



July 22, 2015

Mr. Marc Harris
Supervisor, Power Plant NPDES Permitting
Florida Department of Environmental Protection
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399

**RE: Renewal Application for NPDES Permit No. FL0002275
Gulf Power Company- Crist Electric Generating Plant**

Dear Mr. Harris: *Marc*

Gulf Power has enclosed four (4) completed applications and supporting documents to renew the NPDES permit for Crist Electric Generating Plant pursuant to Section VII.C.1 of permit FL0002275. The application consists of the following information:

- Attachment 1 – Form 1 and Requested Changes to the existing NPDES permit
- Attachment 2 – Form 2CS
- Attachment 3 – Form 2CG
- Attachment 4 – Groundwater Summary Report as required by Condition III.13.

The required \$7,500 application fee is also enclosed.

Please feel free to contact Robert Jernigan at (850) 444-6024 or my staff if you have any questions or need any additional information.

Sincerely,

James O. Vick
Environmental Affairs

cc: Mike Markey, Gulf Power
Robert Jernigan, Gulf Power
Jora Maxwell, Gulf Power

Attachment 1
Form 1 and Requested Changes



WASTEWATER FACILITY OR ACTIVITY PERMIT APPLICATION FORM 1 GENERAL INFORMATION

This form must be completed by all persons applying for a permit for a wastewater facility or activity under Chapter 62-620, F.A.C..

See Form 1 to determine which other application forms you will need.

DESCRIPTION OF PERMIT APPLICATION FORMS

Form 1 - General information. This booklet includes general information on applying for a permit for a wastewater facility or activity under Chapter 62-620, Florida Administrative Code (F.A.C.). **Form 1 is required for all permit applications.**

Form 2 - Specific information. This group of forms includes the specific information required for the type of wastewater facility or activity for which a permit is needed. Select the appropriate form(s) to be submitted with Form 1.

Form 2A - Domestic Wastewater Facilities.

Form 2B - Concentrated Animal Feeding Operations and Aquatic Animal Production Facilities.

Form 2CS -Industrial Wastewater Facilities (discharging process wastewater to surface waters).

Form 2CG -Industrial Wastewater Facilities (discharging process wastewater to ground water).

Form 2ES -Industrial Wastewater Facilities (discharging non-process wastewater to surface waters).

Form 2EG -Industrial Facilities (discharging non-process wastewater to ground water).

Form 2F - Stormwater Discharge Associated with Industrial Activity

Form 2CR -Non-Discharging/Closed Loop Recycle System.

SECTION A - GENERAL INSTRUCTIONS

Who Must Apply:

Persons who are or are going to discharge wastewater to waters of Florida or the United States must file for and be granted a permit under Sections 403.087, 403.088, or 403.0885, Florida Statutes (F.S.). Persons that discharge stormwater associated with industrial activity to surface waters of the state must file for and be granted a permit under Section 403.0885, F.S. There are severe penalties for discharging without a permit.

There are some exceptions to this requirement. Discharges of domestic sewage from vessels and discharges from properly operating marine engines are not required to have a permit under the laws listed above. However, discharges of rubbish, trash, garbage or other such materials discharged overboard do require permits. Vessels operated in a capacity other than as a means of transportation are required to have a permit if they are discharging to waters. These types include vessels used as an energy or mining facility, a storage facility, a seafood processing facility, or an anchored facility for the purpose of mineral or oil exploration or development.

The introduction of sewage, industrial wastes, or other pollutants into a domestic wastewater treatment facility does not need a permit under Sections 403.087, 403.088 or 403.0885, F.S. Persons discharging to permitted wastewater treatment facilities must comply with all applicable pretreatment standards. If a person has a plan or an agreement to switch from direct discharge into waters of the state to discharge to a domestic treatment facility, it does not relieve the person from obtaining a permit for the discharge until such time as the connection is made and the discharge is stopped.

Most discharges from agricultural and silvicultural activities to waters of the state do not require a permit under Sections 403.087, 403.088, or 403.0885, F.S. However, permits under those sections are required for discharges from concentrated animal feeding operations, concentrated aquatic animal production facilities, activities associated with approved aquaculture projects, and silvicultural point sources.

Where to Apply:

Permit applications must be filed with the Department of Environmental Protection (DEP) district office shown in Figure 1 for the county in which the wastewater facility or activity is located, except for permit applications for steam electrical generating power plants which are filed with the DEP office in Tallahassee. DEP offices are located at

Figure 1. State Map Showing DEP District Offices



NORTHWEST DISTRICT

160 Government Center, Ste 308
Pensacola, Florida 32501-5794
Phone No. (850) 595-8300

NORTHEAST DISTRICT

7825 Baymeadows Way, Suite B-200
Jacksonville, Florida 32256-7577
Phone No. (904) 448-4300

SOUTHWEST DISTRICT

3804 Coconut Palm Drive
Tampa, Florida 33619-8318
Phone No. (813) 744-6100

CENTRAL DISTRICT

3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767
Phone No. (407) 894-7555

SOUTH DISTRICT

2295 Victoria Avenue, Suite 364
Fort Myers, Florida 33901
Phone No. (239) 332-6975

SOUTHEAST DISTRICT

400 North Congress Avenue
West Palm Beach, Florida 33401
Phone No. (561) 681-6600

When to Apply:

Applications must be filed with the appropriate DEP office 180 days before your current permit expires or 180 days before startup of a new or modified facility. If the submitted application is for a new facility or for a modification of an existing facility, the information required for describing the construction must be filed at least 90 days before construction begins. The DEP encourages applicants to file the materials describing the construction of a new facility or the modification of an existing facility as early as possible to avoid problems with delays in startup or facility redesign to achieve effluent limitations.

Federal regulations provide that a new source in the NPDES program may not be constructed or started to be constructed before the issuance of an operation permit. Because of this regulation, a permit application for a new source may need to be submitted well in advance of the required 180 days.

Fees:

Application fees are listed in Section 62-4.050, Florida Administrative Code (F.A.C.). An application will not be processed until the application fee has been paid. If the DEP determines that a permit should be issued for less than five years duration, the application fee will be pro rated.

If a permit is issued for a surface water discharge, the permittee will be assessed a regulatory and surveillance program fee annually. Those fees are listed in Section 62-4.052, F.A.C. Failure to pay the annual fee may result in revocation of the permit.

Availability of Information to the Public:

Information contained in these applications forms will, upon request, be made available to the public for inspection and copying. However, you may request confidential treatment for certain information which you may submit to supplement the information requested on these forms. Section 62-620.302, F.A.C., and 40 CFR 2 provide set forth the procedures for making the claim. No information on Forms 1 and 2A through 2EG may be claimed as confidential.

Completion of Forms:

Unless otherwise specified in instructions to the forms, each item in each form must be answered. To indicate that each item has been considered, enter "NA", for not applicable, if a particular item does not fit the circumstances or characteristics of your facility or activity.

If you have previously submitted information to the DEP which answers a question, you may either repeat the information in the space provided or attach a copy of the previous submission. DO NOT WRITE "ON FILE". Some items in the form require narrative explanation. If more space is necessary to answer a question, attach a separate sheet entitled "Additional Information."

SECTION B - FORM 1 LINE-BY-LINE INSTRUCTIONS

This form must be completed by all applicants.

Completing This Form:

Please type or print in the underlined areas only. Some items have a limited number of spaces or characters so that your response may be entered into a computer program. Please do not exceed this maximum number with your response. Abbreviate if necessary to stay within the number of characters allowed for each item. Use one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response.

Item I

Space is provided at the upper right hand corner of Form 1 for insertion of your Facility Identification Number. If you have an existing facility, enter your identification number. If you don't know your identification number, please contact the appropriate DEP office which will provide you with your number. If your facility is new (not yet constructed), leave this item blank.

Item II

Answer each question to determine which supplementary forms you need to fill out. Be sure to check the glossary in Section C of these instructions for the legal definitions of any words you are not certain of their meaning.

If you answer "no" to every question, then you may not need a permit. However, you should call the appropriate district office to determine if you have made a correct determination. If you answer "yes" to any question, then you must complete and file the supplementary form by the deadline listed in Section A along with this form.

Item III

Enter the facility's official or legal name. Do not use a colloquial name.

Item IV

Give the name, title, and work telephone number of a person who is thoroughly familiar with the operation of the facility, with the facts reported in this application, and who can be contacted by reviewing offices if necessary.

Item V

Give the complete mailing address of the office where correspondence should be sent. This often is not the address used to designate the location of the facility or activity.

Item VI

Give the address or location of the facility identified in Item III of this form. If the facility lacks a street name or route number, give the most accurate alternative geographic information (for example, section number or quarter section number from county records or at intersection of Rts 426 and 22).

Item VII

List four, in descending order of significance, 4-digit standard industrial classification (SIC) codes which best describe your facility in terms of the principal products or services you produce or provide. Also, specify each classification in words. These classifications may differ from the SIC codes describing the operation generating the discharge from the facility.

SIC code numbers are descriptions which may be found in the "Standard Industrial Classification Manual" prepared by the Executive Office of the President, Office of Management and Budget, which is available from the Government Printing Office, Washington, D.C. Your local library may have a copy of this publication which you may use. Use the current edition of the manual. If you have any questions concerning the appropriate SIC code for your facility, please contact the appropriate DEP district office.

Item VIII-A

Give the name, as it is legally referred to, of the person, firm, public organization, or any other entity which operates the facility described in this application. This may or may not be the same name as the facility. The operator of the facility is the legal entity which controls the facility's operation rather than the plant or site manager. Do not use a colloquial name.

Item VIII-B

Indicate whether the entity which operates the facility also owns it by marking the appropriate box.

Item VIII-C

Enter the appropriate letter to indicate the legal status of the operator of the facility. Indicate "public" for a facility solely owned by a local government, such as a city, town, county, etc.

Items VIII-D through H

Enter the telephone number and address of the operator identified in Item VIII-A.

Item IX

Indicate whether the facility is located on Indian Lands.

Item X

Give the number of each presently effective wastewater and stormwater permit issued to the facility listed in this application. List relevant federal, state, and local permits. DO NOT LIST ALL YOUR PERMITS. LIST ONLY CURRENT ENVIRONMENTAL PERMITS RELATING TO THIS PROJECT.

Item XI

Provide a topographic map or maps of the area extending at least to one mile beyond the property boundaries of the facility which clearly show the following:

The legal boundaries of the facility;

The location and serial number of each of your existing and proposed intake and discharge structures;

All hazardous waste management facilities;

Each well where you inject fluids underground; and

All springs and surface water bodies in the area, plus all drinking water wells within 1/4 mile of the facility which are identified in the public record or otherwise known to you.

If an intake or discharge structure, hazardous waste disposal site, or injection well associated with the facility is located more than one mile from the plant, include it on the map, if possible. If not, attach additional sheets describing the location of the structure, disposal site, or well, and identify the U.S. Geological Survey (or other) map corresponding to the location.

On each map, include the map scale, a meridian arrow showing north, and latitude and longitude at the nearest whole second. On all maps of rivers, show the direction of the current, and in tidal waters, show the directions of the ebb and flow tides. Use a 7-1/2 minute series map published by the U.S. Geological Survey. If a 7-1/2 minute series map has not been published for your facility site, then you may use a 15 minute series map from the U.S. Geological Survey. If neither a 7-1/2 nor 15 minute series map has been published for your facility site, use a plat map or other appropriate map, including all the requested information; in this case, briefly describe land uses in the map area (for example, residential, commercial).

You may trace your map from a geological survey chart, or other map meeting the above specifications. If you do, your map should bear a note showing the number or title of the map or chart from which it was traced. Include the names of nearby towns, water bodies, and other prominent points.

You may obtain a topographic map from:

Eastern Mapping Center
National Cartographic Information Center
U.S. Geological Survey
536 National Center
Reston, VA 22092

Item XII

Briefly describe the nature of your business (for example, products produced or services provided).

Item XIII

Section 403.161, F.S., provides severe penalties for submitting false information on this application form or any reports or records required by a permit, if issued. There are both civil and criminal penalties, in addition to the revocation of the permit.

Rule 62-620.305, F.A.C., requires that the application and any reports required by the permit, if issued, to be signed as follows:

- A. For a corporation, by a responsible corporate officer as described in Rule 62-620.305, F.A.C.;
- B. For partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- C. For a municipality, state, federal or other public facility, by a principal executive officer or elected official.

SECTION C - GLOSSARY

NOTE: This Glossary includes terms used in the instructions and in Forms 1, 2A through 2EG. If you have any questions concerning the meaning of any of these terms, please contact your DEP district office.

Activity means any action which results in a discharge of wastes into waters of the State or that is reasonably expected to be a source of water pollution.

Aliquot means a sample of specified volume used to make up a total composite sample.

Animal Feeding Operation means a lot or facility (other than an aquatic animal production facility) where the following conditions are met:

A. Animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period; and

B. Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

Two or more animal feeding operations under common ownership are a single animal feeding operation if they adjoin each other or if they use a common area or system for the disposal of wastes.

Animal Unit means a unit of measurement for any animal feeding operation calculated by adding the following number: The number of slaughter and feeder cattle multiplied by 1.0; plus the number of mature dairy cattle multiplied by 1.4; plus the number of swine weighing over 25 kilograms (approximately 55 pounds) multiplied by 0.4; plus the number of sheep multiplied by 0.1; plus the number of horses multiplied by 2.0.

Application means the approved DEP standard forms for applying for a permit, including any approved additions, revisions, or modifications to the forms. Approved forms are numbered, Form 62-620.910, and have an effective date of October 1, 1994, or later.

Aquifer means a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

Best Management Practices (BMP) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs include treatment requirements, operation procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Biological Monitoring Test means any test which include the use of aquatic algal, invertebrate, or vertebrate species to measure acute or chronic toxicity, and any biological or chemical measure of bioaccumulation.

Bypass means the intentional diversion of wastes from any portion of a treatment facility.

Concentrated Animal Feeding Operation means an animal feeding operation which meets the criteria set forth in Chapter 62-670, F.A.C.

Concentrated Aquatic Animal Production Facility means a hatchery, fish farm, or other facility which contains, grows or hold aquatic animals as set forth in Chapter 62-660, F.A.C.

Contact Cooling Water means water used to reduce temperature which comes into contact with a raw material, intermediate product, waste product other than heat, or finished product.

CWA means the Clean Water Act as amended, 33 U.S.C. 1251 et seq.

Dike means any embankment or ridge of either natural or manmade materials used to prevent the movement of liquids, sludges, solids, or other materials.

Discharge (of a Pollutant) means any addition of any pollutant or combination of pollutants to waters of the State from any point source; or any addition of any pollutant or combination of pollutants to the marine waters of the State from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes discharges into waters of the State from surface runoff which is collected or channelled by man; discharges through pipes, sewers, or other conveyances owned by the State, a municipality, or other person which do not lead to POTWs; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any indirect discharge.

Effluent Limitation mean any restriction imposed by the DEP on quantities, discharge rates, and concentrations of pollutants which are discharged from point sources into waters of the State.

Effluent Limitation Guideline means a regulation published under Section 304(b) of the Clean Water Act to adopt or revise effluent limitations.

EPA means the United States Environmental Protection Agency.

Existing Source or Existing Discharger means any source which is not a new source or a new discharger.

Facility or wastewater facility means any facility which can reasonably be expected to be a source of pollution and includes any or all of the following: a collection and transmission system, a wastewater treatment works, a reuse or disposal system, and a residuals management facility.

Ground Water means water below the land surface in a zone of saturation.

Indirect Discharger means an industrial discharger introducing pollutants to a publicly owned treatment works.

Injection Well mean a well into which fluids are injected.

MGD means millions of gallons per day.

Municipality means a city, village, town, borough, county, district, association, or other public body created by or under State law and have jurisdiction over disposal of sewage, industrial wastes, or other wastes.

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, termination, monitoring and enforcing permits and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the CWA. The term includes a State program which has been authorized by EPA under 40 CFR Part 123.

New Discharger mean any building, structure, facility, or installation: (A) from which there is or may be a new or additional discharge of pollutants at a site at which on October 18, 1972, it had never discharged pollutants; (B) which has never received a finally effective NPDES permit for discharges at that site; and (C) which is not a "new source." This definition includes an indirect discharger which commences discharging into water of the State. It also includes any existing mobile point source, such as an offshore oil drilling rig, seafood processing vessel, or aggregate plant that begins discharging at a location for which it does not have an existing permit.

New Source means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced: (A) after promulgation of standards of performance under Section 306 of the CWA which are applicable to such source; or (B) after proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

Non-Contact Cooling Water means water used to reduce temperature which does not come into direct contact with any raw material, intermediate produce, waste product (other than heat), or finished product.

Off-Site means any site which is not "on-site."

On-Site means on the same or geographically contiguous property which may be divided by public or private right(s)-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along, the right(s)-of-way. Non-contiguous properties owned by the same person, but connected by a right-of-way which the person controls and to which the public does not have access, is also considered on-site property.

Operator means the person responsible for the overall operation of a facility.

Outfall means a point source.

Owner means the person who owns a facility or part of a facility.

Permit means an authorization, license, or equivalent control document issued by the State to implement the requirements of 40 CFR 122, 123, and 124 and Chapter 403, F.S.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended), heat, wrecked or discarded equipment, rocks, sand, cellar dirt and industrial, municipal, and agriculture waste discharged into water. It does NOT mean: (A) sewage from vessels; or (B) water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Privately Owned Treatment Works means any device or system which is used to treat domestic wastewater from any facility which is not a POTW.

Process Wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly Owned Treatment Works (POTW) means any device or system used in the treatment (including recycling and reclamation) of domestic sewage or industrial wastes of a liquid nature which is owned by a State or municipality. This definition includes any sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Residuals means the solid, semisolid, or liquid residue generated during the treatment of domestic wastewater. Not included are solids removed from pump stations and lift stations, and screenings and grit removed from the headworks of domestic wastewater treatment facilities. Also not included are other solids removed prior to treatment of the residuals to meet the stabilization standards of Chapter 62-640, F.A.C., or ash generated during the incineration of residuals.

Sewage From Vessels means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes that are discharged from vessels and regulated under Section 312 of the CWA.

Sewage Sludge means residuals.

Silvicultural Point Source means any discernable, confined and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into water of the State.

