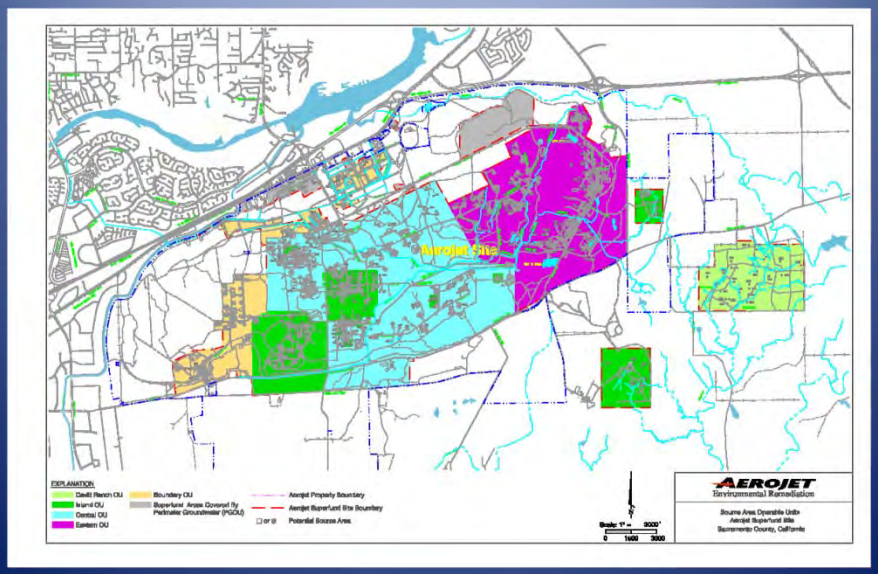
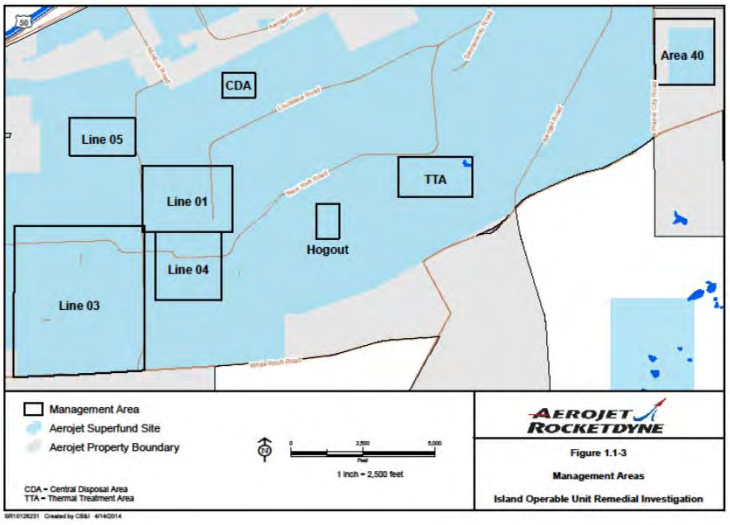
Island Operable Unit (OU-7) Remedial Investigation HogOut

Chris Fennessy, P.E.
Aerojet Rocketdyne
September 17, 2014

Operable Units



OU-7 Management Areas



History of OU-7

- Source Areas Identified in Partial Consent Decree
- Initial investigation conducted in mid-1980s to early-1990s – Stage 1 Remedial Investigation Report
- Program Plan Modification Report – 2004
  - Island OU – This OU contains potential source areas (73 areas) that have very high concentrations of VOCs in either groundwater or soil vapor and/or very high concentrations of perchlorate in soil.
- Priority Evaluation, Central OU Source Areas – 2006
  - Evaluated all Central OU source areas to determine if any contained concentrations of TCE or perchlorate that would warrant early evaluation in IOU. Nine source areas transferred to IOU.
- Sampling and Analysis Plan – 2007
- Remedial Investigation field work – 2007 and 2008
- Area 39 transferred to IOU following completion of BOU RI and RA

