

2005-003A-002



ARCADIS

Infrastructure, environment, buildings

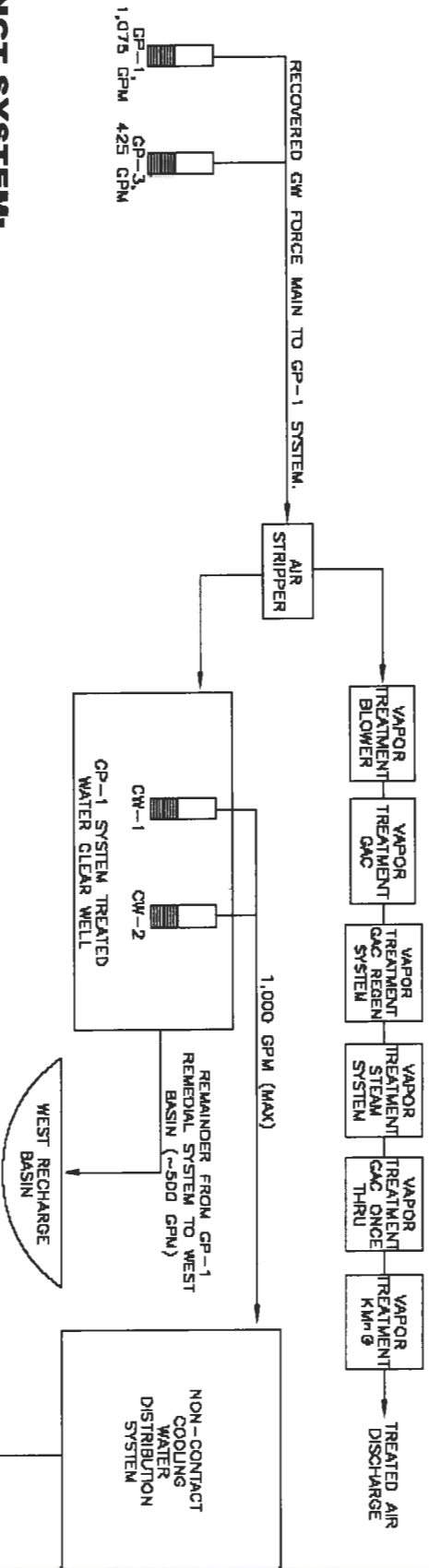
Technical Advisory Committee Meeting Presentation

Northrop Grumman Corporation/
Naval Weapons Industrial Reserve Plant
Bethpage, New York

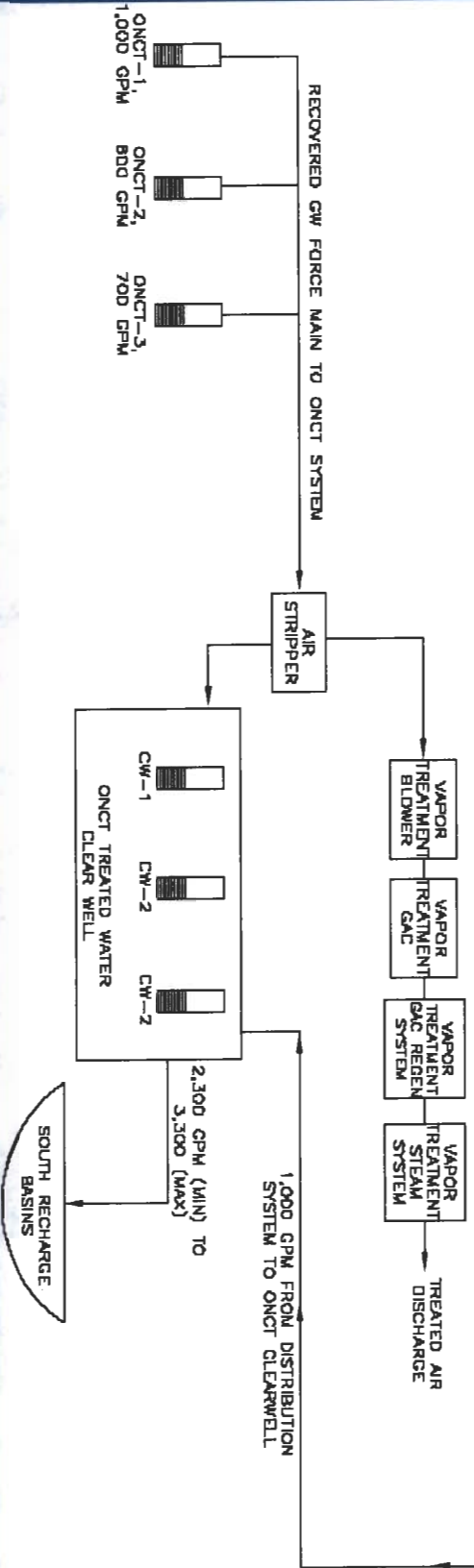
April 7, 2005

Remedial System Process Flow Diagram

GP-1 SYSTEM:



ONCT SYSTEM:

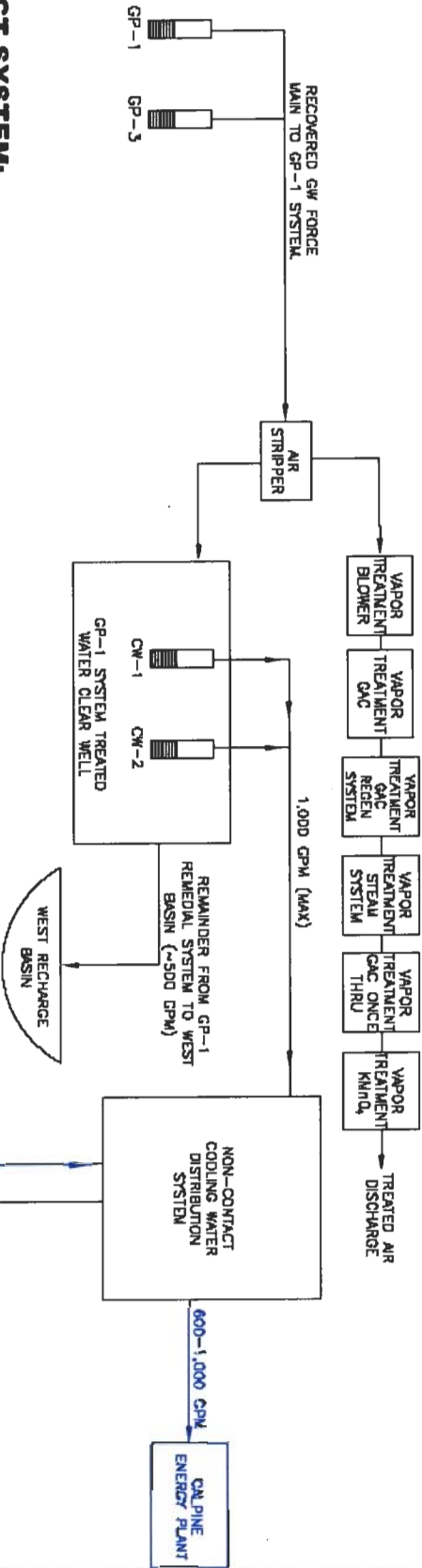


Summary of Calpine Project

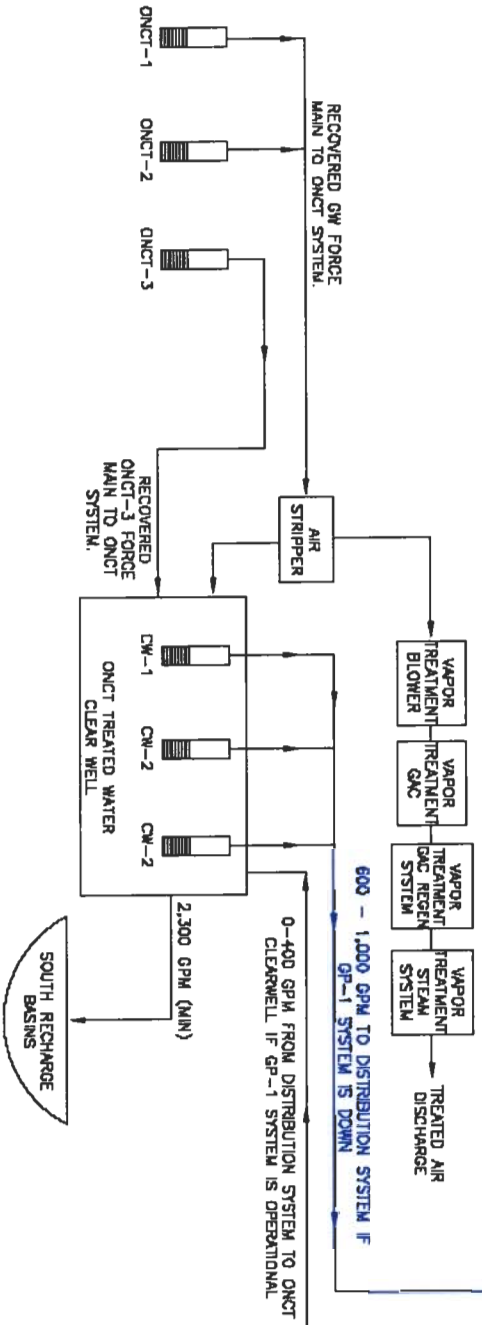
- Northrop Grumman will divert between 600 and 1,000 gpm of treated water to the Calpine Energy Plant for electrical power generation.
- Modeling performed indicates no adverse effect on remedial system performance or goals.

Planned Diversion to Calpine

GP-1 SYSTEM:



ONCT SYSTEM:



Operable Unit 2 Groundwater Monitoring Program

- Total Program: includes 84 wells, plus GP-1 and ONCT remedial treatment systems.
 - Hydraulic Monitoring: 78 wells
 - VOC Plume Monitoring: 61 wells
 - PWSCP Outpost Monitoring: 9 wells
 - Inorganic Monitoring: 14 wells
- Starting Year 2004: Semi-Annual and Quarterly Rounds, per NYSDEC approval.
 - Two Quarterly Rounds: 59 Wells / round
 - Two Semi-Annual Rounds: 84 Wells / round
- Well GP-3 formally added to the remedial well network.