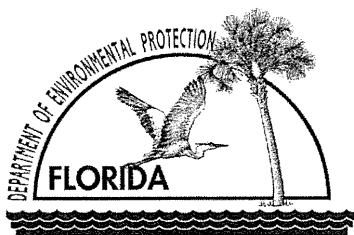
Stormwater Discharge Associated with Industrial Activity is as defined in 40 CFR 122.26(b)(14).

Surface Impoundment or Impoundment means a facility or part of a facility which is a natural topographic depression, manmade excavation, or diked area formed primarily of earthen materials (although it may be lined with manmade materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.

Toxic Pollutant means any pollutant listed as toxic under Section 307(a)(1) of the CWA.

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Waters of the State means the waters defined in Section 403.031, F.S., and including waters of the United States to the seaward boundaries of the State.



WASTEWATER FACILITY OR ACTIVITY PERMIT APPLICATION FORM 1 GENERAL INFORMATION

I IDENTIFICATION NUMBER:

Facility ID FL0002275

II CHARACTERISTICS:

INSTRUCTIONS: Complete the questions below to determine whether you need to submit any permit application forms to the Department of Environmental Protection. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the blank in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements. See Section B of the instructions. See also, Section C of the instructions for definitions of the terms used here.

SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED
A. Is this facility a domestic wastewater facility which results in a discharge to surface or ground waters?		X	
B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters?		X	
C. Does or will this facility (other than those describe in A. or B.) discharge process wastewater, or non-process wastewater regulated by effluent guidelines or new source performance standards, to surface waters?	X		2CS
D. Does or will this facility (other than those described in A. or B.) discharge process wastewater to ground waters?	X		2CG
E. Does or will this facility discharge non-process wastewater, not regulated by effluent guidelines or new source performance standards, to surface waters?		X	
F. Does or will this facility discharge non-process wastewater to ground waters?		X	
G. Does or will this facility discharge stormwater associated with industrial activity to surface waters?	X		NA, MSGP in place
H. Is this facility a non-discharging/closed loop recycle system?		X	

III NAME OF FACILITY: (40 characters and spaces)

Crist Electric Generating Plant

IV FACILITY CONTACT: (A. 30 characters and spaces)

A. Name and Title (Last, first, & title)	B. Phone (area code & no.)
Jernigan, Robert, Engineer	850.444.6024

V FACILITY MAILING ADDRESS: (A. 30 characters and spaces; B. 25 characters and spaces)

A. Street or P.O. Box: One Energy Place		
B. City or Town: Pensacola	State: FL	Zip Code: 32520

VI FACILITY LOCATION: (A. 30 characters and spaces; B. 24 characters and spaces; C. 3 spaces (if known); D. 25 characters and spaces; E. 2 spaces; F. 9 spaces)

A. Street, Route or Other Specific Identifier: 11999 Pate Road		
B. County Name: Escambia	C. County Code (if known): 17	
D. City or Town: Pensacola	E. State: FL	F. Zip Code: 32514

VII SIC CODES: (4-digit, in order of priority)

1. Code #: 4911	(Specify) Electric Serv	2. Code #:	(Specify)
3. Code #:	(Specify)	4. Code #:	(Specify)

VIII OPERATOR INFORMATION: (A. 40 characters and spaces; B. 1 character; C. 1 character (if other, specify); D. 12 characters; E. 30 characters and spaces; F. 25 characters and spaces; G. 2 characters; H. 9 characters)

A. Name: Gulf Power Company		B. Is the name in VIII A. the owner? ☒ Yes ☐ No	
C. Status of Operator: F = Federal; S = State; P = Private; O = Other; M = Public (other than F or S)	(code) P	(specify) Utility	D. Phone No.: 850-444-6024
E. Street or P. O. Box: One Energy Place			
F. City or Town: Pensacola		G. State: FL	H. Zip Code: 32520

IX INDIAN LAND: Is the facility located on Indian lands?☐ Yes☒ No

X EXISTING ENVIRONMENTAL PERMITS:

A. NPDES Permit No.	B. UIC Permit No.	C. Other (specify)	D. Other (specify)
FL0002275	IW17-0085658-004	Stormwater MSGP	Title V- 0330045

XI MAP: Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

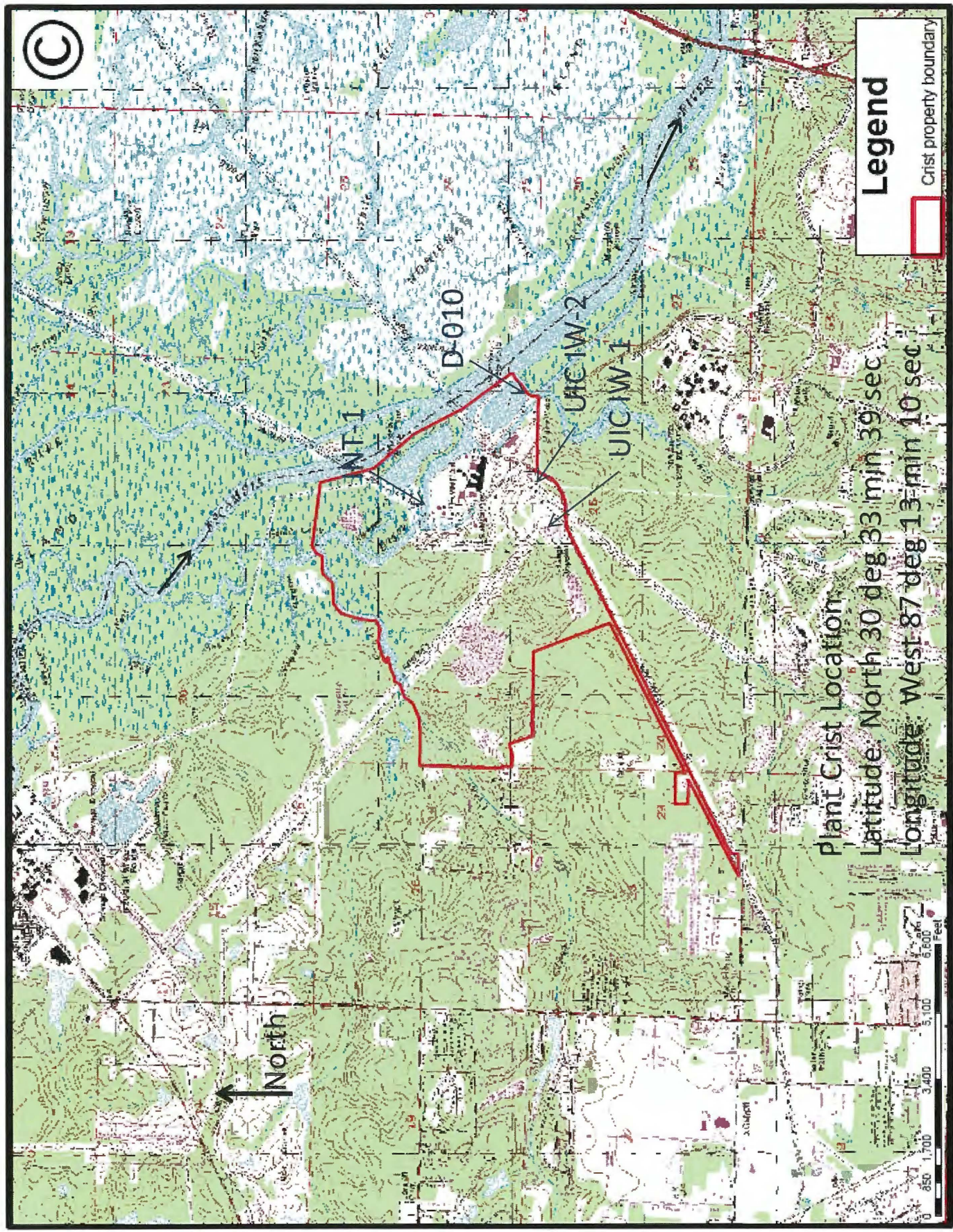
XII NATURE OF BUSINESS (provide a brief description)

Electrical power generation

XIII CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

<u>James O. Vick</u> A. Name (type or print)	 B. Signature
<u>Environmental Affairs Director</u> Official Title (type or print)	<u>7/21/15</u> C. Date Signed



Plant Crist Location

Latitude: North 30 deg 33 min 39 sec

Longitude: West 87 deg 13 min 10 sec

Plant Crist

NPDES Permit #FL0002275

Issuance Date: January 28, 2011

Expiration Date: January 27, 2016

Requested Changes to Existing Permit

Renaming of Ash Pond to Industrial Wastewater Treatment Pond (IWTP)

Gulf Power completed the removal of the legacy ash in the former ash pond at Plant Crist in July 2014. Based upon the removal and DEP concurrence, Gulf Power requests to remove references to the “Ash Pond” in the NPDES permit and replace them with “Industrial Wastewater Treatment Pond” or “IWTP”.

Reclaimed Water Nutrient Sampling

Since the last permit renewal, Plant Crist has been using reclaimed water from the Emerald Coast Utility Authority (ECUA) in the FGD and Units 6 and 7 closed loop cooling systems. A nutrient TMDL was also developed for the Escambia River and Escambia Bay system, and Plant Crist’s compliance with the TMDL is based upon a nutrient mass loading allocation for nitrogen and phosphorus. Gulf Power requests that monitoring requirements for ammonia, total kjeldahl nitrogen, and nitrate and nitrite be removed from Monitoring Site Numbers OUI-5, OUI-6, and OUI-7, and to only monitor total nitrogen and total phosphorus, based upon the TMDL allocation.

Cooling Tower Blowdown

Gulf Power requests the ability to discharge cooling tower blowdown to the IWTP during periods of time when reclaimed water is used as make-up water.

Metal Cleaning Wastewater Pond

Plant Crist is in the process of draining and cleaning the metal cleaning wastewater pond monitored by Internal Outfall I-150. Upon completion of the draining and cleaning, Gulf Power requests for monitoring of Outfall I-150 to not be required if the discharge consists of only rain water that has accumulated in the pond.

Underground Injection Control

Plant Crist is currently in the process of permitting two additional injection wells for the disposal of ash landfill contact water, stormwater from the ash landfill area stormwater collection system, non-hazardous wastewater from the IWTP comprised of neutralized demineralizer regeneration wastewater, cooling tower blowdown, boiler blowdown, floor drainage, auxiliary equipment cooling water and seal water, coal pile runoff, yard sump drainage, and treated metal cleaning wastewater, along with the currently permitted injection of FGD control wastewater, stormwater from the FGD system, and de-minimus amounts of lab wastes. Gulf Power requests this be incorporated into the NPDES permit.

Fly Ash Silo Area Sump Reroute

Gulf Power is proposing to re-route the existing fly ash silo area sump discharge from the oil skimmer pond to the ash landfill stormwater pond.

Attachment 2
Form 2CS



WASTEWATER APPLICATION FORM 2CS

PERMIT TO DISCHARGE PROCESS WASTEWATER
FROM NEW OR EXISTING
INDUSTRIAL WASTEWATER FACILITIES
TO SURFACE WATER

INSTRUCTIONS - FORM 2CS

This form must be completed by all applicants who check "yes" to Item II-C in DEP Form 62-620.910(1).

Public Availability of Submitted Information.

You may not claim as confidential any information required by this form or DEP Form 62-620.910(1), whether the information is reported on the forms or in an attachment. This information will be made available to the public upon request. Any information you submit to the Department which goes beyond that required by this form or DEP Form 62-620.910(1) you may claim as confidential, but claims for information which is effluent data will be denied. If you do not assert a claim of confidentiality at the time of submitting the information, the Department may make the information public without further notice to you. Claims of confidentiality must be in accordance with Rule 62-620.302, Florida Administrative Code.

Completeness

Your application will not be considered complete unless you answer every question on this form (DEP Form 62-620.910(5)) and on Form 1 (DEP Form 62-620.910(1)). If an item does not apply to you, enter "NA" (for "not applicable") to show that you considered the question. Also, you may need a Plan of Study (POS) to develop Water Quality Effluent Limitations (WQBEL) required by Rule 62-650, F.A.C. Please contact the Department for information.

Follow-up Requirements (for New or Substantially Modified Facilities)

Although you are now required to submit estimated data on this form, please note that no later than six months after you begin discharging from the proposed or substantially modified facility, you must complete and submit items VII and VIII of this Form 2CS (DEP Form 62-620.910(5)). However, you need not complete those portions of Item V requiring test which you have already performed under the discharge monitoring requirements of your permit.

Definitions

All significant terms used in these instructions and in the form are defined in the glossary found in the General Instructions which accompany Form 1.

DEP ID Number

If you are applying for a renewal of an existing permit or for a substantial revision to an existing permit, fill in your DEP Identification Number at the top of each page of Form 2CS. You may copy this number directly from Item 1 of Form 1. If you are applying for a permit for a proposed facility, leave the DEP Identification Number blank. The Department will assign a number.

Item I

You may use the map you provided for Item XI of Form 1 to determine the latitude and longitude of each of your discharge locations.

Item II

Describe the design of each outfall, including construction materials used or to be used.

Item III

Describe the surface water body which will be or is receiving effluent from the wastewater facility.

Item IV

A. The line drawing should show generally the route taken by water in your facility from intake to discharge. Show all operations contributing wastewater, including process and production areas, sanitary flows, cooling water, and stormwater runoff. You may group similar operations into a single unit, labeled to correspond to the more detailed listing in Item III B. The water balance should show average flows. Show all significant losses of water to products, atmosphere, and discharge. You should use actual measurements whenever available; otherwise, use your best estimate.

B. List all sources of wastewater to each discharge point. Operations may be described in general terms (for example, "dye-making reactor" or "distillation tower"). You may estimate the flow contributed by each source if no data are available. For stormwater discharges you may estimate the average flow, but you must indicate the rainfall event upon which the estimate is based and the method of estimation. For each treatment unit, indicate its size, flow rate, and retention time, and describe the ultimate disposal of any solid or liquid wastes not discharged. Treatment units should be listed in order and you should select the proper code from Table 2CS-1 to fill in column 3-b for each treatment unit. Insert "XX" into column 3-b if no code corresponds to a treatment unit you list.

C. A discharge is intermittent unless it occurs without interruption during the operating hours of the facility, except for infrequent shut-downs for maintenance, process changes, or other similar activities. A discharge is seasonal if it occurs only during certain parts of the year. Fill in every applicable column in this item for each source of intermittent or seasonal discharges. Base your answers on actual data whenever available; otherwise, provide your best estimate. Report the highest daily value for flow rate and total volume in the "Max. Daily" columns (columns 4-a and 4-b). Report the average of all daily values measured during days when the discharge occurred within the last year in the "Long Term Avg." columns (columns 4-a and 4-b).

Item V

"Production" in this question refers to those goods which the proposed, substantially modified, or existing facility will produce or is producing, not to "wastewater" production. This information is only necessary where production-based new source performance standards (NSPS) or effluent guidelines apply to your facility. Your estimated production figures should be based on a realistic projection of actual daily production level (not design capacity) for each of the first three operating years of the facility. This estimate must be a long-term-average estimate (e.g., average production on an annual basis). If production will vary depending on long-term shifts in operating schedule or capacity, you may report alternate production estimates and the basis for the alternate estimates.

A. All NSPS and effluent guidelines promulgated by EPA appear in the Federal Register and are published annually in 40 CFR Subchapter N. A guideline applies to you if you have any operations contributing process wastewater in any subcategory covered by a BPT, BCT, or BAT guideline. If you are unsure whether you are covered by a promulgated NSPS or effluent guideline, check with your DEP district office (*Figure 1 in the Form 1 instructions*). You must check "yes" if an applicable NSPS or effluent guideline has been promulgated, even if the guideline limitations are being contested in court. If you believe that a promulgated NSPS or effluent guideline has been remanded for reconsideration by a court and does not apply to your operations, you may check "no."

B. An NSPS or effluent guideline is expressed in terms of production (*or other measure of operation*) if the limitation is expressed as mass of pollutant per operational parameter: for example, "pounds of BOD per cubic foot of logs from which bark is removed," or "pounds of TSS per megawatt hour of electrical energy consumed by smelting furnace." An example of a guideline not expressed in terms of a measure of operation is one which limits the concentration of pollutants.

C. This item must be completed only if you checked "yes" to Item V-B. The production information requested here is necessary to apply effluent guidelines to your facility and you cannot claim it as confidential. However, you do not have to indicate how the reported information was calculated. Report quantities in the units of measurement used in the applicable NSPS or effluent guideline. The production figures provided must be based on actual daily production and not on design capacity or on predictions of future operations. To obtain alternate limits under Rule 62-620.620(2)(b)3., F.A.C., you must define your maximum production capability and demonstrate to the Department that your actual production is substantially below maximum production capability and that there is a reasonable potential for an increase above actual production during the duration of the permit.

Item VI

- A. If you check "yes" to this question, complete all parts of the chart, or attach a copy of any previous submission you have made to the Department containing the same information.
- B. You are not required to submit a description of future pollution control projects if you do not wish to or if none is planned.

Item VII (A, B, C, and D, including Tables VII-A, VII-B, and VII-C)

This item requires you to collect and report data on the pollutants discharged from each of your discharge points. Each part of this item addresses a different set of pollutants and must be completed in accordance with the specific instructions for that part. The following general instructions apply to the entire item.

General Instructions

Part A requires you to report at least one analysis for each pollutant listed. Parts B and C require you to report analytical data in two ways. For some pollutants, you may be required to mark "X" in the "Testing Required" column (*column 2-a, Part C*), and test (*sample and analyze*) and report the levels of the pollutants in your discharge whether or not you expect them to be present in your discharge. For all other, you must mark "X" in either the "Believe Present" column or the "Believe Absent" column (*columns 2-a or 2-b, Part B, and Columns 2-b or 2-c, Part C*) based on your best estimate, and test for those which you believe to be present. (*See specific instructions on the form and below for Parts A through D.*) Base your determination that a pollutant is present in or absent from your discharge on your knowledge of your raw materials, maintenance chemicals, intermediate and final products and by-products, and any previous analyses known to you of your effluent or similar effluent. (*For example, if you manufacture pesticides, you should expect those pesticides to be present in contaminated stormwater runoff.*) If you would expect a pollutant to be present solely as a result of its presence in your intake water, you must mark "Believe Present" but you are not required to analyze for that pollutant. Instead, mark an "X" in the "Intake" column.

