BRAC PMO West

Parcel C Remedial Action Project Update (RU-C1, RU-C4 and RU-C5) Groundwater Post-Injection Monitoring Results Hunters Point Naval Shipyard San Francisco, California

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Contracted Support to NAVFAC BRAC PMO

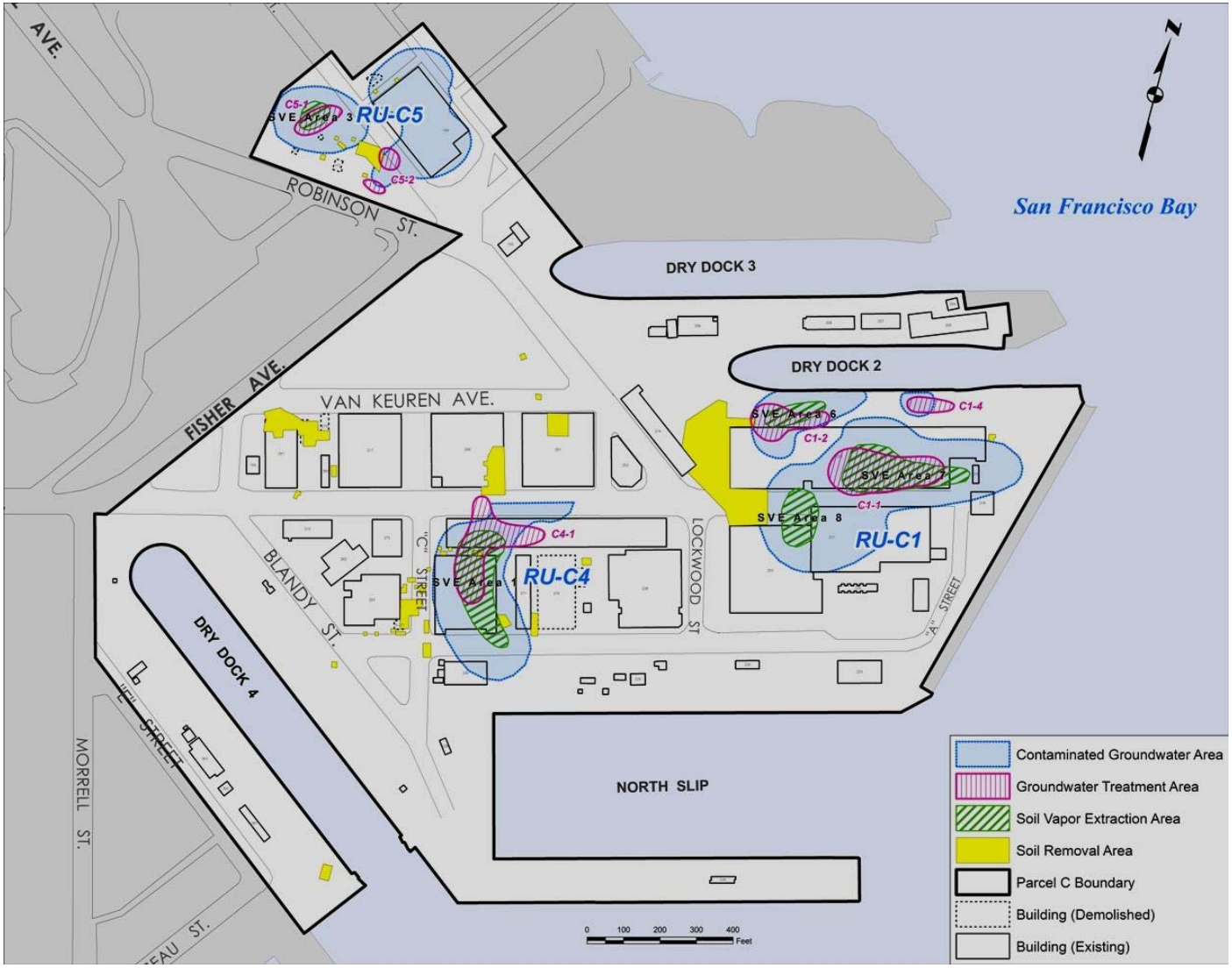
BCT Meeting December 4, 2014

Agenda - Parcel C Remedial Action Update

- **Groundwater – Performance Monitoring Trends Based on Six Sampling Events**

- **Schedule – What's Next?**

Parcel C Groundwater Injection Locations



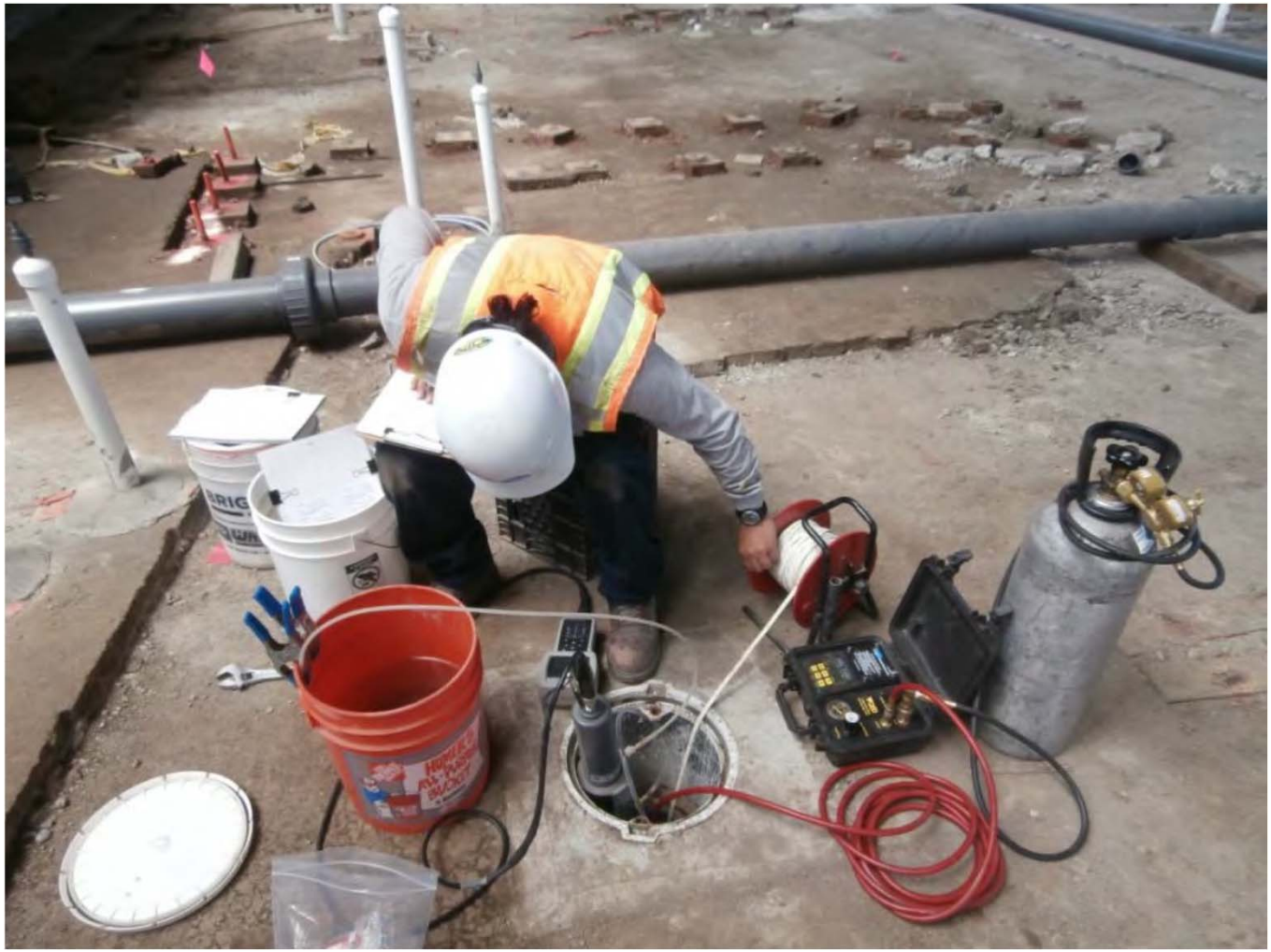
Post-Injection Groundwater Sampling Schedule

- **Overall Post-Injection Sampling Schedule for RU-C1, C4 & C5:**
  - **April 2014 - March 2015**

- **Sampling Schedule for each GW Injection Area:**
  - **Two (2) Bi-weekly events (completed June 2014)**
  - **Four (4) Monthly events (completed September 2014)**
  - **Two (2) Quarterly events (scheduled for Dec. 2014 and March 2015)**

