Community Environmental Forum

Zero-Valent Iron Groundwater Cleanup Study at Hunters Point Shipyard

Melanie Kito, Lead Remedial Project Manager
Hamide Kayaci, Project Manager
BRAC Program Management Office
April 29, 2009

Groundwater Cleanup Study Overview

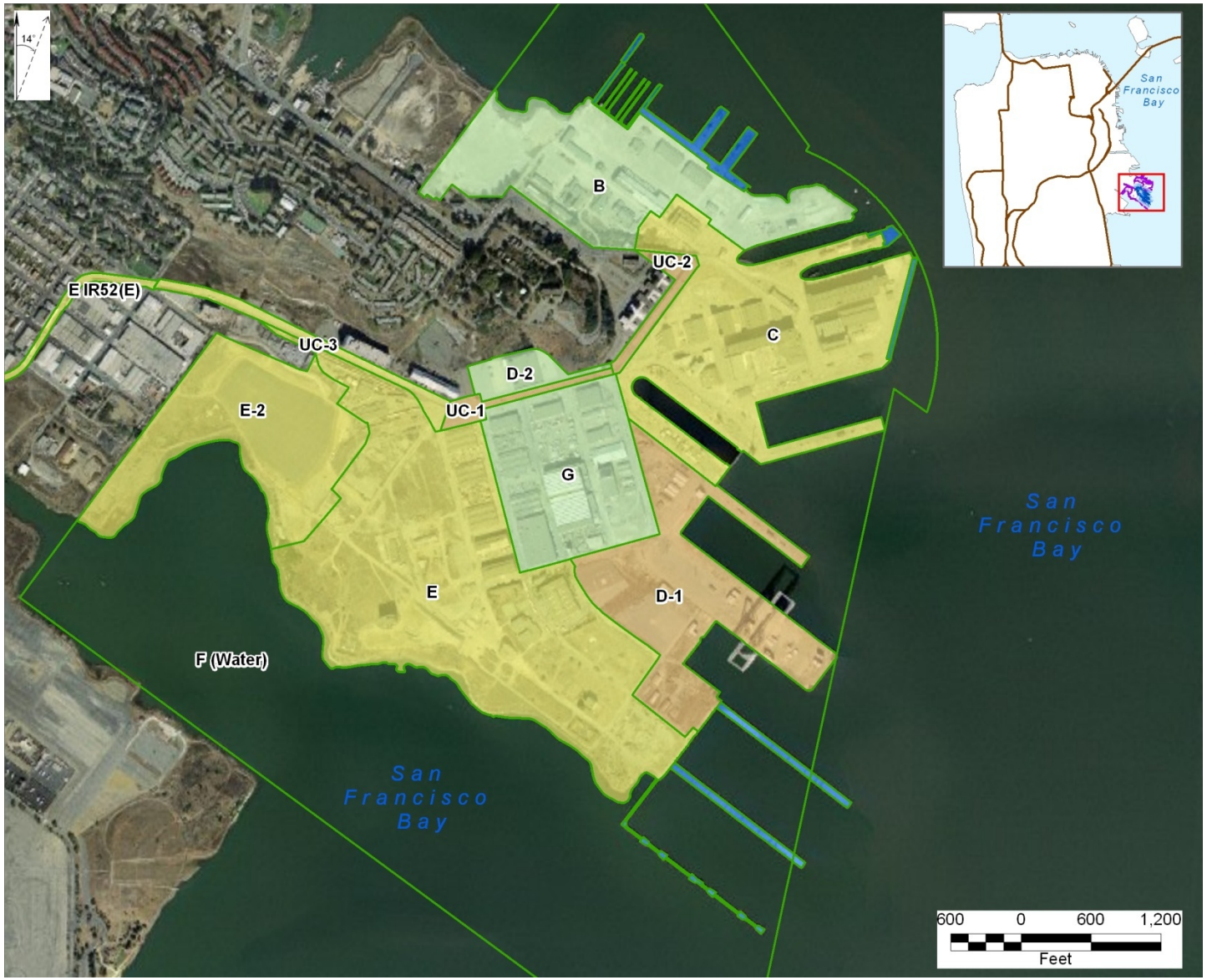
- **Phase I - Before Cleanup**
  - **Baseline Sampling**
    - **August 2008**