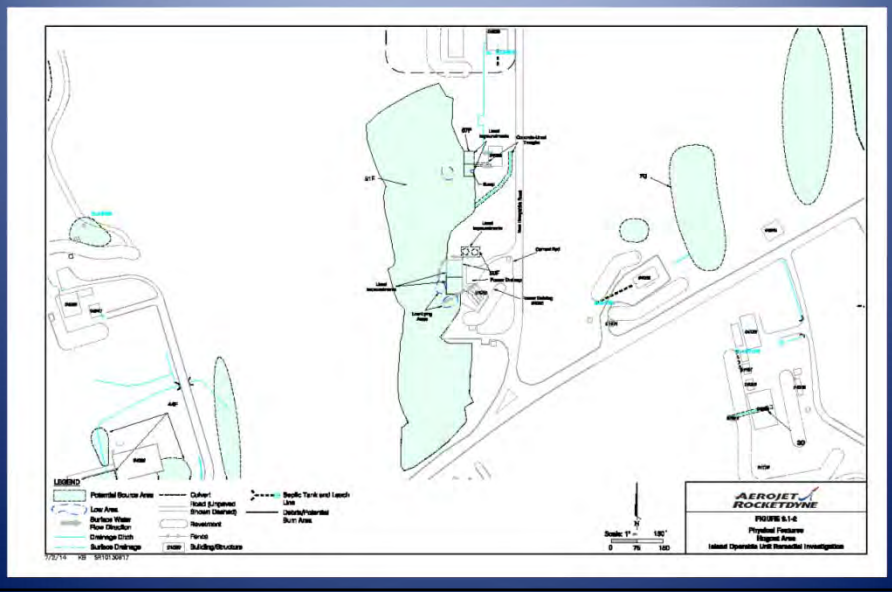
OU-7 Field Sampling Plan

- Preparation
  - Historical Data Review
  - Aerial Photograph Research
  - Risk Management Decision Boundaries (RMDB)
  - Screening level determination
- Identified Goals
  - Nature and Extent of chemicals in soil, soil vapor, groundwater, surface water and sediment
  - Extent of RMDB
  - Evaluate releases and, if necessary, extent of chemicals in open space areas

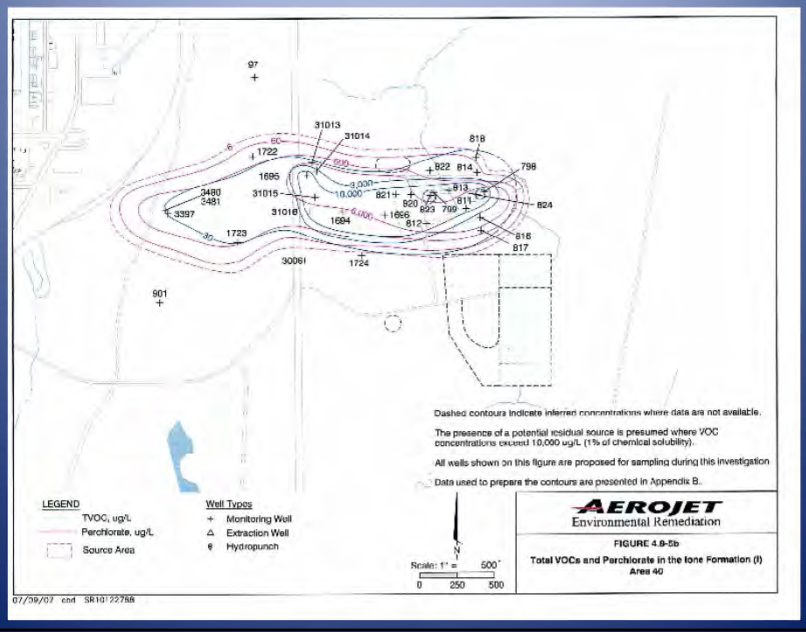
HogOut FSP

- Former rocket motor cleaning facility
- Former Diesel Fuel Tank
- Investigation partially dictated by topography
- Unconfined groundwater within 35 feet of surface in slickens