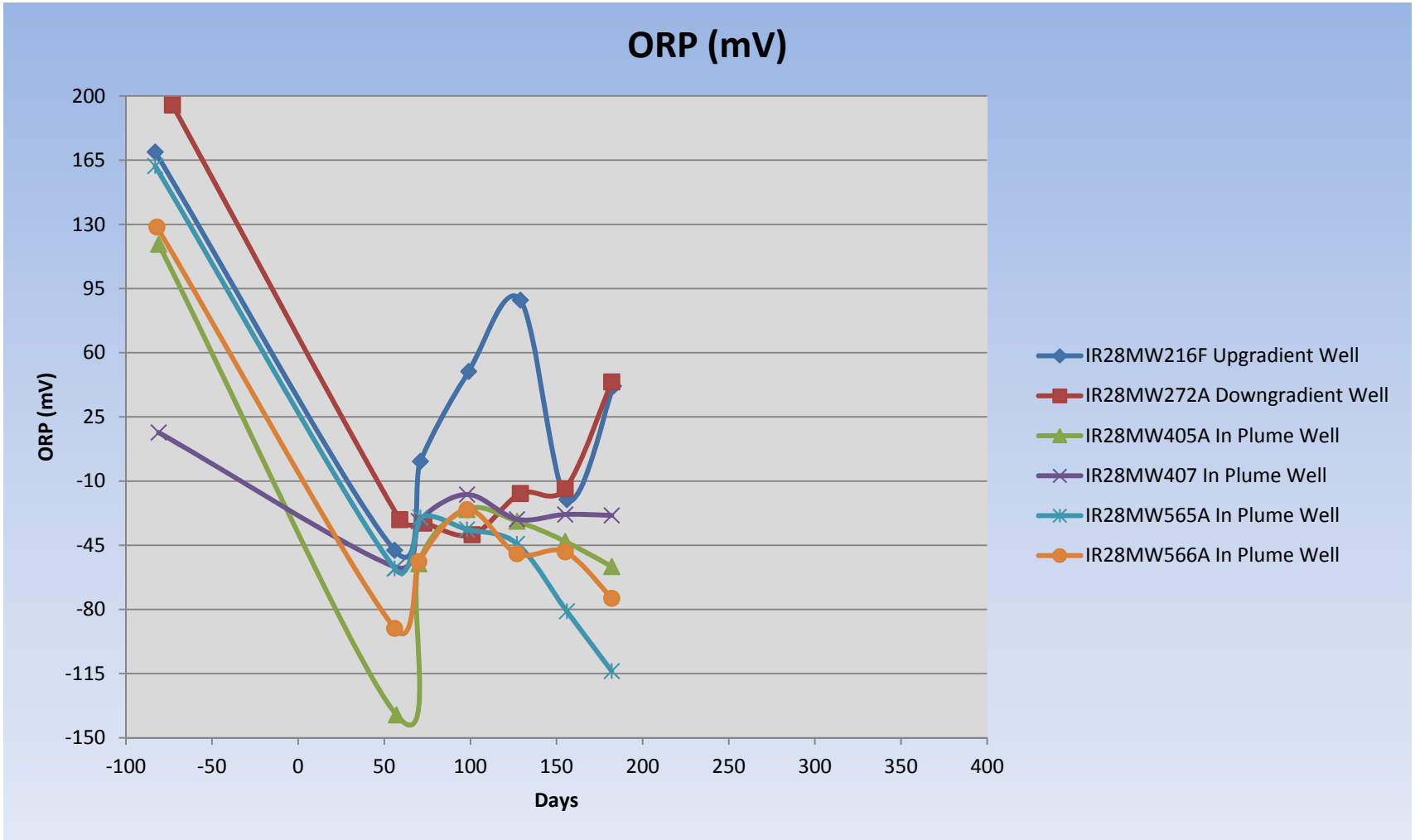
- **GW Data presented through six sampling events including:**
  - **GW Plume & Injection Location Maps**
  - **ORP Trends**
  - **VOC/Chromium VI Concentration Graphs vs. ZVI/ISB Treatment Criteria**

Groundwater Performance Monitoring
Post-Injection Sampling inside Building 231 (RU-C1)



