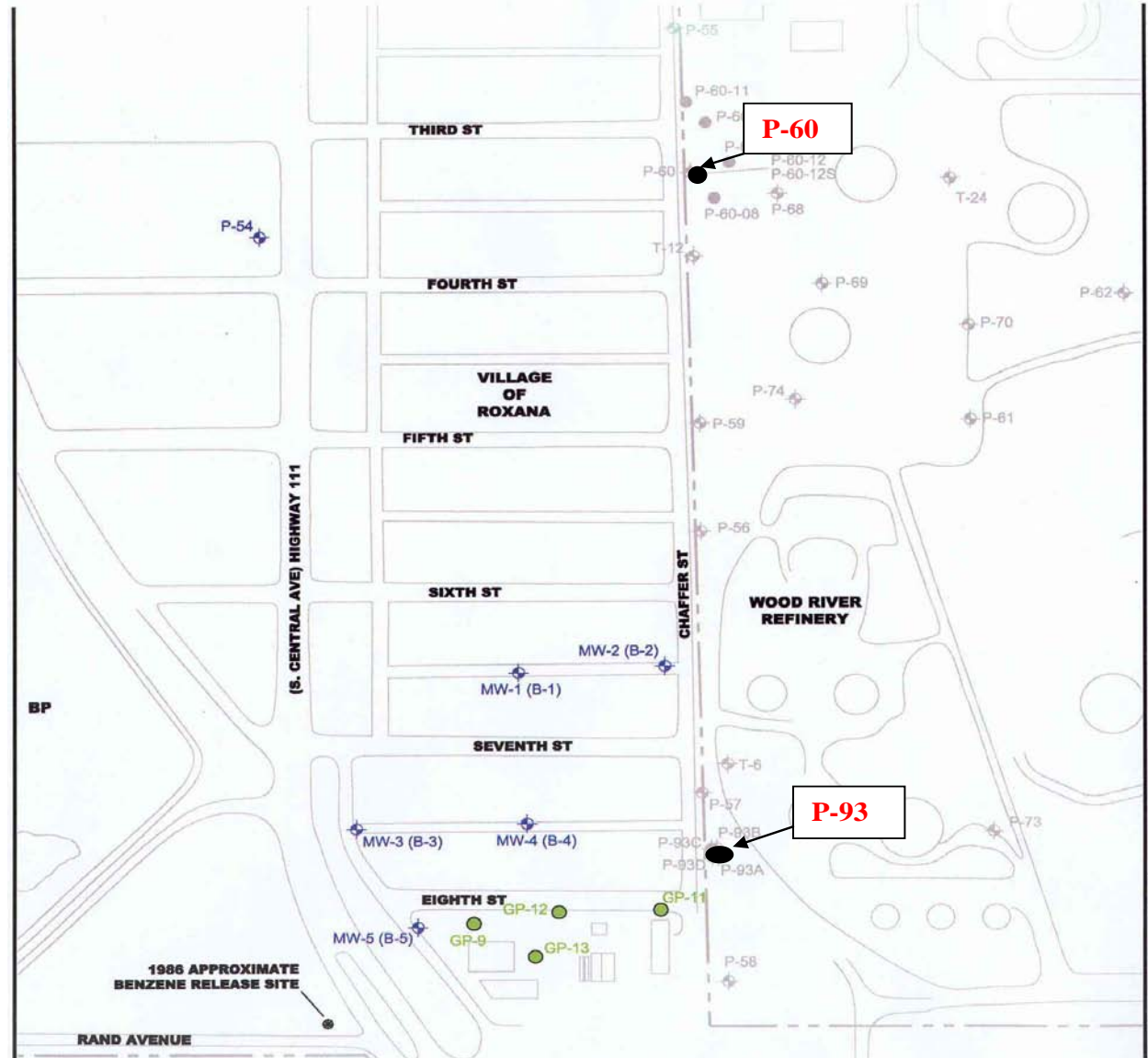
**2006**

**In 2006 Shell conducted an investigation around well P-60**

**Mainly on refinery property**

**Subsurface soils, groundwater and free phase hydrocarbon**

**Shell found an increase level of hydrocarbon in well P-60 along the western fence line.**



2009

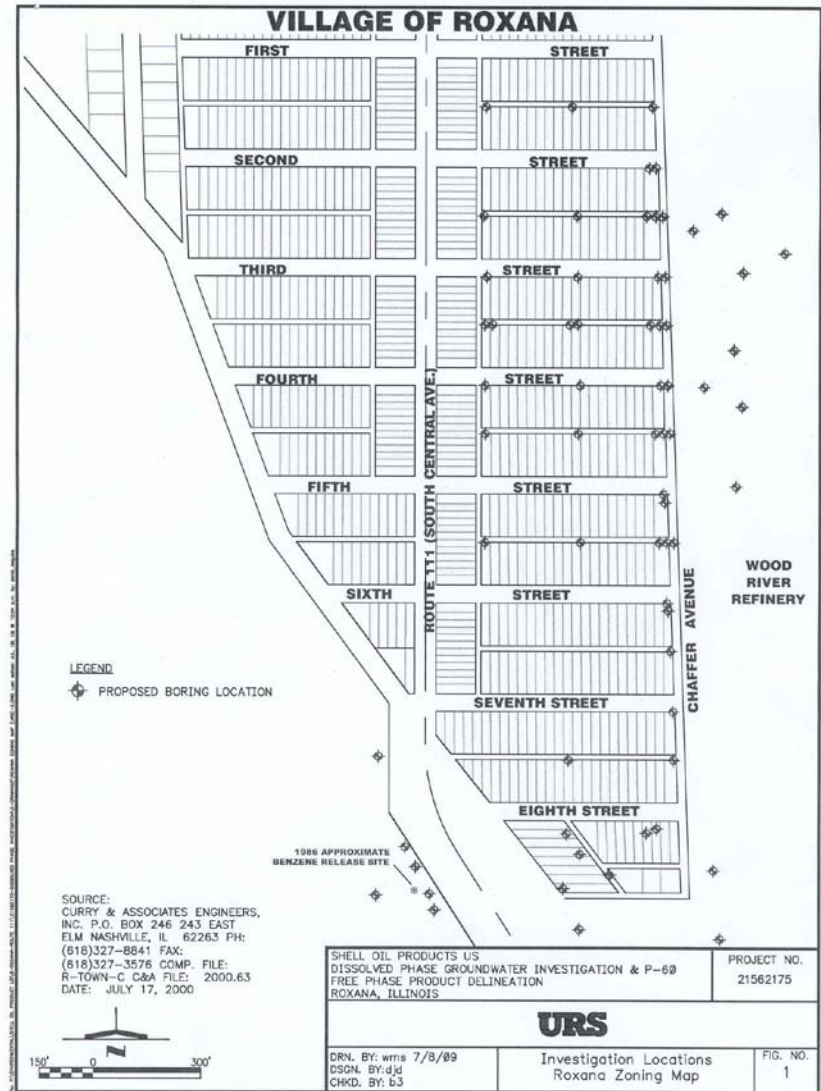
In response to P-60  
and P-93 findings  
Illinois EPA  
required Shell to  
characterize and  
sample:

Ground water for  
dissolved  
hydrocarbons

Subsurface soil

Soil gas for  
hydrocarbon vapor

Free floating  
hydrocarbon on the  
groundwater



**2010**

**Results of 2009 investigation showed the potential for in home vapor intrusion**

**IEPA required Shell to investigate homes in Roxana for the potential of vapor intrusion**

**Shell submitted a work plan in 2010 and an implementation plan in 2011**

**Shell began to conduct in home needs assessments with sampling in February 2011**