A. Reporting

All levels must be reported as concentration and as total mass. You may report some or all of the required data by attaching separate sheets of paper instead of filling out pages VII-1 to VII-10 if the separate sheets contain all the required information in a format which is consistent with pages VII-1 to VII-10 in spacing and in identification of pollutants and columns. (*For example, the data systems used in your GC/MS analysis may be able to print data in the proper format.*) Use the following abbreviations in the columns headed "Units" (*column 3, Part A, and Column 4, Parts B and C*).

Concentration
ppm - parts per million
mg/l - milligrams per liter
ppb - parts per billion
µg/l - micrograms per liter

Mass
lbs - pounds
ton - tons (English tons)
mg - milligrams
g - grams
kg - kilograms
T - tonnes (metric tons)

All reporting of values for metals must be in terms of "total recoverable metal," unless (1) an applicable, promulgated effluent limitation or standard specifies the limitation for the metal in dissolved, valent, or total form; or (2) all approved analytical methods for the metal inherently measure only its dissolved form (e.g., hexavalent chromium). If you measure only one daily value, complete only "Max. Daily Values" columns and insert "1" into the "Number of Analyses" column (*columns 2-a and 2-d, Part A, and column 3-a, 3-d, Parts B and C*). The Department may require you to conduct additional analyses to further characterize your discharges. For composite sample, the daily value is the total mass or average concentration found in a composite sample taken over the operating hours of the facility during a 24-hour period; for grab samples, the daily value is the arithmetic or flow-weighted total mass or average concentration found in a series of at least

four grab samples taken over the operating hours of the facility during a 24-hour period. If you measure more than one daily value for a pollutant and those values are representative of your waste stream, you must report them. You must describe your method of testing and data analysis. You also must determine the average of all values within the last year and report the concentration and mass under the "Long Term Avg. Values" columns (*column 2-c, Part A, and column 3-c, Parts B and C*), and the total number of daily values under the "Number of Analyses" columns (*column 2-d, Part A, and columns 3-d, Parts B and C*). Also determine the average of all daily values taken during each calendar month, and report the highest average under the "Max. 30-day Values" columns (*column 2-c, Part A, and column 3-b, Parts B and C*).

B. Sampling

The collection of the samples for the reported analyses should be supervised by a person experienced in performing sampling of industrial wastewater. Any specific requirements contained in the applicable analytical methods should be followed for sample containers, sample preservation, holding times, the collection of duplicate samples, etc. The time when you sample should be representative of your normal operation, to the extent feasible, with all processes which contribute wastewater in normal operation, and with your treatment system operating properly with no system upsets. Samples should be collected from the center of the flow channel, where turbulence is at a maximum, at a site specified in your present permit, or at any site adequate for the collection of a representative sample. Sampling for metals that are hardness-dependent shall also include sampling for hardness.

For pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, and fecal coliform, grab samples must be used. For all other pollutants 24-hour composite samples must be used. However, a minimum of one grab sample may be taken for effluents from holding ponds, or other impoundments with a retention period of greater than 24 hours. For stormwater discharges a minimum of one to four grab samples may be taken, depending on the duration of the discharge. One grab must be taken in the first hour (*or less*) of discharge, with one additional grab (*up to a minimum of four*) taken in each succeeding hour of discharge for discharges lasting four or more hours. The Department may waive composite sampling for any discharge point for which you demonstrate that use of an automatic sampler is infeasible and that a minimum of four grab samples will be representative of your discharge.

Grab and composite samples¹ are defined as follows:

Grab sample: An individual sample or at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

¹Sampling requirements are periodically reviewed in light of recent research on testing methods. Upon completion of the review, changes to sampling requirements may be made. Before starting any required sampling or submitting past sampling to the Department, be sure that you have a current copy of 40 CFR Part 136 or Chapter 160, Florida Administrative Code.

Composite sample: A combination of at least 8 sample aliquots of a least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. For GC/MS Volatile Organic Analysis (VOA), aliquots must be combined in the laboratory immediately before analysis. Four (4) (*rather than eight*) aliquots or grab samples should be collected for VOA. These four samples should be collected during actual hours of discharge over a 24-hour period and need not be flow proportioned. Only one analysis is required.

Data from samples taken in the past may be used if all data requirement are met; sampling was done no more than three years before submission; and all data are representative of the present discharge. Among the factors which would cause the data to be unrepresentative are significant changes in production level; changes in raw materials, processes, or final products; and changes in wastewater treatment. When EPA promulgates new analytical methods in 40 CFR Part 136, EPA will provide information as to when you should use the new methods to generate data on your discharges. The Department may promulgate new methods in Chapter 160, Florida Administrative Code, with the date when the new methods are to be used. Always be sure you have current copies of these two documents before you take samples or submit sampling data to the Department. If you have submitted data from past sampling, the Department may request additional information, including current quantitative data, if it is determined to be necessary to assess your discharges.

C. Analysis

You must use test methods promulgated in 40 CFR Part 136 or Chapter 160, Florida Administrative Code; however, if none has been promulgated for a particular pollutant, you may use any suitable method for measuring the level of the pollutant in your discharge if you submit a description of the method or a reference to a published method. Your description should include the sample holding time, preservation techniques, and the quality control measures which you used. If you have two or more substantially identical discharge points, you may request permission from the Department to sample and analyze only one point and submit the results of the analysis for other substantially identical points. If your request is granted by the Department, or a separate sheet attached to the application form identify which point you did test, and describe why the other points you did not test are substantially identical to the point which you did test.

D. Reporting of Intake Data

You are not required to report data under the "Intake" columns unless you wish to demonstrate your eligibility for a "net" effluent limitation for one or more pollutants, that is, an effluent limitation adjusted by subtracting the average level of the pollutant(s) present in your intake water. To demonstrate your eligibility, under the "Intake" columns report the average of the results of analyses on your intake water (*If your water is treated before use, test the water after it is treated.*), and discuss the requirements for a new limitation with the appropriate district office.

Part VII-A

Part VII-A must be completed by all applicants for all discharge points including discharges of non-contact cooling water or storm runoff. However, at your request, the Department may waive the requirement to test for one or more of these pollutants, upon a determination that available information is adequate to support issuance of the permit with less stringent reporting requirements for these pollutants. Use composite samples for all pollutants in this Part, except use grab samples for pH and temperature. See the discussion in General Instructions to item VII for definitions of the columns in Part A. The "Long Term Avg. Values" column (*column 2-c*) and "Max. 30-day Values" column (*column 2-b*) are not compulsory but should be filled out if data are available.

Part VII-B

Part VII-B must be completed by all applicants for all discharge points, including points containing only non-contact cooling water or storm runoff. You must report quantitative data if the pollutant(s) in question is limited in an effluent limitation either directly or indirectly but expressly through a limitation on an indicator (*e.g., use of TSS as an indicator to control the discharge of iron and aluminum*). For other discharged pollutants you must provide quantitative data or explain their presence in your discharge. The Department will consider a request to eliminate the requirement to test for pollutants for an industrial category or subcategory. Your request must be supported by data representative of the industrial category or subcategory in question. The data must demonstrate that individual testing for each applicant is unnecessary, because the facilities in the category or subcategory discharge substantially identical levels of the pollutant or discharge the pollutant uniformly at sufficiently low levels. Use composite samples for all pollutants you analyze for in this part, except use grab samples for residual chlorine, oil and grease, and fecal coliform. The "Long Term Avg. Values" column (*column 2-c*) and "Max. 30-day Values" column (*column 2-b*) are not compulsory but should be filled out if data are available.

Part VII-C

Table 2CS-2 at the end of these instructions lists 34 primary industry categories. For each discharge point, if any of your processes which contribute wastewater falls into one of those categories, you must mark "X" in "Testing Required" column (*column 2-a*) and test for (1) all of the toxic metals, cyanide, and total phenols; and (2) the organic toxic pollutants contained in Table 2CS-3 as applicable to your category. The organic toxic pollutants are listed by GC/MS fractions on pages VII-4 to VII-10 in Part VII-C. The inclusion of total phenols in Part VII-C is not intended to classify total phenols as a toxic pollutant. When you determine which industry category you are in to find your testing requirements, you are not determining your category for any other purpose and you are not giving up your right to challenge your inclusion in that category before your permit is issued. For all other cases (*secondary industries, non-process wastewater discharge points, and GC/MS fractions that are not required*), you must mark "X" in either the "Believed Present" column or the "Believed Absent" column for each pollutant.

You must report quantitative data as follows:

For every pollutant you know or have reason to believe is present in your discharge in concentrations of 10 ppb or greater;

For acrolein; acrylonitrile; 2,4 dinitrophenol; and 2-methyl-4,6 dinitrophenol where you expect these four pollutants to be discharged in concentrations of 100 ppb or greater; and

For every pollutant expected to be discharged in concentrations less than the thresholds specified above. For pollutants in this last category, in lieu of quantitative data, you may briefly describe the reasons the pollutant is expected to be discharged.

You are required to mark "Testing Required" for dioxin if you use or manufacture one of the following compounds:

- (a) 2,4,5-trichlorophenoxy acetic acid, (2,4,5-T);
- (b) 2-(2,4,5-trichlorophenoxy) propanoic acid, (Silvex, 2,4,5-TP);
- (c) 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate, (Erbon);
- (d) 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate, (Ronnell);
- (e) 2,4,5-trichlorophenol, (TCP); or
- (f) hexachlorophene, (HCP).

If you mark "testing Required" or "Believed Present," you must perform a screening analysis for dioxin, using gas chromatography with an electron capture detector. A TCDD standard for quantitation is not required. Describe the results of this analysis in the space provided: for example, "no measurable baseline deflection at the retention time of TCDD" or "a measurable peak within the tolerances of the retention time of TCDD." The Department may require you to perform a quantitative analysis if you report a quantitative analysis if you report a positive result.

Part VII-D

List any pollutants in Table 2CS-3 that you believe to be present and explain why you believe them to be present. No analysis is required, but if you have analytical data, you must report it. For discharges of the hazardous substances listed in Table 2CS-4, you may be exempt from the reporting requirements of section 311 of the Clean Water Act. Please contact the Department for information.

Item VIII

This requirement applies to current use or manufacture of a toxic pollutant as an intermediate or final product or by-product. The Department may waive or modify the requirement if you demonstrate that it would be unduly burdensome to identify each toxic pollutant and the Department has adequate information to issue your permit. You may not claim this information as confidential; however, you do not have to distinguish between use or production of the pollutants or list the amounts.

Item IX

This item is self explanatory.

Item X

This item is self explanatory.

Item XI

This item is self explanatory.

Item XII

There are severe penalties for submitting false information on this application form. Chapter 62-620, Florida Administrative Code, requires, in addition to the certification provided by a professional engineer, a certification from the owner or responsible authority of the facility as follows:

A. For a corporation: by a responsible corporate official. For purposes of this section, a responsible corporate official means (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities employing more than 250 person or have gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

B. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

C. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. A principal executive officer includes the chief executive officer of the agency or a senior executive officer having the responsibility for the overall operations of a principal geographic unit of the agency, for example, a regional or district administrator.

**TABLE 2CS-1
CODES FOR TREATMENT UNITS**

PHYSICAL TREATMENT PROCESSES			
1-A	Ammonia Stripping	1-N	Microstraining
1-B	Dialysis	1-O	Mixing
1-C	Diatomaceous Earth Filtration	1-P	Moving Bed Filters
1-D	Distillation	1-Q	Multimedia Filtration
1-E	Electrodialysis	1-R	Rapid Sand Filtration
1-F	Evaporation	1-S	Reverse Osmosis (Hyperfiltration)
1-G	Flocculation	1-T	Screening
1-H	Flotation	1-U	Sedimentation (Settling)
1-I	Foam Fractionation	1-V	Slow Sand Filtration
1-J	Freezing	1-W	Solvent Extraction
1-K	Gas-Phase Separation	1-X	Sorption
1-L	Grinding (Comminutors)	1-Y	Percolation Pond
1-M	Grit Removal		
CHEMICAL TREATMENT PROCESSES			
2-A	Carbon Adsorption	2-G	Disinfection (<i>Ozone</i>)
2-B	Chemical Oxidation	2-H	Disinfection (<i>Other</i>)
2-C	Chemical Precipitation	2-I	Electrochemical Treatment
2-D	Coagulation	2-J	Ion Exchange
2-E	Dechlorination	2-K	Neutralization
2-F	Disinfection (<i>Chlorine</i>)	2-L	Reduction
BIOLOGICAL TREATMENT PROCESSES			
3-A	Activated Sludge	3-E	Pre-Aeration
3-B	Aerated Lagoons	3-F	Spray Irrigation/Land Application

Table 2CS-1, Codes for Treatment Units contd.

3-C	Anaerobic Treatment	3-G	Stabilization Ponds
3-D	Nitrification-Denitrification	3-H	Trickling Filter
OTHER PROCESSES			
4-A	Discharge to Surface Water	4-C	Reuse/Recycle of Treated Effluent
4-B	Ocean Discharge Through Outfall	4-D	Underground Injection
SLUDGE TREATMENT AND DISPOSAL PROCESSES			
5-A	Aerobic Digestion	5-M	Heat Drying
5-B	Anaerobic Digestion	5-N	Heat Treatment
5-C	Belt Filtration	5-O	Incineration
5-D	Centrifugation	5-P	Land Application
5-E	Chemical Conditioning	5-Q	Landfill
5-F	Chlorine Treatment	5-R	Pressure Filtration
5-G	Composting	5-S	Pyrolysis
5-H	Drying Beds	5-T	Sludge Lagoons
5-I	Elutriation	5-U	Vacuum Filtration
5-J	Flotation Thickening	5-V	Vibration
5-K	Freezing	5-W	Wet Oxidation
5-L	Gravity Thickening		

TABLE 2CS-2
TESTING REQUIREMENTS FOR ORGANIC TOXIC POLLUTANTS INDUSTRY CATEGORY

INDUSTRY CATEGORY	GC/MS FRACTION ¹			
	Volatile	Acid	Base/Neutral	Pesticide
Adhesives and sealants	X	X	X	
Aluminum forming	X	X	X	
Auto and other laundries	X	X	X	X
Battery manufacturing	X		X	
Coal mining	X	X	X	X

Table 2CS-2, Testing Requirements for Organic Toxic Pollutants Industry Category contd.

Coil coating	X	X	X	
Copper forming	X	X	X	
Electric and electronic compounds	X	X	X	X
Electroplating	X	X	X	
Explosives manufacturing		X	X	
Foundries	X	X	X	
Gum and wood chemicals	X	X	X	X
Inorganic chemicals manufacturing	X	X	X	
Iron and steel manufacturing	X	X	X	
Leather tanning and finishing	X	X	X	X
Mechanical products manufacturing	X	X	X	
Nonferrous metals manufacturing	X	X	X	X
Ore mining	X	X	X	X
Organic chemicals manufacturing	X	X	X	X
Paint and ink formulation	X	X	X	X
Pesticides	X	X	X	X
Petroleum refining	X	X	X	X
Pharmaceutical preparations	X	X	X	
Photographic equipment and supplies	X	X	X	X
Plastic and synthetic materials manufacturing	X	X	X	X
Plastic processing	X			
Porcelain enameling	X		X	X
Printing and publishing	X	X	X	X
Pulp and paperboard mills	X	X	X	X
Rubber processing	X	X	X	
Soap and detergent manufacturing	X	X	X	
Steam electric power plants	X	X	X	
Textile mills	X	X	X	X
Timber products processing	X	X	X	X

¹The pollutants in each fraction are listed in Item VII-C . X = Testing required.

