

Burnaby Refinery Community Advisory Panel (CAP)

Area 2 Hydrocarbon Seep UPDATE January 20, 2011



Beach Seeps



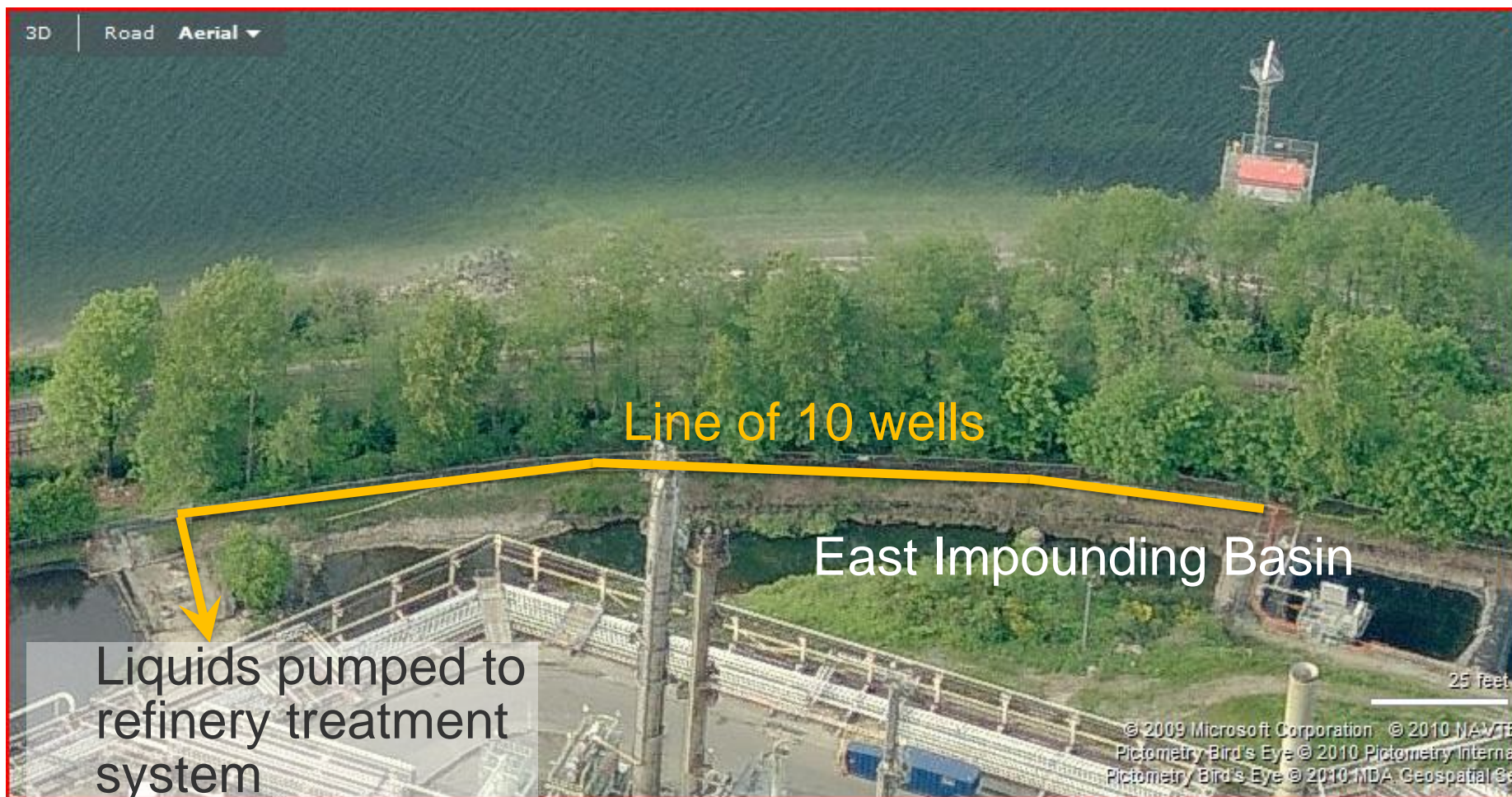
Coast Guard tower

locations of seeps