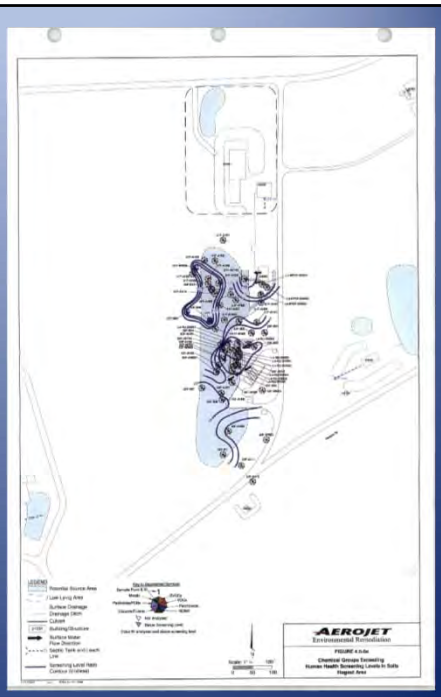
HogOut Physical Features



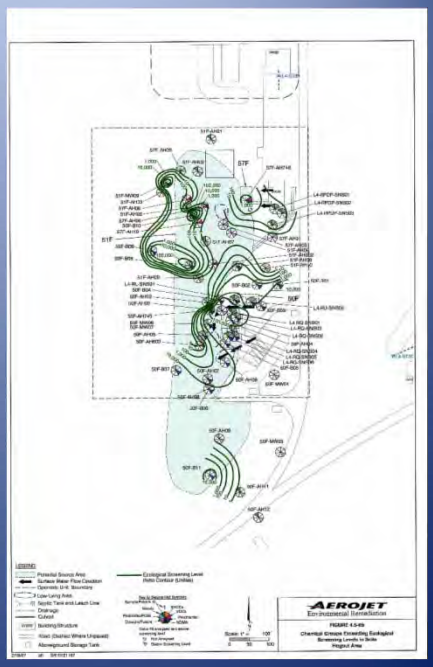
Pre-2000 Groundwater Data



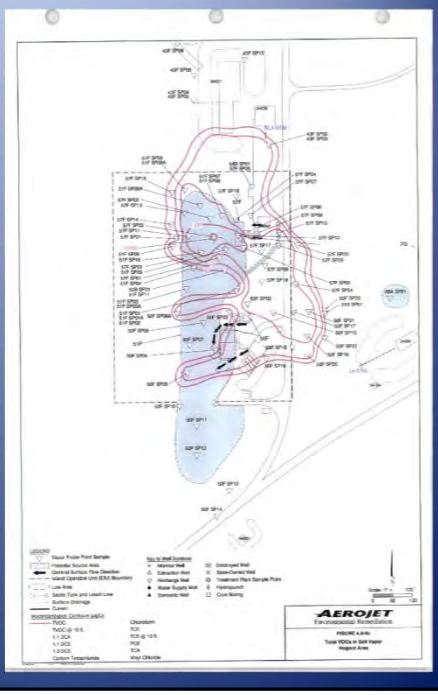
Pre-2000 Human Health Data Evaluation