- **Phase II – Cleanup**
  - **Zero-Valent Iron (ZVI) Injections**
    - **November-December 2008**

- **Phase III – After Cleanup**
  - **Monitor the groundwater for effectiveness of the cleanup technology (ZVI)**
    - **Jan- Feb-March 2009**

- **Conclusion**

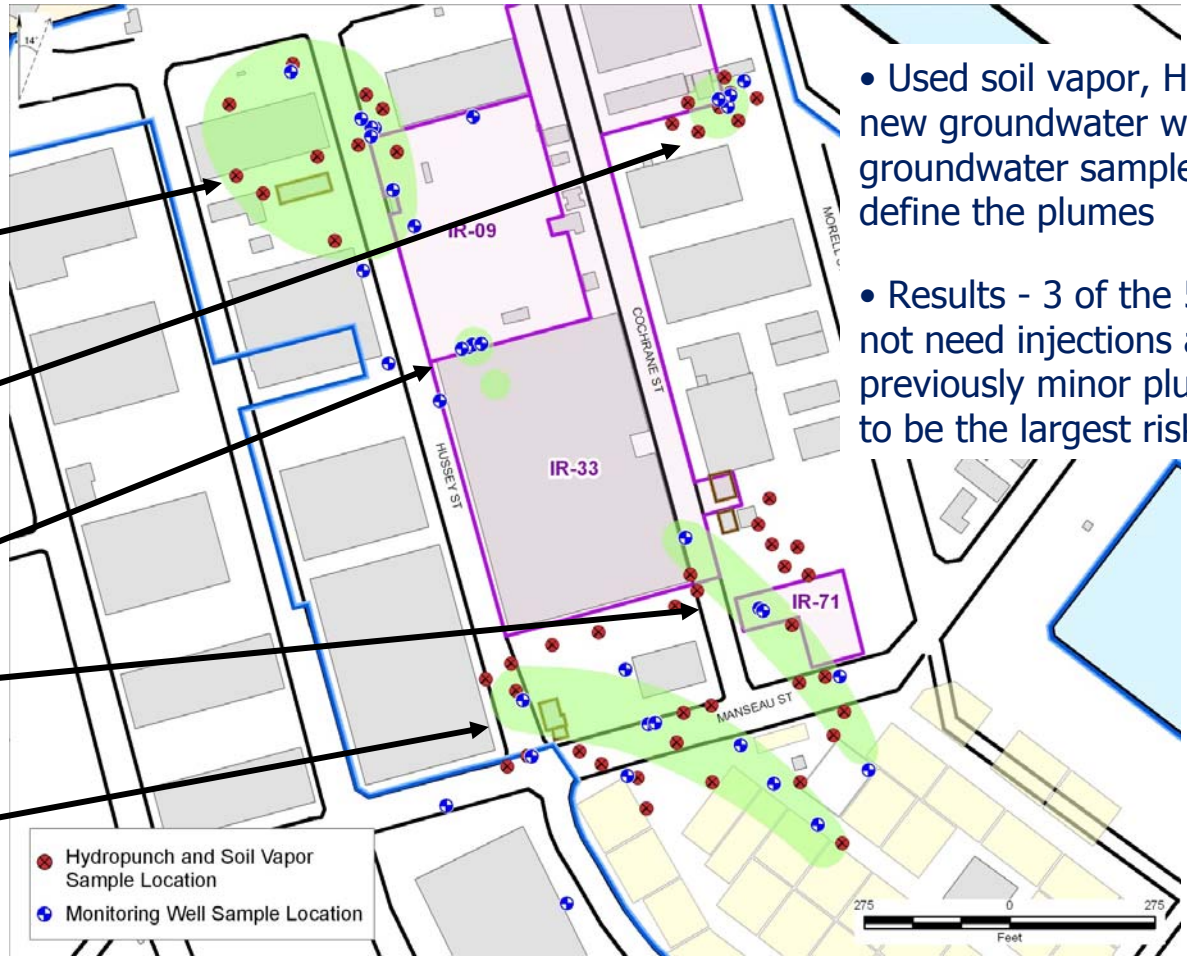
Facility Location



Phase I – Before Cleanup

Plumes:

- **Site 09 Northern -** TCE and Hexavalent Chromium (CrVI)
- **Site 33 -** CrVI and Benzene
- **Site 09 Southern -** CrVI and Nickel
- **Site 71 Eastern -** PCE, TCE, and Chloroform
- **Site 71 Western -** Chloroform

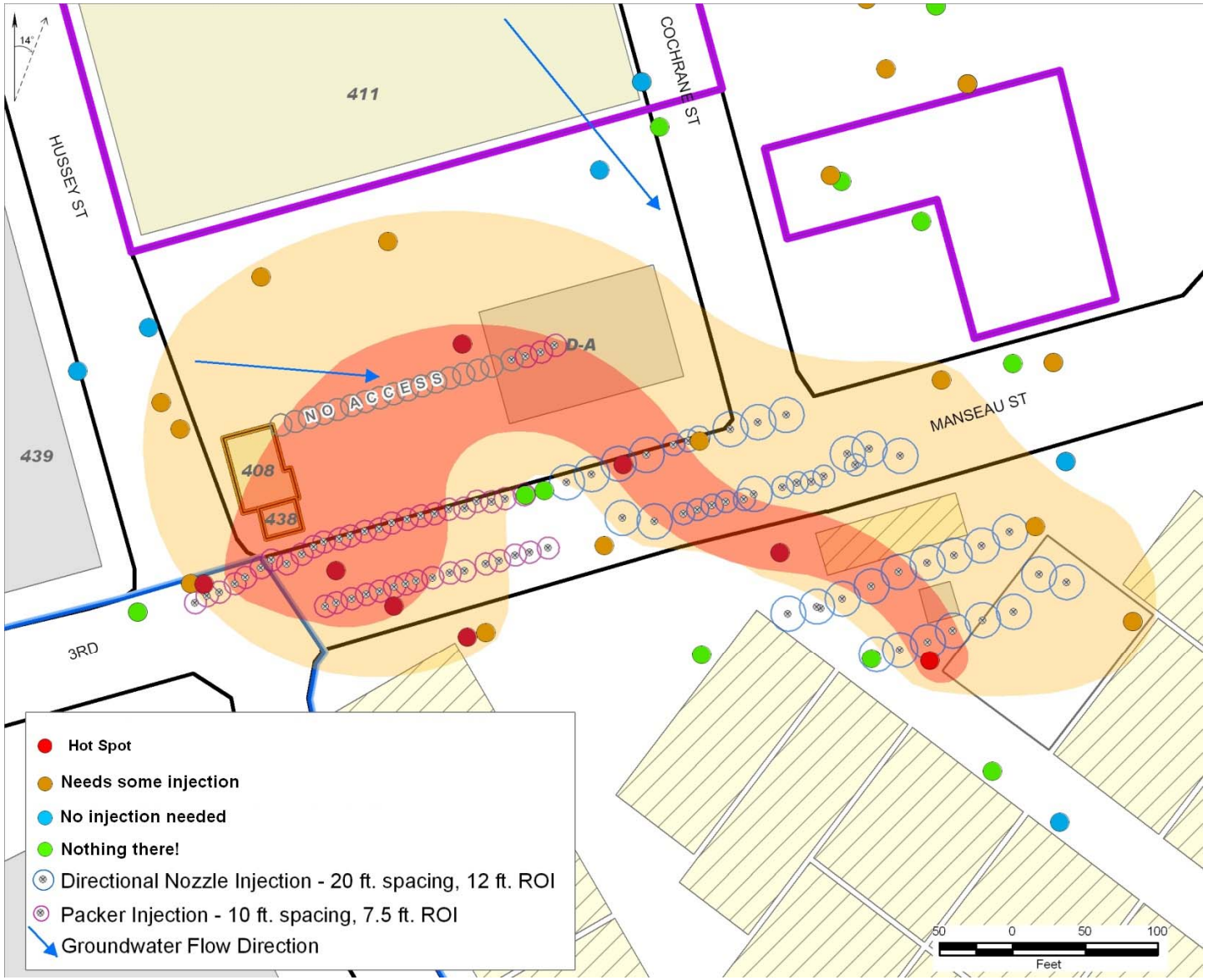


- Used soil vapor, Hydropunch®, new groundwater wells and groundwater samples to better define the plumes
- Results - 3 of the 5 plumes did not need injections and a previously minor plume turned out to be the largest risk!