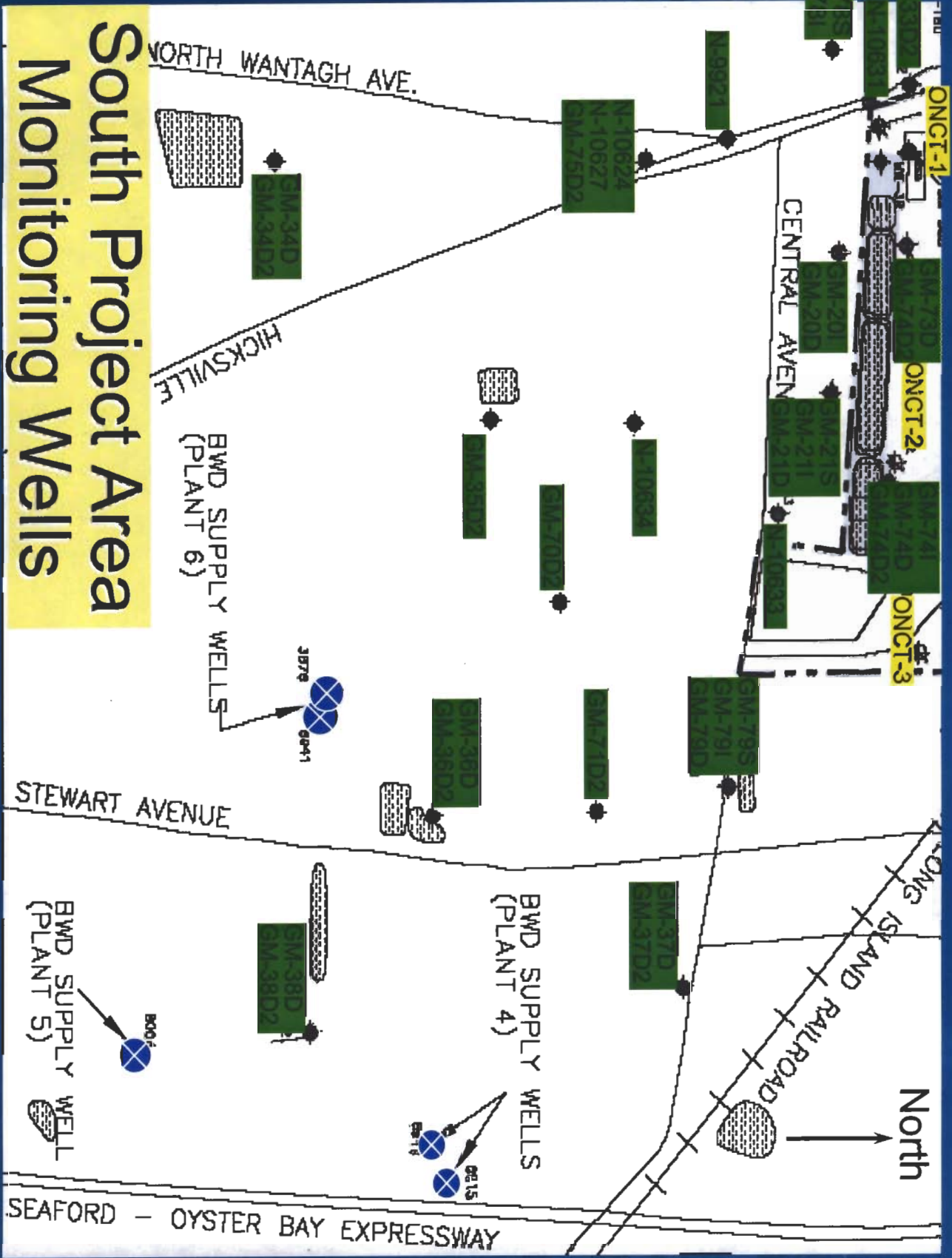
Groundwater Quality Overview

- Hydraulic Effectiveness Evaluation (2003) and current data confirm that OU2 On-Site System meets remedial goals.
- Total VOC Mass Removed: 81,700 pounds (since November 1998).
- Volatile Organic Compounds (VOCs):
 - On-Site: indicative of expected plume heterogeneity.
 - Near Off-Site: decreasing trends.
- Cadmium/Chromium:
 - ND in remedial wells.
 - Plant 1: NGC discussing need for additional monitoring with NYSDEC.
 - Plant 2: Plume is stable and limited to on-site area.
- Outpost Monitoring:
 - Site-related VOCs detected in Wells OW1-1, OW1-3, OW2-1, and OW2-2.