**TABLE 2CS-3
TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES
REQUIRED TO BE IDENTIFIED BY APPLICANTS
IF EXPECTED TO BE PRESENT**

<u>Toxic Pollutant</u>	<u>Hazardous Substances</u>	<u>Hazardous Substances</u>
Asbestos	2,2 Dichloropropionic acid	Monomethyl amine
	Dichlorvos	Naled
<u>Hazardous Substances</u>	Diethyl amine	Naphthenic acid
Acetaldehyde	Dimethyl amine	Nitrotoluene
Allyl alcohol	Dintrobenzene	Parathion
Allylchloride	Diquat	Phenolsulfonate
Amyl acetate	Disulfoton	Phosgene
Aniline	Diuron	Propargite
Benzonitrile	Epichlorohydrin	Propylene oxide
Benzyl chloride	Ethion	Pyrethrins
Butyl acetate	Ethylene diamine	Quinoline
Butylamine	Formaldehyde	Resorcinol
Captan	Furfural	Strontium
Carbaryl	Guthion	Strychnine
Carbofuran	Isoprene	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)
Carbon disulfide	Isopropanolamine	TDE (Terochlorodiphenyl ethane)
Chlopyrifos	dodecylbenzenesulfonate	2,4,5-TP [2-(2,4,5-Trichlorophenoxy)propanoic acid]
Coumpahos	Kelthane	Trichlorofon
Cresol	Kepone	Triethanolamine dodecylbenzenesulfonate
Crotonaldehyde	Malathion	Triethylamine
Cyclohexane	Mercaptodimethur	Uranium
2,4-D (2,4-Dichlorophenoxyacetic acid)	Methoxychlor	Vanadium
Diazinon	Methyl mercaptan	Vinyl acetate
Dicamba	Methyl methacrylate	Xylene
Dichlobenil	Methyl parathion	Xylenol
Dichlone	Mevinphos	Zirconium
	Mexacarbate	
	Monoethyl amine	

**TABLE 2CS-4
HAZARDOUS SUBSTANCES**

1. Acetaldehyde	49. Arsenic trisulfide	97. Cupric nitrate
2. Acetic acid	50. Barium cyanide	98. Cupric oxalate
3. Acetic anhydride	51. Benzene	99. Cupric sulfate
4. Acetone cyanohydrin	52. Benzoic acid	100. Cupric sulfate ammoniated
5. Acetyl bromide	53. Benzonitrile	101. Cupric tartrate
6. Acetyl chloride	54. Benzoyl chloride	102. Cyanogen chloride
7. Acrolein	55. Benzyl chloride	103. Cyclohexane
8. Acrylonitrile	56. Beryllium chloride	104. 2,4-D acid (2,4-
9. Adipic acid	57. Beryllium fluoride	Dichlorophenoxyacetic acid)
10. Aldrin	58. Beryllium nitrate	105. 2,4-D esters (2,4-
11. Allyl alcohol	59. Butylacetate	Dichlorophenoxyacetic acid esters)
12. Allyl chloride	60. n-Butylphthalate	106. DDT
13. Aluminum sulfate	61. Butylamine	107. Diazinon
14. Ammonia	62. Butyric acid	108. Dicamba
15. Ammonium acetate	63. Cadmium acetate	109. Dichlobenil
16. Ammonium benzoate	64. Cadmium bromide	110. Dichlone
17. Ammonium bicarbonate	65. Cadmium chloride	111. Dichlorobenzene
18. Ammonium bichromate	66. Calcium arsenate	112. Dichloropropane
19. Ammonium bifluoride	67. Calcium arsenite	113. Dichloropropene
20. Ammonium bisulfite	68. Calcium carbide	114. Dichloropropene-Dichloropropane
21. Ammonium carbamate	69. Calcium chromate	mix
22. Ammonium carbonate	70. Calcium cyanide	115. 2,2-Dichloropropionic acid
23. Ammonium chloride	71. Calcium dodecylbenzenesulfonate	116. Dichlorvos
24. Ammonium chromate	72. Calcium hypochlorite	117. Dieldrin
25. Ammonium citrate	73. Captan	118. Diethylamine
26. Ammonium fluoroborate	74. Carbaryl	119. Dimethylamine
27. Ammonium fluoride	75. Carbofuran	120. Dinitrobenzene
28. Ammonium hydroxide	76. Carbon disulfide	121. Dinitrophenol
29. Ammonium oxalate	77. Carbon tetrachloride	122. Dinitrotoluene
30. Ammonium silicofluoride	78. Chlordane	123. Diquat
31. Ammonium sulfamate	79. Chlorine	124. Disulfoton
32. Ammonium sulfide	80. Chlorobenzene	125. Diuron
33. Ammonium sulfite	81. Chloroform	126. Dodecylbenzenesulfonic acid
34. Ammonium tartrate	82. Chloropyrifos	127. Endosulfan
35. Ammonium thiocyanate	83. Chlorosulfonic acid	128. Endrin
36. Ammonium thiosulfate	84. Chromic acetate	129. Epichlorohydrin
37. Amyl acetate	85. Chromic acid	130. Ethion
38. Aniline	86. Chromic sulfate	131. Ethylbenzene
39. Antimony pentachloride	87. Chromous chloride	132. Ethylenediamine
40. Antimony potassium tartrate	88. Cobaltous bromide	133. Ethylene dibromide
41. Antimony tribromide	89. Cobaltous formate	134. Ethylene dichloride
42. Antimony trichloride	90. Cobaltous sulfamate	135. Ethylene Diaminetetracetic acid
43. Antimony trifluoride	91. Coumaphos	(EDTA)
44. Antimony trioxide	92. Cresol	136. Ferric ammonium citrate
45. Arsenic disulfide	93. Crotonaldehyde	137. Ferric ammonium oxalate
46. Arsenic pentoxide	94. Cupric acetate	138. Ferric chloride
47. Arsenic trichloride	95. Cupric acetoarsenite	139. Ferric fluoride
48. Arsenic trioxide	96. Cupric chloride	140. Ferric nitrate

HAZARDOUS SUBSTANCES (contd.)

141. Ferric sulfate	190. Naled	240. Sodium hydrosulfide
142. Ferrous ammonium sulfate	191. Naphthalene	241. Sodium hydroxide
143. Ferrous chloride	192. Naphthenic acid	242. Sodium hypochlorite
144. Ferrous sulfate	193. Nickel ammonium sulfate	243. Sodium methylate
145. Formaldehyde	194. Nickel chloride	244. Sodium nitrate
146. Formic acid	195. Nickel hydroxide	245. Sodium phosphate (dibasic)
147. Fumaric acid	196. Nickel nitrate	246. Sodium phosphate (tribasic)
148. Furfural	197. Nickel sulfate	247. Sodium selenite
149. Guthion	198. Nitric acid	248. Strontium chromate
150. Heptachlor	199. Nitrobenzene	249. Strychnine
151. Hexachlorocyclopentadiene	200. Nitrogen dioxide	250. Styrene
152. Hydrochloric acid	201. Nitrophenil	251. Sulfuric acid
153. Hydrofluoric acid	202. Nitrotoluene	252. Sulfur monochloride
154. Hydrogen cyanide	203. Paraformaldehyde	253. 2,4,5-T acid (2,4,5- Trichlorophenoxy acetic acid)
155. Hydrogen sulfide	204. Parathion	254. 2,4,5-T amines (2,4,5- Trichlorophenoxy acetic cid amines)
156. Isoprene	205. Pentachlorophenol	255. 2,4,5-T esters (2,4,5- Trichlorophenoxy acetic cid esters)
157. Isopropanolamine dodecylbenzenesulfonate	206. Phenol	256. 2,4,5-T salts (2,4,5- Trichlorophenoxy acetic acid salts)
158. Kelthane	207. Phosoene	257. 2,4,5-TP acid (2,4,5- Trichlorophenoxy propanoic acid)
159. Kepone	208. Phosphoric acid	258. 2,4,5-TP acid esters (2,4,5- Trichlorophenoxy propanoic acid esters)
160. Lead acetate	209. Phosphorus	259. TDE (Tetrachlorodiphenyl ethane)
161. Lead arsenate	210. Phosphorus oxychloride	260. Tetraethyl lead
162. Lead chloride	211. Phosphorus pentasulfide	261. Tetraethyl pyrophosphate
163. Lead fluoborate	212. Phosphorus trichloride	262. Thallium sulfate
164. Lead fluorite	213. Polychlorinated biphenyls (PCB)	263. Toluene
165. Lead iodide	214. Potassium arsenate	264. Toxaphene
166. Lead nitrate	215. Potassium arsenite	265. Trichlorofon
167. Lead stearate	216. Potassium bichromate	266. Trichloroethylene
168. Lead sulfate	217. Potassium chromate	267. Trichlorophenol
169. Lead sulfide	218. Potassium cyanide	268. Triethanolamine dodecylbenzenesulfonate
170. Lead thiocyanate	219. Potassium hydroxide	269. Triethylamine
171. Lindane	220. Potassium permanganate	270. Trimethylamine
172. Lithium chromate	221. Propargite	271. Uranyl acetate
173. Malathion	222. Propionic acid	272. Uranyl nitrate
174. Maleic acid	223. Propionic anhydride	273. Vanadium pentoxide
175. Maleic anhydride	224. Propylene oxide	274. Vanadyl sulfate
176. Mercaptodimethur	225. Pyrethrins	275. Vinyl acetate
177. Mercuric cyanide	226. Quinoline	276. Vinylidene chloride
178. Mercuric nitrate	227. Resorcinol	277. Xylene
179. Mercuric sulfate	228. Selenium oxide	278. Xylenol
180. Mercuric thiocyanate	229. Silver nitrate	279. Zinc acetate
181. Mercurous nitrate	230. Sodium	280. Zinc ammonium chloride
182. Methoxychlor	231. Sodium arsenate	
183. Methyl mercaptan	232. Sodium arsenite	
184. Methyl methacrylate	233. Sodium bichromate	
185. Methyl parathion	234. Sodium bifluoride	
186. Mevinphos	235. Sodium bisulfite	
187. Mexacarbate	236. Sodium chromate	
188. Monoethylamine	237. Sodium cyanide	
189. Monomethylamine	238. Sodium dodecylbenzensulfonate	
	239. Sodium fluoride	

HAZARDOUS SUBSTANCES (contd.)

- | | | |
|---------------------|---------------------------|-----------------------------------|
| 281. Zinc borate | 287. Zinc formate | 293. Zinc sulfate |
| 282. Zinc bromide | 288. Zinc hydrosulfite | 294. Zirconium nitrate |
| 283. Zinc carbonate | 289. Zinc nitrate | 295. Zirconium potassium fluoride |
| 284. Zinc chloride | 290. Zinc phenolsulfonate | 296. Zirconium sulfate |
| 285. Zinc cyanide | 291. Zinc phosphide | 297. Zirconium tetrachloride |
| 286. Zinc fluoride | 292. Zinc silcofluoride | |

FORM 2CS



WASTEWATER APPLICATION FOR PERMIT TO DISCHARGE PROCESS WASTEWATER FROM NEW OR EXISTING INDUSTRIAL WASTEWATER FACILITIES TO SURFACE WATERS

Facility I.D. Number: FL0002275

Please print or type information in the appropriate areas.

I OUTFALL LOCATION For each outfall, list the X,Y coordinates and the name of the receiving water.
(latitude/longitude to the nearest 15 seconds)

A. Outfall No. (List)	B. Latitude			C. Longitude			D. Name of Receiving Water
	Deg.	Min.	Sec.	Deg.	Min.	Sec.	
D-010	30	33	39	87	13	10	Escambia River
I-1C0	30	33	43	87	13	12	Internal Outfall
I-150	30	33	53	87	13	17	Internal Outfall
I-170	30	33	50	87	13	19	Internal Outfall
I-180	30	33	53	87	13	17	Internal Outfall

II OUTFALL DESIGN

A. Outfall No. (List)	B. Design Configuration and Construction Materials	C. Distance from shore	D. Diameter	E. Elevation of Discharge Invert (MSL)	F. Receiving Water Depth at POD (MSL)
D-010	Man-made canal	NA	NA	NA	NA
I-1C0	Industrial Wastewater Treatment Pond	Internal	Outfall	To D-010	NA
I-150	Metal Cleaning Waste Pond	Internal	Outfall	To I-1C0	NA
I-170	Cooling Tower Blowdown	Internal	Outfall	To I-1C0	NA
I-180	Reclaimed and Spent Reclaimed Water	Internal	Outfall	To D-010	NA

III RECEIVING WATER INFORMATION

For each surface water that will receive effluent, supply the following information:

A. Name of Receiving Water	B. Check One		C. Classification (See Ch. 62-302, F.A.C.)	D. Type of Receiving Water (canal, river, lake, etc.)
	Fresh	Salt or Brackish		
Escambia River	☒	☐	Class III	River
	☐	☐		
Note: The river at this location becomes brackish during	☐	☐		
The summer and periods of low rainfall	☐	☐		
	☐	☐		
	☐	☐		

E. Minimum 7-day 10-year low flow of the receiving water at each outfall (if appropriate).

Not applicable

F. Identify and describe the flow of effluent from each outfall to a major body of water. A suitably marked map or aerial photograph may be used.

Please see Attachment 2CS-1.

G. Do you request a mixing zone under Rule 62-4.244, F.A.C.? If yes, for what parameters or pollutants?

No mixing zone is requested.

IV FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B.

B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

Please see Attachment 2CS-1

B. For each outfall, provide a description of:

1. All operations contributing wastewater to the effluent; including process wastewater, sanitary wastewater, cooling water, and stormwater runoff;
2. The average flow contributed by each operation; and
3. The treatment received by the wastewater.

Use the space on the next page. Continue on additional sheets, if necessary.

(1) Outfall No. (List)	(2) Operation(s) Contributing Flow		(3) Treatment		
	(a) Operation (list)	(b) Avg. Flow & Units	(a) Description	(b) List Code from Table 2CS-1	
D-010	Once through condenser cooling water	274 MGD	Discharge to surface water	4-A	
	For Units 1-5				
	IWTP overflow	~18 MGD	Sedimentation, neutralization	1-U	2-K
	Reclaimed and Spent Reclaimed water	Upto 11.5MGD	Discharge to surface water	4-A	
I-1C0	Cooling tower blowdown	~9.36 MGD	Sedimentation	1-U	
	Demineralizer waste	~0.004 MGD	Sedimentation, neutralization	1-U	2-K
	Coal pile runoff	0.018 MGD	Sedimentation, neutralization	1-U	2-K
	Building/yards sumps	6 MGD	Sedimentation, neutralization	1-U	2-K
	Bottom ash hydrobin overflow water	2.2 MGD	Sedimentation, neutralization	1-U	2-K
	Metal Cleaning waste water	~1.2 MGD	Chemical precipitation	2-C	
		(per batch)			
I-150	Metal Cleaning waste water	~1.2 MGD	Chemical precipitation	2-C	
		Per batch			
I-170	Cooling tower blowdown	~9.36 MGD	Sedimentation	1-U	
I-180	Reclaimed and Spent Reclaimed water	Upto 11.5MGD	Reuse/recycle of treated effluent	4-C	

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☒ Yes (complete the following table) ☐ No (go to D. below)

(1) Outfall No. (List)	(2) Operation(s) Contributing Flow(List)	(3) Frequency		(4) Flow				
		(a) Days per Week	(b) Months per Yr.	(a) Flow Rate (in mgd)		(b) Total Volume (specify with units)		(c) Duration (in days)
		(specify avg.)	(specify avg.)	Long Term Avg.	Max. Daily	Long Term Avg.	Max. Daily	
I-150	Metal Cleaning Waste	~1 batch every	3-5 years				1.2 mmgal per batch	3-5

D. Describe practices to be followed to ensure adequate wastewater treatment during emergencies such as power loss and equipment failures causing shutdown of pollution abatement equipment of the proposed/permitted facilities.

Please see Attachment 2CS-2

E. List the method(s) and location(s) of flow measurement.

Please see Attachment 2CS-2

V PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☒ Yes (complete Item V-B) ☐ No (go to Section VI)

B. Are the limitations in the applicable guideline expressed in terms of production (or other measure of operation)?

☐ Yes (complete Item V-C) ☒ No (go to Section VI)

C. If you answered "yes" to Item V-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. Affected Outfalls (list outfall nos.)
a. Quantity per Day	b. Units of Measure	c. Operation, Product, Materials, Etc. (specify)	

VI IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement order, enforcement compliance schedule letter, stipulations, court orders, and grant or loan conditions.

☐ Yes (complete the following table) ☒ No (go to Item VI-B)

1. Identification of Condition, Agreement, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	a. No.	b. Source of Discharge		a. Required	B. Projected

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ Mark "X" if description of additional control programs is attached.

VII INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding--Complete one set of tables for each outfall -- Annotate the outfall number in the space provided. NOTE: Tables VII-A, VII-B, and VII-C are included on separate sheets number VII-1 through VII-9.

D. Use the space below to list any of the pollutants listed in Table 2CS-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. Pollutant	2. Source	1. Pollutant	2. Source

VIII POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item VII-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or by-product?

☐ YES (list all such pollutants below) ☒ NO (go to IX)

IX BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☒ YES (identify the test(s) and describe their purposes below) ☐ NO (go to Section X)

Choric Toxicity tests are conducted on Outfall D-010 as part of the routine monitoring plan. Test results are submitted semi-annually with The facility Discharge Monitoring Reports.

X CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

☒ YES (list the name, address, telephone number, and certification number of, and pollutants analyzed by each such laboratory or firm below) ☐ NO (go to Section XI)

A. Name	B. Address	C. Telephone (area code & no.)	D. Pollutants Analyzed (list)
Test America Laboratories, Inc. Cert# E81010	3355 McLemore Dr Pensacola, FL 32514	850.474.1001	All parameters except pH, TRC, temperature, And flow
TRAC Laboratories, Inc	14 S 14 th Street Pensacola, FL 32507	850.456.5836	Chronic Toxicity

XI CONNECTION TO REGIONAL POTW

- A. Indicate the relationship between this project and area regional planning for wastewater treatment. List steps to be taken for this industrial wastewater facility to become part of an area-wide wastewater treatment system.

Plant Crist is currently in a partnership with Emerald Coast Utility Authority (ECUA) to receive up to 20 MGD of reclaimed water from ECUA's Central Water Reclamation Facility. The partnership began in 2009, and Plant Crist began receiving reclaimed water in 2010 for the Flue Gas Desulphurization system (FGD). Since then, Gulf Power and ECUA have expanded to supply water for the FGD and both the Unit 6 and Unit 7 cooling towers.

XII-A CERTIFICATIONS FOR NEW OR MODIFIED FACILITIES

This is to certify the engineering features of this pollution control project have been designed by me and found to be in conformity with sound engineering principles, applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules of the Department. It is also agreed that the undersigned, if authorized by the owner, will furnish the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signature

Company Name

Address

Name (please type)

(Affix Seal)

Florida Registration No.:

Telephone No.:

Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name & Official Title (Please type or print)

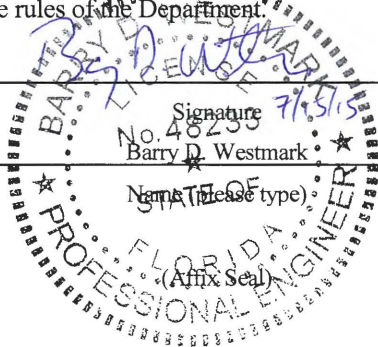
Signature

Telephone No. (area code & No.)

Date Signed

XII-B CERTIFICATIONS FOR PERMIT RENEWALS

This is to certify the engineering features of this pollution control project have been examined by me and found to be in conformity with sound engineering principles, applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules of the Department.



Environmental Consulting & Technology, Inc.

Company Name

Address 1408 N. Westshore Blvd, Suite 115

Tampa, FL 33607

Florida Registration No.: 48233

Telephone No.: (813) 549-4386

Date 7/15/15

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

James O. Vick, Director of Environmental Affairs

Name & Official Title (Please type or print)

850-444-6311

Telephone No. (area code & No.)

Signature

7/21/15

Date Signed

PLEASE PRINT OR TYPE ONLY: You may report some or all of this information on separate sheets instead of completing these pages. Use the same format. SEE INSTRUCTIONS.