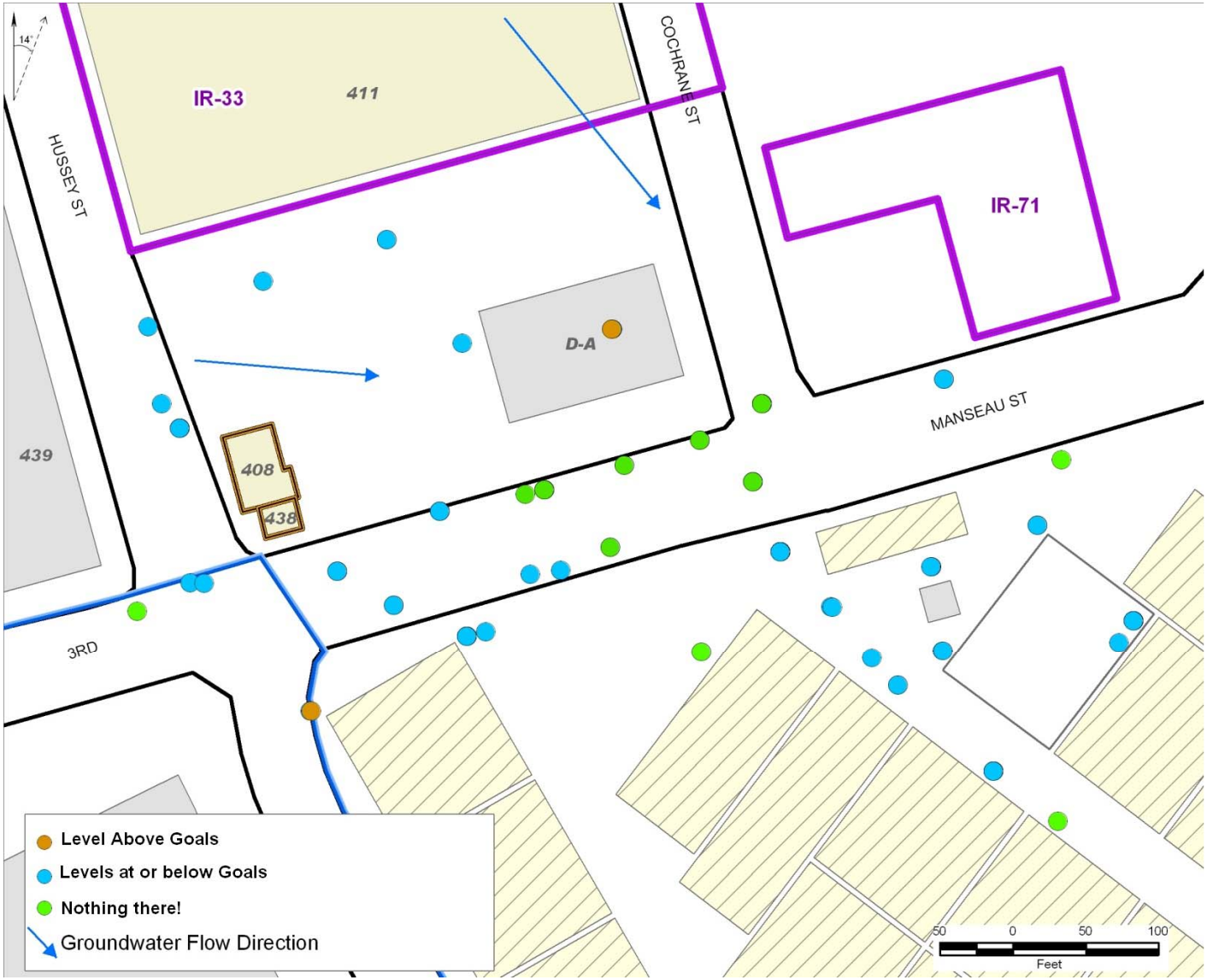
Additional Sampling

- Installed 48 new soil vapor (SV) monitoring wells
- Installed 40 new groundwater locations and collected samples
- Collected 43 groundwater samples from existing wells
- Collected 125 SV samples from existing and new SV wells