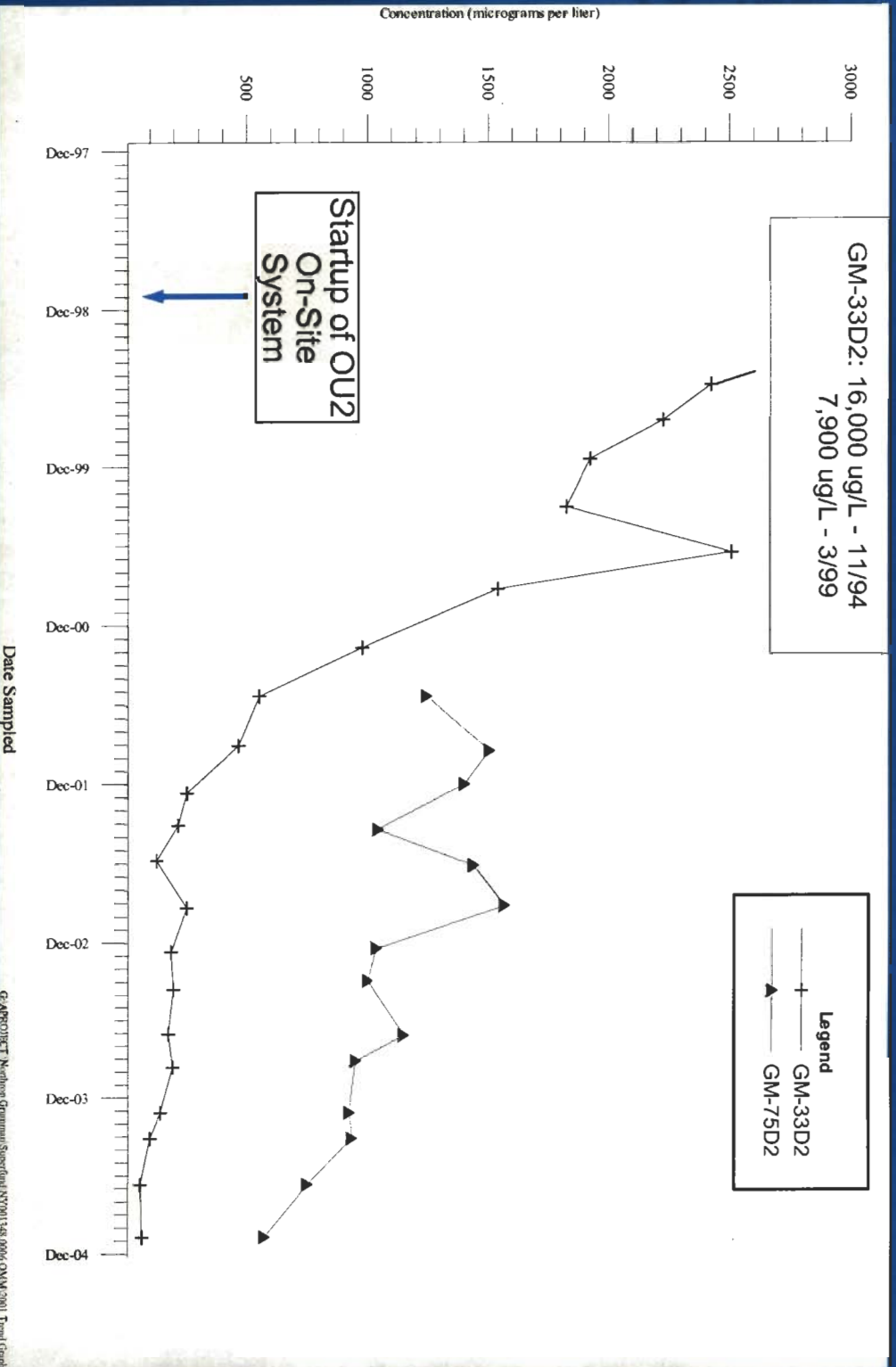
Groundwater Quality Trends

- Off-Site VOC trend analysis key points:
 - NGC southern boundary off-site wells – ND or trace levels.
 - “GM-75D2 Area”:
 - GM-33D2 and GM-75D2 – decreased since 2001.
 - GM-34D, GM-34D2, and GM-35D2 – increased since 2001.
 - GM-38 Area – stable.
 - Majority of other off-site wells – stable or downward.