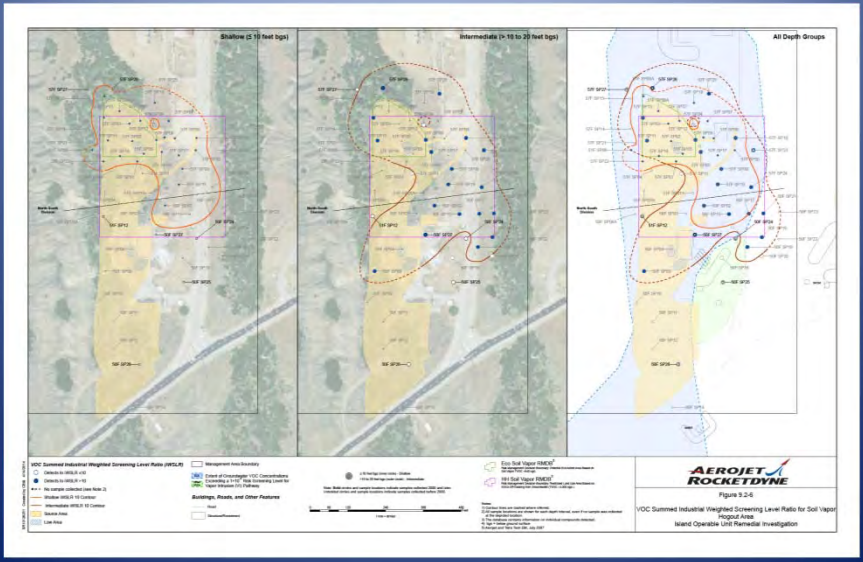
Pre-2000 Ecological Data Evaluation



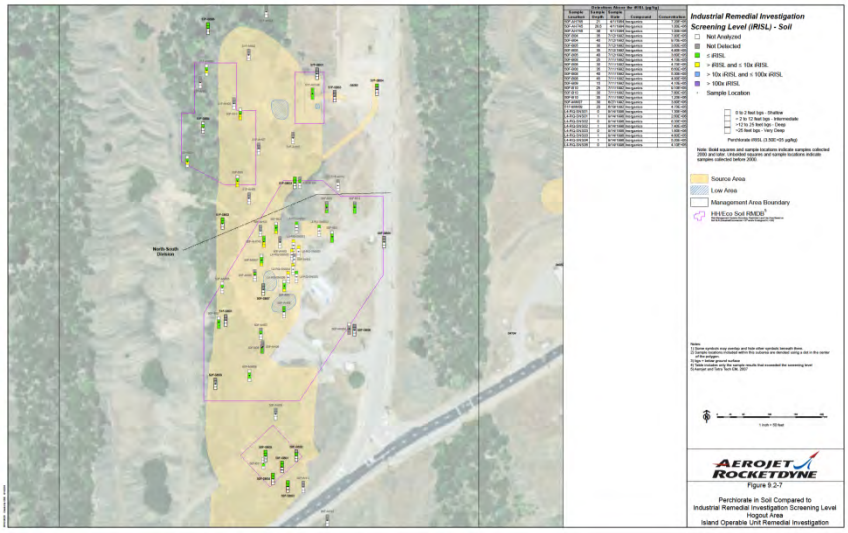
Pre-2000 Soil Vapor Data



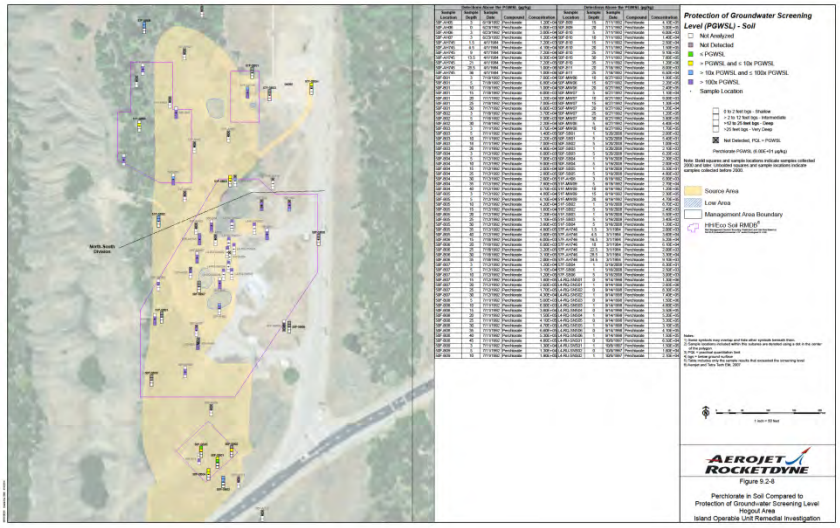