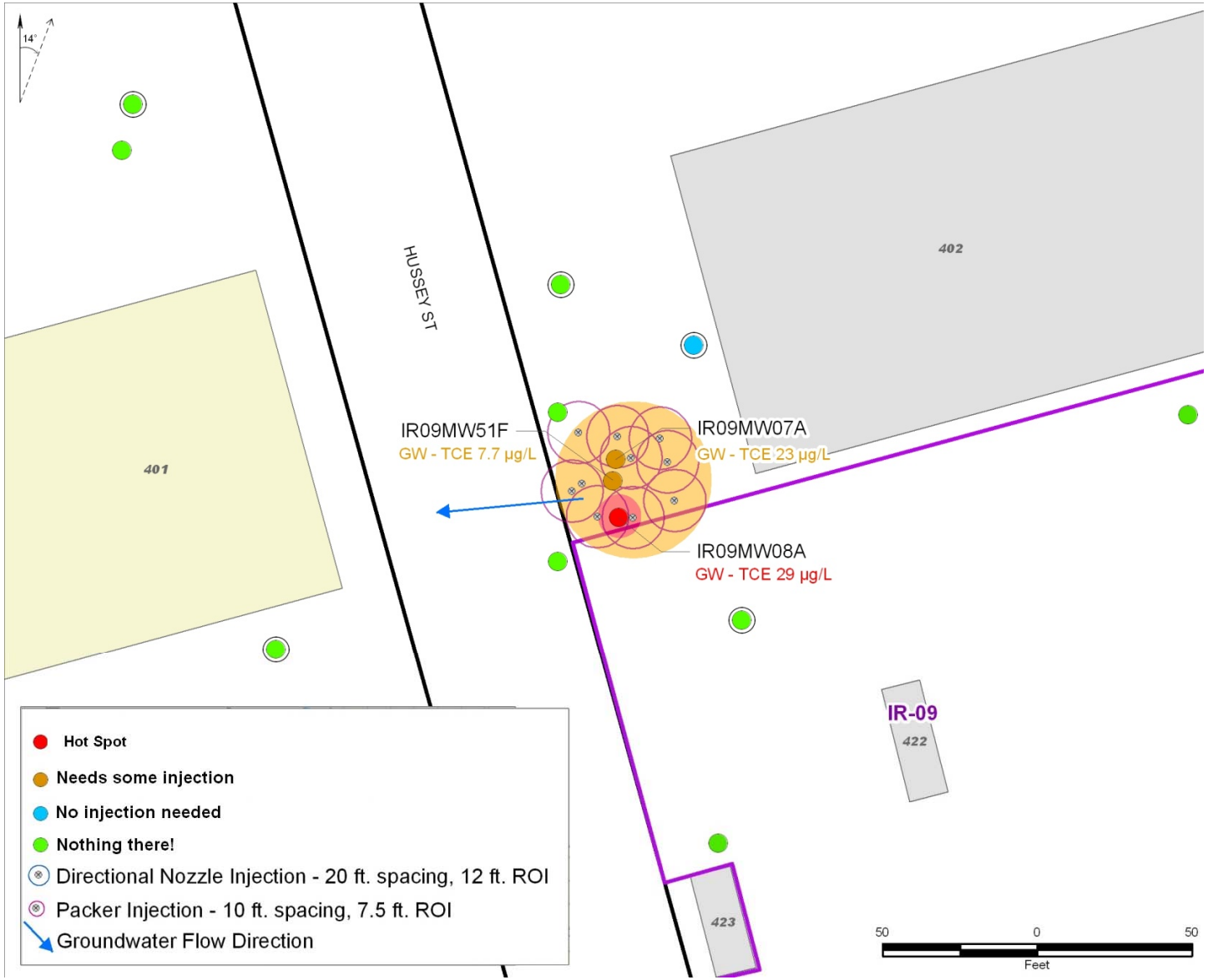
Phase I – Site 71 Before Cleanup
Chloroform Plume - September 2008



