

Roger F. Smith, P.G. Project Manager Direct Dial (972) 687-7516 5005 LBJ Freeway, Suite 1350 Dallas, TX 75244-6119 Facsimile (972) 687-7524

October 10, 2012

Mr. Thomas Taccone Western New York Remediation Section Emergency and Remedial Response Division United States Environmental Protection Agency - Region II 290 Broadway, 20th Floor New York, NY 10007-1866

Dear Mr. Taccone:

Re: Quarterly Report – Third Quarter 2012 (July through September) Administrative Orders Hooker Chemical/Ruco Polymer Corporation Site Index Nos. II-CERCLA-80216, II-CERCLA-94-0210, and II-CERCLA-02-2001-2018

This submittal provides the Quarterly Progress Report covering July through September 2012 for the Hooker/Ruco Site in Hicksville, New York. This report covers OU-1, OU-2, and OU-3. Please note that the next Quarterly Progress Report will be submitted by January 15, 2013 and will cover October through December 2012.

#### **QUARTERLY PROGRESS REPORT**

The following activities were performed during the period July through September 2012.

The quarterly progress report for the time period April through June 2012 was submitted to the USEPA on July 16, 2012. The submittal included an electronic data deliverable (EDD) for the May 2012 biosparge system performance monitoring event.

#### **Operable Unit-1 (On-Site Soil)**

All work has been successfully completed. OU-1 is closed.

#### **Operable Unit-2 (Soils Impacted by On-Site Release of PCBs)**

All work has been successfully completed. OU-2 is closed.

#### **Operable Unit-3 (Off-Site Groundwater)**

#### Supplemental Treatment System

- i) Operation and monitoring of the GP-1/GP-3 supplemental air treatment system continued
- ii) The carbon bed was changed out on July 19, 2012
- iii) Evaluations of possible upgrade alternatives for the supplemental treatment system are ongoing

#### **Biosparge System**

See Figures 1 and 2 for system layout and Figures 3 and 4 for system cross-sections.

Contractor mobilization for construction of the remainder of the biosparge system occurred on March 5, 2012. Construction activities were completed on August 15, 2012. The activities performed this quarter included:

- i) The excess soil cover from Sleepy's and GSHI's properties was placed on the Bayer property the week of July 9, 2012
- ii) Replacement of the asphalt on the Northrop property for the areas disturbed to install the biosparge system
- iii) Insulation of the piping in IW-19 to IW-22
- iv) Installation of power and communication wiring in IW-20 through IW-22
- v) Completion of the final electrical terminations in IW-8 and IW-15 through IW-22
- vi) De-bugging and start-up activities started on July 9, 2012 and were completed by mid-September

The Draft Remedial Action (RA) Report was submitted to the USEPA on August 9, 2012. USEPA/NYSDEC comments were received August 28 and September 5. The draft civil and mechanical as-built drawings were submitted on August 31. A revised Interim RA Report was submitted to the USEPA on September 17. USEPA/NYSDEC comments were received September 20 and a redlined updated copy of the Interim RA Report was submitted to the USEPA on September 21. Additional USEPA comments were received September 24. The finished Interim RA Report, including the civil and mechanical as-built drawings, was submitted to the USEPA on September 26, 2012. The electrical as-built drawings will be submitted in October 2012.

Updating the Operation, Maintenance & Monitoring (O, M & M) Manual started. The updated O, M & M Manual will include the April 2012 QAPP and an updated HASP. The O, M & M Manual is to be submitted in October 2012.

The Pre-Final Inspection of the biosparge system with the USEPA was held on July 27, 2012. The NYSDEC also attended the inspection. Separate meetings with representatives of Sleepy's

and Northrop were also held. All construction activities were complete except for minor electrical work in two of the injection well vaults. The main compressor was in the process of being repaired and the electrical and mechanical components of the system were being tested.

The Final Inspection with the USEPA was held on September 12, 2012. The system started full-time operation on September 17 with the start of the initial 40-hour air injections. As of September 30, the 40-hour injections had been completed at 16 of the 22 new injection wells.

The USEPA requested during the Final Inspection stratigraphic well logs in electronic format for select wells. USEPA is to provide a listing of the select wells.

An updated EDD for the May 2012 performance monitoring event (revised to be consistent with the new USEPA format) was submitted to the USEPA on July 23, 2012.

Surveying of the groundwater and vadose zone monitoring wells installed in 2010 and 2011 was performed in April 2012. The remainder of the newly constructed biosparge system was surveyed in July 2012.

On September 12, 2012, the USEPA requested additional copies of the final updated QAPP, which had been submitted to the USEPA on April 13, 2012. The signed USEPA signature page was received on September 20. An email was submitted to the USEPA on September 21 inquiring if the NYSDEC signature page needed to be completed by the NYSDEC before providing the requested copies.

Notification of the second 2012 semi-annual biosparge system performance monitoring event was submitted to the USEPA on September 25, 2012. The PDB/HydraSleeve samplers are to be inserted starting October 9 and retrieved a minimum of 14 days after insertion. Samples from select wells are to be provided to the USEPA.

Startup activities identified five air injection wells which are not accepting air at the design flow rate of 100 scfm. Arrangements are being made to redevelop these wells.

#### SUMMARY OF BIOSPARGE PILOT SYSTEM

The dissolved oxygen (DO), total volatile organic compounds (TVOC), and vinyl chloride monomer (VCM) concentration trends for the individual groundwater monitoring wells are shown on Figures 5 through 11. To date, the results show that the biosparge Pilot System has operated successfully as demonstrated by the following:

- i. Dissolved oxygen (DO) levels in the groundwater have increased and, in general, are greater than the target concentration of 2 milligrams per liter (mg/L)
- ii. The VCM concentrations are decreasing as a result of the microbial biodegradation processes

Figures 12 through 25 show the pre-air injection DO, TVOC, and VCM concentrations and the time periods of the 40-hour air injections for the groundwater monitoring wells associated with the biosparge system expansion. These figures will be used to track the future trends for the listed parameters.

#### PLANNED FOURTH QUARTER 2012 ACTIVITIES

The following activities are planned for the fourth quarter of 2012:

- i) Continue operation and monitoring of the GP-1/GP-3 supplemental air treatment system.
- ii) Complete the 40-hour air injections the week of October 1, 2012.
- iii) Perform the second 2012 semi-annual biosparge system performance monitoring event. PDB/HydraSleeve insertion is scheduled to start on October 9, 2012 with retrieval a minimum of 14 days after insertion.
- iv) Change-out of the supplemental treatment system carbon bed is scheduled for October 11, 2012.
- v) Change-out of the supplemental treatment system potassium permanganate bed is scheduled for the week of October 15, 2012.
- vi) Start the weekly 8-hour air injections for the entire system after retrieval of the PDBs/HydraSleeve sampling devices is completed.
- vii) Submit the draft electrical as-built drawings and draft O, M & M Manual in October 2012.
- viii) Provide stratigraphic well logs in electronic format upon receipt of well list from USEPA.

The following activities are pending an approval or review by the USEPA. The follow-up schedule is based on receipt of the review or approval:

i. Provide additional copies of the QAPP upon receipt of USEPA response to the September 21 inquiry

Should you have any questions on the above, please do not hesitate to contact me at (972) 687-7516 or e-mail at <u>Roger\_Smith@oxy.com</u>.

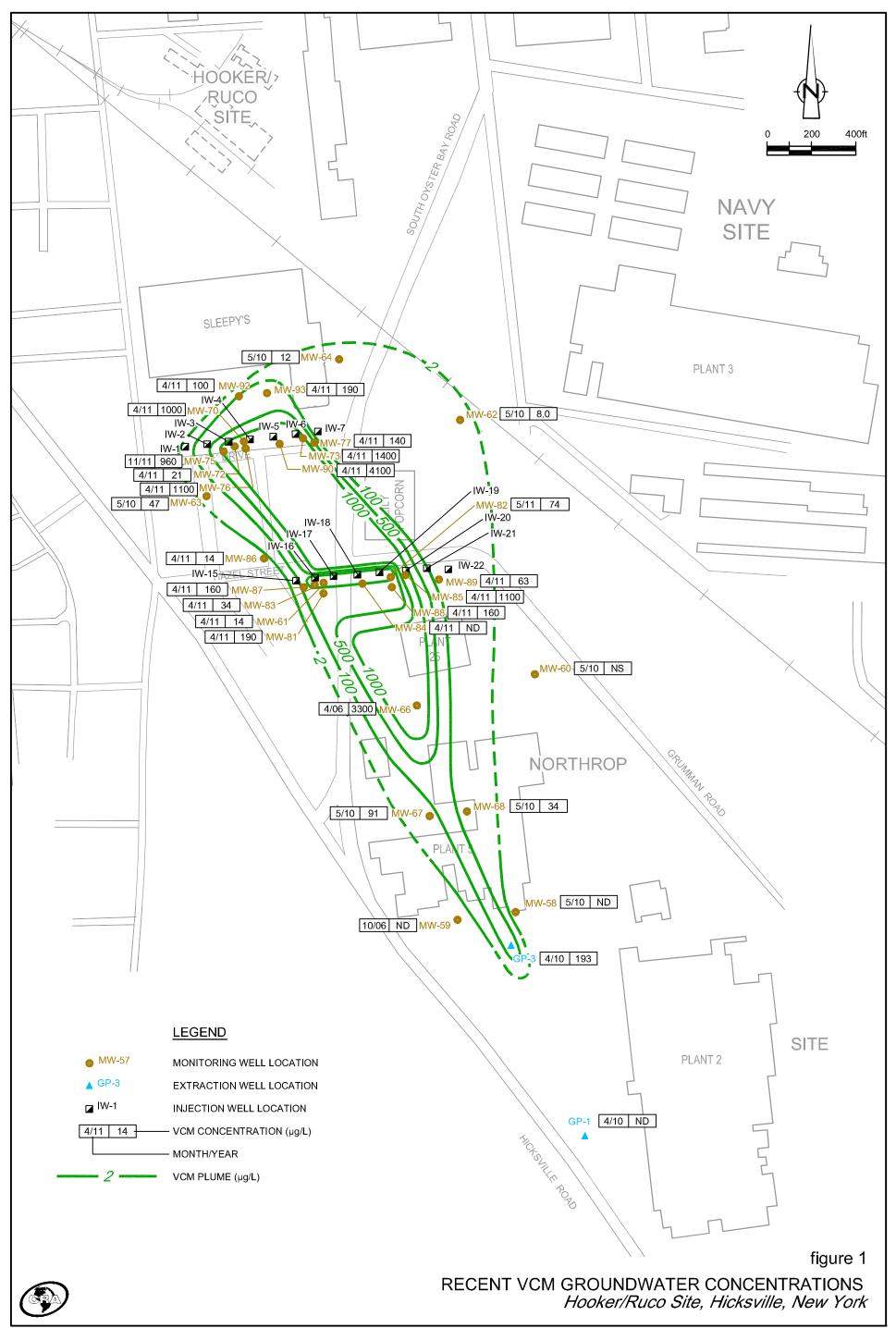
Yours sincerely,

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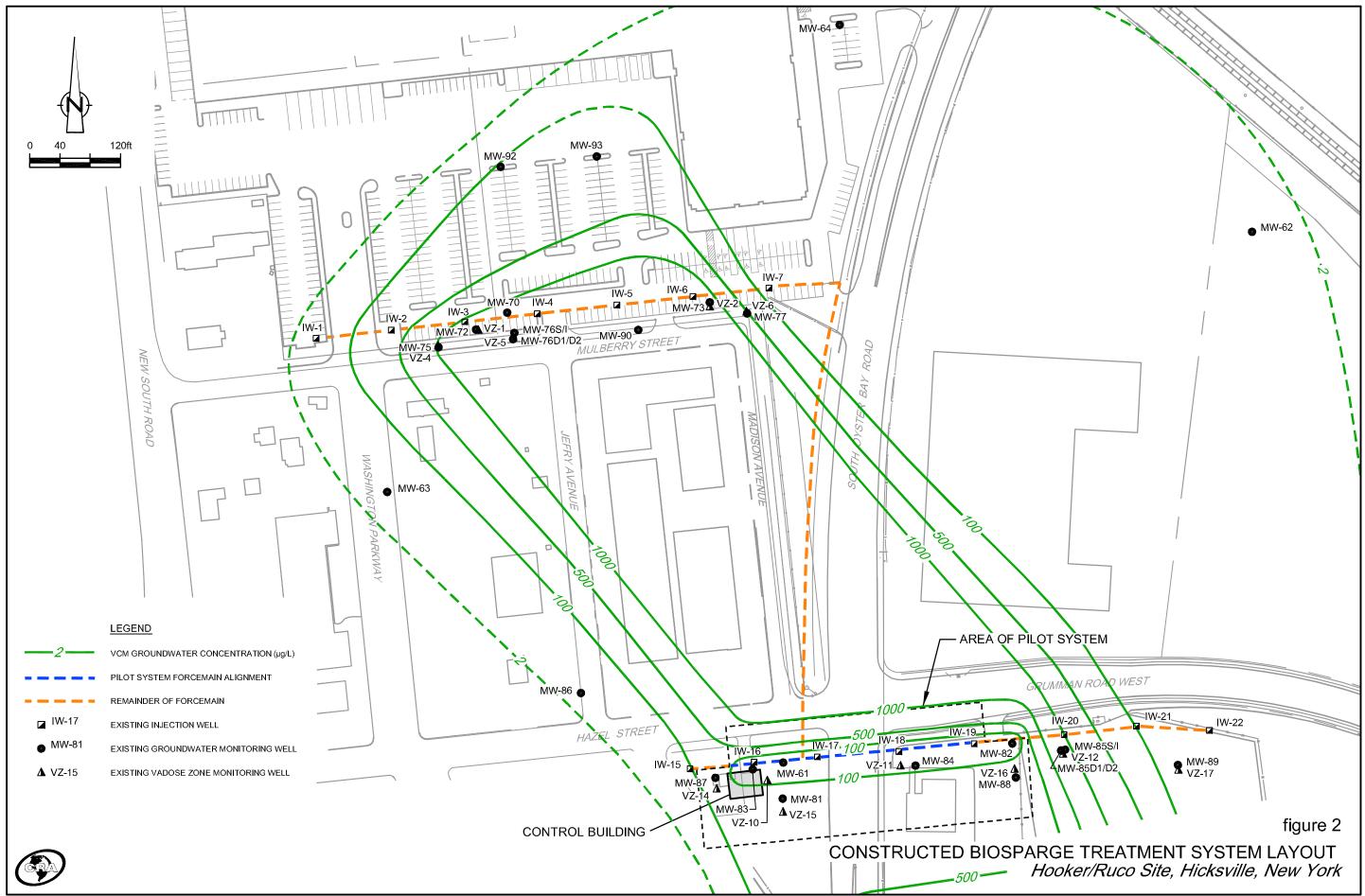
Roger Smith Senior Project Manager