VOCs in Soil Vapor



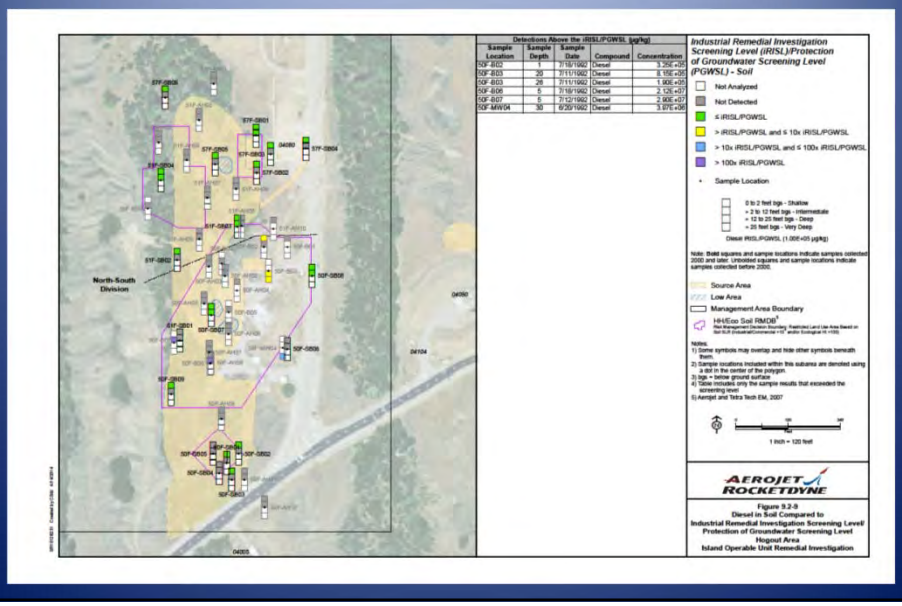
Perchlorate vs Industrial RSL



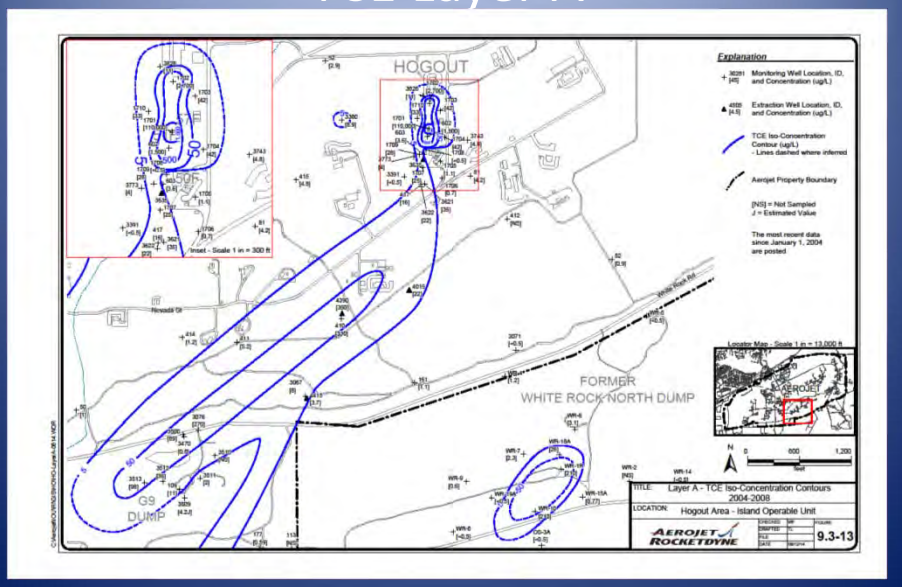
Perchlorate vs PGWSLs



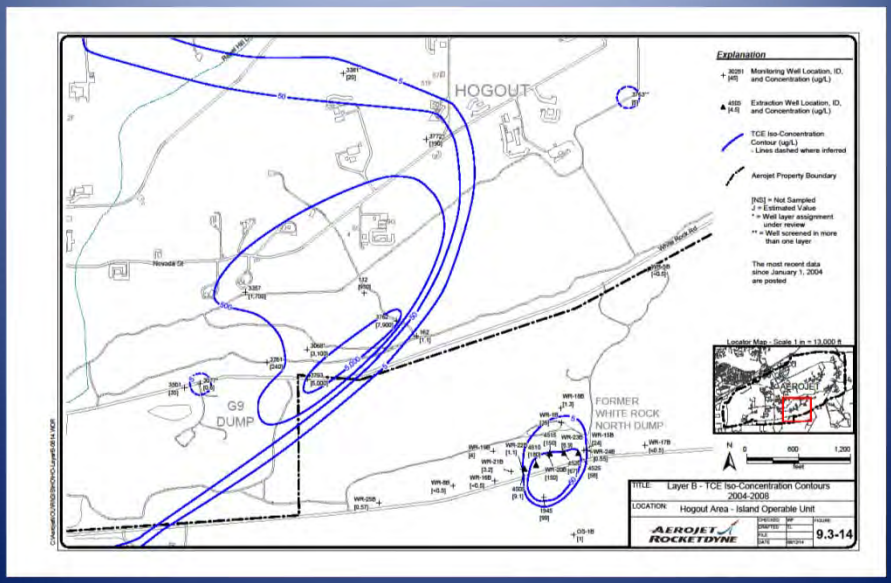
Diesel vs Industrial RISL