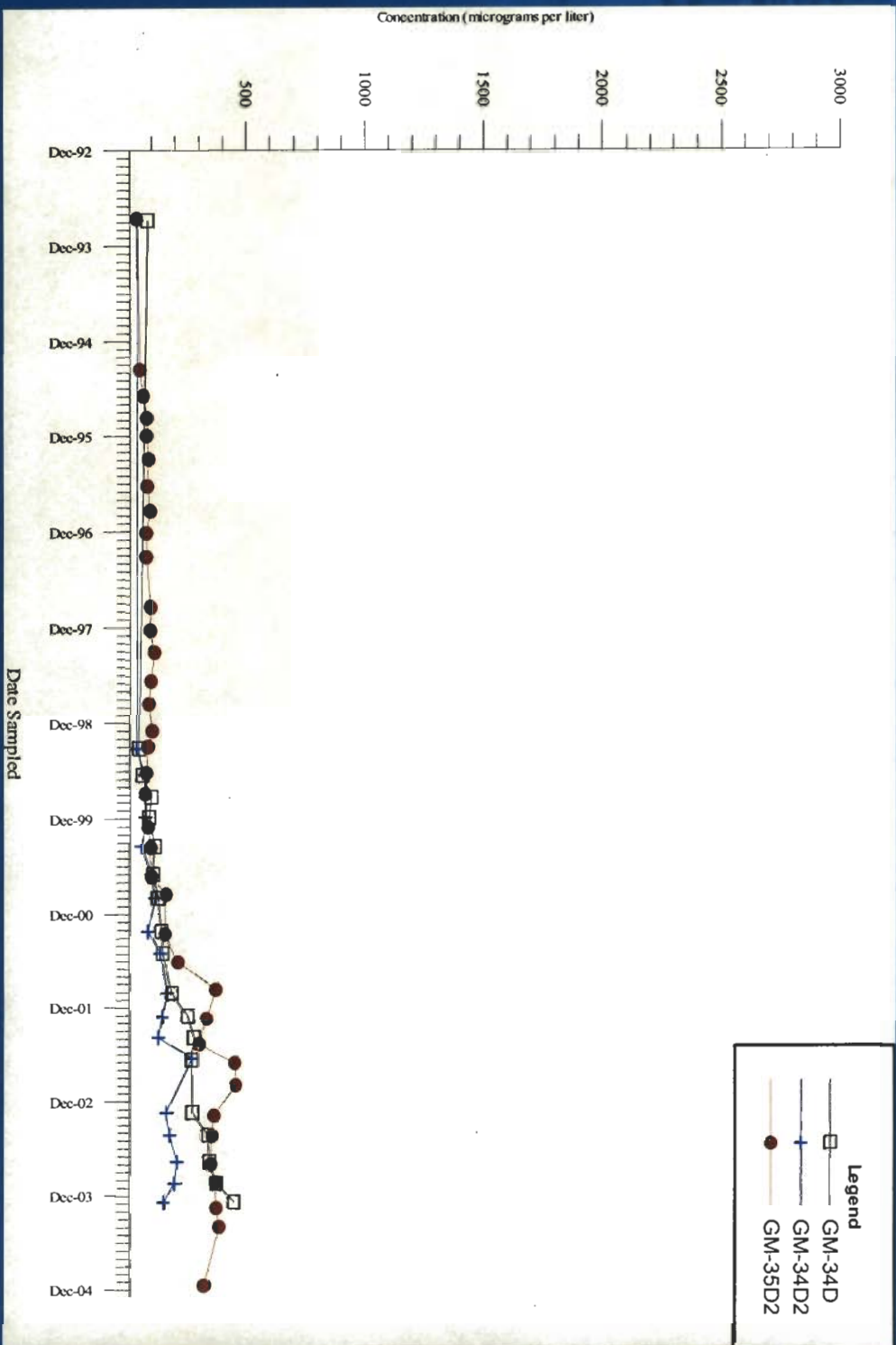
South Project Area Monitoring Wells



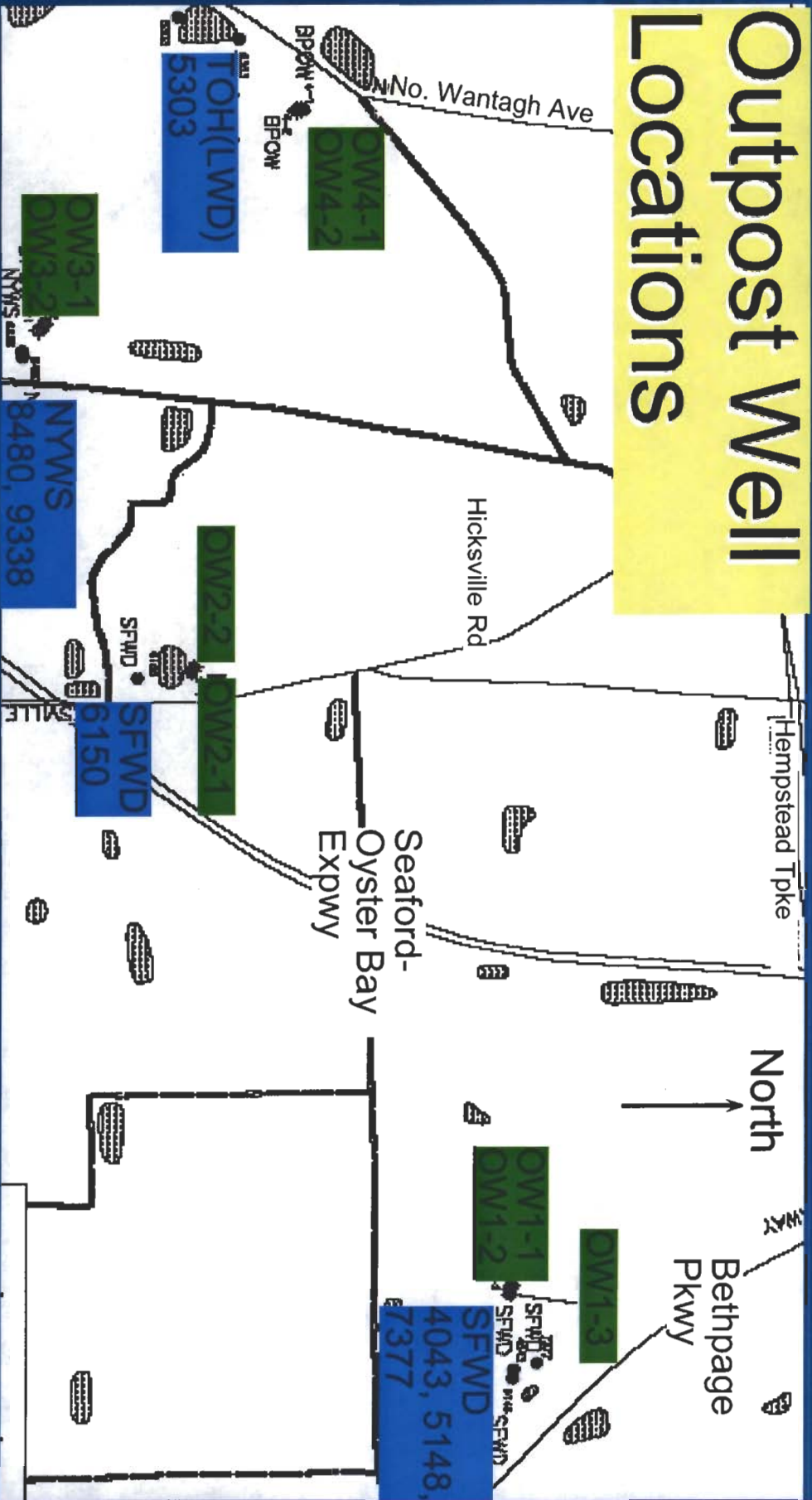
VOC Trends in Key Wells



VOC Trends in Key Wells, continued

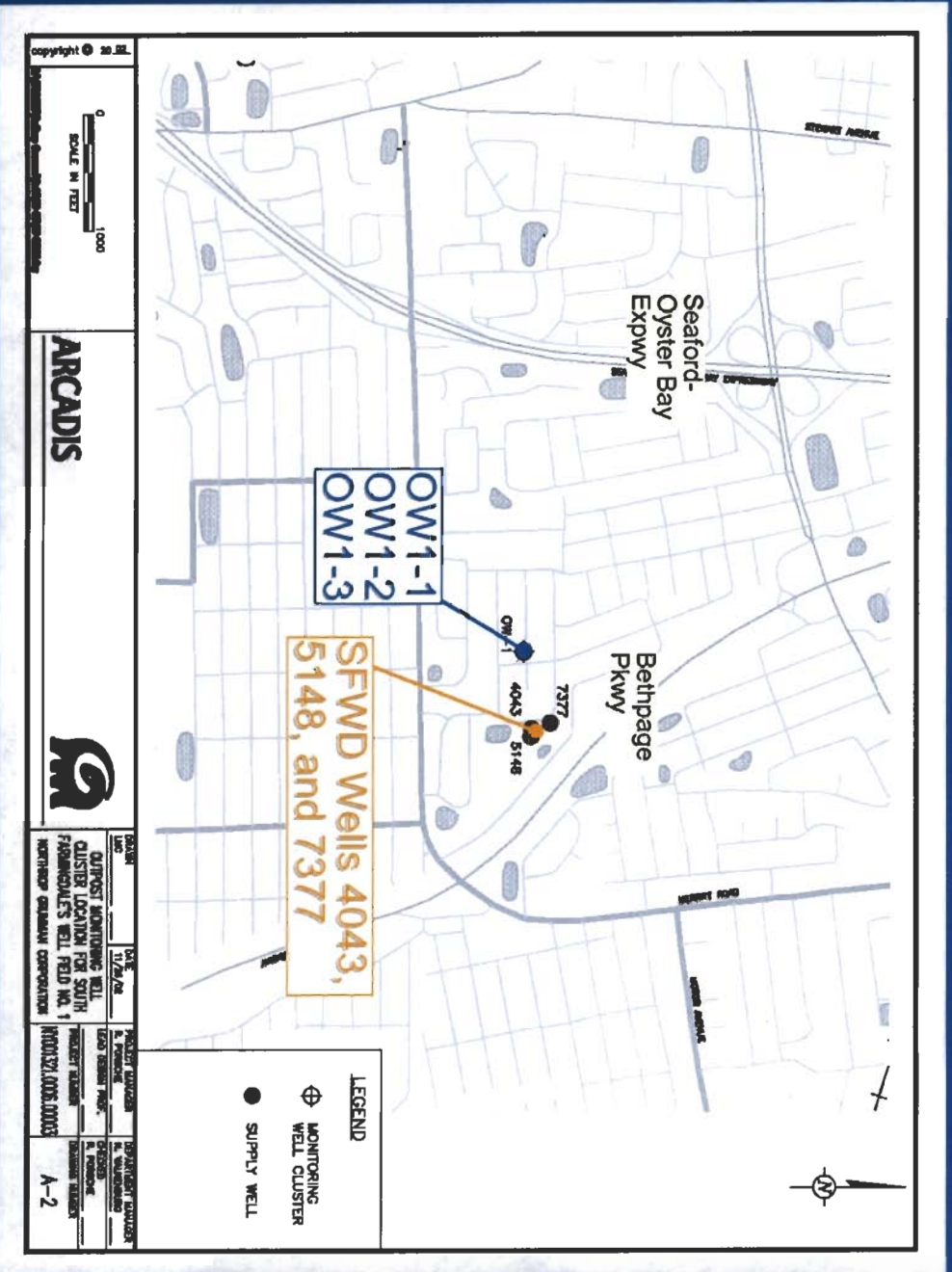


Outpost Well Locations



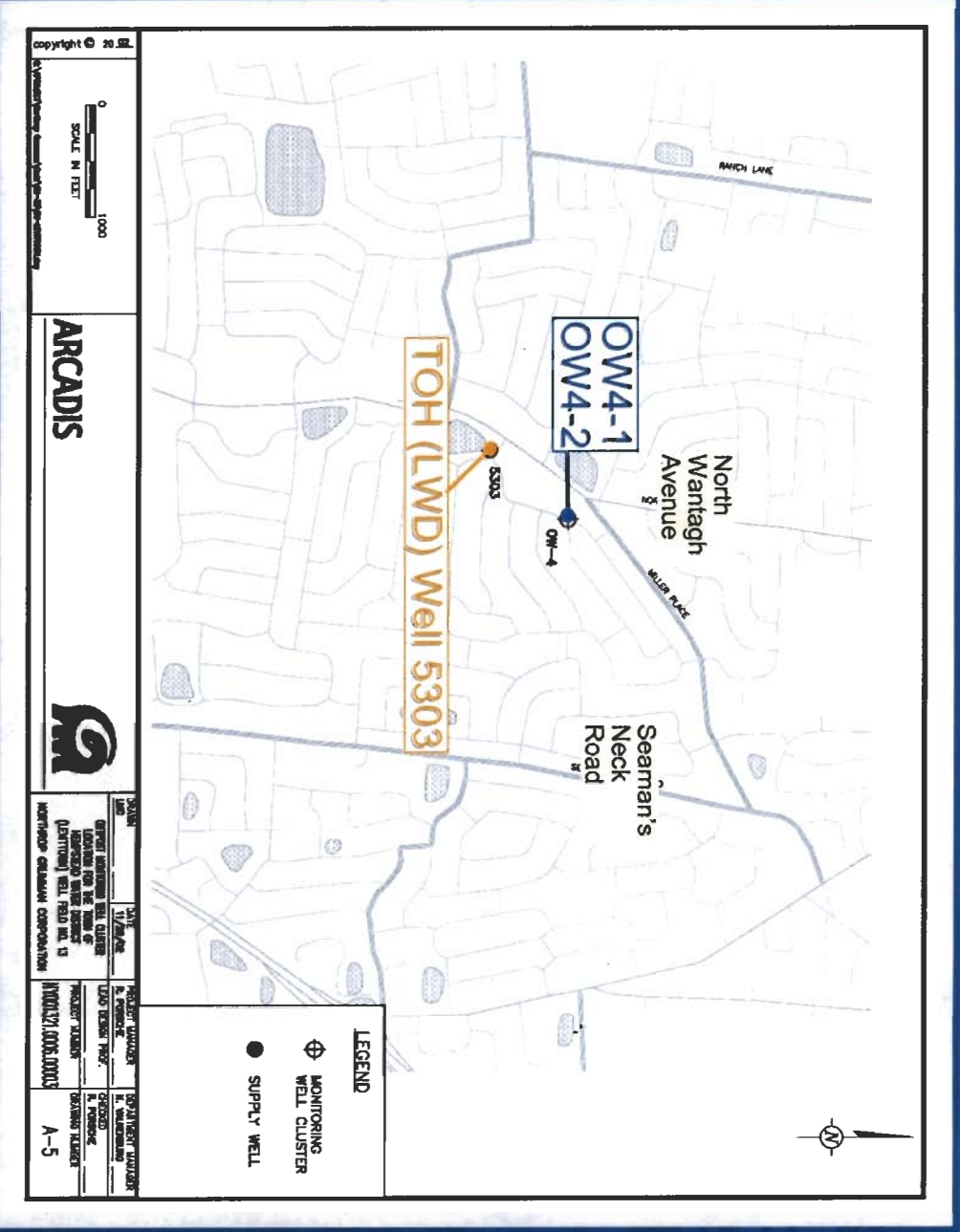
Outpost Monitoring Well Location

Near SFWD Well 4043