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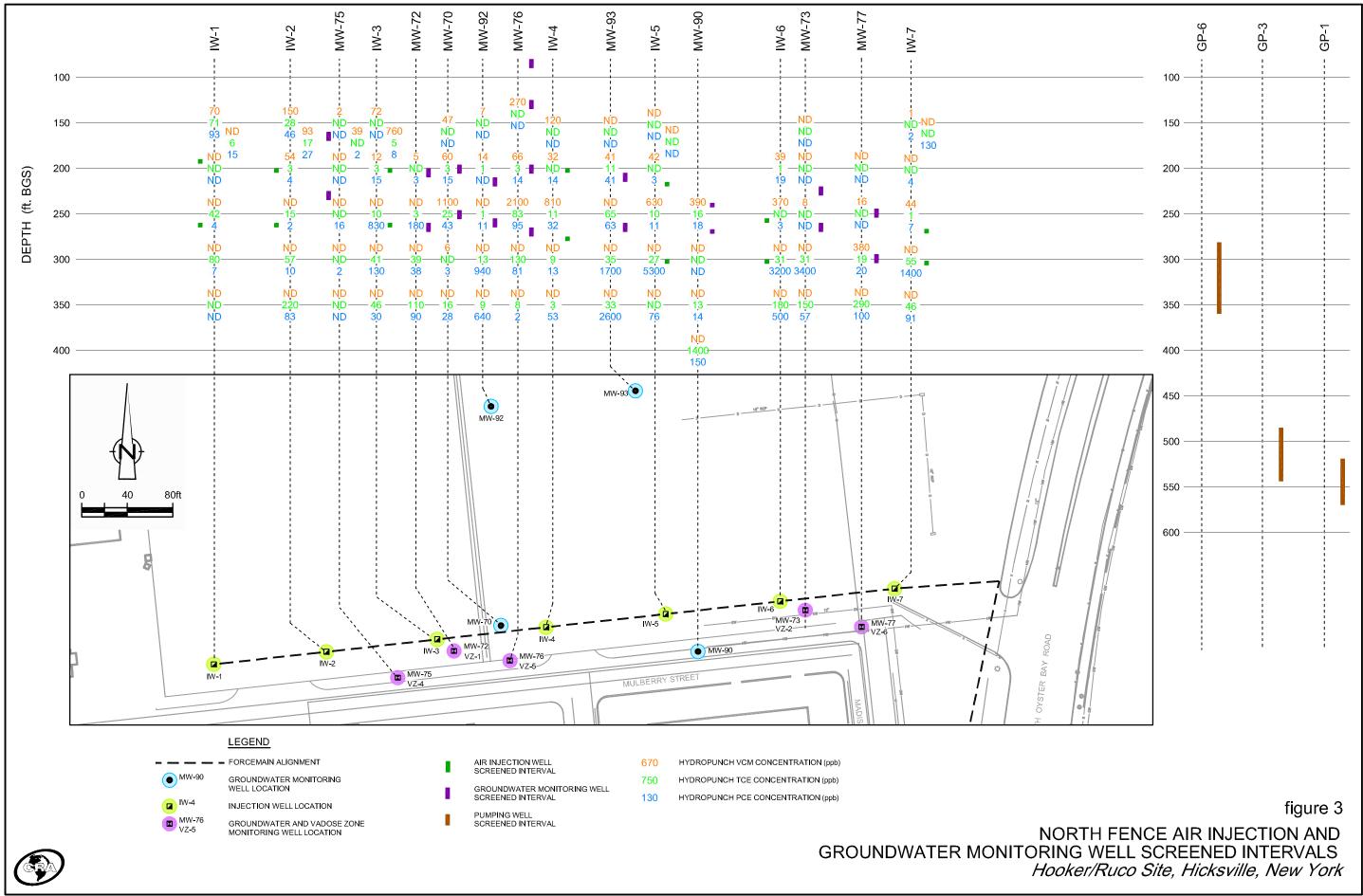
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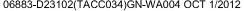


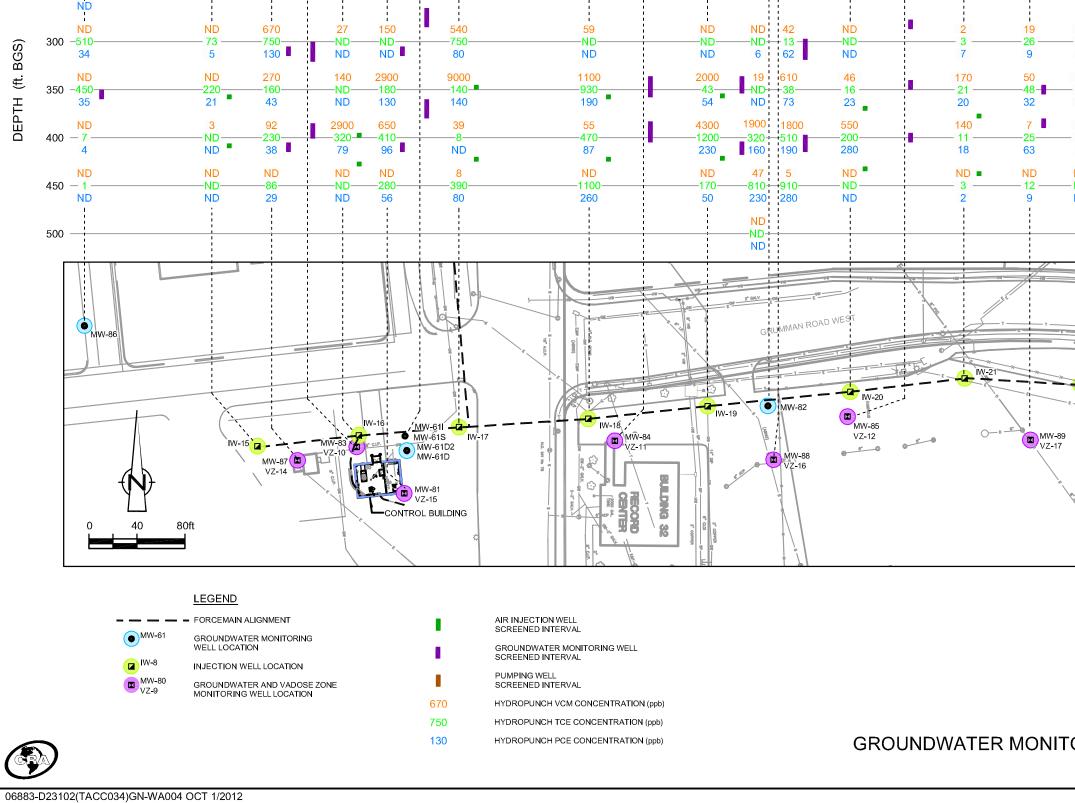
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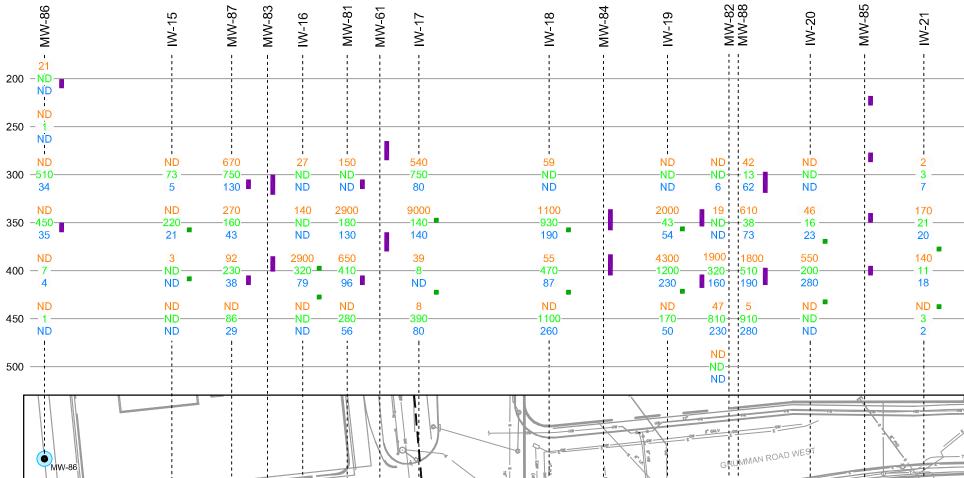


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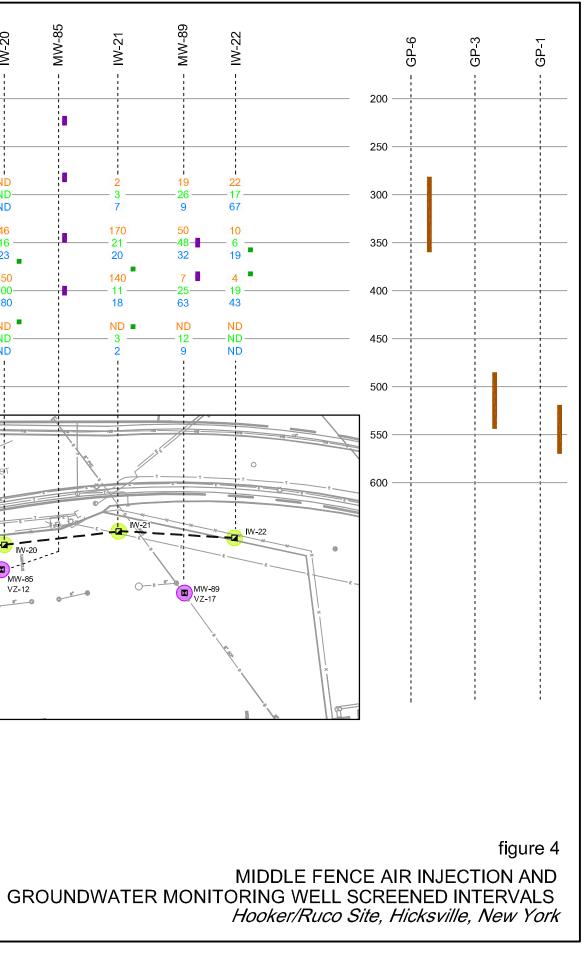