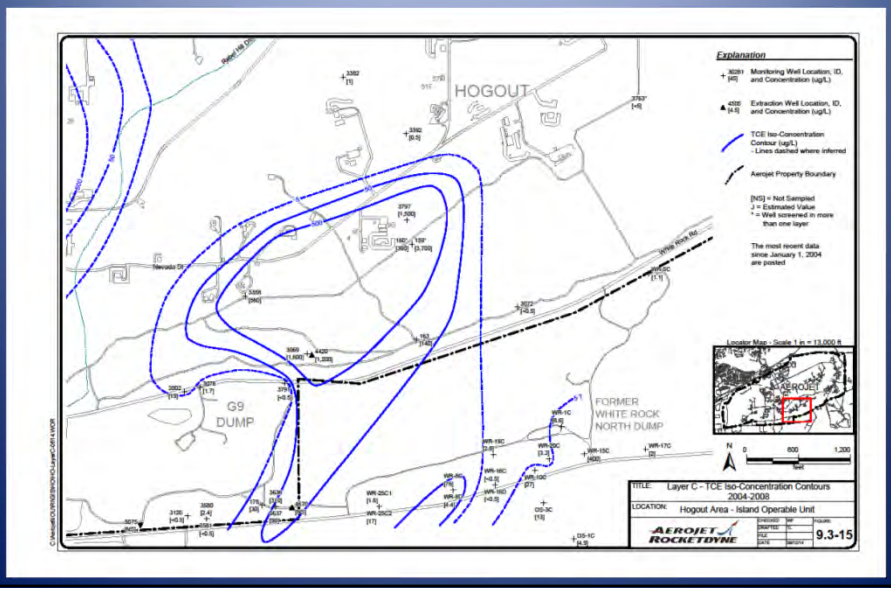
TCE Layer A



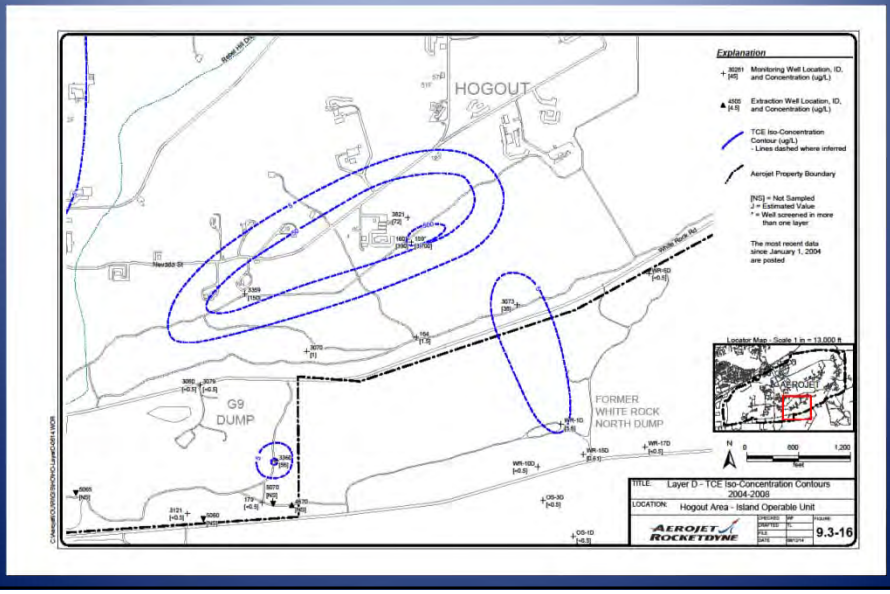
TCE Layer B



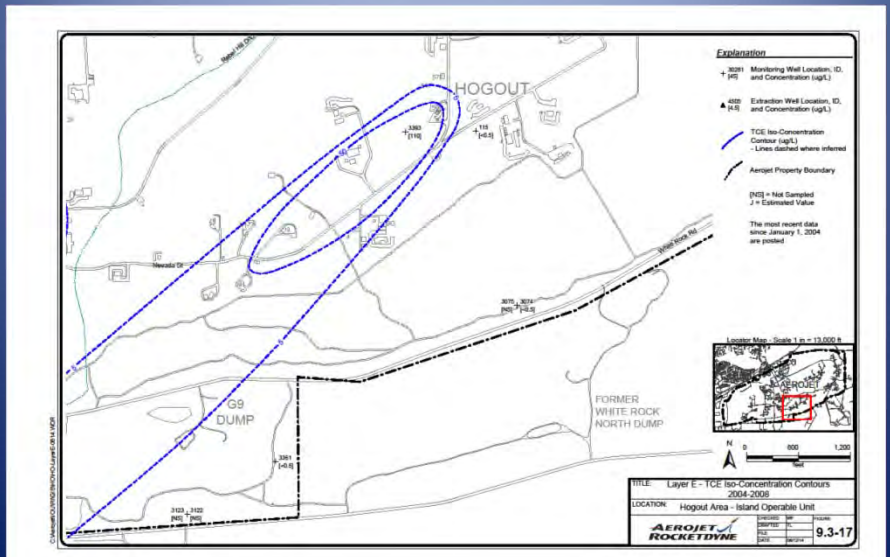
TCE Layer C



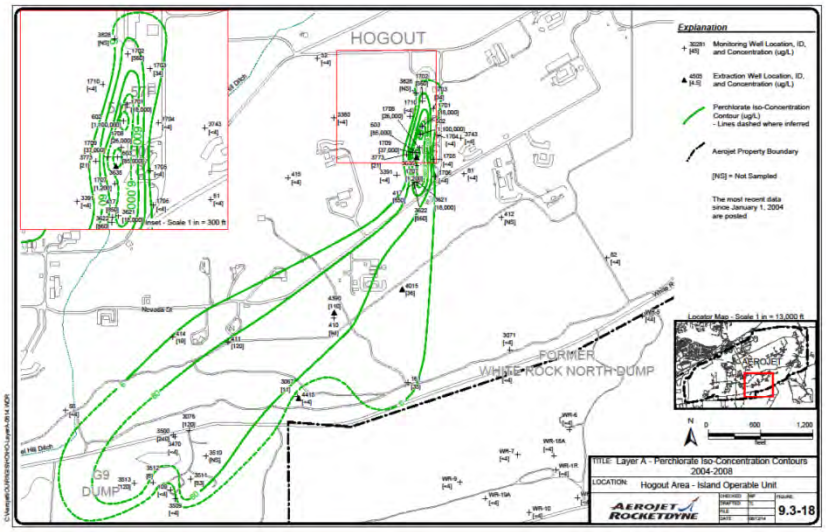