Outpost Monitoring Well Location

Near SFWD Well 5303



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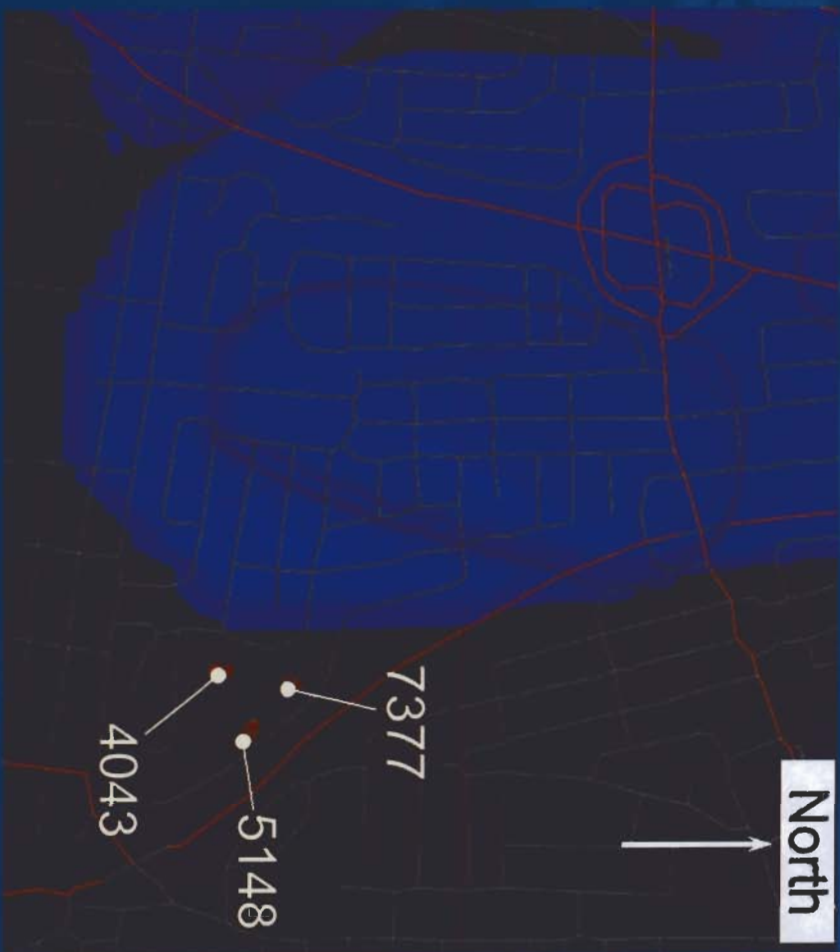


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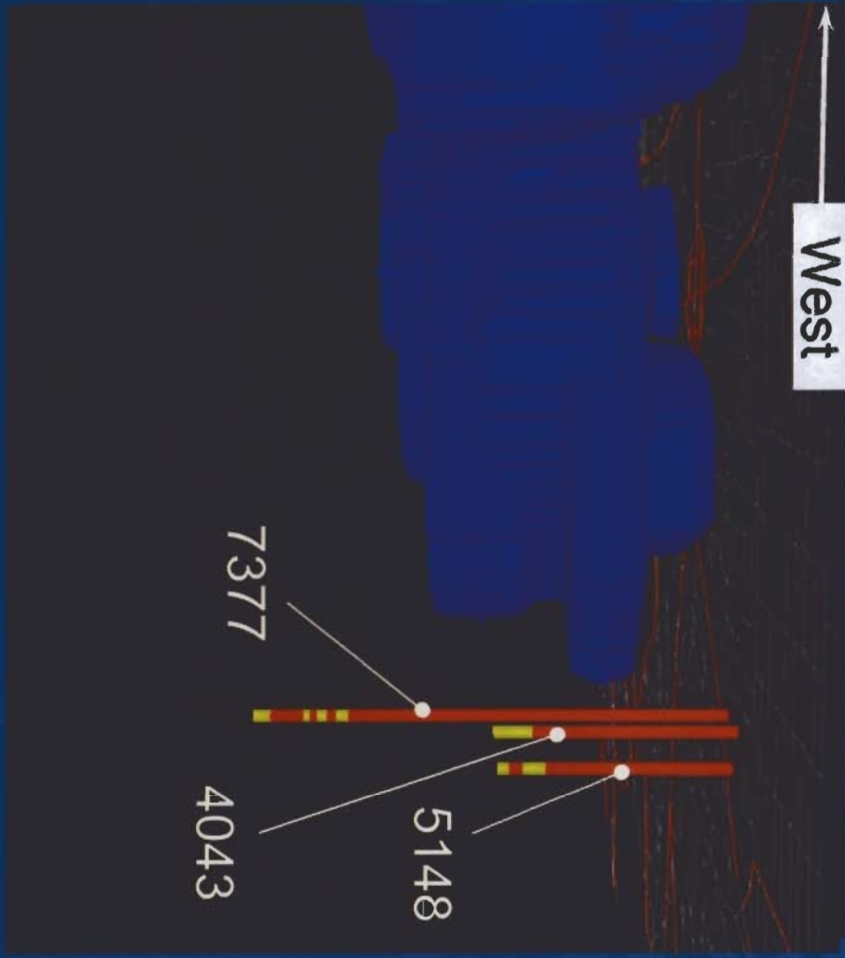
Summary of Latest/Highest Outpost Well Data

- SFWD Well 4043 (Plant 1):
 - OW1-1*: 19 / 30 ug/L
 - OW1-2: <0.5 / <0.5 ug/L
 - OW1-3*: 7 / 7 ug/L
 - SFWD Well 6150 (Plant 3):
 - OW2-1** : 4 / 7 ug/L (benzene detected at 38 / 42 ug/L)
 - OW2-2** : <0.5 / 0.9 ug/L
- * Wells OW1-1 and OW1-3 exceeded the 0.6 ug/L trigger value.
- ** Trigger value not established since outpost wells are located < 5 years of travel time upgradient of SFWD Well 6150.