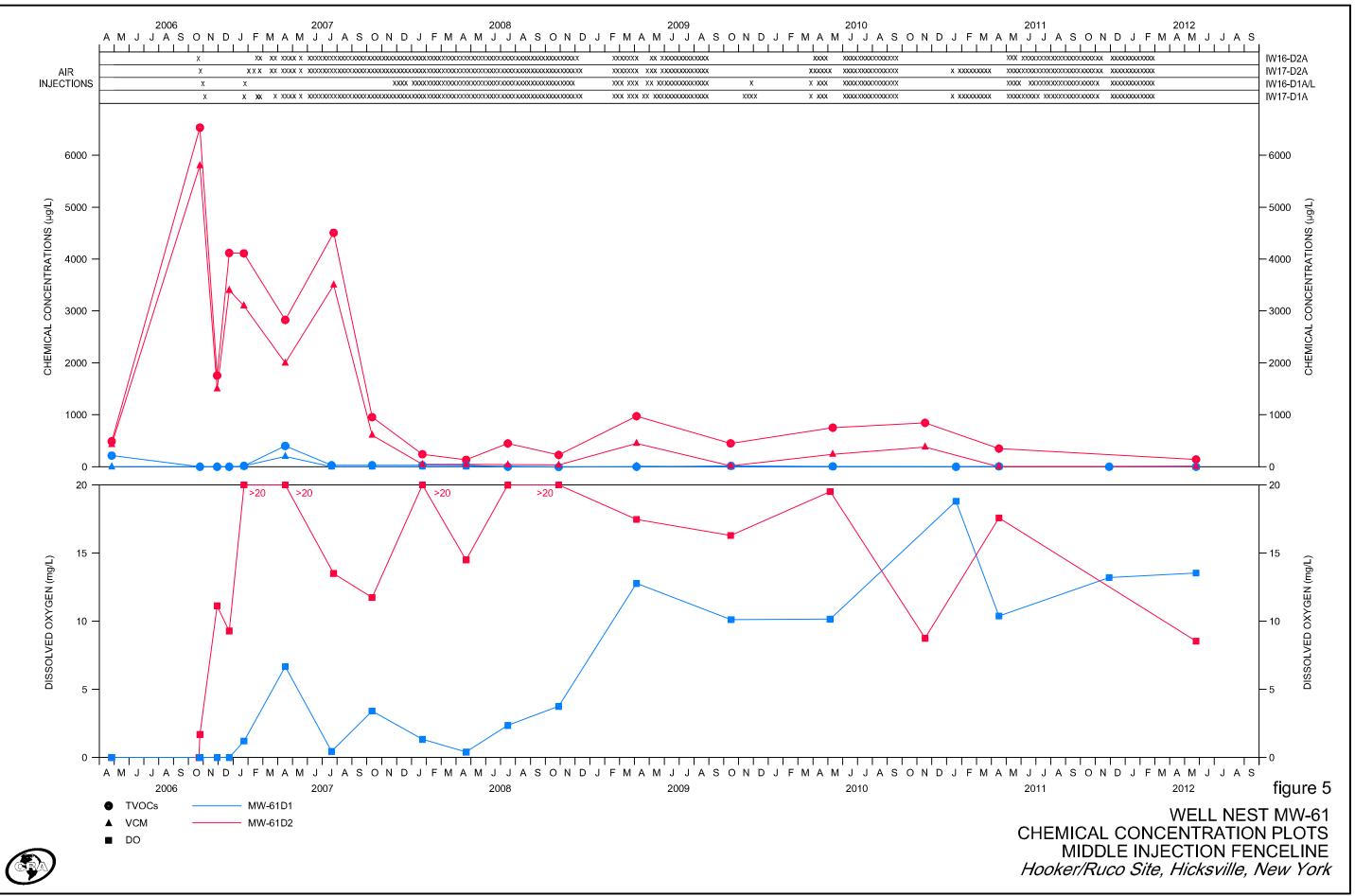




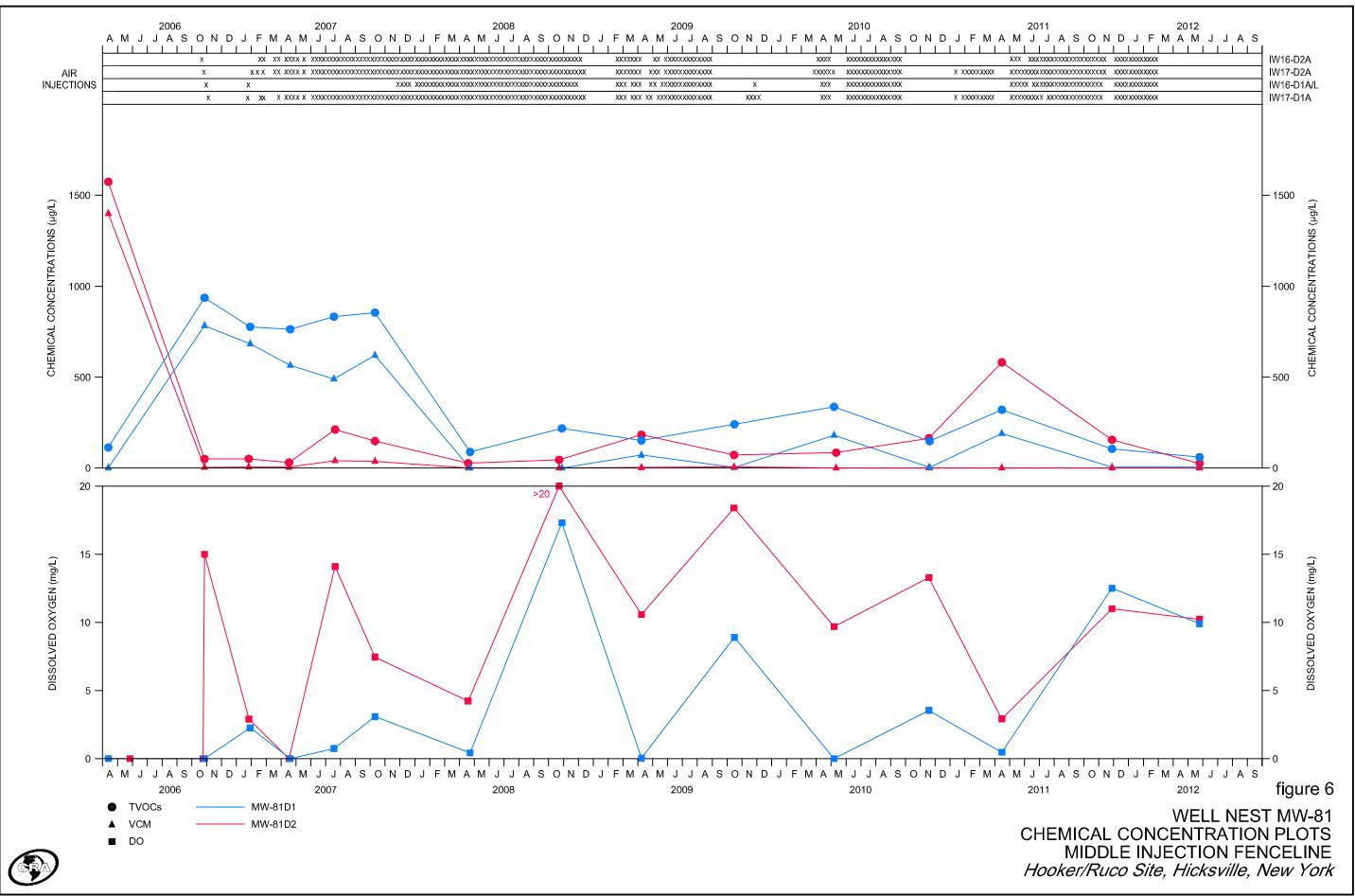


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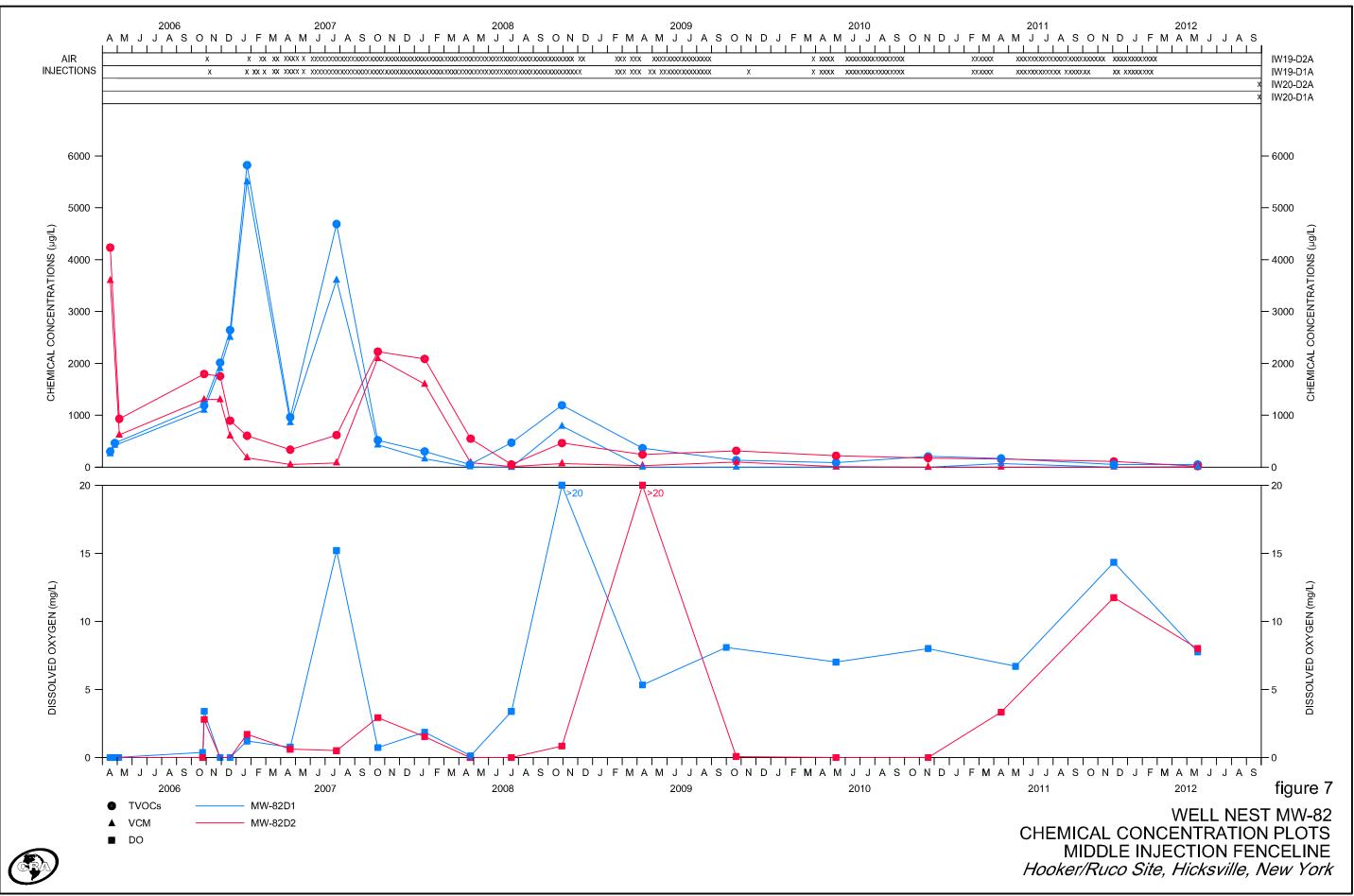




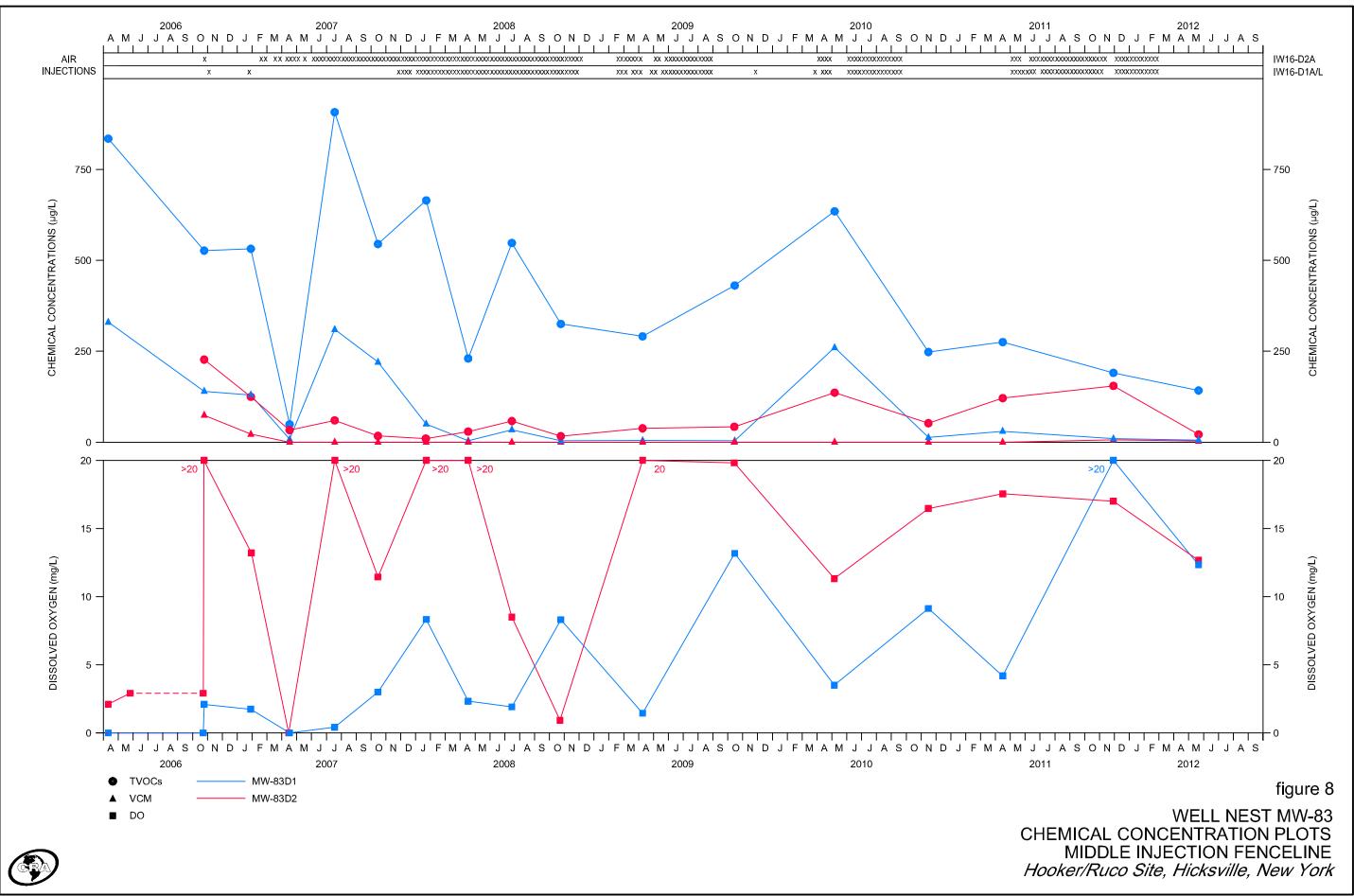
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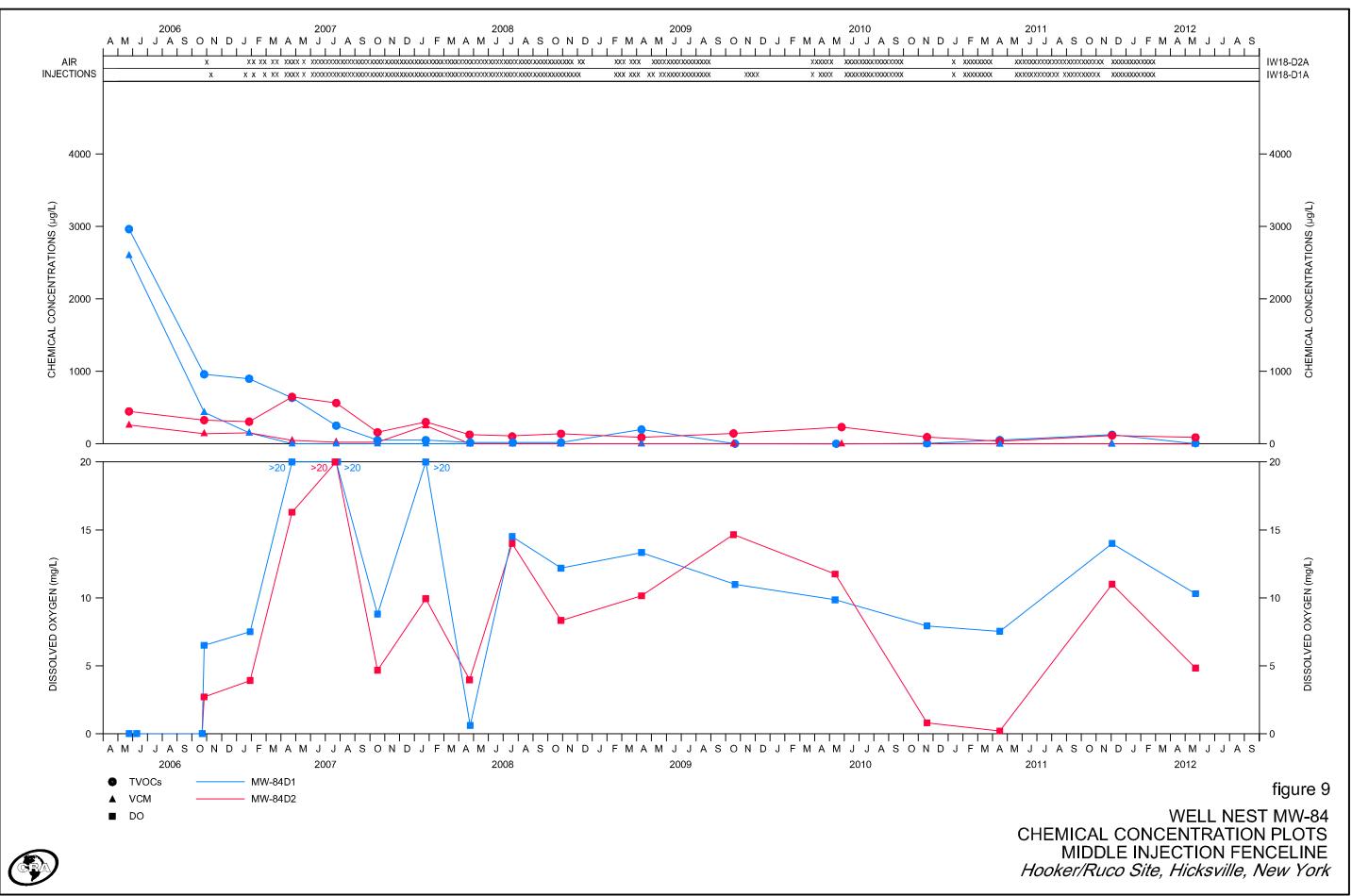
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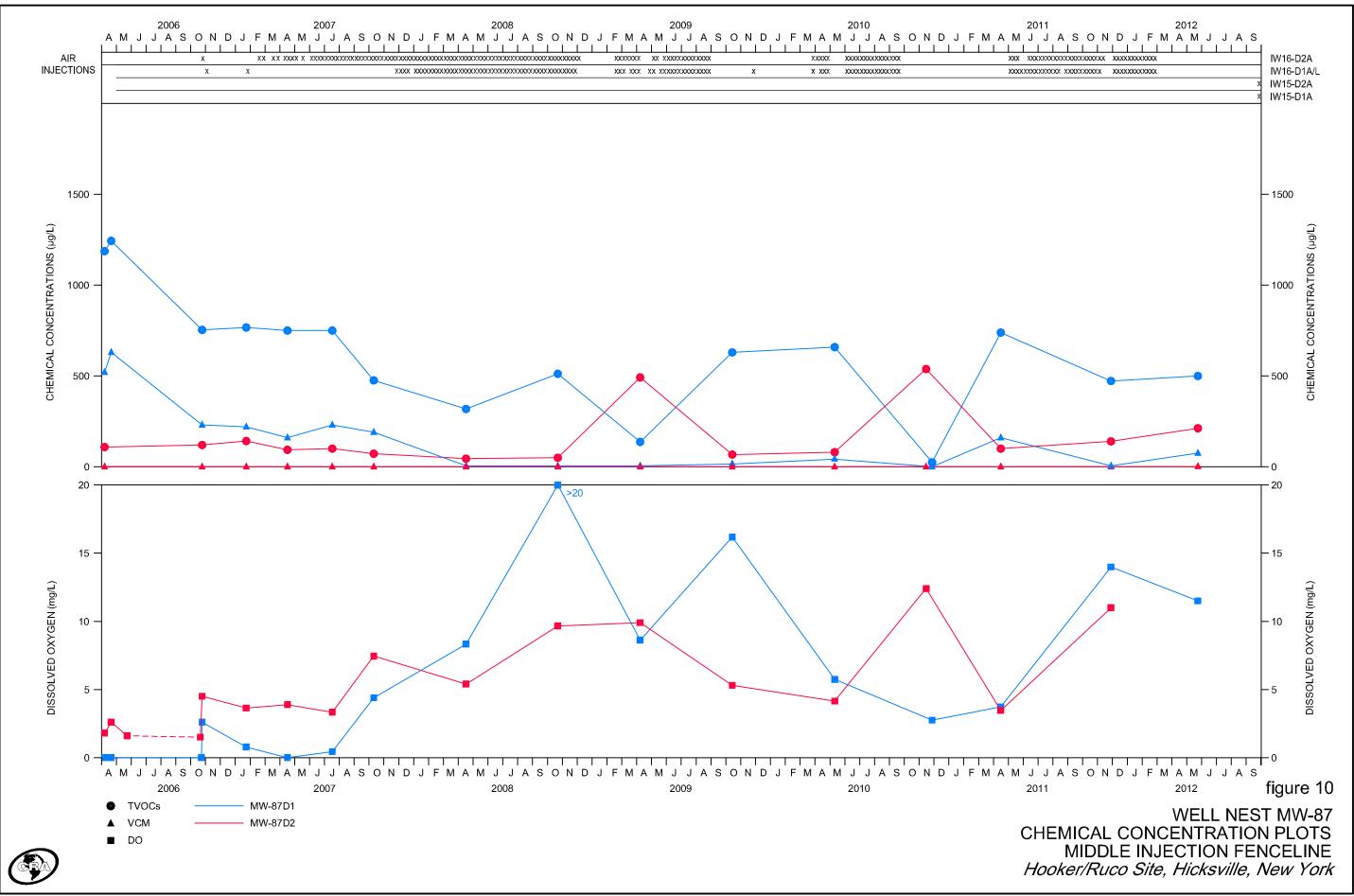