VII. INTAKE AND EFFLUENT CHARACTERISTICS

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. Pollutant	2. Effluent						3. Units		4. Intake (optional)			
	a. Max. Daily Value		b. Max. 30-day Value		c. Annual Avg. Value		d. No. of Analyses	a. Concentration	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
a. Carbonaceous Biochemical Oxygen Demand (CBOD)	<2	1477.22					1	mg/l	lbm/day	<2	1431.15	1
b. Chemical Oxygen Demand (COD)	41.3	61009.29					1	mg/l	lbm/day	30.2	43220.67	1
c. Total Organic Carbon (TOC)	4.14	6115.70					1	mg/l	lbm/day	4.16	5953.58	1
d. Total Suspended Solids (TSS)	18	26590.01					1	mg/l	lbm/day	16	22898.37	1
e. Total Nitrogen (as N)	0.61	901.11					1	mg/l	lbm/day	0.639	914.50	1
f. Total Phosphorus (as P)	<0.03	22.16					1	mg/l	lbm/day	<0.03	21.47	1
g. Ammonia (as N)	<0.016	11.82					1	mg/l	lbm/day	<0.016	11.45	1
h. Flow - actual or projected	Value		Value		Value 177 MGD		365			Value 171 MGD		365
i. Flow - design	Value 274		Value		Value					Value 274		
j. Specific Conductivity	Value 15.82		Value		Value		2	mS/cm		Value 13.50		2
k. Temperature (winter)	Value		Value		Value 64.7		182	°F		Value 59.5		183
l. Temperature (summer)	Value		Value		Value 78.2		183	°F		Value 78.2		183
m. pH	Min. 6.25	Max 7.88	Min.	Max.				STANDARD UNITS				

PART B - Mark "X" in column 2a for each pollutant you know or have reason to believe is present. Mark "X" in column 2b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. Pollutant and CAS No. (if available)	2. Mark "X"		3. Effluent						4. Units		5. Intake (optional)			
	a. be- lieved present	b. be- lieved absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
			(1) Conc...	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
a. Bromide (24949-67-9)	☒	☐	16.3	24078.73					1	Mg/l	Lbm/day	9.13	13066.38	1
b. Chlorine, Total Residual	☒	☐					0.0024	3.55	32	Mg/l	Lbm/day			
c. Color	☒	☐	18.8						1	Color units		20.4		1
d. Fecal Coliform	☒	☐	30						1	MPN/100 ml		20		1
e. Fluoride (16984-48-8)	☒	☐	0.33	487.48					1	Mg/l	Lbm/day	0.28	400.72	1
f. Nitrate-Nitrite (as N)	☒	☐	0.233	344.19					1	Mg/l	Lbm/day	0.254	363.51	1

: Item VII-B Contd.

Facility ID. Number FL0002275 Outfall No. D-010

1. Pollutant and CAS No. (if available)	2. Mark "X"		3. Effluent						4. Units		5. Intake (optional)			
	a. believed present	b. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
			(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
g. Nitrogen, Total Organic (as N)	☒	☐	0.26	384.08					1	Mg/l	Lbm/day	0.26	372.10	1
h. Oil and grease	☐	☒	<2.75	2031.18					1	Mg/l	Lbm/day	<2.65	1896.27	1
i. Phosphorus, Total (as P) (7723-14-0)	☒	☐	<0.03	22.16					1	Mg/l	Lbm/day	<0.03	21.47	1
j. Radioactivity														
(1) Alpha, Total	☒	☐	4.4+/-2.6						1	pCi/l		7.7+/-3.2		1
(2) Beta, Total	☒	☐	75+/-14.1						1	pCi/l		58+/-13.2		1
(3) Radium, Total	☒	☐	0.7+/-0.7						1	pCi/l		0.8+/-0.69		1
(4) Radium 226, Total	☒	☐	0.2+/-0.1						1	pCi/l		0.2+/-0.09		1
k. Sulfate (as SO ₄) (14808-79-8)	☒	☐	545	805086.32					1	mg/L	lbm/day	473	676933.0	1
l. Sulfide (as S)	☒	☐	<1	738.61					1	mg/L	lbm/day	<1	715.57	1
m. Sulfite (as SO ₃) (14265-45-3)	☒	☐	5	7386.11					1	mg/L	lbm/day	5	7155.74	1
n. Surfactants	☒	☐	<0.12	88.63					1	mg/l LAS MW 340	lbm/day	<0.12	85.87	1
o. Aluminum, Total (7429-90-5)	☒	☐	0.139	205.33					1	mg/L	lbm/day	0.208	297.68	1
p. Barium, Total (7440-39-3)	☒	☐	0.0317	46.83					1	mg/L	lbm/day	0.0312	44.65	1
q. Boron, Total (7440-42-8)	☒	☐	1.06	1565.86					1	mg/L	lbm/day	0.888	1270.86	1
r. Cobalt, Total (7440-48-4)	☒	☐	<0.003	2.22					1	mg/L	lbm/day	<0.003	2.15	1
s. Iron, Total (7439-89-6)	☒	☐	0.51	753.38					1	mg/L	lbm/day	0.664	950.28	1
t. Maagnesium, Total (7439-95-4)	☒	☐	314	463847.90					1	mg/L	lbm/day	266	380685.4	1
u. Molybdenum, Total (7439-98-7)	☒	☐	<0.002	1.48					1	mg/L	lbm/day	<0.002	1.43	1
v. Manganese, Total (7439-96-5)	☒	☐	0.107	158.06					1	mg/L	lbm/day	0.107	153.13	1
w. Tin, Total (7440-31-5)	☒	☐	<0.005	3.69					1	mg/L	lbm/day	<0.005	3.58	1
x. Titanium, Total (7440-32-6)	☒	☐	0.0015	2.22					1	mg/L	lbm/day	0.0015	2.15	1

Facility ID. Number: FL0002275 Outfall No. D-010

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2a for all GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2a (secondary industries, non-process wastewater outfalls, and non-required GC/MS fractions), mark "X" in column 2b for each pollutant you know or have reason to believe is present. Mark "X" in column 2c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4-dinitrophenol, or 2-methyl-4,6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a . testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	☒	☒	☐	<0.0023	1.70					1	mg/L	lbm/day	<0.0023	1.65	1
2M. Arsenic, Total (7723-14-0)	☒	☒	☐	<0.004	2.95					1	mg/L	lbm/day	<0.004	2.86	1
3M. Beryllium, Total (7440-41-7)	☒	☒	☐	0.000079	0.12					1	mg/L	lbm/day	0.000079	0.12	1
4M. Cadmium, Total (7440-43-9)	☒	☒	☐	<0.001	0.74					1	mg/L	lbm/day	<0.001	0.72	1
5M. Chromium, Total (7440-47-3)	☒	☒	☐	0.002	2.95					1	mg/L	lbm/day	0.002	2.86	1
6M. Copper, Total (7440-50-8)	☒	☒	☐	0.002	2.95					1	mg/L	lbm/day	<0.002	1.43	1
7M. Lead, Total (7439-92-1)	☒	☒	☐	0.002	2.95					1	mg/L	lbm/day	0.002	2.86	1
8M. Mercury, Total (7439-97-6)	☒	☒	☐	0.00115	0.0017					1	ug/L	lbm/day	0.0002	0.00029	1
9M. Nickel, Total (7440-02-0)	☒	☒	☐	<0.003	2.22					1	mg/L	lbm/day	<0.003	2.15	1
10M. Selenium, Total (7782-49-2)	☒	☒	☐	<0.004	2.95					1	mg/L	lbm/day	<0.004	2.86	1
11M. Silver, Total (7440-22-4)	☒	☒	☐	<0.000047	0.03					1	mg/L	lbm/day	<0.000047	0.03	1
12M. Thallium, Total (7440-28-0)	☒	☒	☐	<0.0005	0.37					1	mg/L	lbm/day	<0.0005	0.36	1
13M. Zinc, Total (7440-66-6)	☒	☒	☐	<0.008	5.91					1	mg/L	lbm/day	<0.008	5.72	1
14M. Cyanide, Total (57-12-5)	☒	☒	☐	<0.005	3.69					1	mg/L	lbm/day	<0.005	3.58	1
15M. Phenols, Total	☒	☒	☐	0.0045	6.65					1	mg/L	lbm/day	0.0148	21.18	1
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)	☐	☐	☒												
GC/MS FRACTION -VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	☒	☐	☒	<10	7.39					1	ug/L	lbm/day	<10	7.16	1
2V. Acrylonitrile (107-13-1)	☒	☐	☒	<2.8	2.07					1	ug/L	lbm/day	<2.8	2.00	1

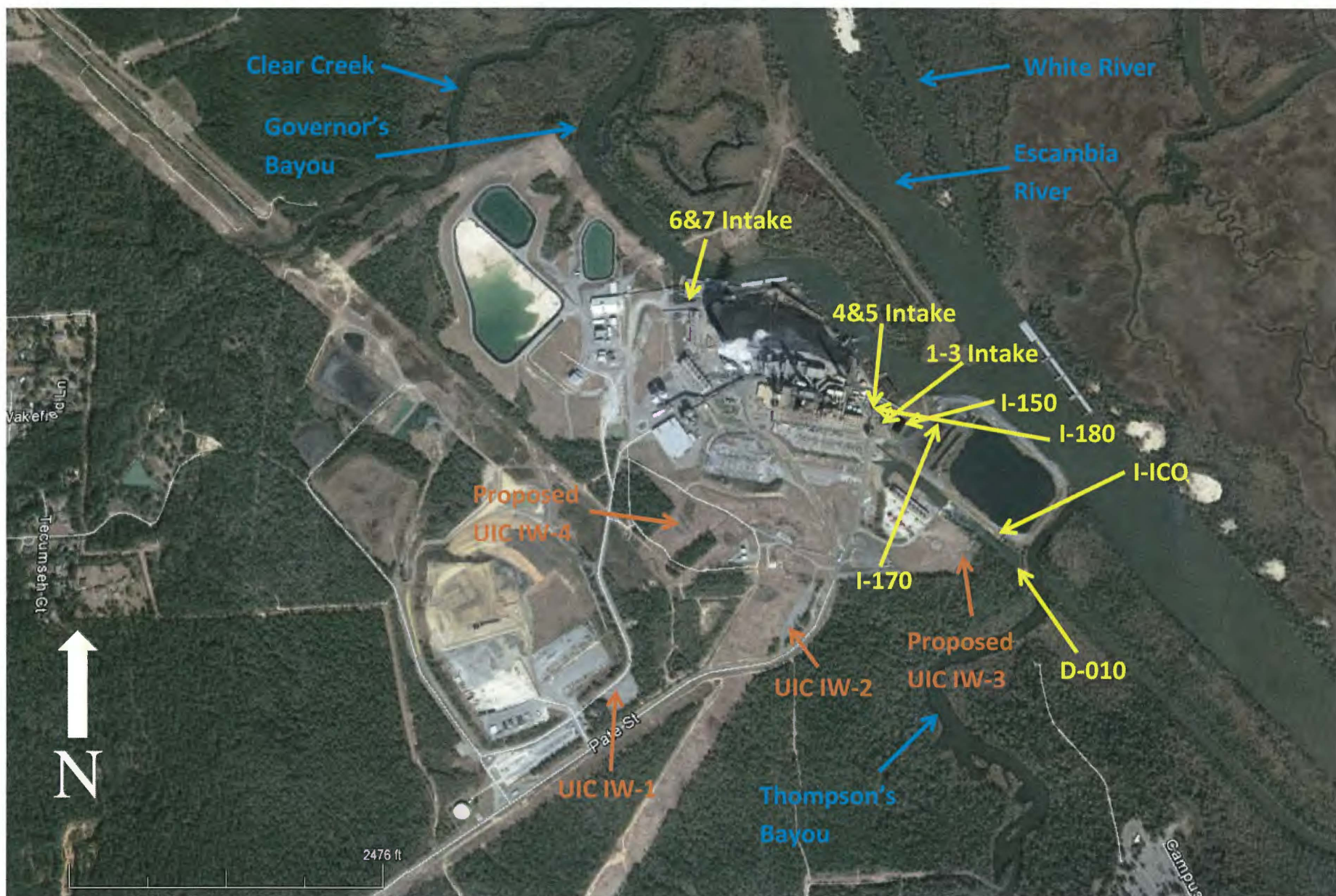
1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
3V. Benzene (71-43-2)	☒	☐	☒	<0.38	0.28					1	ug/L	lbm/day	<0.38	0.27	1
4V. Bis (Chloromethyl) Ether (542-88-1)	☒	☐	☒	<5.0	3.7					1	ug/L	lbm/day	<5.0	3.6	1
5V. Bromoform (75-25-2)	☒	☐	☒	<0.71	0.52					1	ug/L	lbm/day	<0.71	0.51	1
6V. Carbon Tetrachloride (56-23-5)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
7V Chlorobenzene (108-90-7)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
8V. Chlorodi-bromomethane (124-8-1)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
9V. Chloroethane (74-00-3)	☒	☐	☒	<0.76	0.56					1	ug/L	lbm/day	<0.76	0.54	1
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	☒	☐	☒	<2	1.48					1	ug/L	lbm/day	<2	1.43	1
11V. Chloroform (67-86-3)	☒	☐	☒	<0.6	0.44					1	ug/L	lbm/day	<0.6	0.43	1
12V. Dichloro-bromomethane (75-24-4)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
13V. Dichloro-difluoromethane (75-71-8)	☒	☐	☒	<0.85	0.63					1	ug/L	lbm/day	<0.85	0.61	1
14V. 1,1-Dichloroethane (75-34-3)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
15V. 1,2-Dichloroethane (107-06-2)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
16V. 1,1-Dichloroethylene (75-35-4)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
17V. 1,2,-Dichloropropane (78-87-5)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
18V. 1,3-Dichloropropylene (542-75-6)	☒	☐	☒	<1	0.74					1	ug/L	lbm/day	<1	0.72	1
19V. Ethylbenzene (100-41-4)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
20V. Methyl Bromide (74-83-9)	☒	☐	☒	<0.98	0.72					1	ug/L	lbm/day	<0.98	0.70	1
21V. Methyl Chloride (74-87-3)	☒	☐	☒	<0.83	0.61					1	ug/L	lbm/day	<0.83	0.59	1
22V. Methylene Chloride (74-98-2)	☒	☐	☒	<3	2.22					1	ug/L	lbm/day	<3	2.15	1
23V. 1,1,2,2-Tetra-chloroethane (79-34-5)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
24V. Tetrachloroethylene (127-18-4)	☒	☐	☒	<0.58	0.43					1	ug/L	lbm/day	<0.58	0.42	1

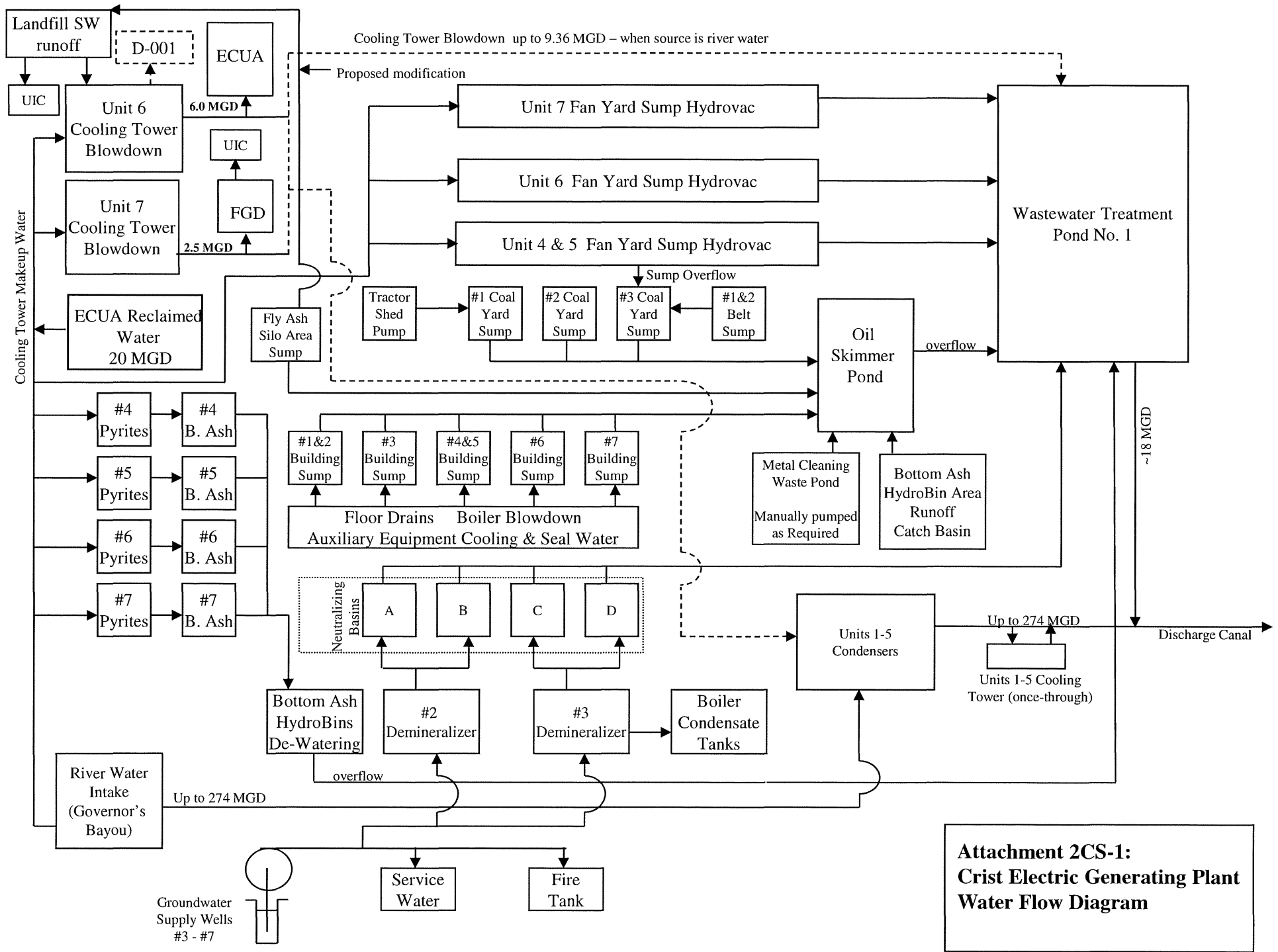
1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
25V. Toluene (108-88-3)	☒	☐	☒	<0.7	0.52					1	ug/L	lbm/day	<0.7	0.50	1
26V. 1,2-Trans-Dichloroethylene (156-60-5)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
27V. 1,1,2-Trichloroethane (71-55-6)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
28V. 1,1,2-Trichloroethane (79-00-5)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
29V. Trichloroethylene (79-01-6)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
30V. Trichloro-fluoromethane (75-69-4)	☒	☐	☒	<0.52	0.38					1	ug/L	lbm/day	<0.52	0.37	1
31V. Vinyl Chloride (75-01-4)	☒	☐	☒	<0.5	0.37					1	ug/L	lbm/day	<0.5	0.36	1
1A. 2-Chlorophenol (95-57-8)	☒	☐	☒	<2.1	1.55					1	ug/L	lbm/day	<2.1	1.50	1
2A. 2,4-Dichlorophenol (120-83-2)	☒	☐	☒	<2.86	2.11					1	ug/L	lbm/day	<2.86	2.05	1
3A. 2,4-Dimethylphenol (105-67-9)	☒	☐	☒	<3.33	2.46					1	ug/L	lbm/day	<3.33	2.38	1
4A. 4,6-Dinitro-O-Cresol (534-53-1)	☒	☐	☒	<1.9	1.40					1	ug/L	lbm/day	<1.9	1.36	1
5A. 2,4-Dinitrophenol (51-28-5)	☒	☐	☒	<3.24	2.39					1	ug/L	lbm/day	<3.24	2.32	1
6A. 2-Nitrophenol (88-75-5)	☒	☐	☒	<0.619	0.46					1	ug/L	lbm/day	<0.619	0.44	1
7A. 4-Nitrophenol (100-02-7)	☒	☐	☒	<2	1.48					1	ug/L	lbm/day	<2	1.43	1
8A P-Chloro-M-Cresol (59-50-7)	☒	☐	☒	<3.62	2.67					1	ug/L	lbm/day	<3.62	2.59	1
9A Pentachlorophenol (87-86-5)	☒	☐	☒	<1.72	1.27					1	ug/L	lbm/day	<1.72	1.23	1
10A Phenol (108-95-2)	☒	☐	☒	<2.48	1.83					1	ug/L	lbm/day	<2.48	1.77	1
11A 2,4,5-Trichloro-phenol (88-06-2)	☒	☐	☒	<3.33	2.46					1	ug/L	lbm/day	<3.33	2.38	1
1B. Acenaphthene (63-32-9)	☒	☐	☒	<0.438	0.32					1	ug/L	lbm/day	<0.438	0.31	1
2B. Acenaphthylene (208-96-8)	☒	☐	☒	<0.533	0.39					1	ug/L	lbm/day	<0.533	0.38	1
3B. Anthracene (120-12-7)	☒	☐	☒	<0.4	0.30					1	ug/L	lbm/day	<0.4	0.29	1
4B. Benzidine (92-87-5)	☒	☐	☒	<19	14.03					1	ug/L	lbm/day	<19	13.60	1