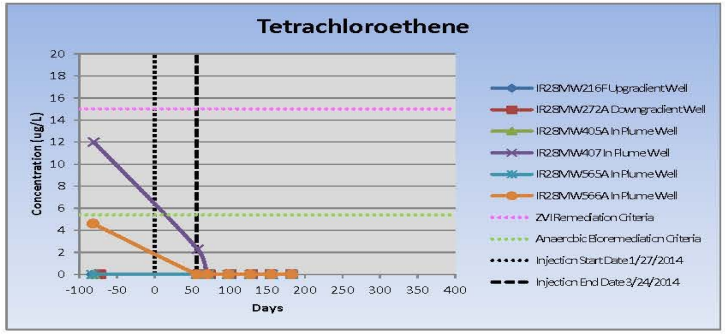
Plume C4-1 Injection Locations

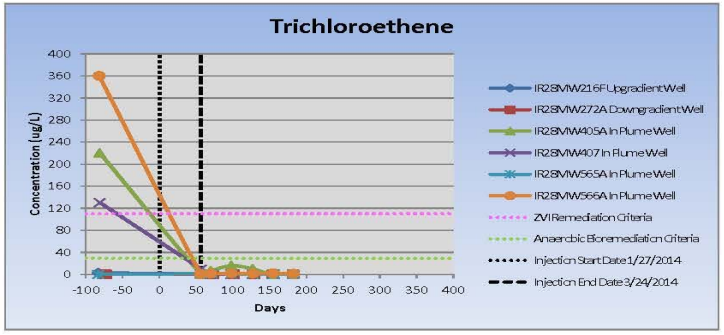
ORP Trends in Groundwater in Plume C4-1

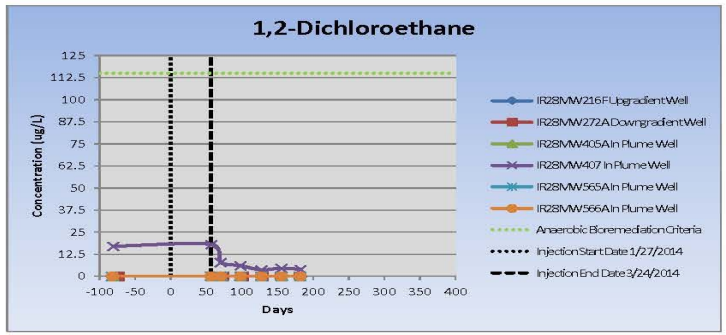


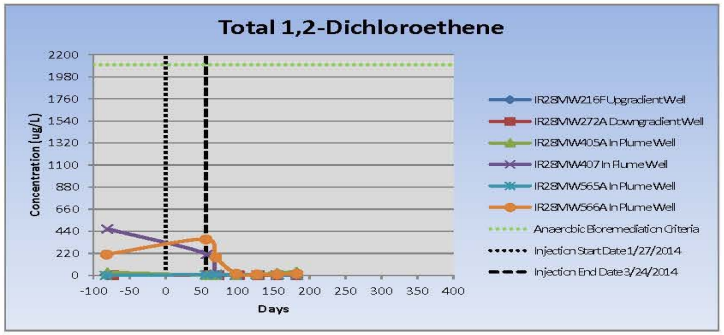
Plume C4-1 Trend Graphs

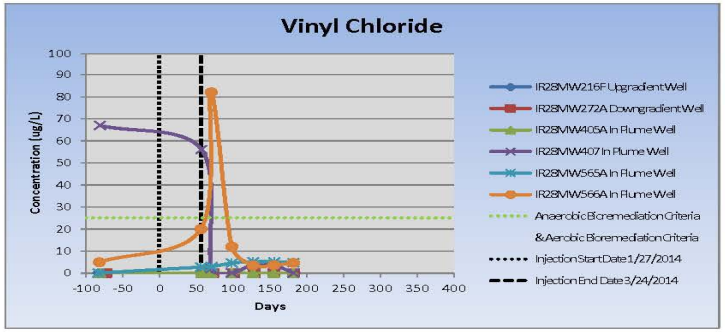
RUC4-1 Contaminants Trend Graphs