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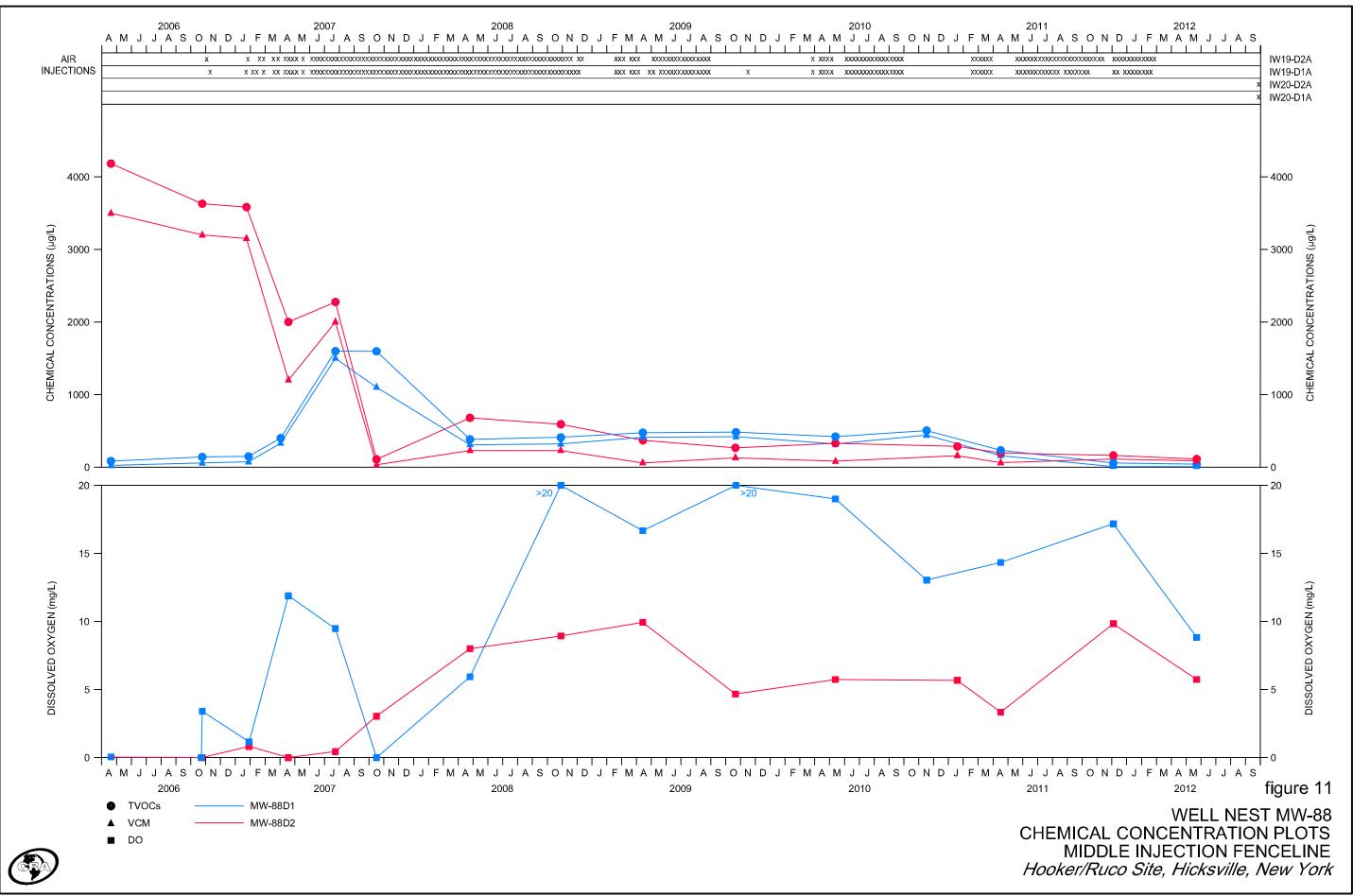


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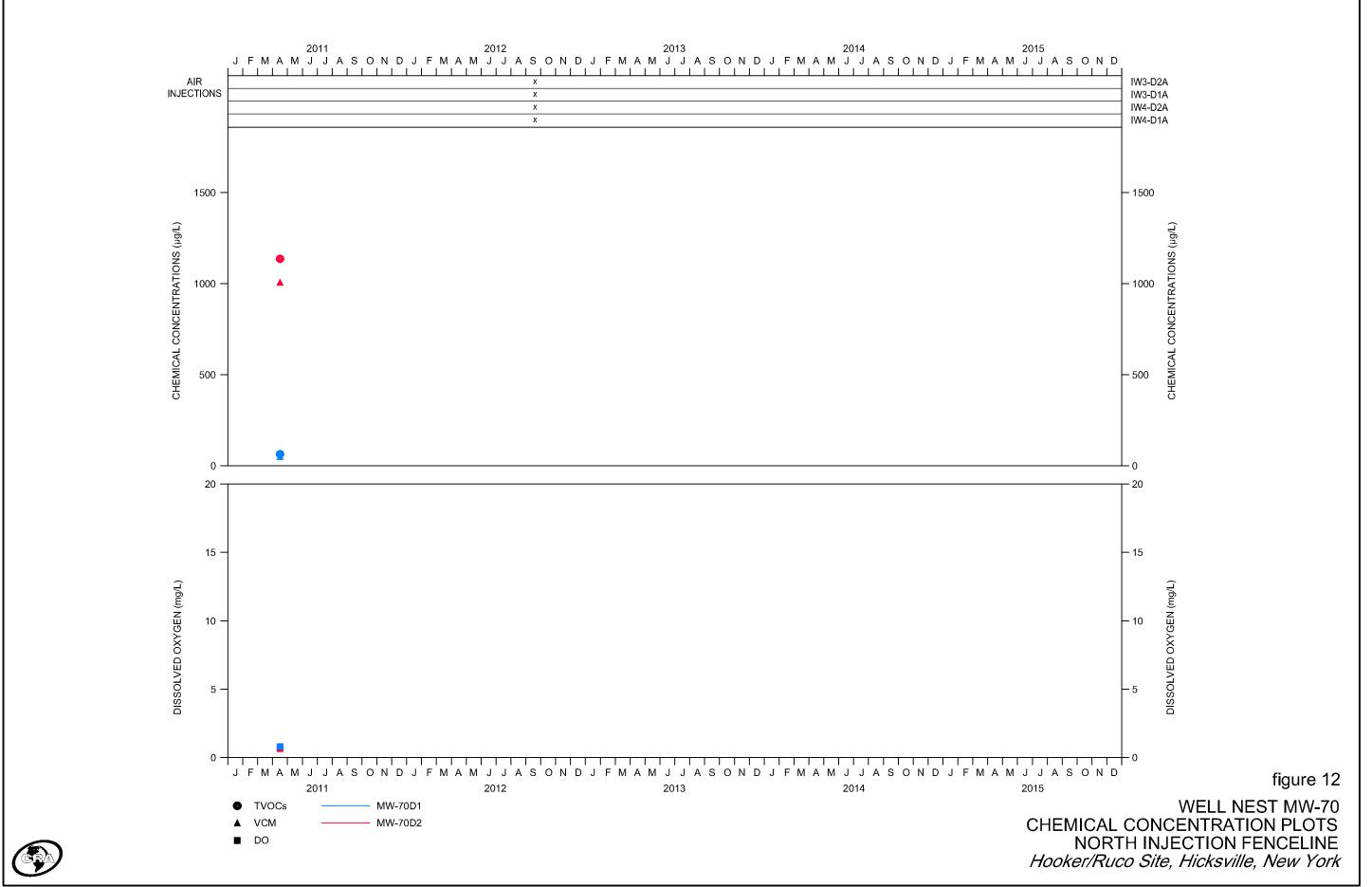