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
5B. Benzo (a) Anthracene (56-55-3)	☒	☐	☒	<0.324	0.24					1	ug/L	lbm/day	<0.324	0.23	1
6B. Benzo (a) Pyrene (50-32-8)	☒	☐	☒	<0.41	0.30					1	ug/L	lbm/day	<0.41	0.29	1
7B. 3,4-Benzo-fluoranthene (205-99-2)	☒	☐	☒	<0.362	0.27					1	ug/L	lbm/day	<0.362	0.26	1
8B. Benzo (ghi) Perylene (191-24-2)	☒	☐	☒	<1.01	0.75					1	ug/L	lbm/day	<1.01	0.72	1
9B. Benzo (k) Fluoranthene (207-08-9)	☒	☐	☒	<0.514	0.38					1	ug/L	lbm/day	<0.514	0.37	1
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	☒	☐	☒	<0.657	0.49					1	ug/L	lbm/day	<0.657	0.47	1
11B. Bis (2-chloroethyl) Ether (111-44-4)	☒	☐	☒	<0.705	0.52					1	ug/L	lbm/day	<0.705	0.50	1
12B. Bis (2-Chloroisopropyl) Ether (102-60-1)	☒	☐	☒	<0.771	0.57					1	ug/L	lbm/day	<0.771	0.55	1
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	☒	☐	☒	<2.15	1.59					1	ug/L	lbm/day	<2.15	1.54	1
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	☒	☐	☒	<0.305	0.23					1	ug/L	lbm/day	<0.305	0.22	1
15B Butyl Benzyl Phthalate (84-68-7)	☒	☐	☒	<0.657	0.49					1	ug/L	lbm/day	<0.657	0.47	1
16B. 2-Chloronaphthalene (91-58-7)	☒	☐	☒	<0.495	0.37					1	ug/L	lbm/day	<0.495	0.35	1
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	☒	☐	☒	<1.9	1.40					1	ug/L	lbm/day	<1.9	1.36	1
18B. Chrysene (218-01-9)	☒	☐	☒	<0.467	0.34					1	ug/L	lbm/day	<0.467	0.33	1
19B. Dibenzo (a,h) Anthracene (53-70-3)	☒	☐	☒	<1.11	0.82					1	ug/L	lbm/day	<1.11	0.79	1
20B. 1,2-Dichlorobenzene (95-50-1)	☒	☐	☒	<0.543	0.40					1	ug/L	lbm/day	<0.543	0.39	1
21B. 1,3-Dichlorobenzene (541-73-1)	☒	☐	☒	<0.448	0.33					1	ug/L	lbm/day	<0.448	0.32	1
22B. 1,4-Dichlorobenzene (106-46-7)	☒	☐	☒	<0.495	0.37					1	ug/L	lbm/day	<0.495	0.35	1
23B. 3,3'-Dichlorobenzidine (92-94-1)	☒	☐	☒	<2.48	1.83					1	ug/L	lbm/day	<2.48	1.77	1
24B. Diethyl Phthalate (84-66-2)	☒	☐	☒	<0.667	0.49					1	ug/L	lbm/day	<0.667	0.48	1
25B. Dimethyl Phthalate (131-11-3)	☒	☐	☒	<0.571	0.42					1	ug/L	lbm/day	<0.571	0.41	1
26B. Di-N-Butyl Phthalate (84-74-2)	☒	☐	☒	<2.57	1.90					1	ug/L	lbm/day	<2.57	1.84	1
27B. 2,4-Dinitrotoluene (121-14-2)	☒	☐	☒	<1.81	1.34					1	ug/L	lbm/day	<1.81	1.30	1
28B. 2,6-Dinitrotoluene (606-20-2)	☒	☐	☒	<1.81	1.34					1	ug/L	lbm/day	<1.81	1.30	1

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
29B. Di-N-Octyl Phthalate (117-84-0)	☒	☐	☒	<0.419	0.31					1	ug/L	lbm/day	<0.419	0.30	1
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	☒	☐	☒	<0.952	0.70					1	ug/L	lbm/day	<0.952	0.68	1
31B. Fluoranthene (206-44-0)	☒	☐	☒	<0.733	0.54					1	ug/L	lbm/day	<0.733	0.52	1
32B. Fluorene (86-73-7)	☒	☐	☒	<0.533	0.39					1	ug/L	lbm/day	<0.533	0.38	1
33B. Hexachlorobenzene (118-74-1)	☒	☐	☒	<0.238	0.18					1	ug/L	lbm/day	<0.238	0.17	1
34B. Hexachlorobutadiene (87-68-3)	☒	☐	☒	<3.43	2.53					1	ug/L	lbm/day	<3.43	2.45	1
35B. Hexachlorocyclopentadiene (77-47-4)	☒	☐	☒	<2.48	1.83					1	ug/L	lbm/day	<2.48	1.77	1
36B. Hexachloroethane (67-72-1)	☒	☐	☒	<4	2.95					1	ug/L	lbm/day	<4	2.86	1
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	☒	☐	☒	<0.971	0.72					1	ug/L	lbm/day	<0.971	0.69	1
38B. Isophorone (78-59-1)	☒	☐	☒	<0.543	0.40					1	ug/L	lbm/day	<0.543	0.39	1
39B. Naphthalene (91-20-3)	☒	☐	☒	<0.6	0.44					1	ug/L	lbm/day	<0.6	0.43	1
40B. Nitrobenzene (98-95-9)	☒	☐	☒	<0.524	0.39					1	ug/L	lbm/day	<0.524	0.37	1
41B N-Nitrosodimethylamine (62-75-9)	☒	☐	☒	<3.33	2.46					1	ug/L	lbm/day	<3.33	2.38	1
42B. N-Nitrosodi-N-Propylamine (621-64-7)	☒	☐	☒	<3.14	2.32					1	ug/L	lbm/day	<3.14	2.25	1
43B. N-Nitro-sodiphenylamine (86-30-6)	☒	☐	☒	<0.448	0.33					1	ug/L	lbm/day	<0.448	0.32	1
44B Phenanthrene (85-01-8)	☒	☐	☒	<0.39	0.29					1	ug/L	lbm/day	<0.39	0.28	1
45B. Pyrene (129-00-0)	☒	☐	☒	<1.04	0.77					1	ug/L	lbm/day	<1.04	0.74	1
46B. 1,2,4-Trichlorobenzene (120-82-1)	☒	☐	☒	<0.505	0.37					1	ug/L	lbm/day	<0.505	0.36	1
1P. Aldrin (309-00-2)	☒	☐	☒	<0.00288	0.002					1	ug/L	lbm/day	<0.00288	0.002	1
2P. -BHC (319-84-6)	☒	☐	☒	<0.00346	0.003					1	ug/L	lbm/day	<0.00346	0.002	1
3P -BHC (319-85-7)	☒	☐	☒	<0.00288	0.002					1	ug/L	lbm/day	<0.00288	0.002	1
4P. -BHC (58-89-9)	☒	☐	☒	<0.0026	0.002					1	ug/L	lbm/day	<0.0026	0.002	1
5P. -BHC (319-86-8)	☒	☐	☒	<0.024	0.018					1	ug/L	lbm/day	<0.024	0.017	1

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
6P. Chlordane (57-74-9)	☒	☐	☒	<0.125	0.092					1	ug/L	lbm/day	<0.125	0.089	1
7P. 4,4'-DDT (50-29-3)	☒	☐	☒	<0.00375	0.003					1	ug/L	lbm/day	<0.00375	0.003	1
8P. 4,4'-DDE (72-55-9)	☒	☐	☒	<0.00385	0.003					1	ug/L	lbm/day	<0.00385	0.003	1
9P. 4,4'-DDD (72-54-8)	☒	☐	☒	<0.00288	0.002					1	ug/L	lbm/day	<0.00288	0.002	1
10P. Dieldrin (60-57-1)	☒	☐	☒	<0.00567	0.004					1	ug/L	lbm/day	<0.00567	0.004	1
11P. -Endosulfan (115-29-7)	☒	☐	☒	<0.00288	0.002					1	ug/L	lbm/day	<0.00288	0.002	1
12P. -Endosulfan (115-29-7)	☒	☐	☒	<0.00712	0.005					1	ug/L	lbm/day	<0.00712	0.005	1
13P. Endosulfan Sulfate (1031-07-8)	☒	☐	☒	<0.00202	0.001					1	ug/L	lbm/day	<0.00202	0.001	1
14P. Endrin (72-20-8)	☒	☐	☒	<0.00288	0.002					1	ug/L	lbm/day	<0.00288	0.002	1
15P. Endrin Aldehyde (7421-92-4)	☒	☐	☒	<0.00269	0.002					1	ug/L	lbm/day	<0.00269	0.002	1
16P. Heptachlor (76-44-8)	☒	☐	☒	<0.00298	0.002					1	ug/L	lbm/day	<0.00298	0.002	1
17P. Heptachlor Epoxide (1024-57-3)	☒	☐	☒	<0.00308	0.002					1	ug/L	lbm/day	<0.00308	0.002	1
18P. PCB-1242 (53469-21-9)	☒	☐	☒	<0.173	0.13					1	ug/L	lbm/day	<0.173	0.12	1
19P. PCB-1254 (11097-69-1)	☒	☐	☒	<0.298	0.22					1	ug/L	lbm/day	<0.298	0.21	1
20P. PCB-1221 (11104-28-2)	☒	☐	☒	<0.212	0.16					1	ug/L	lbm/day	<0.212	0.15	1
21P. PCB-1232 (11141-16-5)	☒	☐	☒	<0.394	0.29					1	ug/L	lbm/day	<0.394	0.28	1
22P. PCB-1248 (12672-29-6)	☒	☐	☒	<0.0192	0.01					1	ug/L	lbm/day	<0.0192	0.01	1
23P. PCB-1260 (11096-82-5)	☒	☐	☒	<0.0327	0.02					1	ug/L	lbm/day	<0.0327	0.02	1
24P. PCB-1016 (12674-11-2)	☒	☐	☒	<0.0462	0.03					1	ug/L	lbm/day	<0.0462	0.03	1
25P. Toxaphene (8001-35-2)	☒	☐	☒	<0.288	0.21					1	ug/L	lbm/day	<0.288	0.21	1





**Attachment 2CS-1:
Crist Electric Generating Plant
Water Flow Diagram**

Attachment 2CS-2

SECTION III-E (page 2CS-17): Minimum 7-day 10-year low flow of the receiving water at each outfall (if appropriate).

This information is not available for the outfall and therefore not applicable.

SECTION III-F (page 2CS-17): Identify and describe the flow of effluent from each outfall to a major body of water. A suitably marked map or aerial photograph may be used.

See attached map for outfall locations. The facility's combined plant discharge (Outfall D-010), which consists of once-through cooling water, IWTP overflow, and reclaimed water is discharged to the Escambia River via a man-made canal. IWTP overflow (Outfall I-1C0) consists of overflow from the bottom ash dewatering bins, neutralized demineralizer regeneration wastewater, cooling tower blowdown, boiler blowdown, floor drainage, auxiliary equipment cooling water and seal water, coal pile runoff, yard sump discharge, and treated metal cleaning wastewater. Internal Outfall I-150 (metal cleaning wastes) and Outfall I-170 (Unit 6 and 7 cooling tower blowdown when using river water) discharge to the IWTP. Those wastewater streams that have a potential to contain oil are routed through an oil skimmer pond prior to discharge to the IWTP. Internal Outfall I-180 discharges spent reclaimed water from the once-through cooling water system supplying Units 4 and 5.

SECTION III-G (page 2CS-17): Do you request a mixing zone under Rule 62-4.2444, F.A.C.? If yes, for what parameters or pollutants?

Gulf Power does not request a mixing zone at this time.

SECTION IV-D (page 2CS-19): Describe practices to be followed to ensure adequate wastewater treatment during emergencies such as power loss and equipment failures causing shutdown of pollution abatement equipment of the proposed/permitted facilities.

Back up pumps are available for facility sumps. Question is not applicable for wastewater flows entering IWTP where the method of treatment is sedimentation.

SECTION IV-E (page 2CS-19). List the method(s) and location(s) of flow measurement.

Once-through cooling water flow is calculated using intake pumps logs. IWTP overflow (Outfall I-1C0) is measured using a parshall flume and flow meter at the IWTP discharge weir. Flow for Outfall I-150, Metal Cleaning Wastewater, is calculated based on the volume of wastewater contained in the metal cleaning pond at the time of discharge. Flow for Outfall I-170, Cooling Tower Blowdown, when using river water as source, is based on engineering calculations. Flow for Outfall I-180 is measured using flow meters.

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Attachment 3
Form 2CG



WASTEWATER APPLICATION FORM 2CG

PERMIT TO DISCHARGE PROCESS WASTEWATER
FROM NEW OR EXISTING
INDUSTRIAL WASTEWATER FACILITIES
TO GROUND WATER

INSTRUCTIONS - FORM 2CG

This form must be completed by all applicants who check "yes" to Item II-D in DEP Form 62-620.910(1) (Form 1).

Public Availability of Submitted Information.

You may not claim as confidential any information required by this form or Form 1, whether the information is reported on the forms or in an attachment. This information will be made available to the public upon request. Any information you submit to the Department which goes beyond that required by this form or Form 1 you may claim as confidential, but claims for information which is effluent data will be denied. If you do not assert a claim of confidentiality at the time of submitting the information, the Department may make the information public without further notice to you. Claims of confidentiality must be in accordance with Rule 62-620.302, Florida Administrative Code.

Completeness

Your application will not be considered complete unless you answer every question on this form and on Form 1. If an item does not apply to you, enter "NA" (for "not applicable") to show that you considered the question. Also, you may need a Ground Water Monitoring Plan (GWMP) required by Rule 62-522.600, Florida Administrative Code. Please contact the Department for more information.

Follow-up Requirements (for New or Substantially Modified Facilities)

Although you are now required to submit estimated data on this form, please note that no later than six months after you begin discharging from the proposed or substantially modified facility, you must complete and submit items V and VI of this Form 2CG. However, you need not complete those portions of Item V requiring test which you have already performed under the discharge monitoring requirements of your permit.

Definitions

All significant terms used in these instructions and in the form are defined in the glossary found in the General Instructions which accompany Form 1.

DEP ID Number

If you are applying for a renewal of an existing permit or for a substantial revision to an existing permit, fill in your DEP Identification Number at the top of each page of Form 2CG. You may copy this number directly from Item 1 of Form 1. If you are applying for a permit for a proposed facility, leave the DEP Identification Number blank. The Department will assign a number.

Item I

You may use the map you provided for Item XI of Form 1 to determine the latitude and longitude of each of your discharge locations.

Item II

Describe any land application of effluent.

Item III

A. The line drawing should show generally the route taken by water in your facility from intake to discharge. Show all operations contributing wastewater, including process and production areas, sanitary flows, cooling water, and stormwater runoff. You may group similar operations into a single unit, labeled to correspond to the more detailed listing in Item III B. The water balance should show average flows. Show all significant losses of water to products, atmosphere, and discharge. You should use actual measurements whenever available; otherwise, use your best estimate.

B. List all sources of wastewater to each discharge point. Operations may be described in general terms (for example, "dye-making reactor" or "distillation tower"). You may estimate the flow contributed by each source if no data are available. For stormwater discharges you may estimate the average flow, but you must indicate the rainfall event upon which the estimate is based and the method of estimation. For each treatment unit, indicate its size, flow rate, and retention time, and describe the ultimate disposal of any solid or liquid wastes not discharged. Treatment units should be listed in order and you should select the proper code from Table 2CG-1 to fill in column 3-b for each treatment unit. Insert "XX" into column 3-b if no code corresponds to a treatment unit you list.