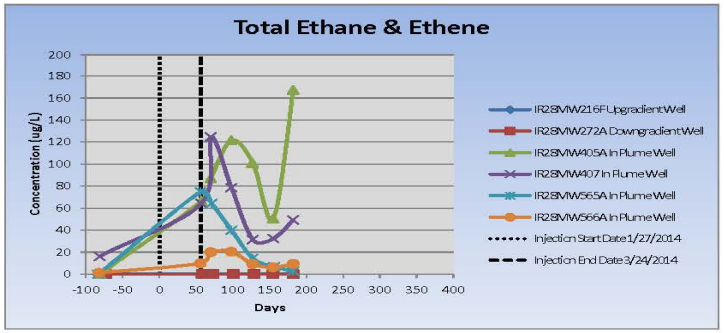




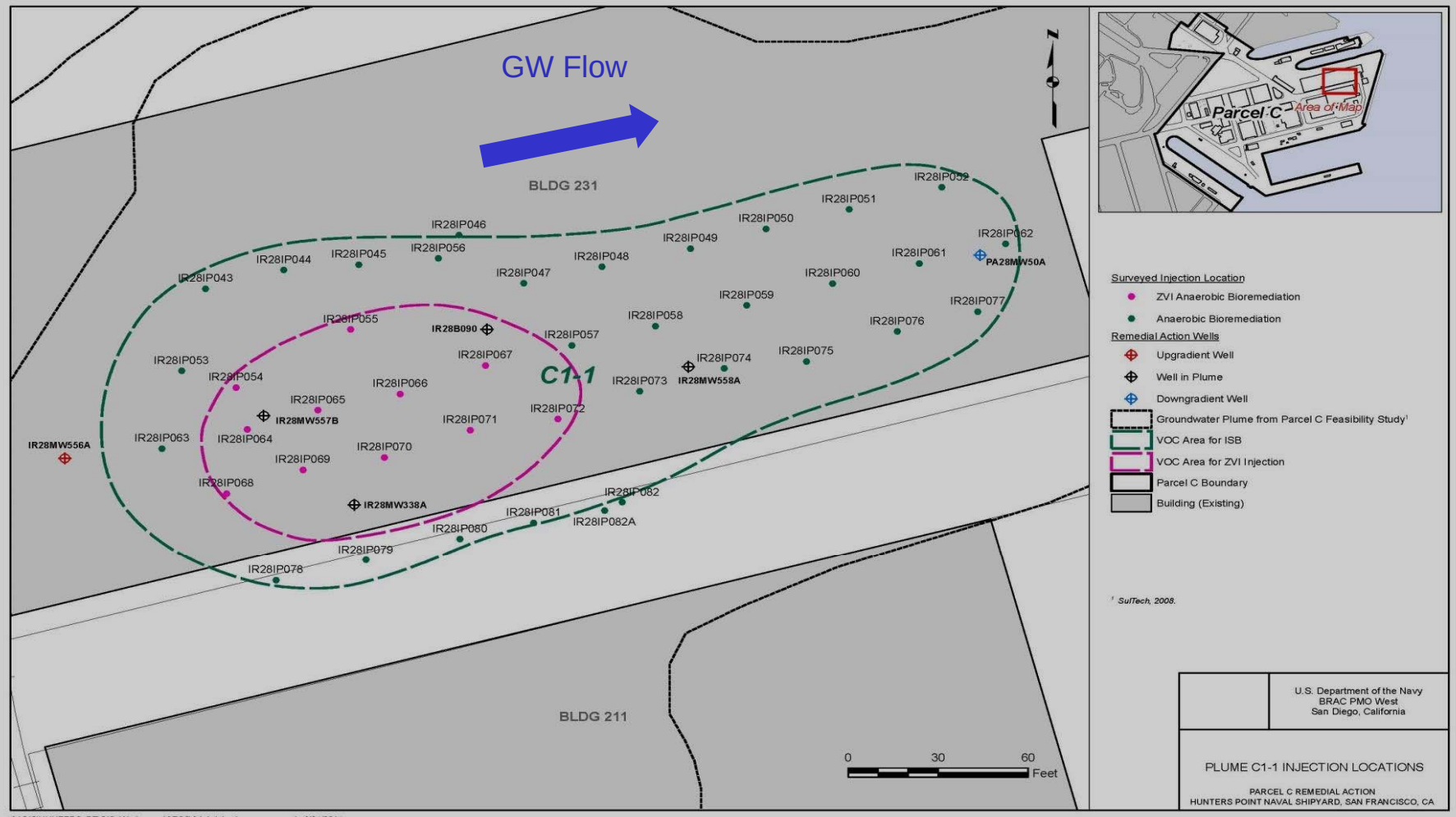




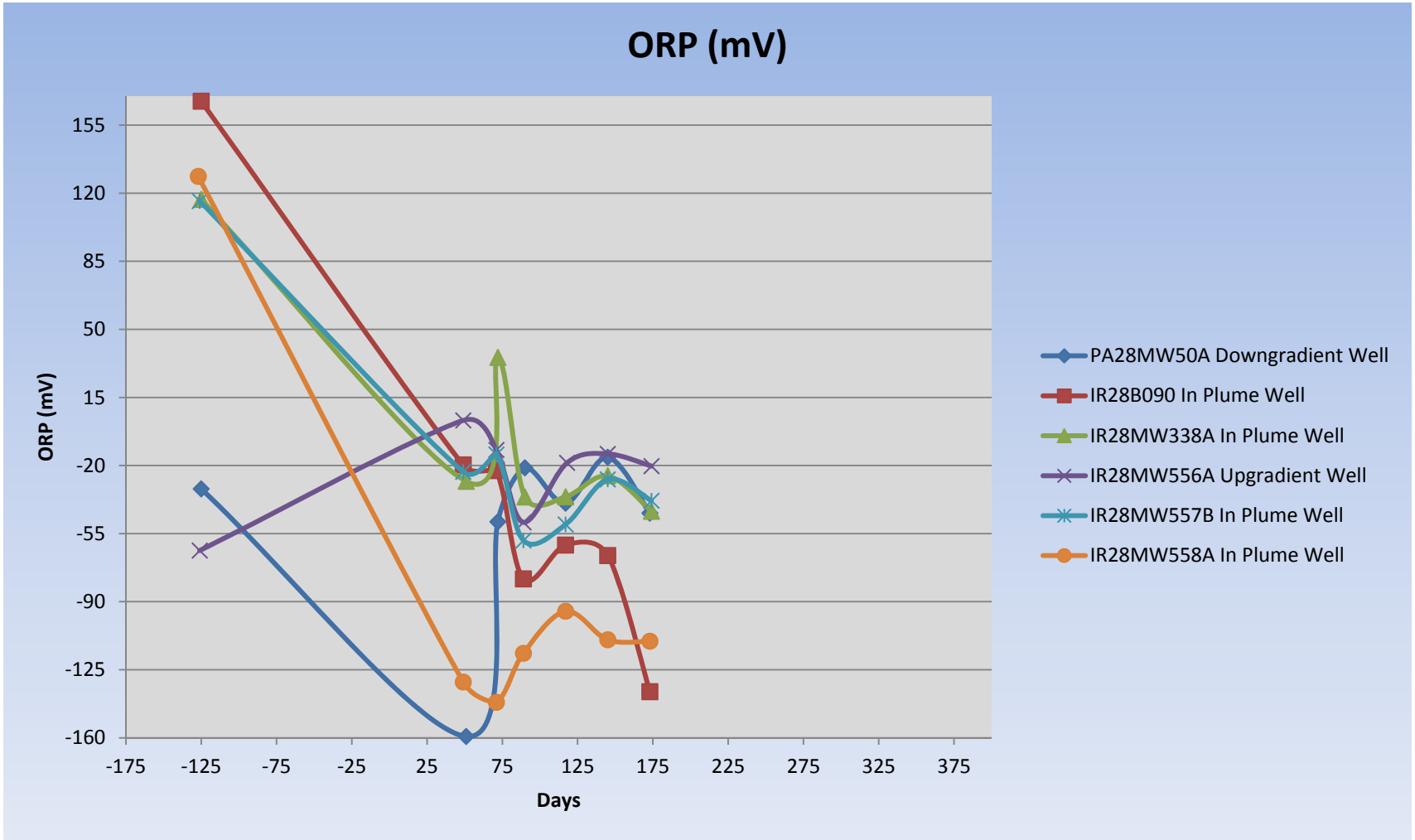




Plume C1-1 Injection Locations

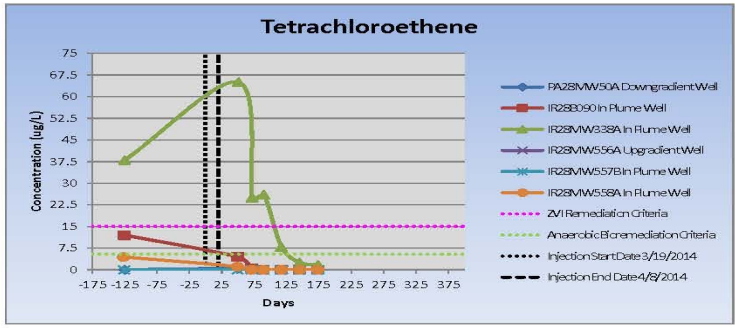


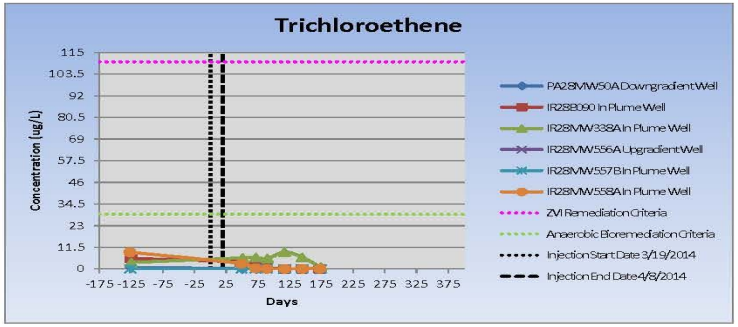
ORP Trend in Groundwater in Plume C1-1

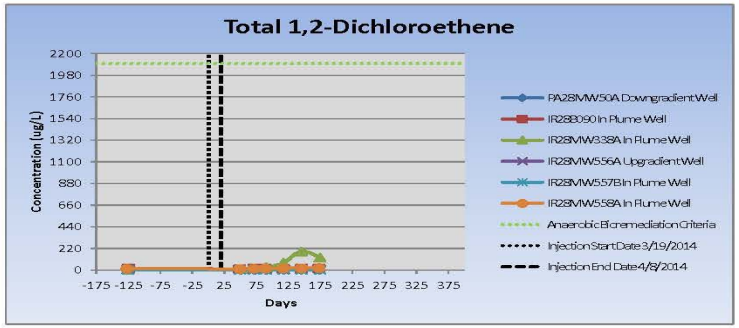


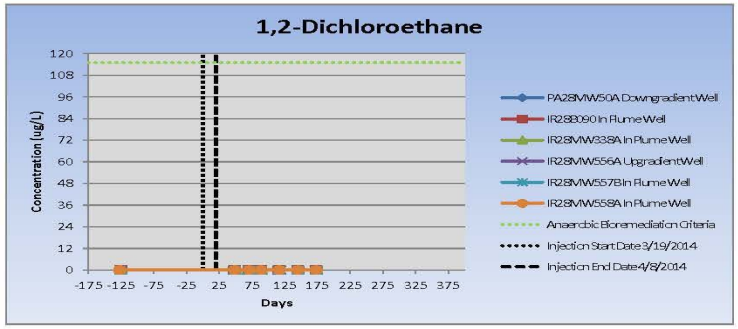