TCE Layer D



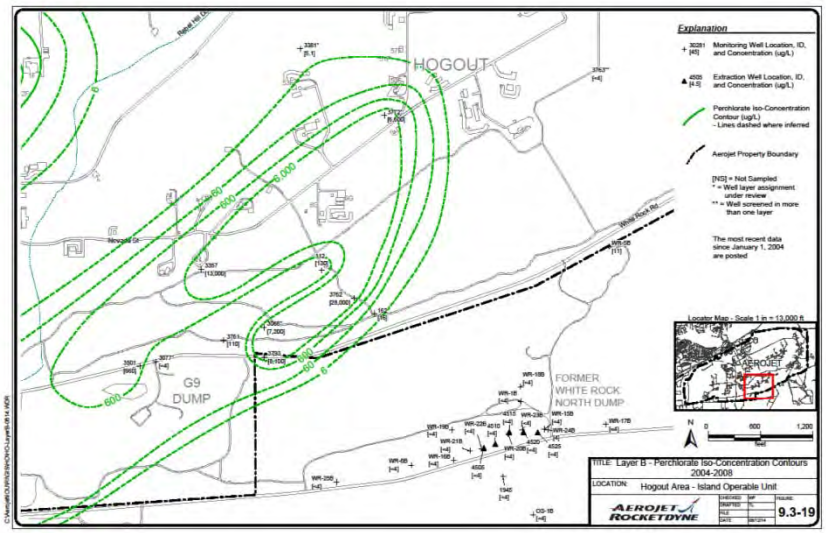
TCE Layer E



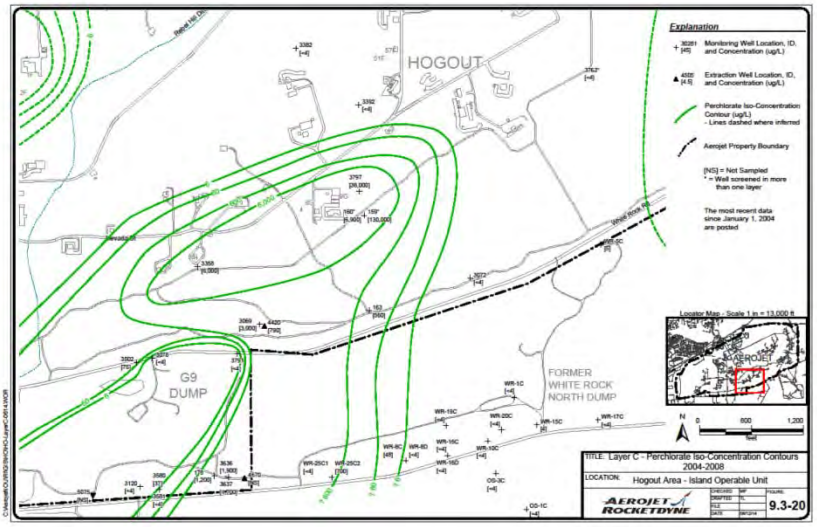
Perchlorate Layer A



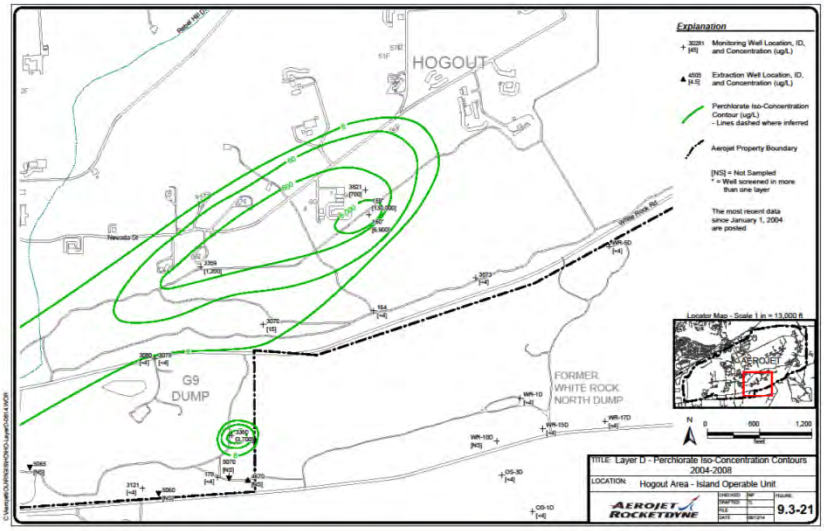
Perchlorate Layer B