Phase III – Site 71 After Cleanup
December 2008 - March 2009

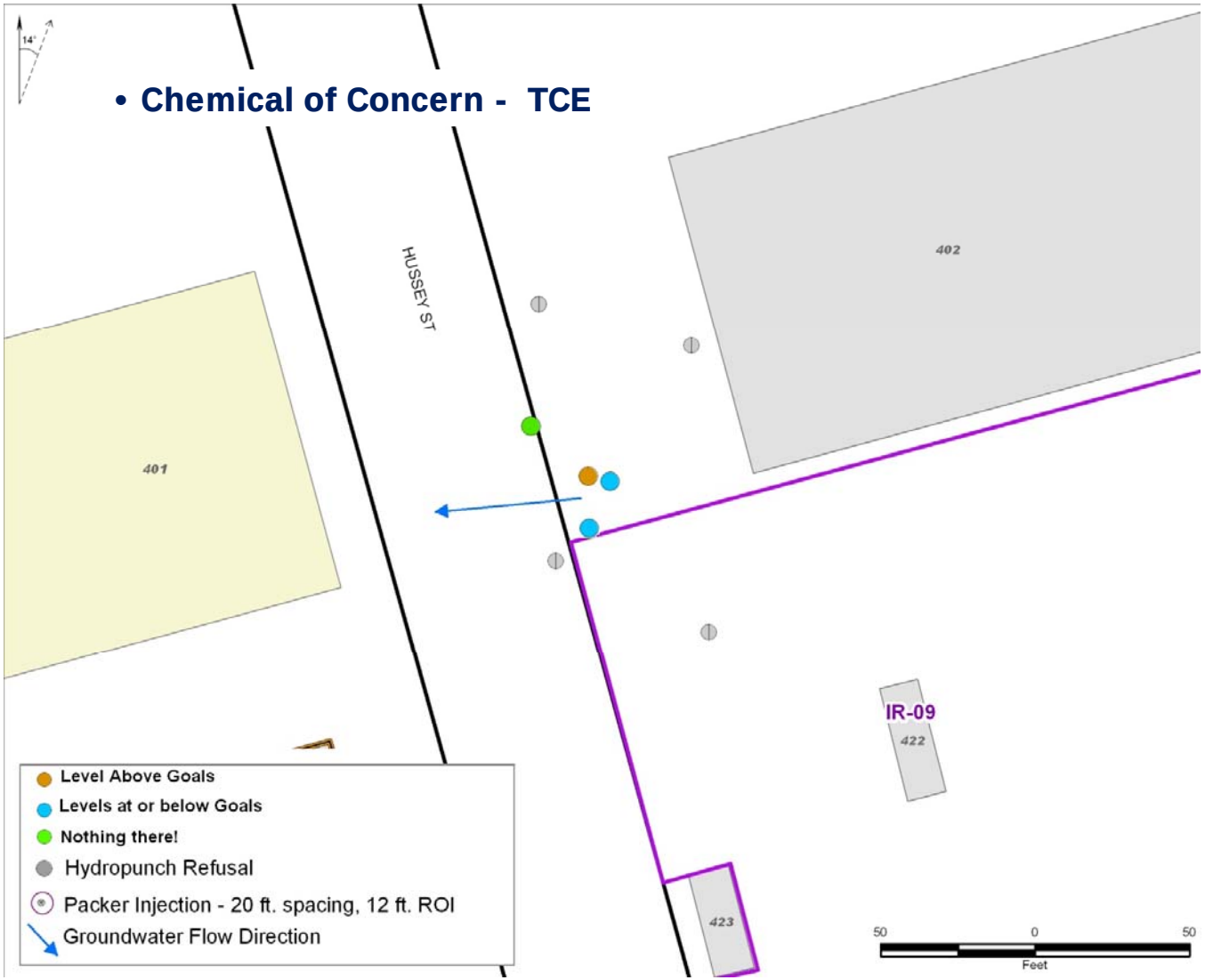


Phase I – Site 09 Before Cleanup TCE Plume - September 2008

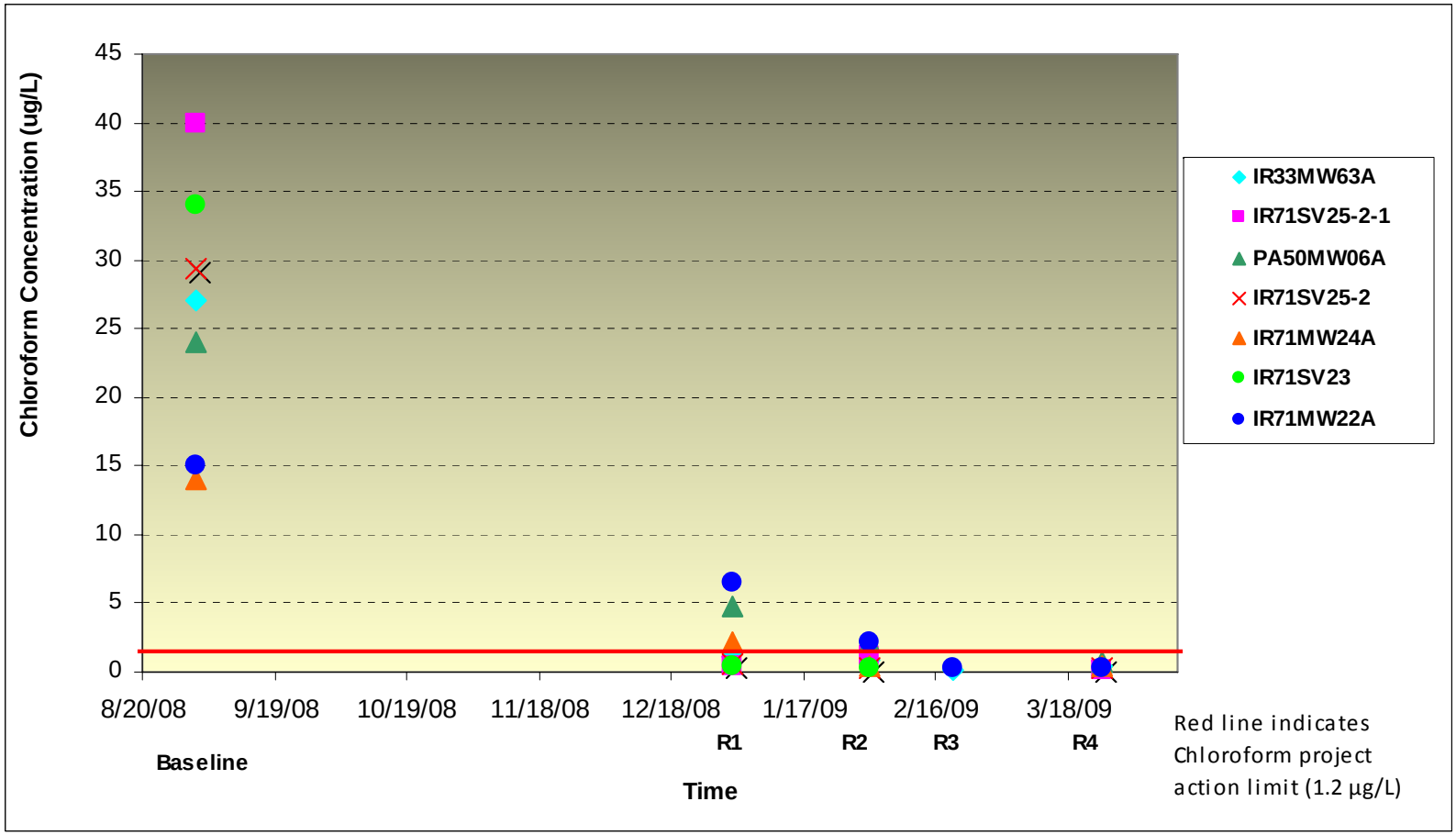