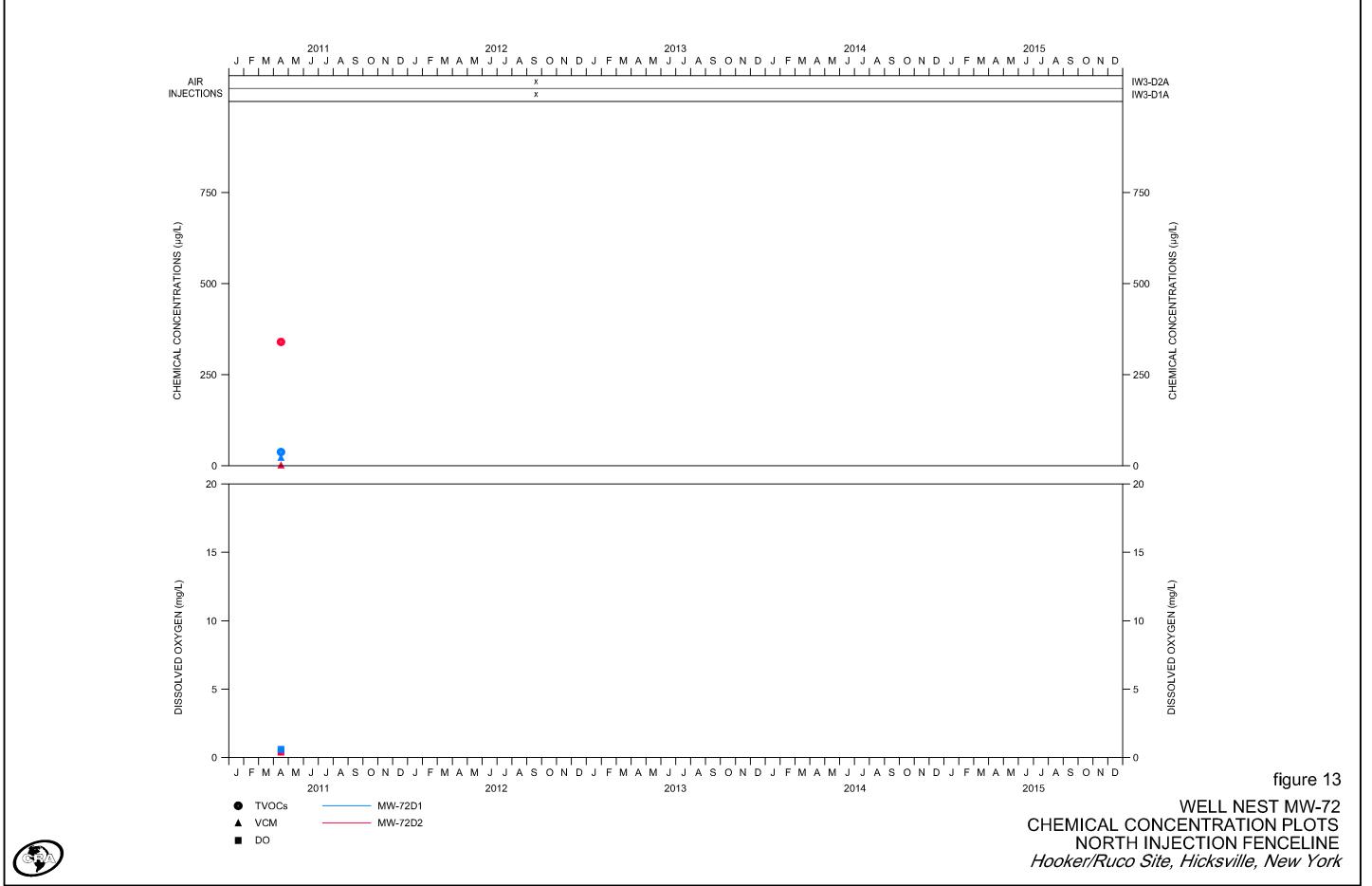


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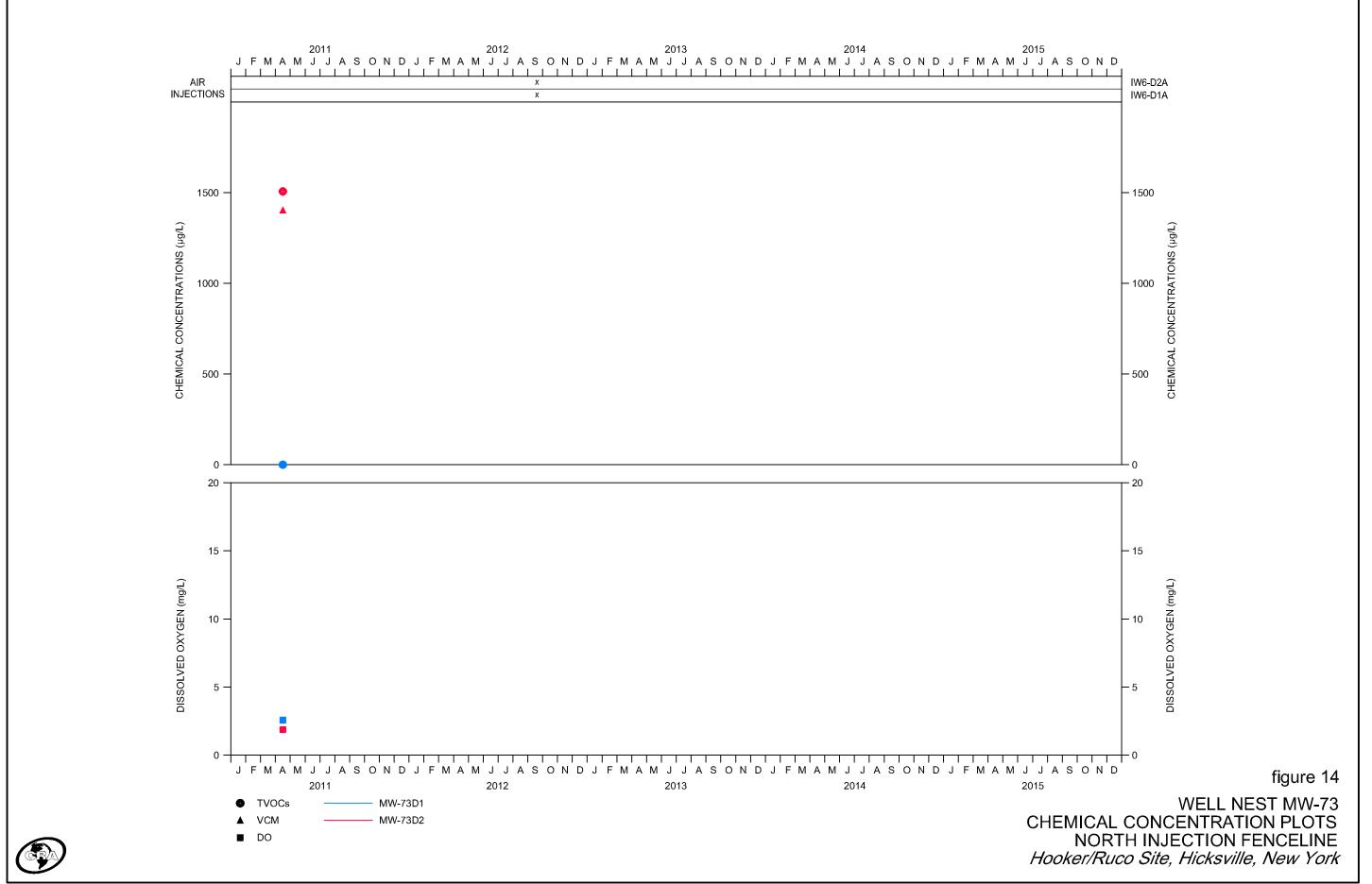


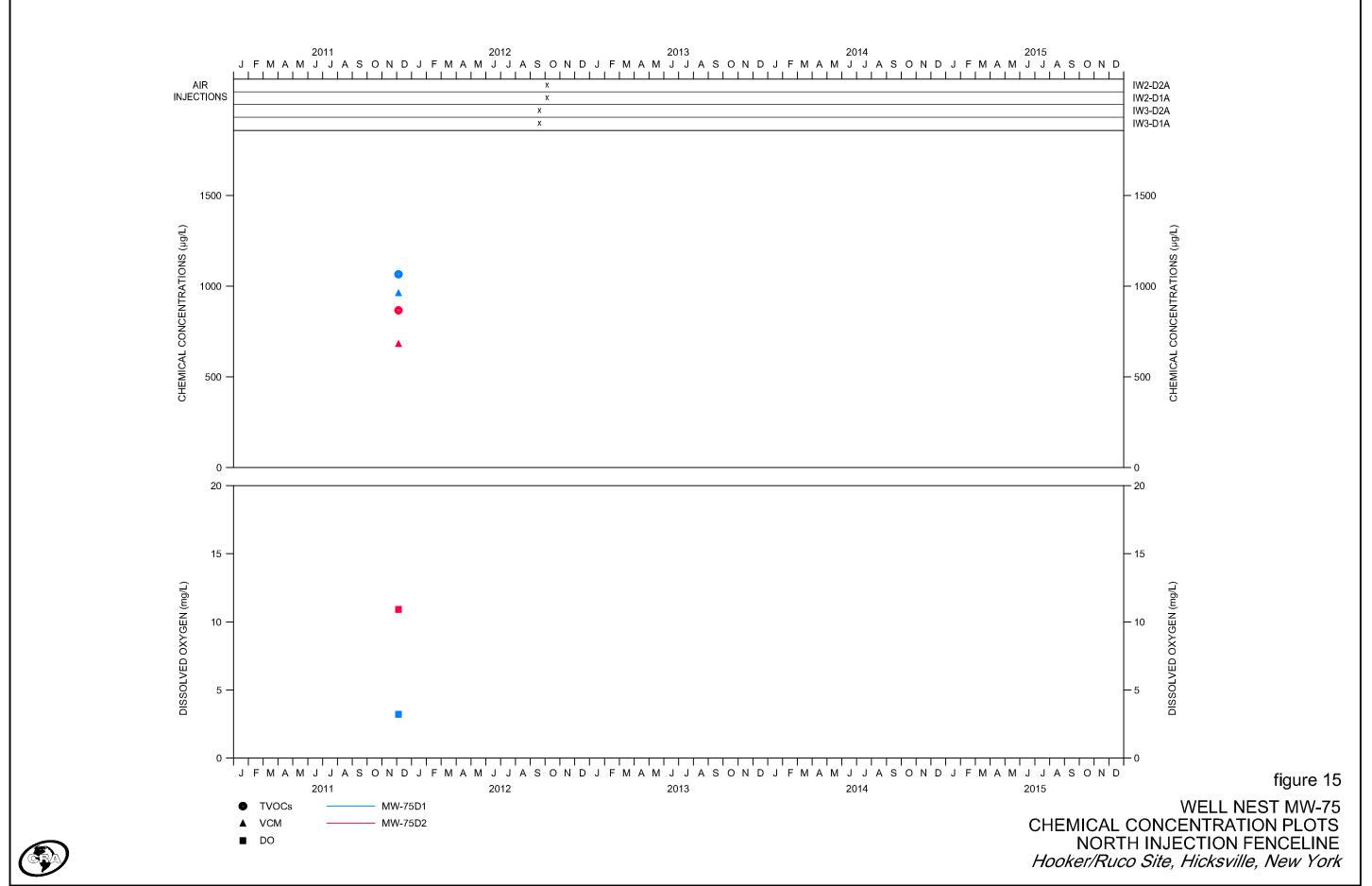
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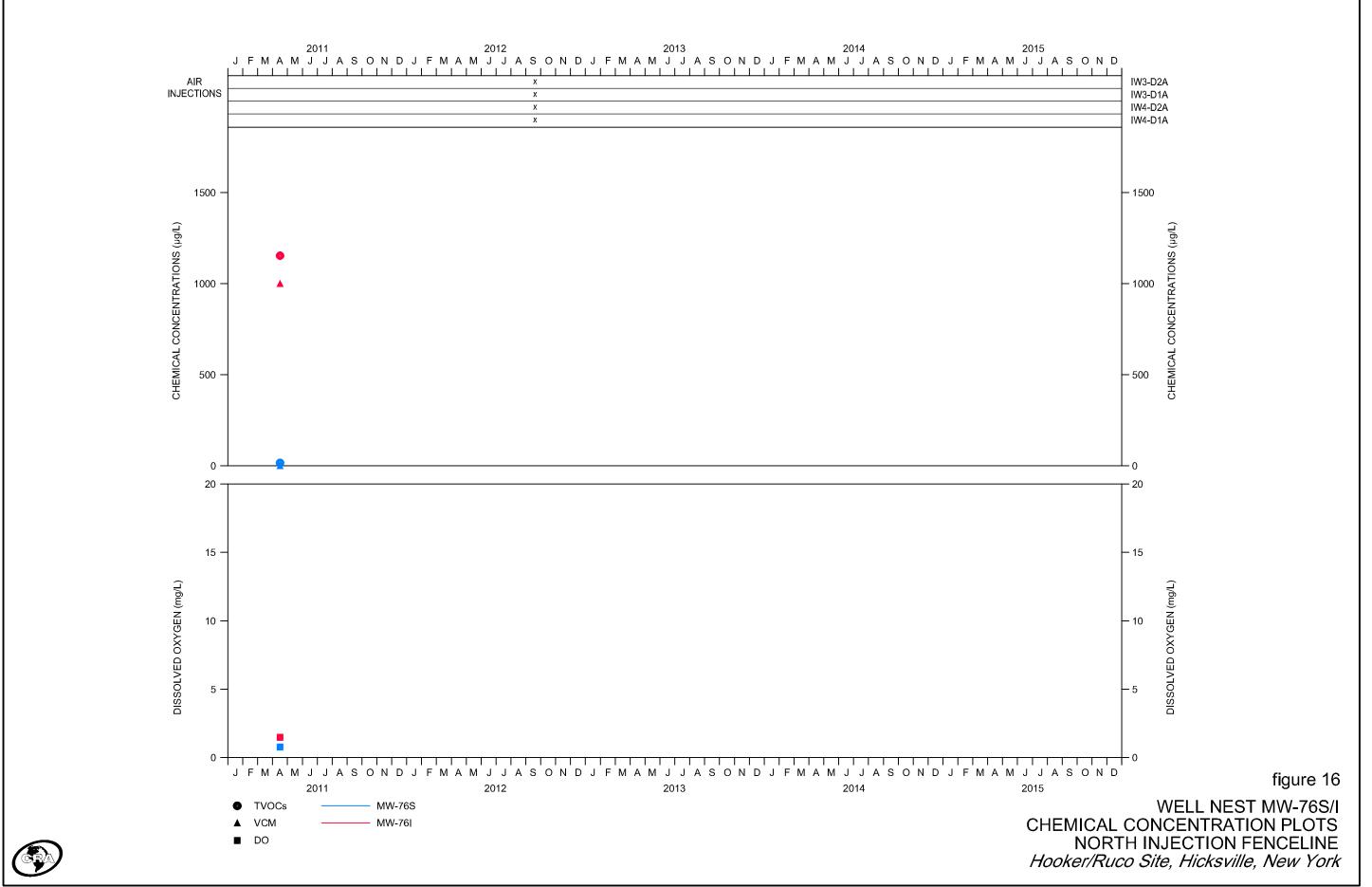