Plume C1-1 CVOC Trend Graphs

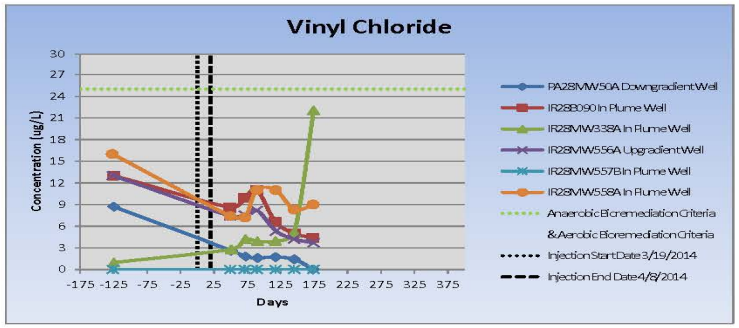
RUC1-1 Contaminants Trend Graphs

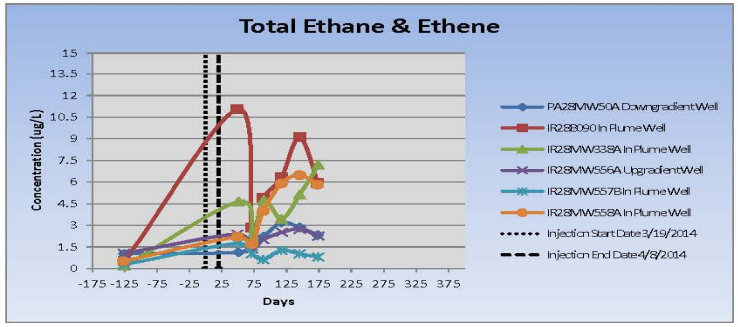




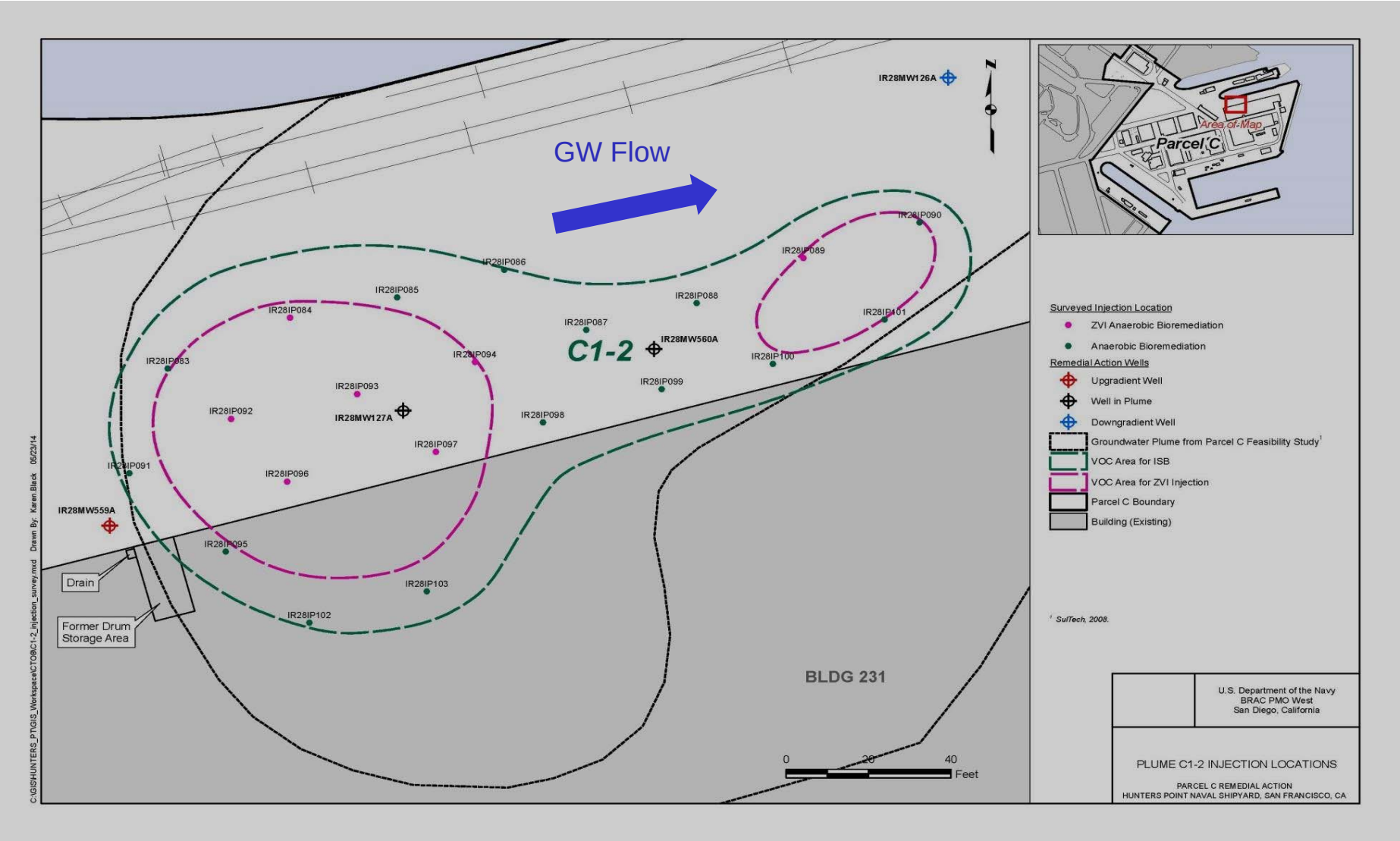




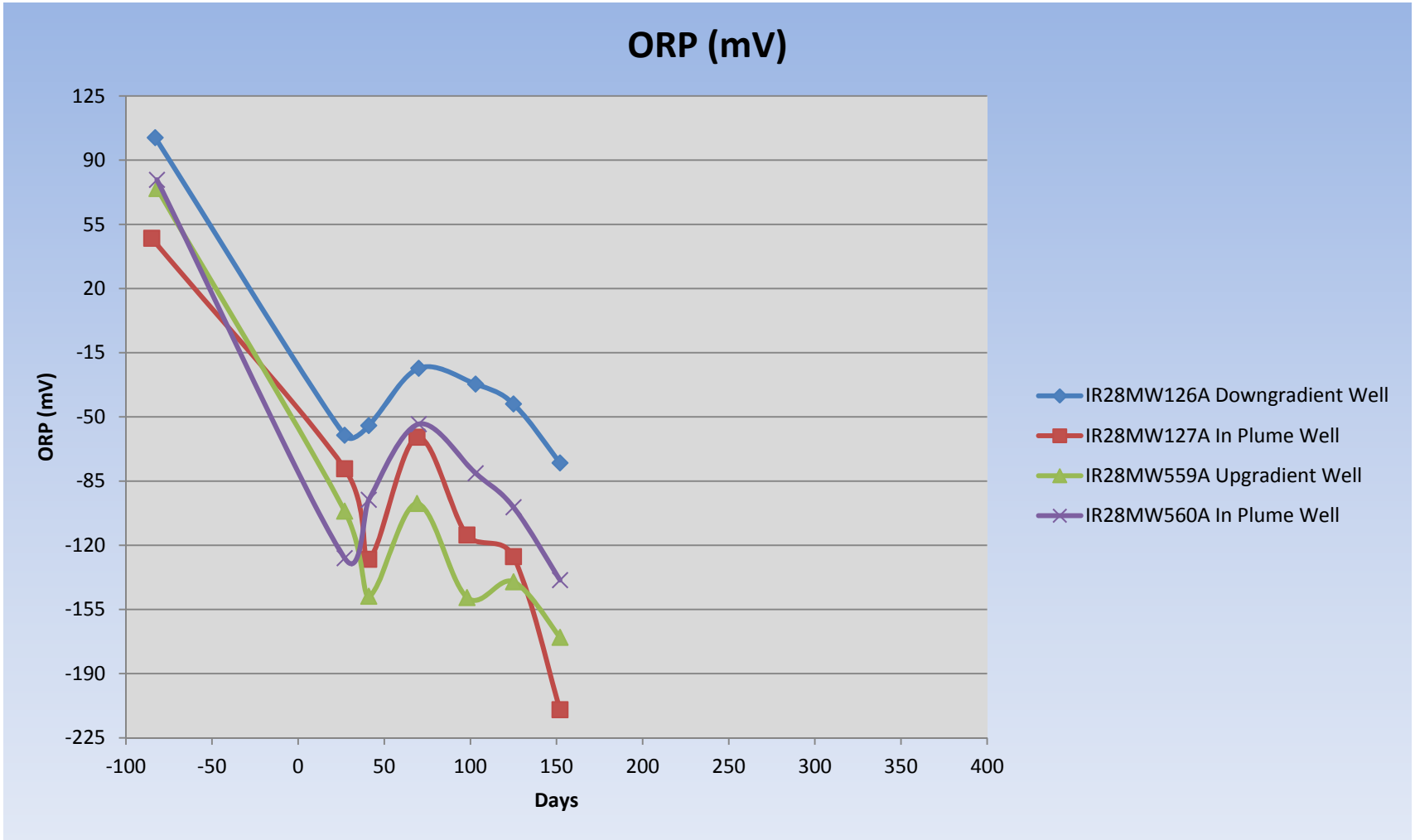




Plume C1-2 Injection Locations

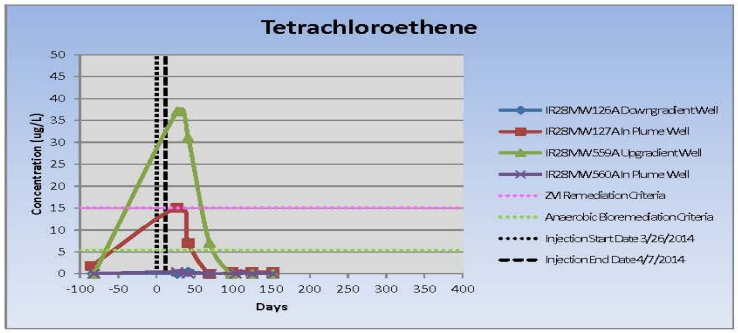


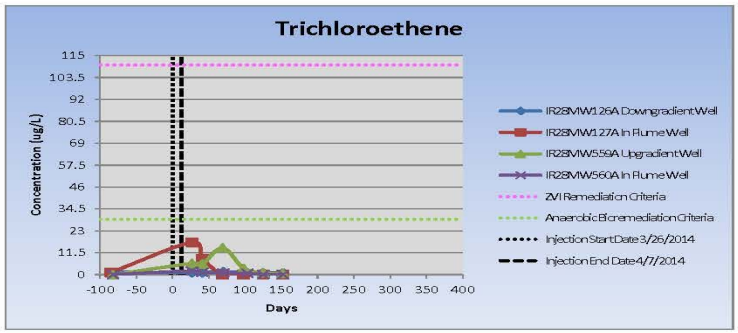