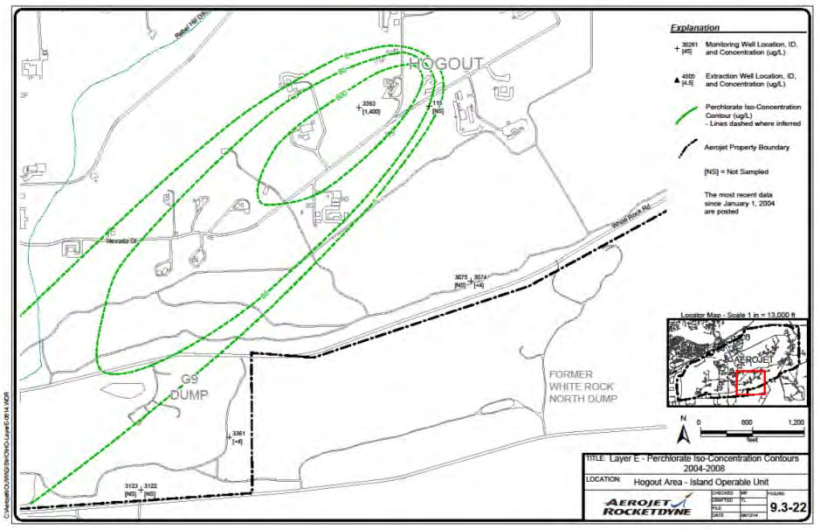
Perchlorate Layer C



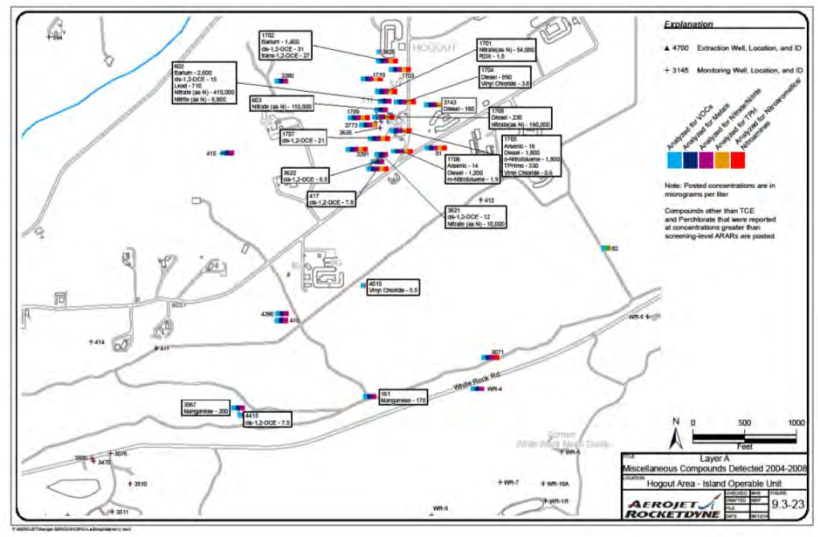
Perchlorate Layer D



Perchlorate Layer E



Miscellaneous Compounds Layer A



Vertical Well Bioreactor