Railroad

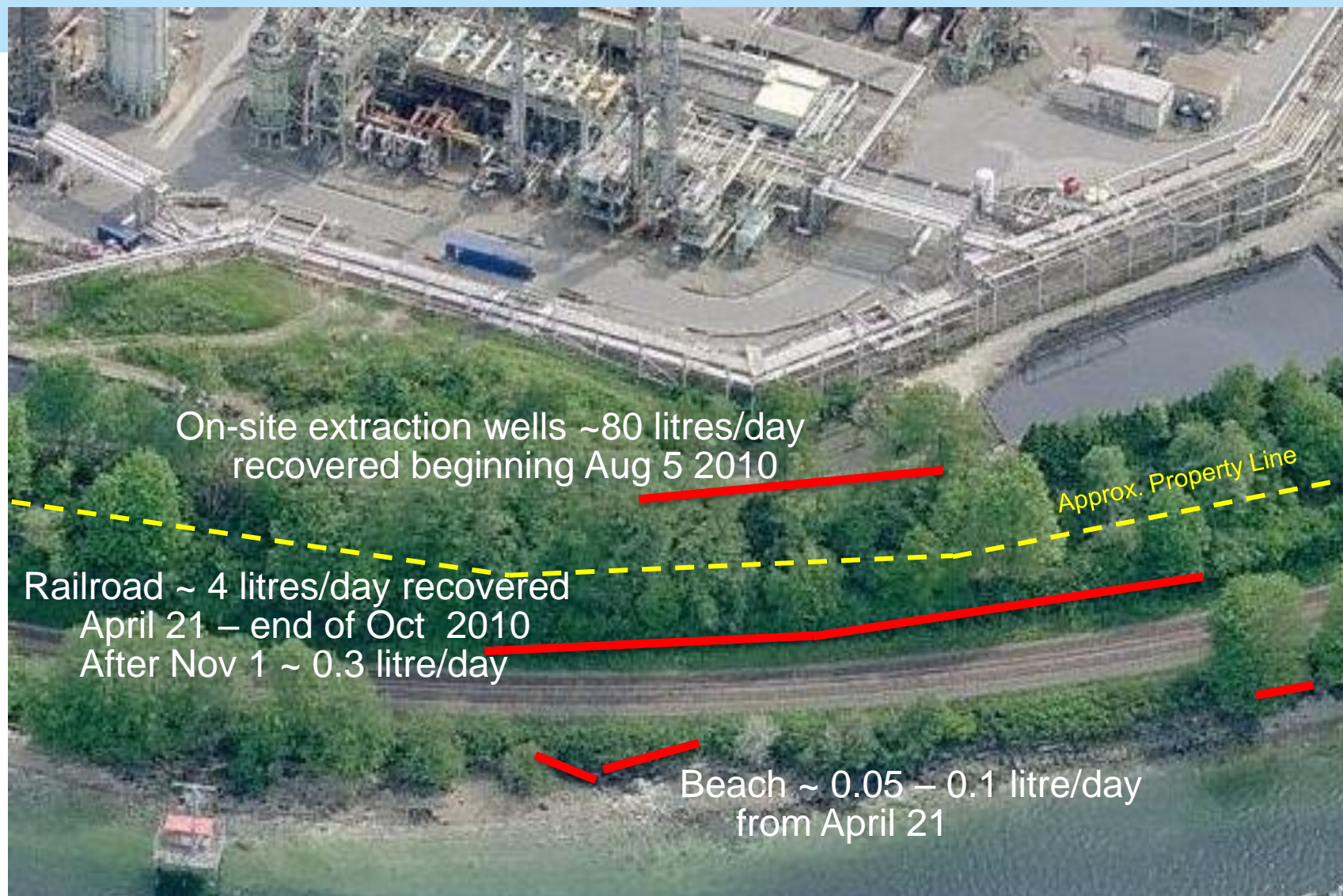


EIB (East Impounding Basin) Wells



View looking north

Approximate volumes estimated based on December sampling,
in response to MOE request