ORP in Groundwater in Plume C1-2

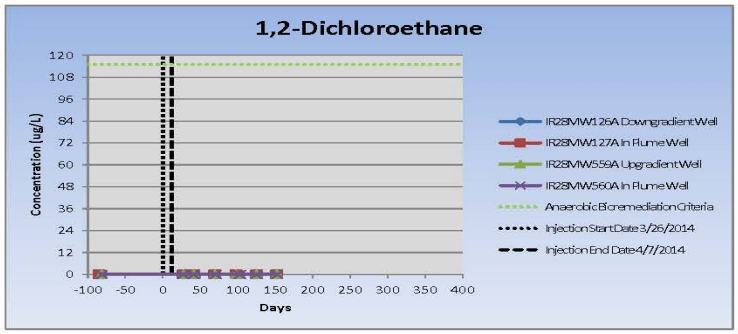


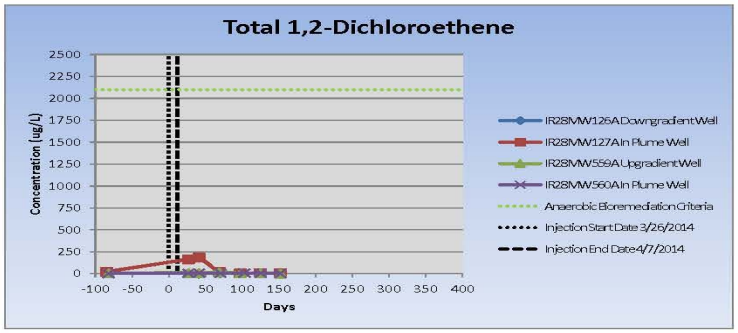
Plume C1-2 CVOC Trend Graphs

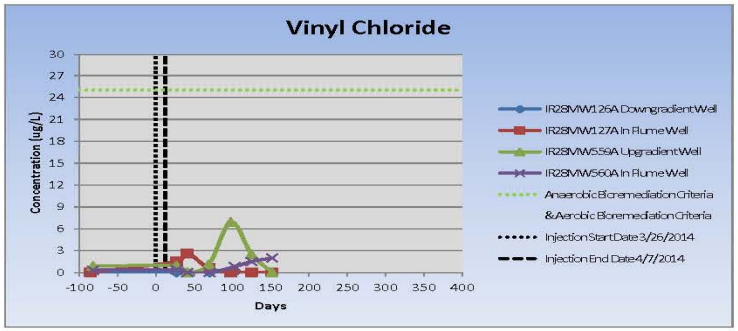
RUC1-2 Contaminants Trend Graphs

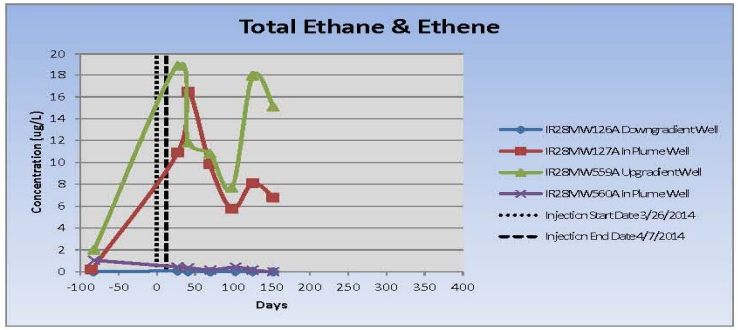




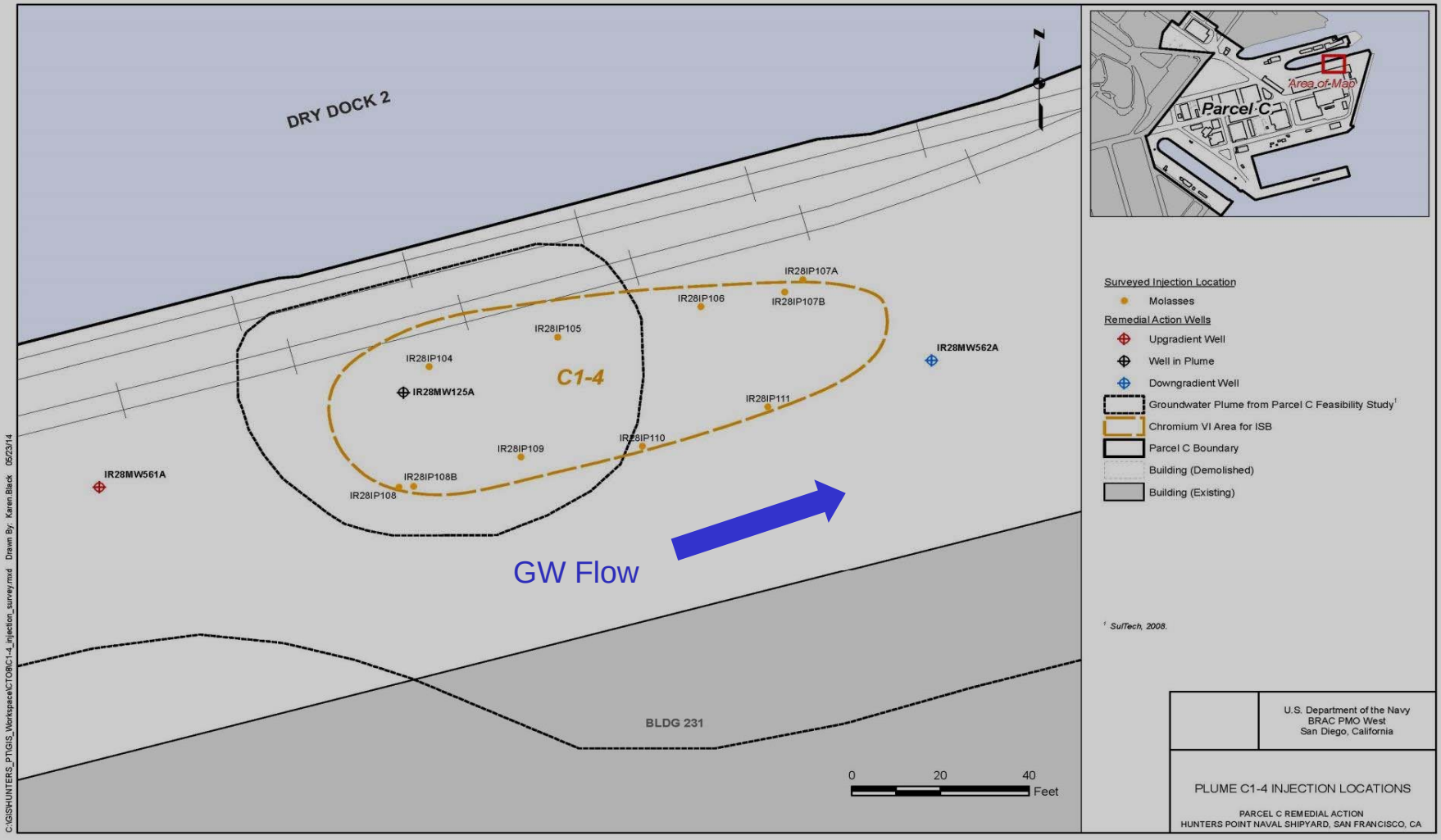




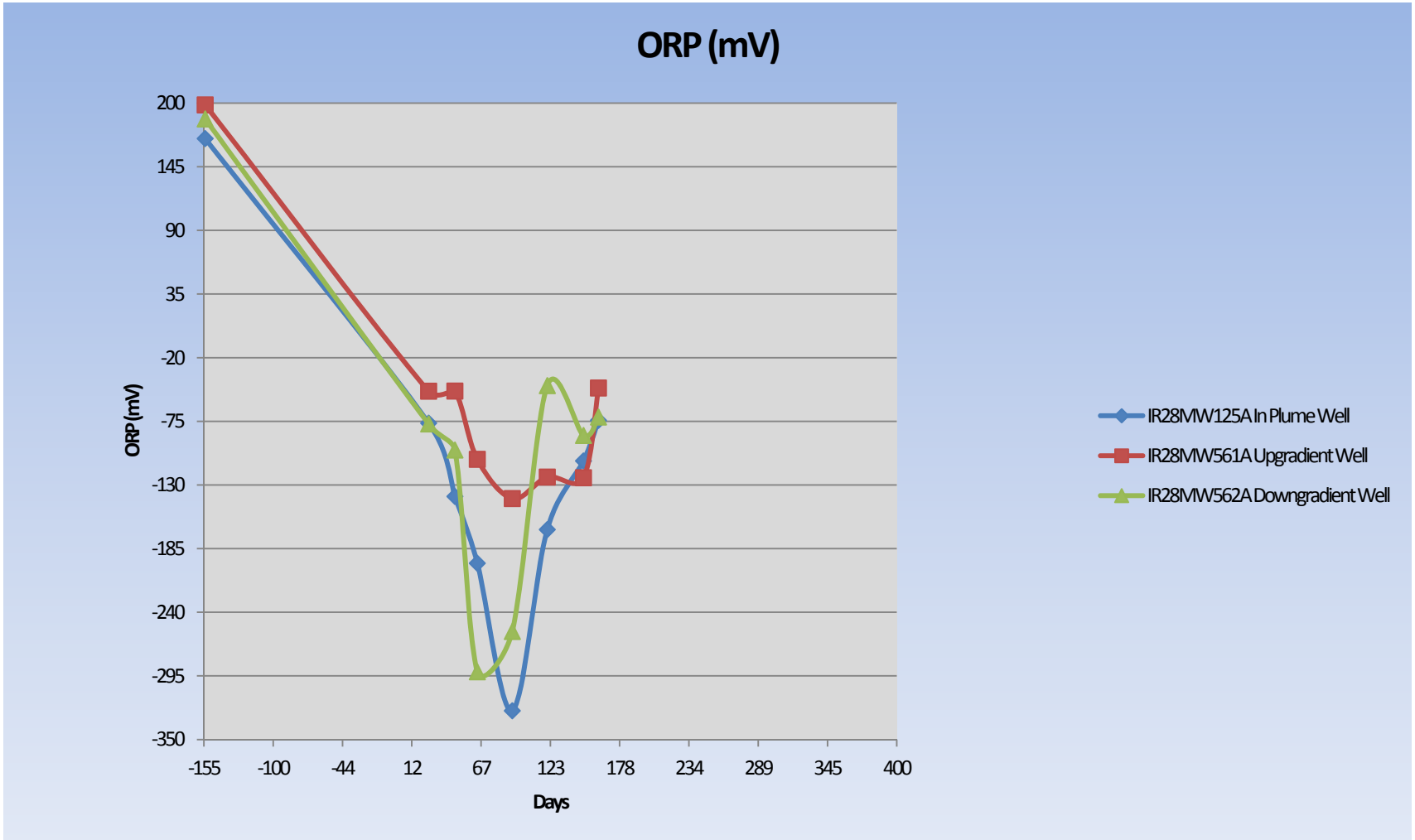