Phase III – Site 09 After Cleanup
December 2008 - March 2009

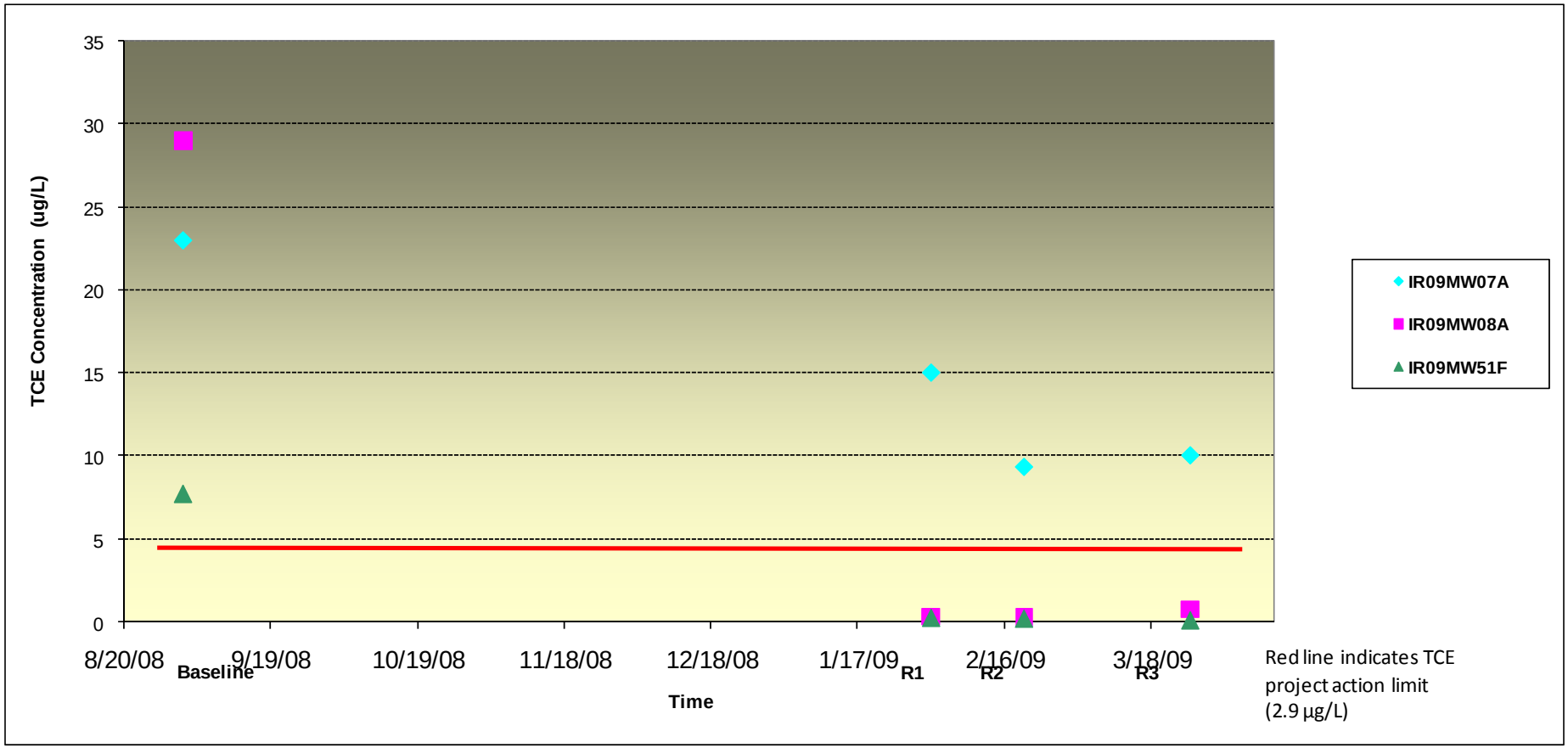
- **Chemical of Concern - TCE**



Chloroform Reduction in Groundwater – Site 71



TCE Reduction in Groundwater – Site 09



In Conclusion

- Site 09 – TCE reductions up to 99% in groundwater
- Site 71 – Chloroform reductions up to 100% in groundwater
- Draft Technical Report due May 21, 2009
- Final Technical Report due July 21, 2009