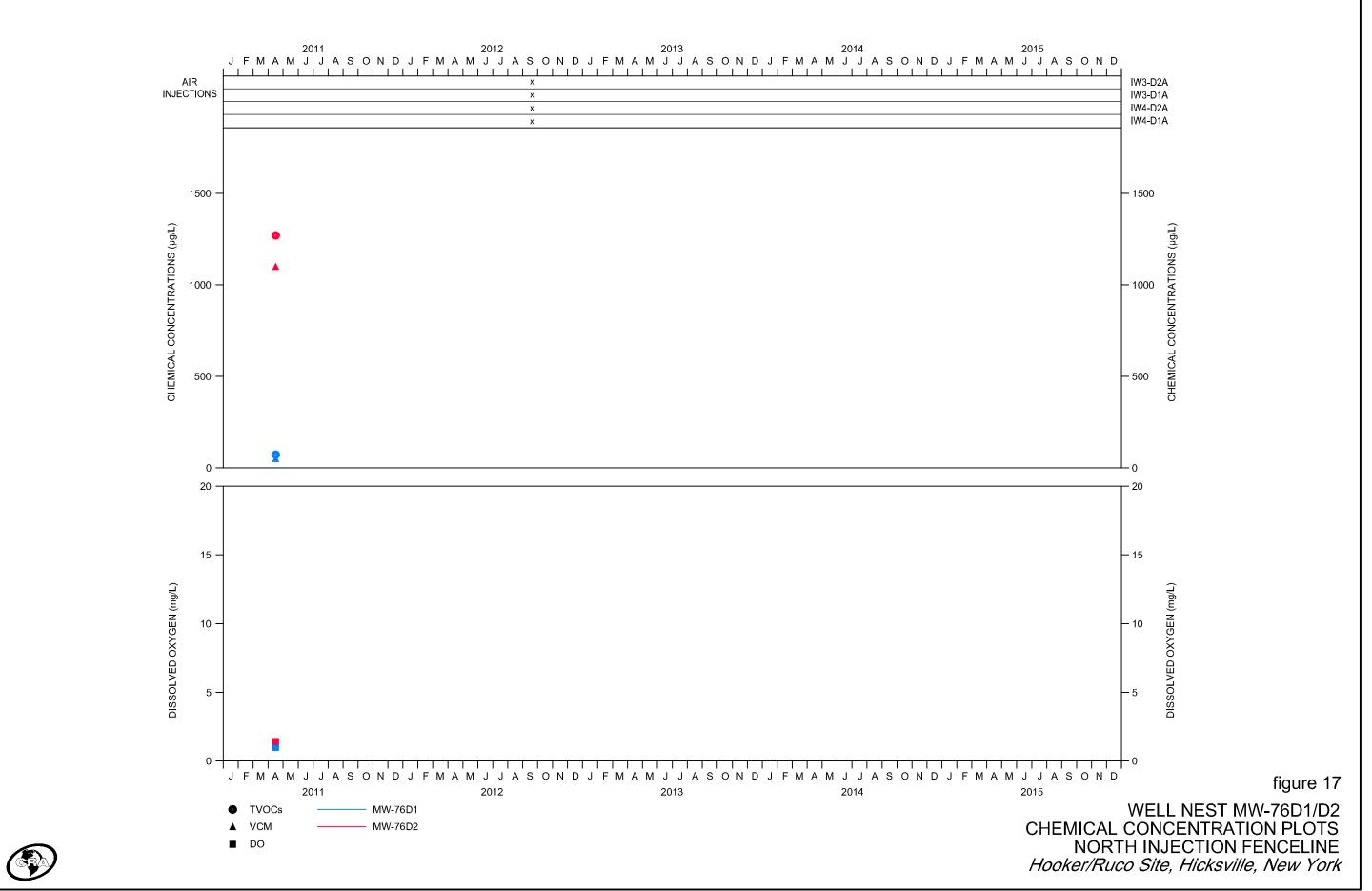


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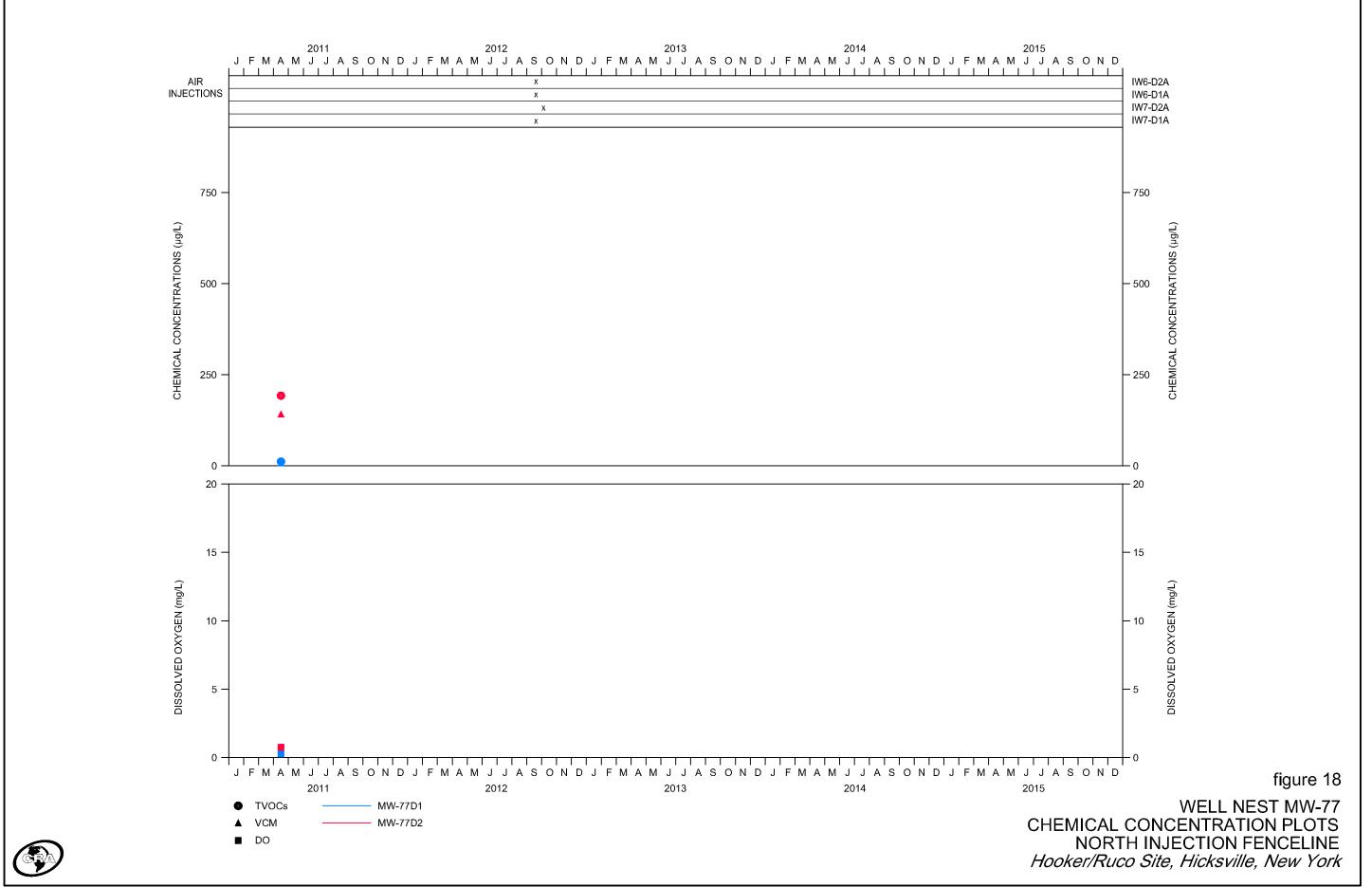