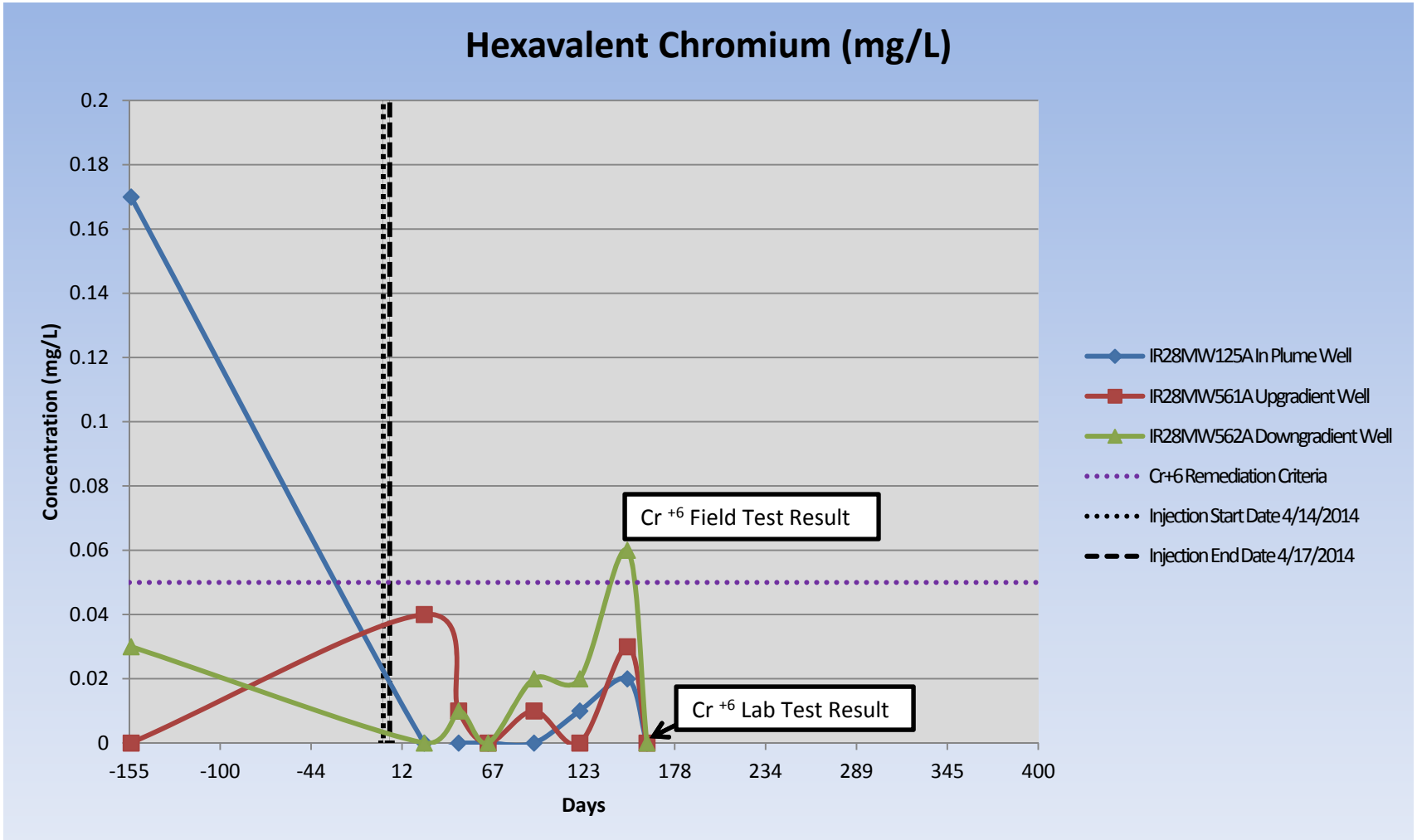
Plume C1-4 Injection Locations



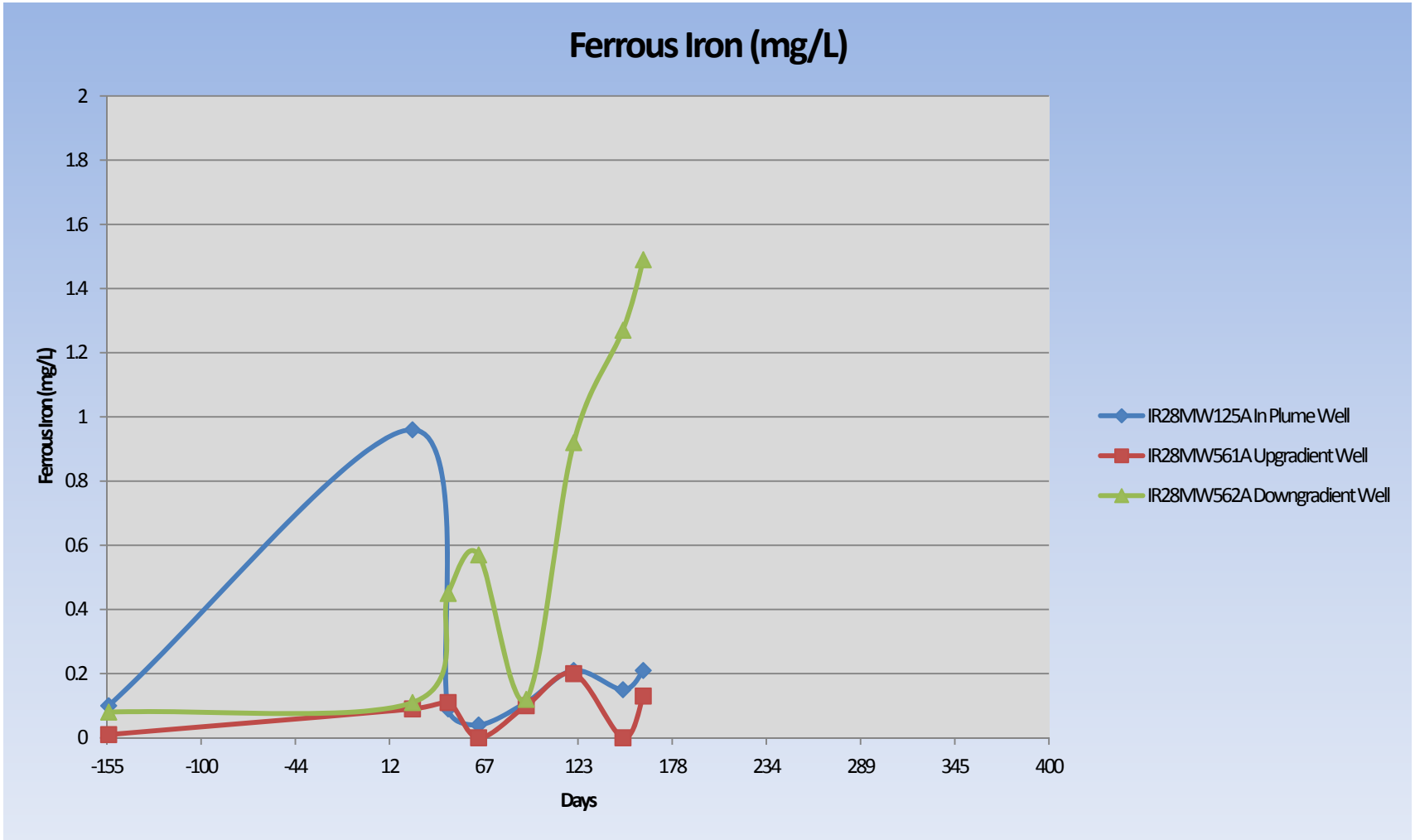
ORP Trend in Groundwater in Plume C1-4



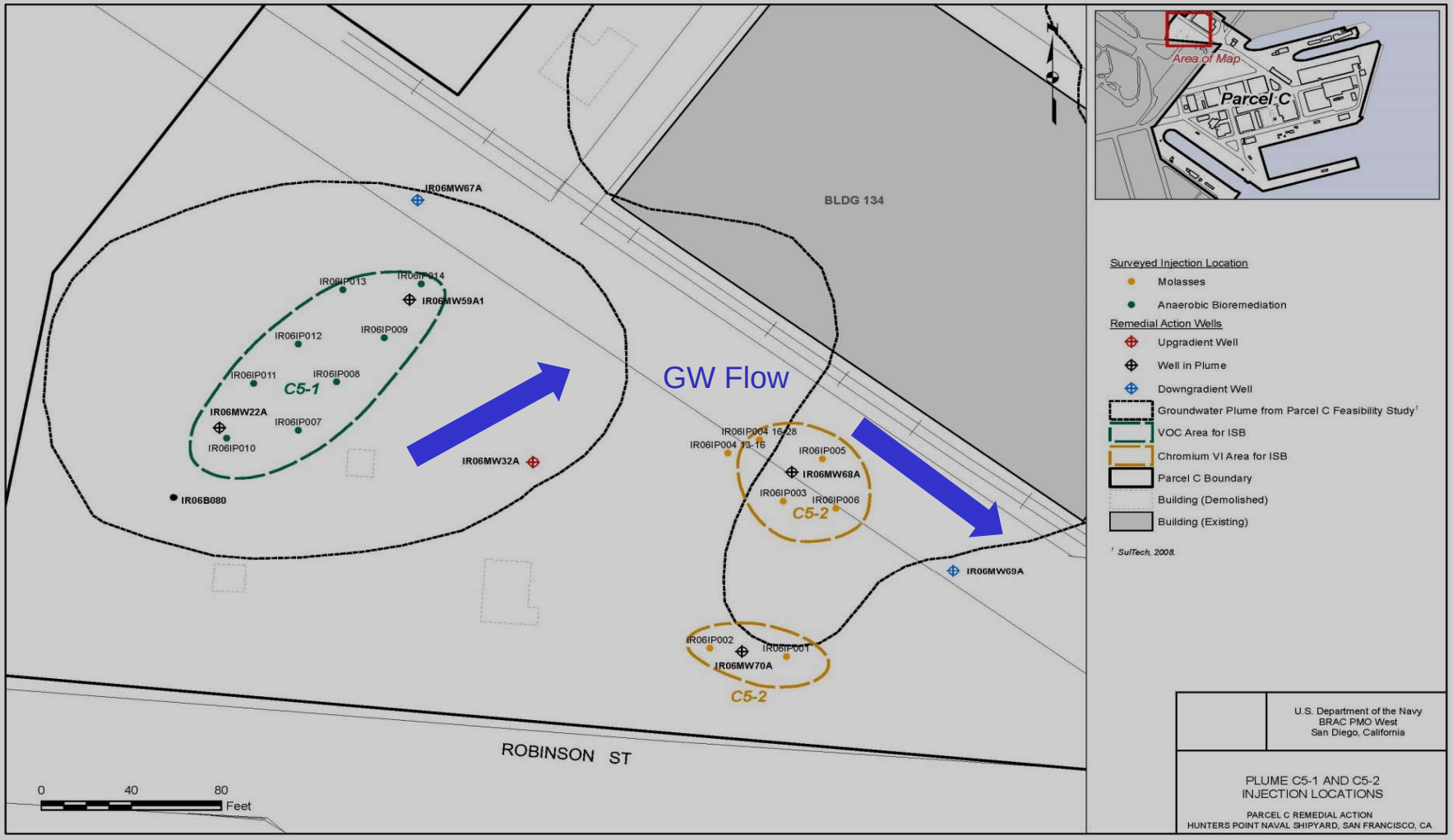
Hexavalent Chrome Concentration Trend in Plume C1-4



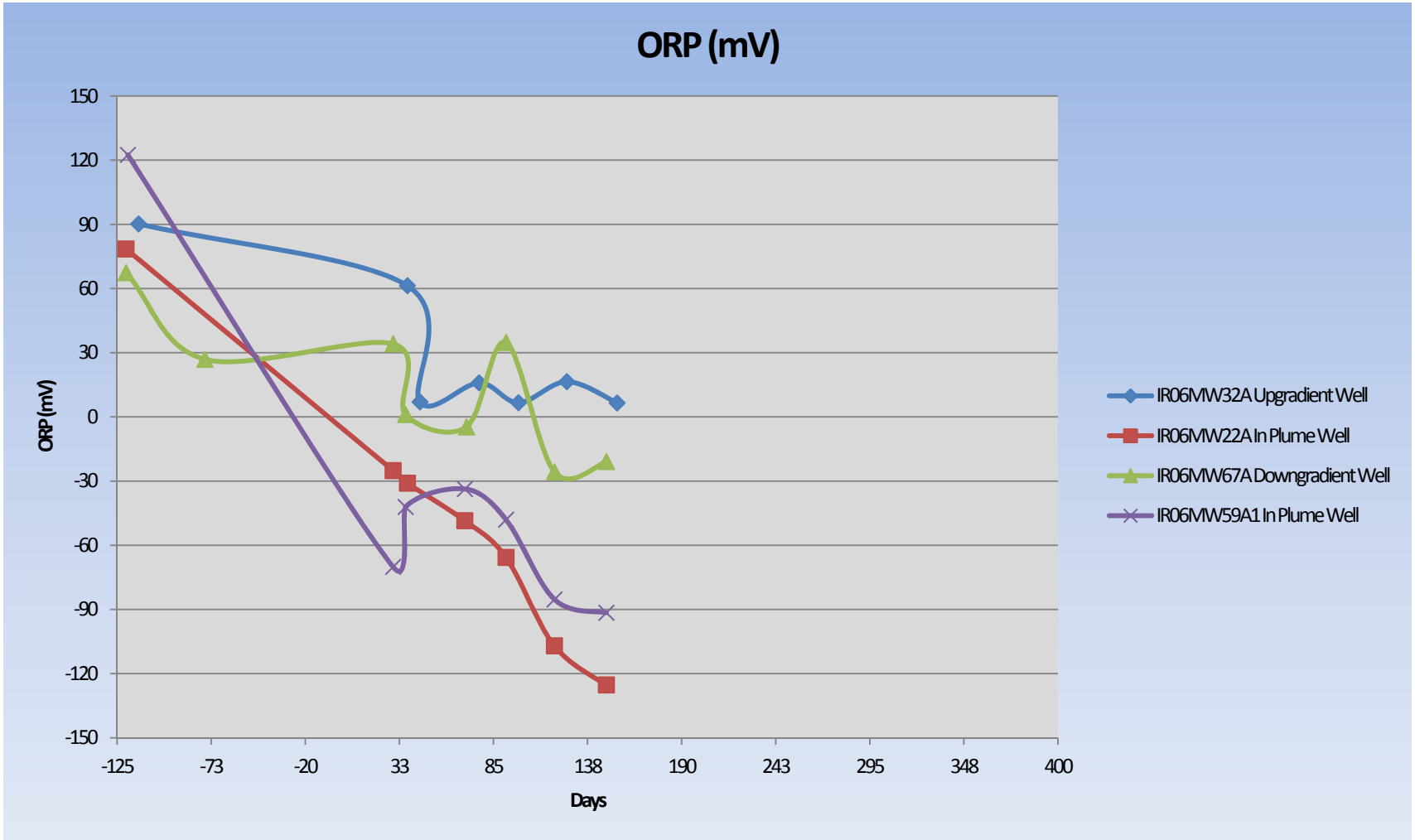
Ferrous Iron Concentration with Time at Plume C1-4