C. A discharge is intermittent unless it occurs without interruption during the operating hours of the facility, except for infrequent shut-downs for maintenance, process changes, or other similar activities. A discharge is seasonal if it occurs only during certain parts of the year. Fill in every applicable column in this item for each source of intermittent or seasonal discharges. Base your answers on actual data whenever available; otherwise, provide your best estimate. Report the highest daily value for flow rate and total volume in the "Max. Daily" columns (columns 4-a and 4-b). Report the average of all daily values measured during days when the discharge occurred within the last year in the "Long Term Avg." columns (columns 4-a and 4-b).

Item IV

A. If you check "yes" to this question, complete all parts of the chart, or attach a copy of any previous submission you have made to the Department containing the same information.

B. You are not required to submit a description of future pollution control projects if you do not wish to or if none is planned.

Item V (A, B, C, and D, including Tables V-A, V-B, and V-C)

This item requires you to collect and report data on the pollutants discharged from each of your discharge points. Each part of this item addresses a different set of pollutants and must be completed in accordance with the specific instructions for that part. The following general instructions apply to the entire item.

General Instructions

Part A requires you to report at least one analysis for each pollutant listed. Parts B and C require you to report analytical data in two ways. For some pollutants, you may be required to mark "X" in the "Testing Required" column (*column 2-a, Part C*), and test (*sample and analyze*) and report the levels of the pollutants in your discharge whether or not you expect them to be present in your discharge. For all other, you must mark "X" in either the "Believe Present" column or the "Believe Absent" column (*columns 2-a or 2-b, Part B, and Columns 2-b or 2-c, Part C*) based on your best estimate, and test for those which you believe to be present. (*See specific instructions on the form and below for Parts A through D.*) Base your determination that a pollutant is present in or absent from your discharge on your knowledge of your raw materials, maintenance chemicals, intermediate and final products and by-products, and any previous analyses known to you of your effluent or similar effluent. (*For example, if you manufacture pesticides, you should expect those pesticides to be present in contaminated stormwater runoff.*) If you would expect a pollutant to be present solely as a result of its presence in your intake water, you must mark "Believe Present" but you are not required to analyze for that pollutant. Instead, mark an "X" in the "Intake" column.

A. Reporting

All levels must be reported as concentration and as total mass. You may report some or all of the required data by attaching separate sheets of paper instead of filling out pages V-1 to V-10 if the separate sheets contain all the required information in a format which is consistent with pages V-1 to V-10 in spacing and in identification of pollutants and columns. (*For example, the data systems used in your GC/MS analysis may be able to print data in the proper format.*) Use the following abbreviations in the columns headed "Units" (*column 3, Part A, and Column 4, Parts B and C*).

Concentration
ppm - parts per million
mg/l - milligrams per liter
ppb - parts per billion
ug/l - micrograms per liter

Mass
lbs - pounds
ton - tons (English tons)
mg - milligrams
g - grams
kg - kilograms
T - tonnes (metric tons)

All reporting of values for metals must be in terms of "total recoverable metal," unless (1) an applicable, promulgated effluent limitation or standard specifies the limitation for the metal in dissolved, valent, or total form; or (2) all approved analytical methods for the metal inherently measure only its dissolved form (e.g., hexavalent chromium). If you measure only one daily value, complete only "Max. Daily Values" columns and insert "1" into the "Number of Analyses" column (*columns 2-a and 2-d, Part A, and column 3-a, 3-d, Parts B and C*). The Department may require you to conduct additional analyses to further characterize your discharges. For composite sample, the daily value is the total mass or average concentration found in a composite sample taken over the operating hours of the facility during a 24-hour period; for grab samples, the daily value is the arithmetic or flow-weighted total mass or average concentration found in a series of at least four grab samples taken over the operating hours of the facility during a 24-hour period. If you measure more than one daily value for a pollutant and those values are representative of your waste stream, you must report them. You

must describe your method of testing and data analysis. You also must determine the average of all values within the last year and report the concentration and mass under the "Long Term Avg. Values" columns (*column 2-c, Part A, and column 3-c, Parts B and C*), and the total number of daily values under the "Number of Analyses" columns (*column 2-d, Part A, and columns 3-d, Parts B and C*). Also determine the average of all daily values taken during each calendar month, and report the highest average under the "Max. 30-day Values" columns (*column 2-c, Part A, and column 3-b, Parts B and C*).

B. Sampling

The collection of the samples for the reported analyses should be supervised by a person experienced in performing sampling of industrial wastewater. Any specific requirements contained in the applicable analytical methods should be followed for sample containers, sample preservation, holding times, the collection of duplicate samples, etc. The time when you sample should be representative of your normal operation, to the extent feasible, with all processes which contribute wastewater in normal operation, and with your treatment system operating properly with no system upsets. Samples should be collected from the center of the flow channel, where turbulence is at a maximum, at a site specified in your present permit, or at any site adequate for the collection of a representative sample. Sampling for metals that are hardness-dependent shall also include sampling for hardness.

For pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, and fecal coliform, grab samples must be used. For all other pollutants 24-hour composite samples must be used. However, a minimum of one grab sample may be taken for effluents from holding ponds, or other impoundments with a retention period of greater than 24 hours. For stormwater discharges a minimum of one to four grab samples may be taken, depending on the duration of the discharge. One grab must be taken in the first hour (*or less*) of discharge, with one additional grab (*up to a minimum of four*) taken in each succeeding hour of discharge for discharges lasting four or more hours. The Department may waive composite sampling for any discharge point for which you demonstrate that use of an automatic sampler is infeasible and that a minimum of four grab samples will be representative of your discharge.

Grab and composite samples¹ are defined as follows:

Grab sample: An individual sample or at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

Composite sample: A combination of at least 8 sample aliquots of a least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. For GC/MS Volatile Organic Analysis (VOA), aliquots must be combined in the laboratory immediately before analysis. Four (4) (*rather than eight*) aliquots or grab samples should be collected for VOA. These four samples should be collected during actual hours of discharge over a 24-hour period and need not be flow proportioned. Only one analysis is required.

Data from samples taken in the past may be used if all data requirement are met; sampling was done no more than three years before submission; and all data are representative of the present discharge. Among the factors which would cause the data to be unrepresentative are significant changes in production level; changes in raw materials, processes, or final products; and changes in wastewater treatment. When EPA promulgates new analytical methods in 40 CFR Part 136, EPA will provide information as to when you should use the new methods to generate data on your discharges. The Department may promulgate new methods in Chapter 160, Florida Administrative Code, with the date when the new methods are to be used. Always be sure you have current copies of these two documents before you take samples or submit sampling data to the Department. If you have submitted data from past sampling, the Department may request additional information, including current quantitative data, if it is determined to be necessary to assess your discharges.

C. Analysis

You must use test methods promulgated in 40 CFR Part 136 or Chapter 160, Florida Administrative Code; however, if none has been promulgated for a particular pollutant, you may use any suitable method for measuring the level of the pollutant in your discharge if you submit a description of the method or a reference to a published method. Your description should include the sample holding time, preservation techniques, and the quality control measures which you used. If you have two or more substantially identical discharge points, you may request permission from the Department to sample and analyze only one point and submit the results of the analysis for other substantially identical points. If your request is granted by the Department, or a separate sheet attached to the application form identify which point you did test, and describe why the other points you did not test are substantially identical to the point which you did test.

D. Reporting of Intake Data

You are not required to report data under the "Intake" columns unless you wish to demonstrate your eligibility for a "net" effluent limitation for one or more pollutants, that is, an effluent limitation adjusted by subtracting the average level of the pollutant(s) present in your intake water. To demonstrate your eligibility, under the "Intake" columns report the average of the results of analyses on your intake water (*If your water is treated before use, test the water after it is treated.*), and discuss the requirements for a new limitation with the appropriate district office.

¹ Sampling requirements are periodically reviewed in light of recent research on testing methods. Upon completion of the review, changes to sampling requirements may be made. Before starting any required sampling or submitting past sampling to the Department, be sure that you have a current copy of 40 CFR Part 136 or Chapter 62-160, Florida Administrative Code.

Part V-A

Part V-A must be completed by all applicants for all discharge points including discharges of non-contact cooling water or storm runoff. However, at your request, the Department may waive the requirement to test for one or more of these pollutants, upon a determination that available information is adequate to support issuance of the permit with less stringent reporting requirements for these pollutants. Use composite samples for all pollutants in this Part, except use grab samples for pH and temperature. See the discussion in General Instructions to item V for definitions of the columns in Part A. The "Long Term Avg. Values" column (*column 2-c*) and "Max. 30-day Values" column (*column 2-b*) are not compulsory but should be filled out if data are available.

Part V-B

Part V-B must be completed by all applicants for all discharge points, including points containing only non-contact cooling water or storm runoff. You must report quantitative data if the pollutant(s) in question is limited in an effluent limitation either directly or indirectly but expressly through a limitation on an indicator (*e.g., use of TSS as an indicator to control the discharge of iron and aluminum*). For other discharged pollutants you must provide quantitative data or explain their presence in your discharge. The Department will consider a request to eliminate the requirement to test for pollutants for an industrial category or subcategory. Your request must be supported by data representative of the industrial category or subcategory in question. The data must demonstrate that individual testing for each applicant is unnecessary, because the facilities in the category or subcategory discharge substantially identical levels of the pollutant or discharge the pollutant uniformly at sufficiently low levels. Use composite samples for all pollutants you analyze for in this part, except use grab samples for residual chlorine, oil and grease, and fecal coliform. The "Long Term Avg. Values" column (*column 2-c*) and "Max. 30-day Values" column (*column 2-b*) are not compulsory but should be filled out if data are available.

Part V-C

Table 2CG-2 at the end of these instructions lists 34 primary industry categories. For each discharge point, if any of your processes which contribute wastewater falls into one of those categories, you must mark "X" in "Testing Required" column (*column 2-a*) and test for (1) all of the toxic metals, cyanide, and total phenols; and (2) the organic toxic pollutants contained in Table 2CG-3 as applicable to your category. The organic toxic pollutants are listed by GC/MS fractions on pages V-4 to V-10 in Part V-C. The inclusion of total phenols in Part V-C is not intended to classify total phenols as a toxic pollutant. When you determine which industry category you are in to find your testing requirements, you are not determining your category for any other purpose and you are not giving up your right to challenge your inclusion in that category before your permit is issued. For all other cases (*secondary industries, non-process wastewater discharge points, and GC/MS fractions that are not required*), you must mark "X" in either the "Believed Present" column or the "Believed Absent" column for each pollutant.

You must report quantitative data as follows:

For every pollutant you know or have reason to believe is present in your discharge in concentrations of 10 ppb or greater;

For acrolein; acrylonitrile; 2,4 dinitrophenol; and 2-methyl-4,6 dinitrophenol where you expect these four pollutants to be discharged in concentrations of 100 ppb or greater; and

For every pollutant expected to be discharged in concentrations less than the thresholds specified above. For pollutants in this last category, in lieu of quantitative data, you may briefly describe the reasons the pollutant is expected to be discharged.

You are required to mark "Testing Required" for dioxin if you use or manufacture one of the following compounds:

- (a) 2,4,5-trichlorophenoxy acetic acid, (2,4,5-T);

- (b) 2-(2,4,5-trichlorophenoxy) propanoic acid, (Silvex, 2,4,5-TP);
- (c) 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate, (Erbon);
- (d) 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate, (Ronnel);
- (e) 2,4,5-trichlorophenol, (TCP); or
- (f) hexachlorophene, (HCP).

If you mark "testing Required" or "Believed Present," you must perform a screening analysis for dioxins, using gas chromatography with an electron capture detector. A TCDD standard for quantitation is not required. Describe the results of this analysis in the space provided: for example, "no measurable baseline deflection at the retention time of TCDD" or "a measurable peak within the tolerances of the retention time of TCDD." The Department may require you to perform a quantitative analysis if you report a quantitative analysis if you report a positive result.

Part V-D

List any pollutants in Table 2CG-3 that you believe to be present and explain why you believe them to be present. No analysis is required, but if you have analytical data, you must report it. Table 2CG-4 lists certain hazardous substances which may be exempt from reporting requirements contained in section 311 of the Clean Water Act. If you discharge any of these substances, please contact the Department for further information.

Item VI

This requirement applies to current use or manufacture of a toxic pollutant as an intermediate or final product or by-product. The Department may waive or modify the requirement if you demonstrate that it would be unduly burdensome to identify each toxic pollutant and the Department has adequate information to issue your permit. You may not claim this information as confidential; however, you do not have to distinguish between use or production of the pollutants or list the amounts.

Item VII

This item is self explanatory.

Item VIII

There are severe penalties for submitting false information on this application form. Chapter 62-620, Florida Administrative Code, requires, in addition to the certification provided by a professional engineer, a certification from the owner or responsible authority of the facility as follows:

A. For a corporation: by a responsible corporate official. For purposes of this section, a responsible corporate official means (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities employing more than 250 person or have gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

B. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

C. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. A principal executive officer includes the chief executive officer of the agency or a senior executive officer having the responsibility for the overall operations of a principal geographic unit of the agency, for example, a regional or district administrator.

**TABLE 2CG-1
CODES FOR TREATMENT UNITS**

PHYSICAL TREATMENT PROCESSES			
1-A	Ammonia Strippin	1-N	Microstraining
2-B	Dialysis	1-O	Mixing
1-C	Diatomaceous Earth Filtration	1-P	Moving Bed Filters
1-D	Distillation	1-Q	Multimedia Filtration
1-E	Electrodialysis	1-R	Rapid Sand Filtration
1-F	Evaporation	1-S	Reverse Osmosis (Hyperfiltration)
1-G	Flocculation	1-T	Screening
1-H	Flotation	1-U	Sedimentation (Settling)
1-I	Foam Fractionation	1-V	Slow Sand Filtration
1-J	Freezing	1-W	Solvent Extraction
1-K	Gas-Phase Separation	1-X	Sorption
1-L	Grinding (Comminutors)	1-Y	Percolation Pond
1-M	Grit Removal		
CHEMICAL TREATMENT PROCESSES			
2-A	Carbon Adsorption	2-G	Disinfection (<i>Ozone</i>)
2-B	Chemical Oxidation	2-H	Disinfection (<i>Other</i>)
2-C	Chemical Precipitation	2-I	Electrochemical Treatment
2-D	Coagulation	2-J	Ion Exchange
2-E	Dechlorination	2-K	Neutralization
2-F	Disinfection (<i>Chlorine</i>)	2-L	Reduction
BIOLOGICAL TREATMENT PROCESSES			
3-A	Activated Slludge	3-E	Pre-Aeration
3-B	Aerated Lagoons	3-F	Spray Irrigation/Land Application
3-C	Anaerobic Treatment	3-G	Stabilization Ponds
3-D	Nitrification-Denitrification	3-H	Trickling Filter
OTHER PROCESSES			
4-A	Discharge to Surface Water	4-C	Reuse/Recycle of Treated Effluent
4-B	Ocean Discharge Through Outfall	4-D	Underground Injection

Table 2CG-1, Codes for Treatment Units Contd.

SLUDGE TREATMENT AND DISPOSAL PROCESSES			
5-A	Aerobic Disgestion	5-M	Heat Drying
5-B	Anaerobic Digestion	5-N	Heat Treatment
5-C	Belt Filtration	5-O	Incineration
5-D	Centrifugation	5-P	Land Application
5-E	Chemical Conditioning	5-Q	Landfill
5-F	Chlorine Treatment	5-R	Pressure Filtration
5-G	Composting	5-S	Pyrolysis
5-H	Drying Beds	5-T	Sludge Lagoons
5-I	Elutriation	5-U	Vacuum Filtration
5-J	Flotation Thickening	5-V	Vibration
5-K	Freezing	5-W	Wet Oxidation
5-L	Gravity Thickening		

TABLE 2CG-2
TESTING REQUIREMENTS FOR ORGANIC TOXIC POLLUTANTS INDUSTRY CATEGORY

INDUSTRY CATEGORY	GC/MS FRACTION ²			
	Volatile	Acid	Base/Neutral	Pesticide
Adhesives and sealants	X	X	X	
Aluminum forming	X	X	X	
auto and other laundries	X	X	X	X
Battery manufacturing	X		X	
Coal mining	X	X	X	X
Coil coating	X	X	X	
Copper forming	X	X	X	
Electric and electronic compounds	X	X	X	X
Electroplating	X	X	X	
Explosives manufacturing		X	X	
Foundries	X	X	X	
Gum and wood chemicals	X	X	X	X
Inorganic chemicals manufacturing	X	X	X	
Iron and steel manufacturing	X	X	X	
Leather tanning and finishing	X	X	X	X
Mechanical products manufacturing	X	X	X	
Nonferrous metals manufacturing	X	X	X	X

² The pollutantas in each fraction are listed in Item V-C
X - Testing required.

Table 2CG-2, Testing Requirements for Organic Toxic Pollutants Industry Category, contd.

INDUSTRY CATEGORY	GC/MS FRACTION ³			
	Volatile	Acid	Base/Neutral	Pesticide
Ore mining	X	X	X	X
Organic chemicals manufacturing	X	X	X	X
Paint and ink formulation	X	X	X	X
Pesticides	X	X	X	X
Petroleum refining	X	X	X	X
Pharmaceutical preparations	X	X	X	
Photographic equipment and supplies	X	X	X	X
Plastic and synthetic materials manufacturing	X	X	X	X
Plastic processing	X			
Porcelain enameling	X		X	X
Printing and publishing	X	X	X	X
Pulp and paperboard mills	X	X	X	X
Rubber processing	X	X	X	
Soap and detergent manufacturing	X	X	X	
Steam electric power plants	X	X	X	
Textile mills	X	X	X	X
Timber products processing	X	X	X	X

¹The pollutants in each fraction are listed in Item V-C
X = Testing required.

³ The pollutants in each fraction are listed in Item V-C.
X + Testing required.