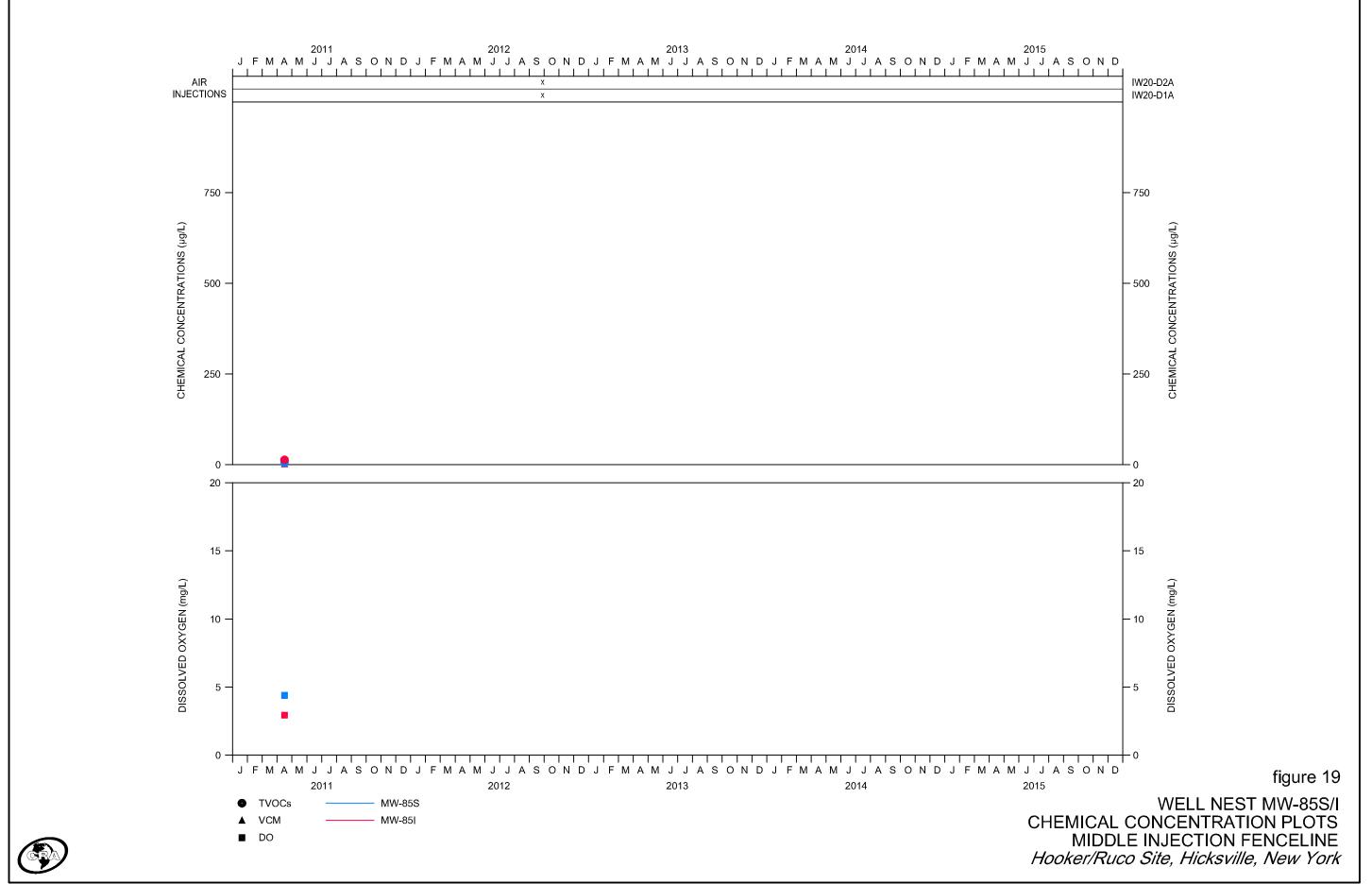


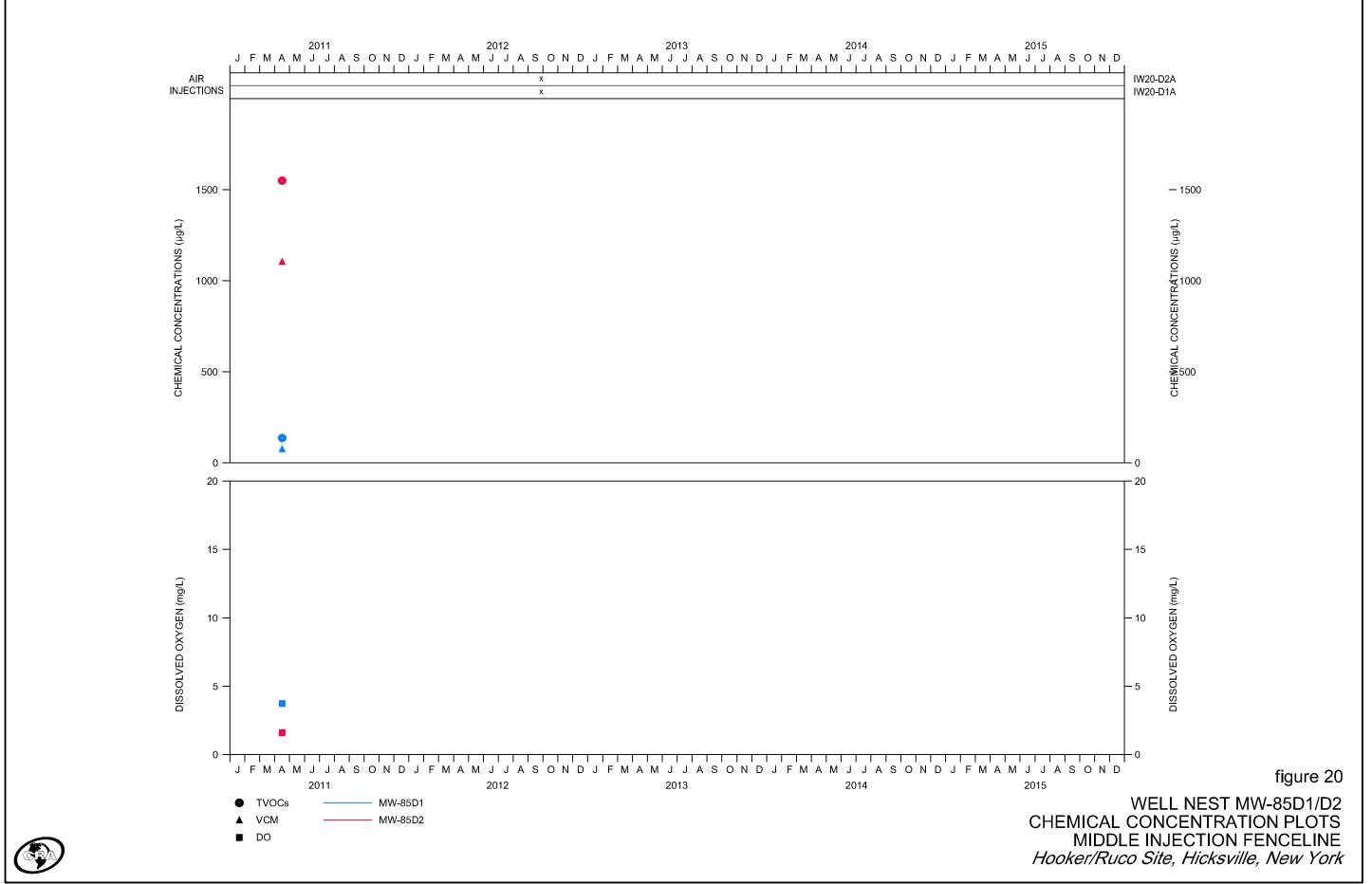


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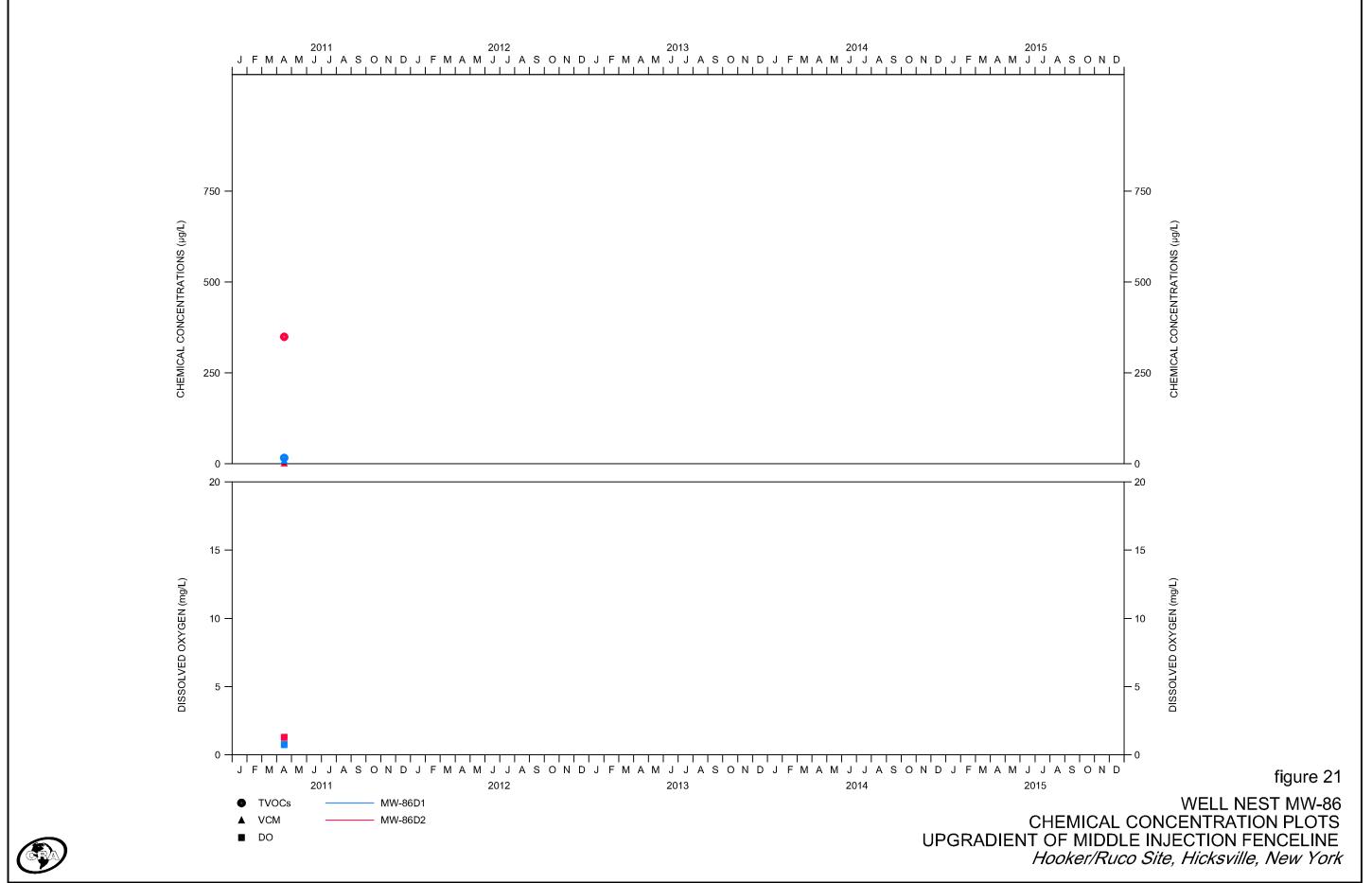


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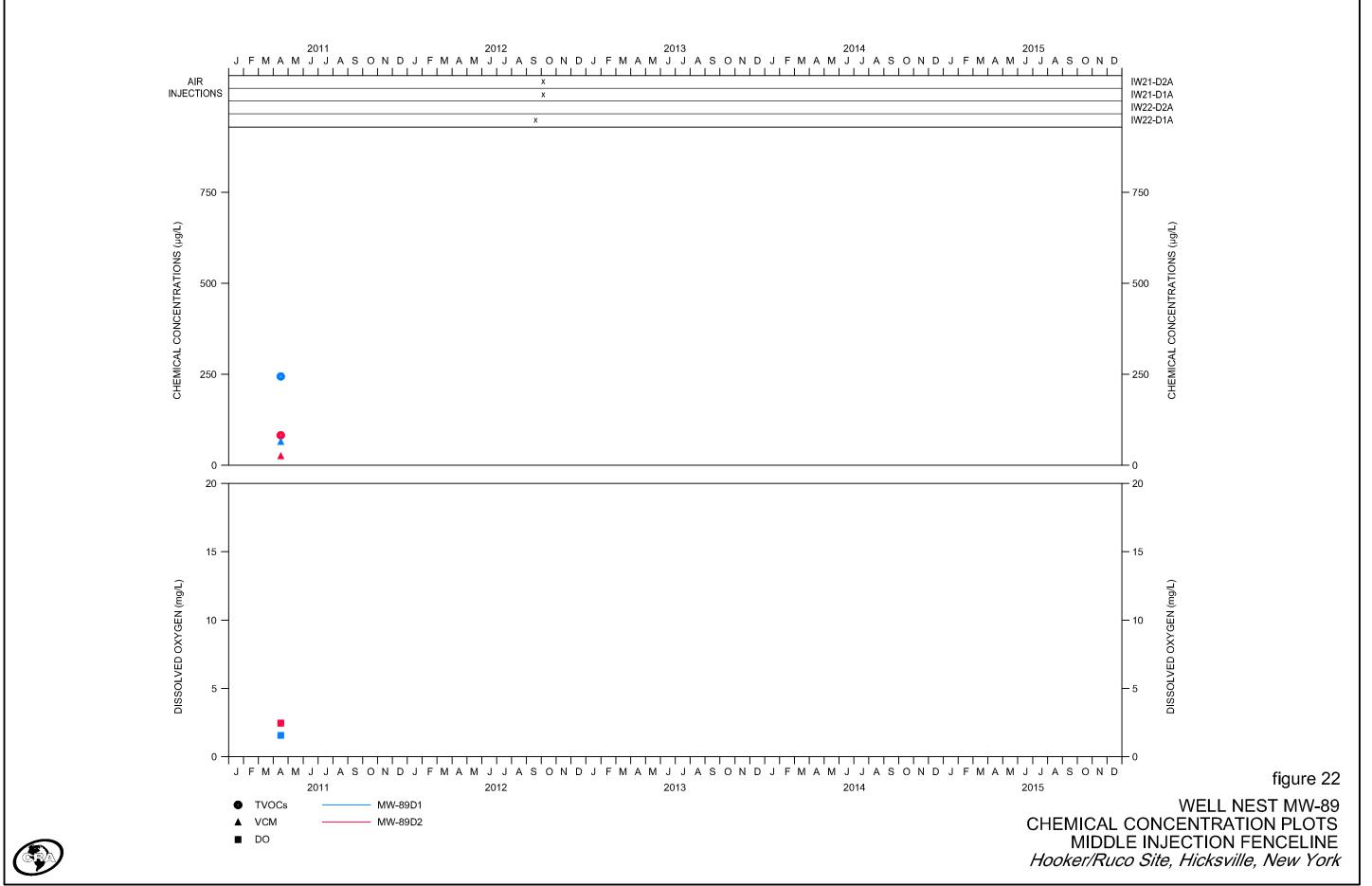




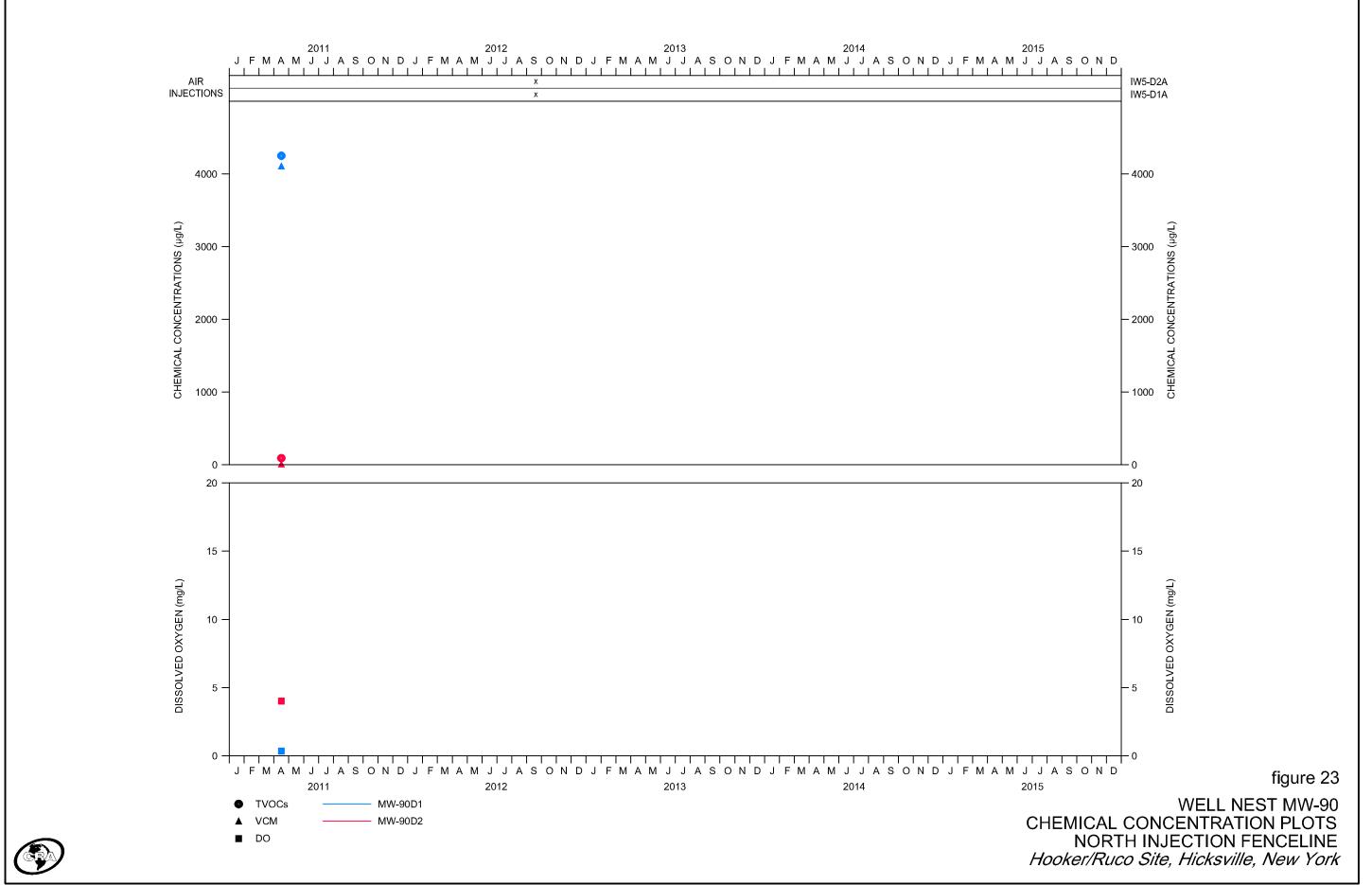
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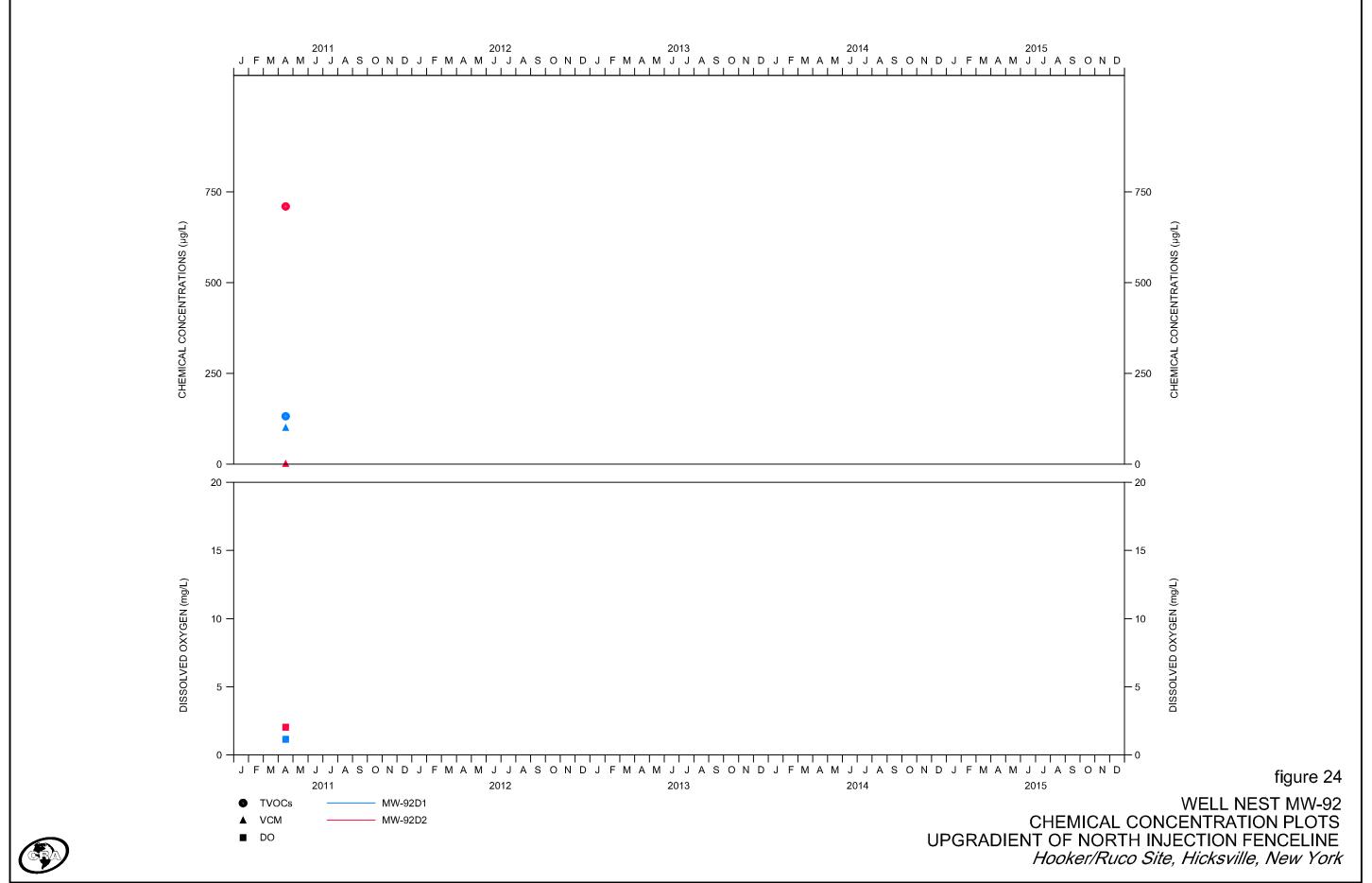