Plumes C5-1 and 5-2 Injection Locations

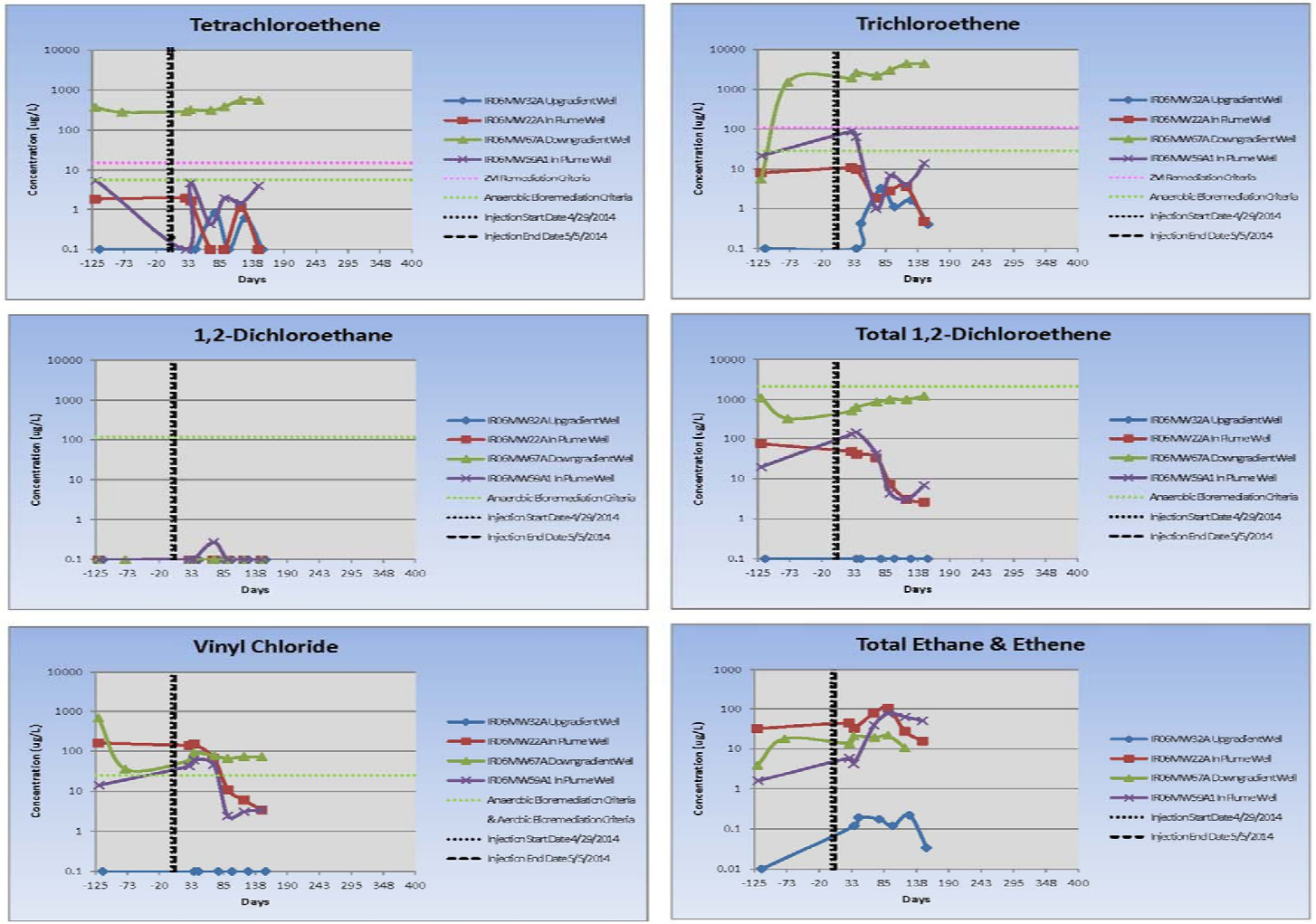


Plume C5-1 ORP concentrations

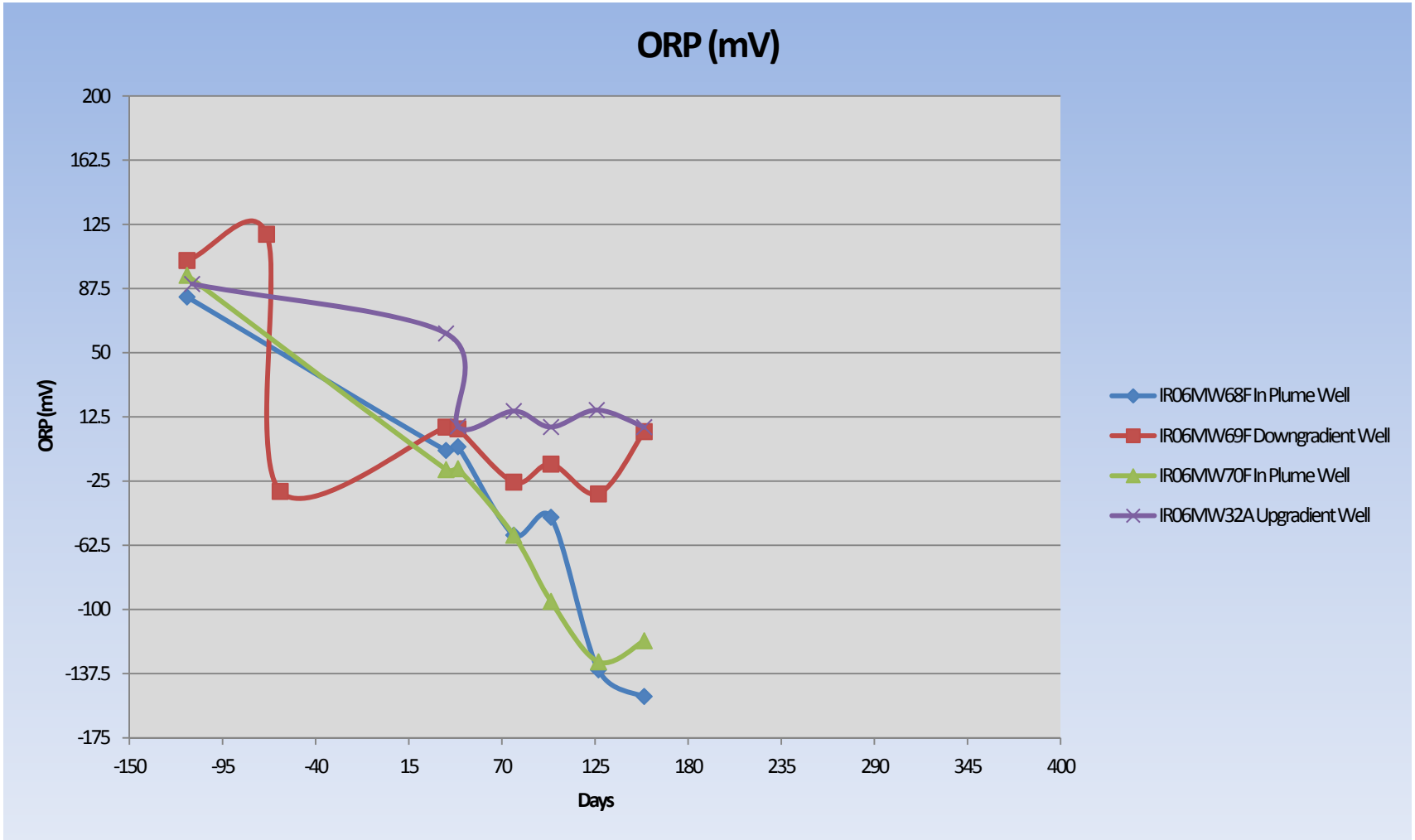


Plume C5-1 CVOC Trend Graphs

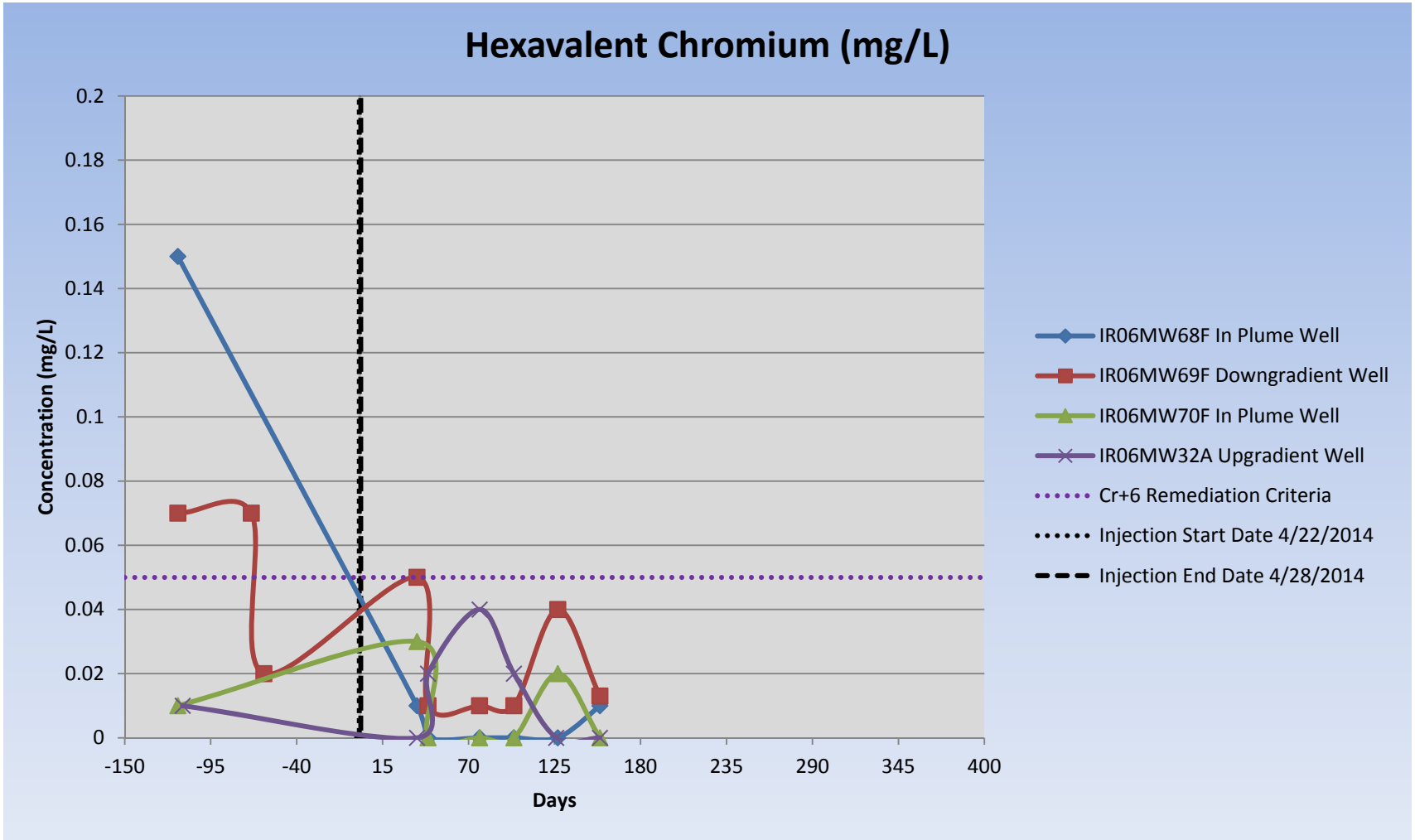
RUC5-1 Contaminants Trend Graphs



ORP Trend in Plume C5-2



Plume C5-2 Hexavalent Chromium Concentrations vs Time



Schedule – What's Next?

- **Groundwater Post-Injection Performance Monitoring:**
  - **Complete Quarterly GW Sampling: March 2015**
  - **GW data to be evaluated & presented in Parcel C RACR**

- **Bldg. 134 Area/RU-C5 Additional GW and Soil Vapor Characterization:**
  - **Draft Work Plan Addendum: Agency Comments due Dec. 12, 2014**
  - **Field Investigation @ GW Plumes C5-1, C5-4 & C5-5: Feb. – March 2015**
  - **Draft Characterization Technical Memo Submittal: June 2015**

- **Parcel C RACR (Excavation, In Situ Groundwater Treatment and SVE):**
  - **Draft RACR for Agency Review: Winter 2015**
  - **RU-C2 RACR will be provided as an appendix**
  - **Durable cover RACR to be produced as a separate document**