Source Investigation

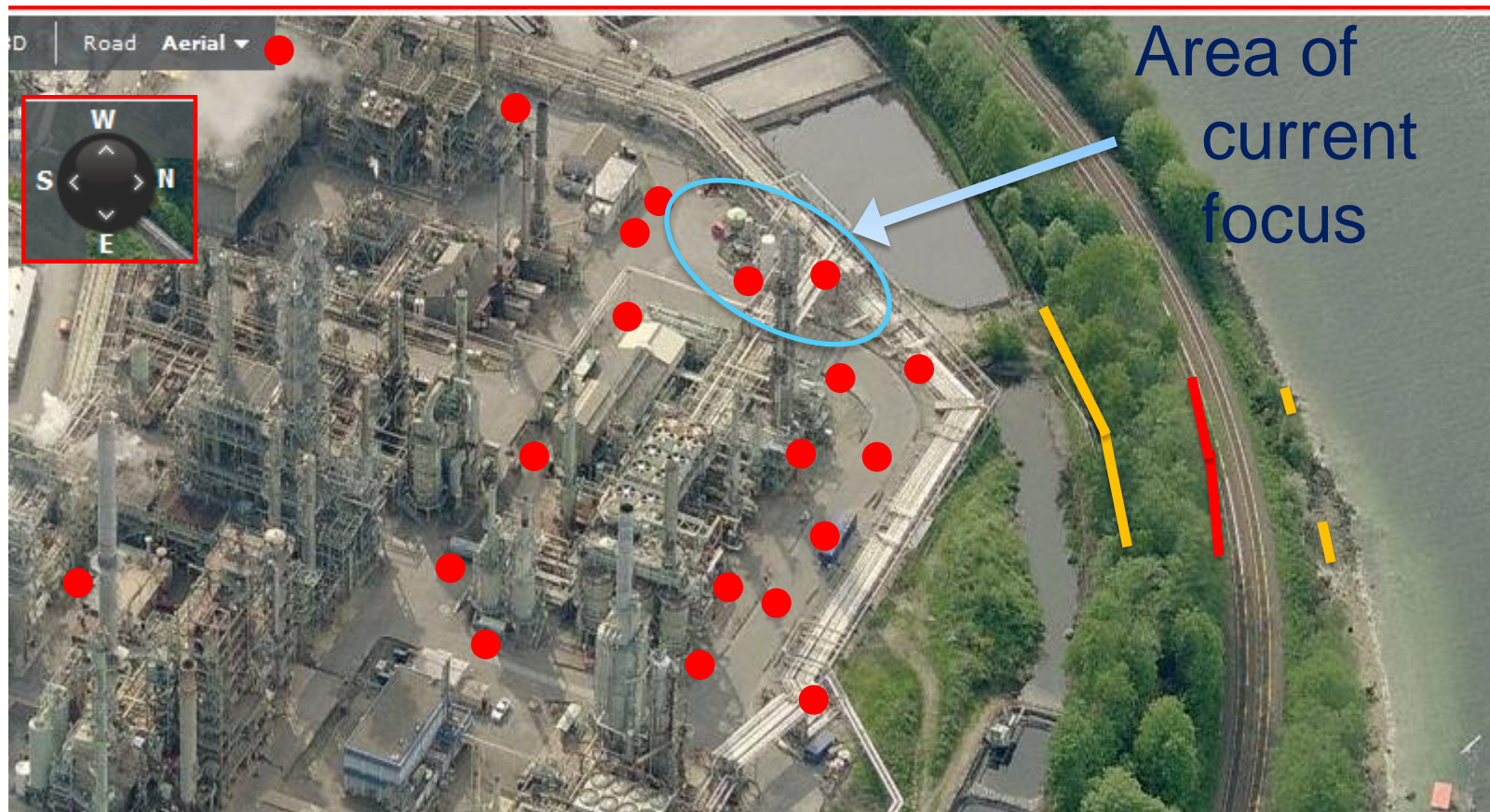
- **Investigative work to date:**

- Splitter crude line was pressure tested – no leaks were detected
- Refinery effluent and storm water sewer system continues to be our primary focus of investigation
 - This is based on the fact that the seep composition is a mix of products that is similar to the mix of products found in the effluent and storm water sewer
 - A video inspection has been completed and 5 exploratory excavations conducted along north sewer. This section was chosen due to its up-gradient proximity to the seep.
 - No clear source has been found, although some excavations had evidence of liquid hydrocarbons
- Based on these preliminary observations, we have continued to drill 40 more wells to systematically narrow our area of investigation
 - We are dealing with complex underground geology with varying subsurface soil conditions
 - Access is difficult due to proximity of equipment and underground piping
- We are now currently focusing on a localized section of the effluent and storm water sewer as a result of having detected elevated levels of hydrocarbon in 3 wells

- **Next Steps:**

- ▶ Plan being developed for hydrocarbon extraction in this excavation area as required
- ▶ Additional video inspection has shown no breaks or failure but some sewer gasket deterioration was noted
 - more excavation along effluent sewer will be required to determine best plan of action

Source Investigation



- Approximate location of completed boreholes (not all wells shown)

Commitment

- Chevron is committed to ensuring that we protect our local environment, and mitigate and contain any potential impacts relating to this seepage.
- Our priority is to contain and prevent material from leaving our site, with oversight by the designated regulator.