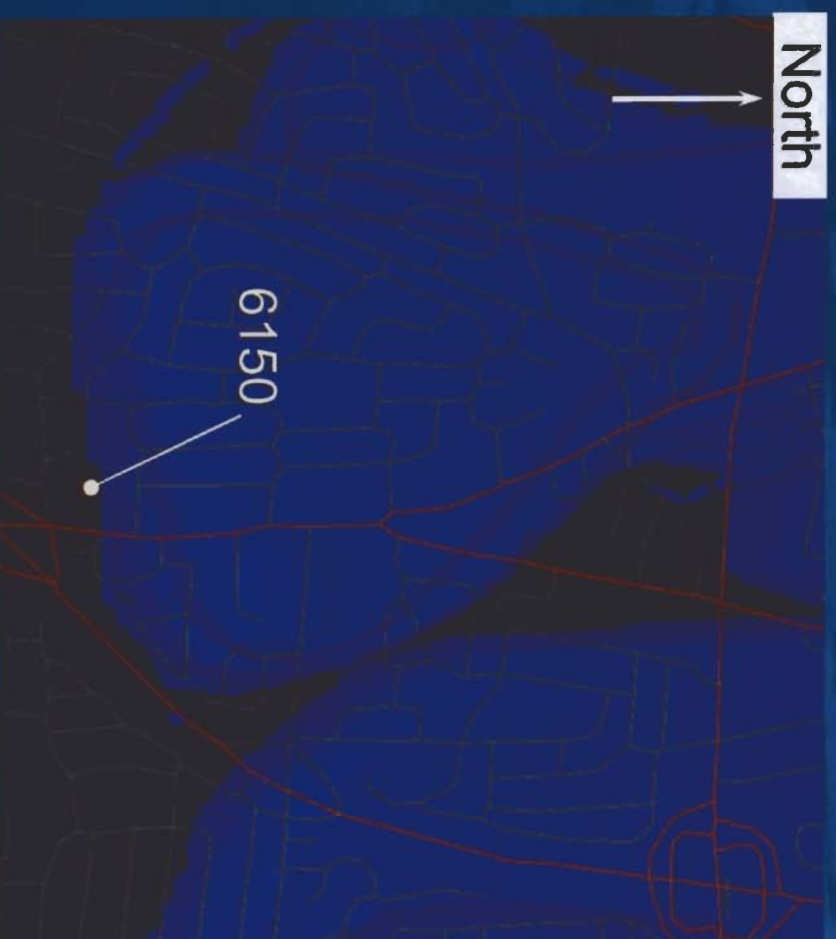
TVOC Plume Extent at SFWD Plant No. 1 (2004 Model Update)



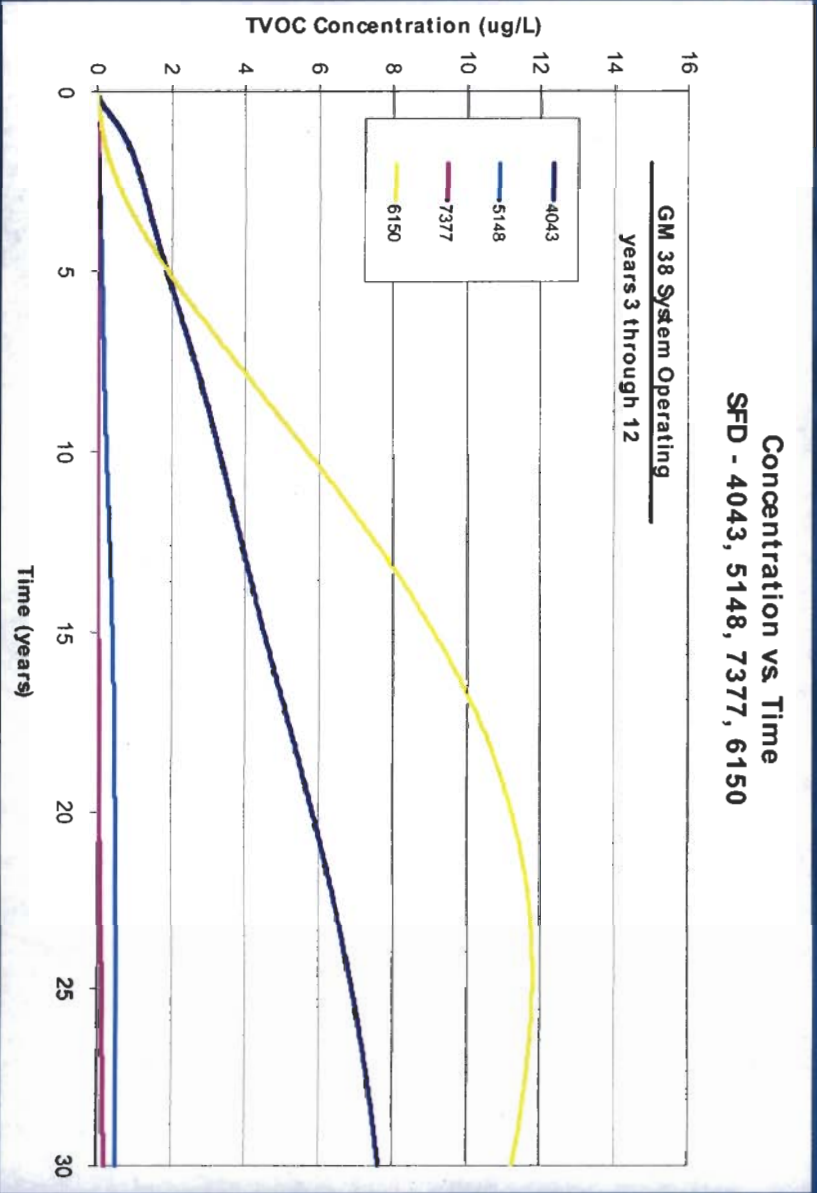
SFWD Well Field No. 1 (2004 Model Update)



TVOC Plume Extent at SFWD Plant No. 3 (2004 Model Update)



Concentration vs. Time at SFWD Plants 1 and 3 (active remediation at GM38 Area)



TVOC Plume Movement

(Near SFWD Plant No. 1)



TVOC Plume Movement

(Near SFWD Plant No. 1)



Status of SFWD Negotiations

- H2M prepared design and cost estimate for treatment of supply wells at SFWD Plant 1.
- Meetings and negotiations with Navy are underway concurrent with design/build.
- Monitoring of associated outpost wells is ongoing in accordance with PWSCP.