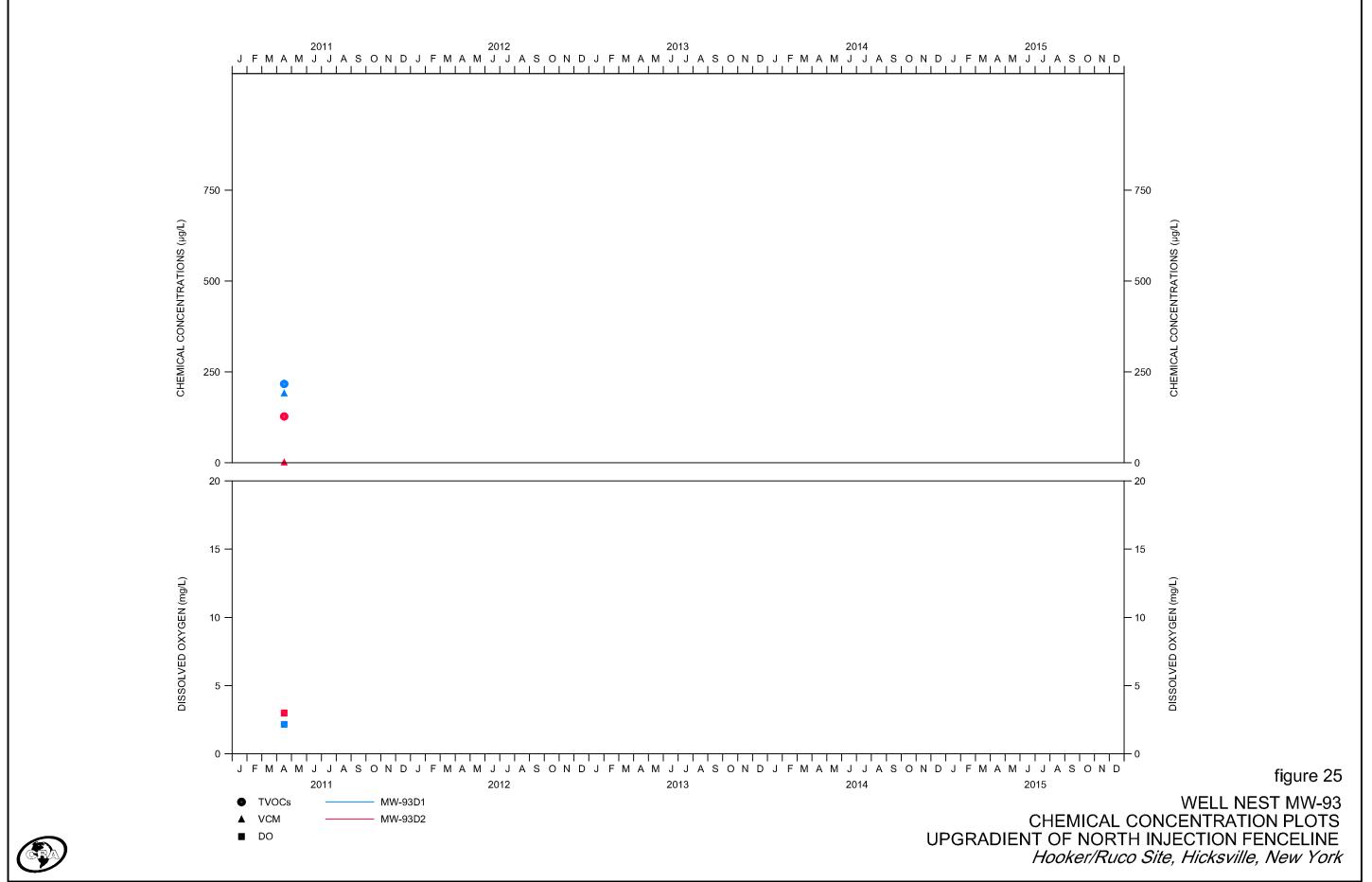
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## GLENN SPRINGS HOLDINGS INC. HOOKER/RUCO SITE HICKSVILLE, NEW YORK

Groundwater Investigations Beyond the Ruco Property (OU-3)

July through September 2012

Task and Activity	Percentage of Activity Completed	Scheduled Start Date Completion Do	ate Completion Date
• Work Plan	100	July 1993	September 23, 1993
<ul> <li>Borehole/Well Installation (MW-50, MW-53, MW-54 and MW-55)</li> </ul>	100	September 30, 1994	June 19, 1995
• Well Development, Sampling and Analysis	100	July 10, 1995	August 9, 1995
Water Level Measurements	100	August 15, 1995	April, 1996
Interim Report	100	May 23, 1995	June 15, 1995
Interim Report - Addendum No. 1	100	July 28, 1995	August 2, 1995
Grumman Production Wells     Sample Collection and Analysis	100	August 1, 1995	October 4, 1995
• Well Installation (MW-51, MW-52, MW-56 and MW-57)	100	August 30, 1995	January 26, 1996
Regional Groundwater Level Monitoring Event	100	October 3, 1995	October 3, 1995
Well Development, Sampling and Analysis	100	January 22, 1996	July 5, 1996
Grumman Groundwater Model	100	July 27, 1995	November 20, 1997
Phase I Report	100	February 21, 1996	April 26, 1996
• Supporting Documentation Regarding the Effectiveness of In Situ Remediation	100	June 10, 1996	August 9, 1996
Phase II Report	100	February 21, 1996	August 12, 1996
Comments on DEC Draft Supplemental Feasibility Study	100	September 23, 1996	October 17, 1996
Responses to Northrop Comments on the Phase I Report	100	April 17, 1997	June 6, 1997
Comments on DEC Supplemental Feasibility Study	100	June 1, 1997	June 20, 1997
Comments on Navy Regional Groundwater Feasibility Study	100	July 28, 1997	October 8, 1997
Revised Pages for Navy Regional Groundwater Feasibility Study	100	July 28, 1997	November 3, 1997
Comments on Groundwater Flow Model Report	100	November 20, 1997	December 5, 1997
Comments on Draft Final Regional Groundwater Feasibility Study	100	March 27, 1998	May 1, 1998
Comments on Northrop Letter Report	100	May 20, 1998	June 4, 1998
Evaluation of MW-52 Area Groundwater Extraction System	100	July 1, 1998	July 29, 1998
Remedial Investigation Report	100	December 1, 1998	January 21, 1999
Feasibility Study Report	100	December 1, 1998	March 16, 1999
Groundwater Treatability Study (GTS)	100	December 16, 1998	July 19, 1999
Responses to EPA Comments on RI Report	100	May 25, 1999	June 11, 1999
Responses to EPA Comments on FS Report	100	June 21, 1999	July 7, 1999
<ul> <li>Scope of Predesign Investigative Activities</li> <li>- Initial</li> <li>- Revised</li> </ul>	100 100	June 1, 1999 February 16, 2001	June 11, 1999 May 28, 2001

## GLENN SPRINGS HOLDINGS INC. HOOKER/RUCO SITE HICKSVILLE, NEW YORK

Groundwater Investigations Beyond the Ruco Property (OU-3)

July through September 2012

Task and Activity	Percentage of Activity Completed		neduled letion Date Completion Date
Revised RI Report	100	May 25, 1999	November 16, 1999
Revised FS Report	100	July 7, 1999	December 22, 1999
Responses to EPA Comments on GTS	100	October 14, 1999	November 3, 1999
Responses to EPA Comments on FS Report Responses	100	October 14, 1999	November 3, 1999
Obtain access agreements	100	June 1999	December 2001
Final RI Report	100	March 15, 2000	July 21, 2000
Final FS Report	100	April 10, 2000	July 25, 2000
• PRAP	100		July 28, 2000
• ROD	100		September 29, 2000
Unilateral Administrative Order	100		April 26, 2001
• Evaluate VCM presence in GP-3	100		August 15, 2001
• Design Supplemental System for VCM in GP-3	100	August 15, 2001	December 2001
EPA Conditional Approval for Predesign Activities	100		September 28, 2001
Issued Request for Bid for Well Installation	100		October 26, 2001
Contractor Arrangements	100		January 15, 2002
Arrangements for Biosparge Testing of Existing Wells	100		April 12, 2002
Biosparge Testing of Existing Wells	100	April 15, 2002	August 13, 2002
Phase 1 Well Installation	100	February 4, 2002	June 28, 2002
Upgrade of GP-1/GP-3 Treatment System	100	April 8, 2002	July 9, 2003
Sample Wells	100	June 17, 2002	July 12, 2002
Evaluate Pre-Design Information / Develop Scope of Biosparge	e Remedy 100		November 22, 2002
• Install 2 Additional Wells (MW-67/68)	100	December 18, 2002	February 14, 2003
• Sample Wells MW-67 & MW-68			March 25/26, 2003
Responses to EPA comments on Predesign Information Report	100	March 6, 2003	March 27, 2003
EPA Meeting			April 17, 2003
Closed Well T-1	100		May 12, 2003

Closed Well T-1	100		May 12, 2003
MW-67/68 Installation Report	100		May 23, 2003
• Responses to EPA comments on March 27, 2003 Responses	100	June 25, 2003	July 29, 2003
• Pre-Final (95%) RD Report	100	July 7, 2003	October 31, 2003
Responses to EPA comments on 95% RD Report	100	April 12, 2004	May 27, 2004
Submitted Due Diligence Request to Northrop	100		May 10, 2004
• Follow up Due Diligence Clarification to Northrop 6/11 Data Package	100		June 25, 2004

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## GLENN SPRINGS HOLDINGS INC. HOOKER/RUCO SITE HICKSVILLE, NEW YORK

Groundwater Investigations Beyond the Ruco Property (OU-3)

July through September 2012

Task and Activity	Percentage of Activity Completed	Start Date	Scheduled Completion Date	Completion Date
Offer to Northrop for Property Purchase	100			October 1, 2004
Sample 13 Wells and Submit Results	100	August 23, 2004		October 14, 2004
Responses to EPA Comments on 95% RD Report	100	November 17, 2004		December 6, 2004
Revised Property Purchase offer submitted to Northrop	100	December 22, 2004		December 22,2004
Prepare 100% RD Report	100	January 12, 2005		May 27, 2005
Property Purchased	100			June 2005
• 100% Design Approved	100			July 7, 2005
Obtain Building Permits	100	July 11, 2005		November 10, 2005
Arrange Contractors	100	January 2005		July 22, 2005
Well Installation	100	September 13, 2005		April 28, 2006
Biosparge System Installation	100	November 2005		May 2006
Closure of On-Site and Off-Site Wells	100	November 2005		May 10, 2006
OU-1 Soil Borings	100	November 2005		January 11, 2006
Background Groundwater Sampling	100	March 27, 2006		June 14, 2006
Pre-Start Sampling	100			October 24, 25, and 26, 2006
Final Inspection	100			October 27, 2006
Biosparge System Start-Up	100			October 27, 2006
First Monthly Sampling	100			November 28 to 30, 2006
Second Monthly Sampling	100			December 20 and 21, 2006
Noise Survey	100			January 18, 2007
2007 First Quarterly Sampling	100			January 23 to 30, 2007
Submission of Phase I Construction Documents	100			February 1, 2007
2007 Second Quarterly Sampling	100			April 18 to 27, 2007
2007 Third Quarterly Sampling	100			July 16 to 27, 2007
2007 Fourth Quarterly Sampling	100			October 8 to 18, 2007
Evaluation/Recommendation for Design Modifications	100			January 15, 2008

Evaluation/Recommendation for Design Modifications	100	January 15, 2008
2008 First Quarterly Sampling	100	January 22 to 28, 2008
2008 Second Quarterly Sampling	100	April 16 to 25, 2008
2008 Third Quarterly Sampling	100	July 15 to 18, 2008
2008 Fourth Quarterly Sampling	100	October 21 to 30, 2008
Construction of North Fence Underground Components	100	December 23, 2008
2009 First Semi-Annual Sampling	100	April 7 to 14, 2009

CRA 006883Taccone-34 T1

# GLENN SPRINGS HOLDINGS INC. HOOKER/RUCO SITE HICKSVILLE, NEW YORK

Groundwater Investigations Beyond the Ruco Property (OU-3)

July through September 2012

Task and Activity	Percentage of Activity Completed	Start Date	Scheduled Completion Date	Completion Date
Response to USEPA Biosparge System Comments	100	August 27, 2009		September 23, 2009
2009 Second Semi-Annual Sampling	100			October 13 to 21, 2009
Submittal of Biodegradation Supporting Information	100			November 30, 2009
Submittal of Revised Schedule	100			February 3, 2010
• Submittal of PDB/HydraSleeve <sup>1M</sup> Evaluation	100			February 11, 2010
Trailing Edge Proposal	100			March 15, 2010
2010 First Semi-Annual Sampling	100			May 3 to 25, 2012
Distribution of RFP for Biosparge System Well Installation	100			June 25, 2010
Contracted Well Driller	100			August 3, 2010
2010 Second Semi-Annual Sampling	100			November 15 to 29, 2010
Install Biosparge System Wells	100	September 20, 2010		May 15, 2011
• 2011 First Semi-Annual Sampling & Site Wide Event	100			April 7 to May 19, 2011
Distribution of RFP for Biosparge System Expansion	100			May 4, 2011
Receipt of Bids	100			June 17, 2011
• Submittal of PDB/HydraSleeve <sup>1 M</sup> Evaluation	100			August 31, 2011
USEPA Concurrence For Use of PDB Samplers	100			September 22, 2011
Update QAPP	100	September 22, 2011		October 24, 2011
2011 Second Semi-Annual Sampling	100			Nov. 30 to Dec. 1, 2011
Revise Updated QAPP	100	December 6, 2011		January 3, 2012
Address EPA Comments on revised updated QAPP and resubmit	100	February 17, 2012		April 13, 2012
Construction of Remainder of Biosparge System	100	March 5, 2012		August 15, 2012
2012 First Semi-Annual Sampling	100			May 23 and 24, 2012
Submit Interim Remedial Action Report	100			September 26, 2012

CRA 006883Taccone-34 T1