TABLE 2CG-3
TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES REQUIRED TO BE IDENTIFIED
BY APPLICANTS IF EXPECTED TO BE PRESENT

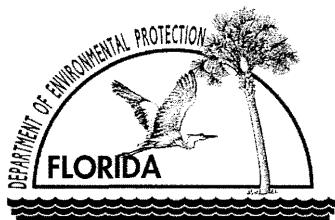
<u>Toxic Pollutant</u>	<u>Hazardous Substances</u>	<u>Hazardous Substances</u>
Asbestos	2,2 Dichloropropionic acid	Monomethyl amine
	Dichlorvos	Naled
<u>Hazardous Substances</u>	Diethyl amine	Naphthenic acid
Acetaldehyde	Dimethyl amine	Nitrotoluene
Allyl alcohol	Dintrobenzene	Parathion
Allylchloride	Diquat	Phenolsulfonate
Amyl acetate	Disulfoton	Phosgene
Aniline	Diuron	Propargite
Benzonitrile	Epichlorohydrin	Propylene oxide
Benzyl chloride	Ethion	Pyrethrins
Butyl acetate	Ethylene diamine	Quinoline
Butylamine	Formaldehyde	Resorcinol
Captan	Furfural	Sroutium
Carbaryl	Guthion	Strychnine
	Isoprene	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)
Carbofuran	Isopropanolamine dodecylbenzenesulfonate	TDE (Terochlorodiphenyl ethane)
Carbon disulfide	Kelthane	2,4,5-TP [2-(2,4,5-Trichlorophenosyl) pro-panic acide]
Chlopyrifos	Kepone	Trichlorofon
Coumpahos	Malathion	Triethanolamine
Cresol	Mercaptodimethur	dodecylbenzenesulfonate
Crotonaldehyde	Methoxychlor	Triethylamine
Cyclohexane	Methyl mercaptan	Uranium
2,4-D (2,4-Dichlorophenoxyacetic acid)	Methyl methacrylate	Vanadium
Diazinon	Methyl parathion	Vinyl acetate
Dicamba	Mevinphos	Xylene
Dichlobenil	Mexacarbate	Xylenol
Dichlone	Monoethyl amine	Zirconium

TABLE 2CG-4 HAZARDOUS SUBSTANCES

1. Acetaldehyde	64. Cadmium bromide	126. Dodecylbenzenesulfonic acid
2. Acetic acid	65. Cadmium chloride	127. Endosulfan
3. Acetic anhydride	66. Calcium arsenate	128. Endrin
4. Acetone cyanohydrin	67. Calcium arsenite	129. Epichlorohydrin
5. Acetyl bromide	68. Calcium carbide	130. Ethion
6. Acetyl chloride	69. Calcium chromate	131. Ethylbenzene
7. Acrolein	70. Calcium cyanide	132. Ethylenediamine
8. Acrylonitrile	71. Calcium dodecylbenzenesulfonate	133. Ethylene dibromide
9. Adipic acid	72. Calcium hypochlorite	134. Ethylene dichloride
10. Aldrin	73. Captan	135. Ethylene Diaminetetracetic acid (EDTA)
11. Allyl alcohol	74. Carbaryl	136. Ferric ammonium citrate
12. Allyl chloride	75. Carbofuran	137. Ferric ammonium oxalate
13. Aluminum sulfate	76. Carbon disulfide	138. Ferric chloride
14. Ammonia	77. Carbon tetrachloride	139. Ferric fluoride
15. Ammonium acetate	78. Chlordane	140. Ferric nitrate
16. Ammonium benzoate	79. Chlorine	141. Ferric sulfate
17. Ammonium bicarbonate	80. Chlorobenzene	142. Ferrous ammonium sulfate
18. Ammonium bichromate	81. Chloroform	143. Ferrous chloride
19. Ammonium bifluoride	82. Chloropyrifos	144. Ferrous sulfate
20. Ammonium bisulfite	83. Chlorosulfonic acid	145. Formaldehyde
21. Ammonium carbamate	84. Chromic acetate	146. Formic acid
22. Ammonium carbonate	85. Chromic acid	147. Fumaric acid
23. Ammonium chloride	86. Chromic sulfate	148. Furfural
24. Ammonium chromate	87. Chromous chloride	149. Guthion
25. Ammonium citrate	88. Cobaltous bromide	150. Heptachlor
26. Ammonium fluoroborate	89. Cobaltous formate	151. Hexachlorocyclopentadiene
27. Ammonium fluoride	90. Cobaltous sulfamate	152. Hydrochloric acid
28. Ammonium hydroxide	91. Coumaphos	153. Hydrofluoric acid
29. Ammonium oxalate	92. Cresol	154. Hydrogen cyanide
30. Ammonium silicofluoride	93. Crotonaldehyde	155. Hydrogen sulfide
31. Ammonium sulfamate	94. Cupric acetate	156. Isoprene
32. Ammonium sulfide	95. Cupric acetoarsenite	157. Isopropanolamine dodecylbenzenesulfonate
33. Ammonium sulfite	96. Cupric chloride	158. Kelthane
34. Ammonium tartrate	97. Cupric nitrate	159. Kepone
35. Ammonium thiocyanate	98. Cupric oxalate	160. Lead acetate
36. Ammonium thiosulfate	99. Cupric sulfate	161. Lead arsenate
37. Amyl acetate	100. Cupric sulfate ammoniated	162. Lead chloride
38. Aniline	101. Cupric tartrate	163. Lead fluoborate
39. Antimony pentachloride	102. Cyanogen chloride	164. Lead fluorite
40. Antimony potassium tartrate	103. Cyclohexane	165. Lead iodide
41. Antimony tribromide	104. 2,4-D acid (2,4-Dichlorophenoxyacetic acid)	166. Lead nitrate
42. Antimony trichloride	105. 2,4-D esters (2,4-Dichlorophenoxyacetic acid esters)	167. Lead stearate
43. Antimony trifluoride	106. DDT	168. Lead sulfate
44. Antimony trioxide	107. Diazinon	169. Lead sulfide
45. Arsenic disulfide	108. Dicamba	170. Lead thiocyanate
46. Arsenic pentoxide	109. Dichlobenil	171. Lindane
47. Arsenic trichloride	110. Dichlone	172. Lithium chromate
48. Arsenic trioxide	111. Dichlorobenzene	173. Malathion
49. Arsenic trisulfide	112. Dichloropropane	174. Maleic acid
50. Barium cyanide	113. Dichloropropene	175. Maleic anhydride
51. Benzene	114. Dichloropropene-Dichloropropane mix	176. Mercaptodimethur
52. Benzoic acid	115. 2,2-Dichloropropionic acid	177. Mercuric cyanide
53. Benzonitrile	116. Dichlorvos	178. Mercuric nitrate
54. Benzoyl chloride	117. Dieldrin	179. Mercuric sulfate
55. Benzyl chloride	118. Diethylamine	180. Mercuric thiocyanate
56. Beryllium chloride	119. Dimethylamine	181. Mercurous nitrate
57. Beryllium fluoride	120. Dinitrobenzene	182. Methoxychlor
58. Beryllium nitrate	121. Dinitrophenol	183. Methyl mercaptan
59. Butylacetate	122. Dinitrotoluene	184. Methyl methacrylate
60. n-Butylphthalate	123. Diquat	185. Methyl parathion
61. Butylamine	124. Disulfoton	186. Mevinphos
62. Butyric acid	125. Diuron	187. Mexacarbate
63. Cadmium acetate		188. Monoethylamine

189. Monomethylamine	244. Sodium nitrate
190. Naled	245. Sodium phosphate (dibasic)
191. Naphthalene	246. Sodium phosphate (tribasic)
192. Naphthenic acid	247. Sodium selenite
193. Nickel ammonium sulfate	248. Strontium chromate
194. Nickel chloride	249. Strychnine
195. Nickel hydroxide	250. Styrene
196. Nickel nitrate	251. Sulfuric acid
197. Nickel sulfate	252. Sulfur monochloride
198. Nitric acid	253. 2,4,5-T acid (2,4,5-Trichlorophenoxy acetic acid)
199. Nitrobenzene	254. 2,4,5-T amines (2,4,5-Trichlorophenoxy acetic acid amines)
200. Nitrogen dioxide	255. 2,4,5-T esters (2,4,5-Trichlorophenoxy acetic acid esters)
201. Nitrophenil	256. 2,4,5-T salts (2,4,5-Trichlorophenoxy acetic acid salts)
202. Nitrotoluene	257. 2,4,5-TP acid (2,4,5-Trichlorophenoxy propanoic acid)
203. Paraformaldehyde	258. 2,4,5-TP acid esters (2,4,5-Trichlorophenoxy propanoic acid esters)
204. Parathion	259. TDE (Tetrachlorodiphenyl ethane)
205. Pentachlorophenol	260. Tetraethyl lead
206. Phenol	261. Tetraethyl pyrophosphate
207. Phosgene	262. Thallium sulfate
208. Phosphoric acid	263. Toluene
209. Phosphorus	264. Toxaphene
210. Phosphorus oxychloride	265. Trichlorofon
211. Phosphorus pentasulfide	266. Trichloroethylene
212. Phosphorus trichloride	267. Trichlorophenol
213. Polychlorinated biphenyls (PCB)	268. Triethanolamine dodecylbenzenesulfonate
214. Potassium arsenate	269. Triethylamine
215. Potassium arsenite	270. Trimethylamine
216. Potassium bichromate	271. Uranyl acetate
217. Potassium chromate	272. Uranyl nitrate
218. Potassium cyanide	273. Vanadium pentoxide
219. Potassium hydroxide	274. Vanadyl sulfate
220. Potassium permanganate	275. Vinyl acetate
221. Propargite	276. Vinylidene chloride
222. Propionic acid	277. Xylene
223. Propionic anhydride	278. Xylenol
224. Propylene oxide	279. Zinc acetate
225. Pyrethrins	280. Zinc ammonium chloride
226. Quinoline	281. Zinc borate
227. Resorcinol	282. Zinc bromide
228. Selenium oxide	283. Zinc carbonate
229. Silver nitrate	284. Zinc chloride
230. Sodium	285. Zinc cyanide
231. Sodium arsenate	286. Zinc fluoride
232. Sodium arsenite	287. Zinc formate
233. Sodium bichromate	288. Zinc hydrosulfite
234. Sodium bifluoride	289. Zinc nitrate
235. Sodium bisulfite	290. Zinc phenolsulfonate
236. Sodium chromate	291. Zinc phosphide
237. Sodium cyanide	292. Zinc silcofluoride
238. Sodium dodecylbenzenesulfonate	293. Zinc sulfate
239. Sodium fluoride	294. Zirconium nitrate
240. Sodium hydrosulfide	295. Zirconium potassium fluoride
241. Sodium hydroxide	296. Zirconium sulfate
242. Sodium hypochlorite	297. Zirconium tetrachloride
243. Sodium methylate	

FORM 2CG



WASTEWATER APPLICATION FOR PERMIT TO DISCHARGE PROCESS WASTEWATER FROM NEW OR EXISTING INDUSTRIAL WASTEWATER FACILITIES TO GROUND WATER

Facility I.D. Number: FL0002275

Please print or type information in the appropriate areas.

I DISCHARGE LOCATION For each location, list the X,Y coordinates and, where applicable, the name of the land application site.

(latitude/longitude to the nearest 15 seconds)

A. Discharge Location No. (list)	B. Latitude			C. Longitude			D. Name of Land Application
	Deg.	Min.	Sec.	Deg.	Min.	Sec.	
I-1C0	30	33	43	87	13	12	Industrial Wastewater Treatment Pond
Note:	I-1C0	Is the	surface	water	monitoring	point	
	For	The	IWTP	System.			
Industrial Stormwater	Various			Various			Stormwater at the site percolates to groundwater from ponds, swales, and overland sheet flow
Unit 6 Cooling tower Basin	30	34	2.8	87	13	41.7	Cooling tower basin water supply
Discharge Canal	30	33	39	87	13	10	Man-made canal

The IWTP system and above discharge locations are unlined and designed such that some of the water is released to groundwater. Groundwater flow direction in the vicinity of the plant is generally toward the north and east, with a portion ultimately flowing to the surrounding surface water bodies.

II LAND APPLICATION DESIGN

A. Discharge No.	B. Design Configuration and Construction Materials	C. Cover Crop	D. Application Rate	E. Land Application Area	F. Ground Water

III FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and discharge points. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

Please see Attachment 2CG-1

B. For each discharge location, provide a description of:

1. All operations contributing wastewater to the effluent; including process wastewater, sanitary wastewater, cooling water, and storm water runoff;
2. The average flow contributed by each operation; and
3. The treatment received by the wastewater.

Use the space below. Continue on additional sheets, if necessary.

(1) Discharge Location No.	(2) Operation(s) Contributing Flow		(3) Treatment		
	(a) Operation (list)	(b) Avg. Flow & Units	(a) Description	(b) List Code from Table 2CG-1	
I-1C0	Cooling tower blowdown	~9.36 MGD	Sedimentation, neutralization	1-U, 2-K	
	Bottom ash hydrobin overflow	2.2 MGD	Sedimentation, neutralization	1-U, 2-K	
	Demineralizer waste	~0.004 MGD	Sedimentation	1-U	
	Coal pile runoff	0.018 MGD	Sedimentation, neutralization	1-U, 2-K	
	Building/yard sumps	6 MGD	Sedimentation, neutralization	1-U, 2-K	
	Metal cleaning wastewater	~1.2 MGD	Chemical precipitation	2-C	
		(Per batch)			
Industrial Stormwater	Rainfall onsite flows to several ponds and swales and a portion	Rainfall dependent	Sedimentation	1-U	
	Of the flow percolates into the				
	Ground.				
Unit 6 cooling Cooling tower basin	Cooling tower basin is unlined		Sedimentation, neutralization	1-U, 2-K	
	Minimal flow percolates into the				
	Ground from the basin.				
Discharge Canal	Unlined canal for surface water discharge.	274 MGD	Discharge to surface water		

III Contd.

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☒ Yes (complete the following table)

☐ No (go to D. below)

(1) Outfall # (List)	(2) Operations(s) Contributing Flow (List)	(3) Frequency		(4) Flow				(c) Duration (in days)
		(a) Days per Week (specify avg.)	(b) Months per Yr. (specify avg.)	(a) Flow Rate (in mgd)		(b) Total Volume (specify with units)		
				Long Term Avg	Max. Daily	Long Term Avg.	Max. Daily	
I-150	Metal cleaning wastewater	1 batch every	3-5 years			1.2 MGD		3-5

*For land application systems, also include the Rest Period.

D. Describe practices to be followed to ensure adequate wastewater treatment during emergencies such as power loss and equipment failures causing shutdown of pollution abatement equipment of the proposed/permitted facilities.

Please see Attachment 2CG-2.

E. List the method(s) and location(s) of flow measurement.

Please see Attachment 2CG-2.

IV IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ Yes (complete the following table)

☒ No (go to Item VI-B)

1. Identification of Condition, Agreement, Etc.	2. Affected Discharge Locations		3. Brief Description of Project	4. Final Compliance Date	
	a. No.	b. Source of Discharge		a. Required	b. Projected

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ Mark "X" if description of additional control programs is attached.

V INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding--Complete one set of tables for each discharge location -- Annotate the location number in the space provided. NOTE: Tables V-A, V-B, and V-C are included on separate sheets number V-1 through V-10.

D. Use the space below to list any of the pollutants listed in Table 2CG-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. Pollutant	2. Source	1. Pollutant	2. Source
NA			

VI POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or by-product?

☐ YES (list all such pollutants below) ☒ NO (go to VII)

--

VII CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☒ YES (list the name, address, telephone number, and certification number of, and pollutants analyzed by each such laboratory or firm below)
☐ NO (go to Section VIII)

A. Name	B. Address	C. Telephone (area code & no.)	D. Pollutants Analyzed (list)
Test America Laboratories,	3355 McLemore Dr	850.474.1001	All parameters except pH
Cert# E87089	Pensacola, FL 32514		And TRC

VIII CONNECTION TO REGIONAL POTW

A. Indicate the relationship between this project and area regional planning for wastewater treatment. List steps to be taken for this industrial wastewater facility to become part of an area-wide wastewater treatment system.

Plant Crist is currently in a partnership with Emerald Coast Utility Authority (ECUA) to receive up to 20 MGD of reclaimed water from ECUA's Central Water Reclamation Facility. The partnership began in 2009, and Plant Crist began receiving reclaimed water in 2010 for the Flue Gas Desulphurization system (FGD). Since then, Gulf Power and ECUA have expanded to supply water for the FGD and both the Unit 6 and Unit 7 cooling towers.

IX-A CERTIFICATIONS FOR NEW OR MODIFIED FACILITIES

This is to certify the engineering features of this pollution control project have been designed by me and found to be in conformity with sound engineering principles, applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules of the Department. It is also agreed that the undersigned, if authorized by the owner, will furnish the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

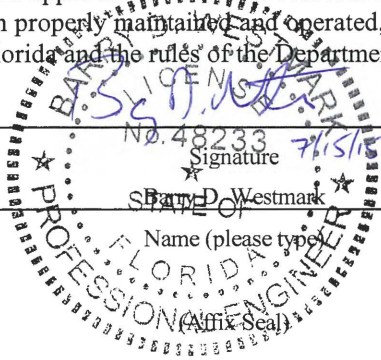
_____ Signature	_____ Company Name
_____ Name (please type)	_____ Address
_____ (Affix Seal)	_____ Florida Registration No.:
	_____ Telephone No.: _____ Date _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____ Name (type or print)	_____ Signature
_____ Title	_____ Date Signed
_____ Telephone No. (area code & No.)	

IX-B CERTIFICATIONS FOR PERMIT RENEWALS

This is to certify the engineering features of this pollution control project have been examined by me and found to be in conformity with sound engineering principles, applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules of the Department.

Environmental Consulting & Technology, Inc.

Company Name

1408 N. Westshore Blvd, Suite 115Tampa, FL 33607Florida Registration No.: 48233Telephone No.: (813) 549-4386

Date

7/15/15

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

James O. Vick

Name (type or print)

Director, Environmental Affairs

Title

850-444-6311

Telephone No. (area code & No.)

Signature

Date Signed

PLEASE PRINT OR TYPE ONLY: You may report some or all of this information on separate sheets instead of completing these pages. Use the same format.
SEE INSTRUCTIONS.

V. INTAKE AND EFFLUENT CHARACTERISTICS

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

I. Pollutant	2. Effluent						3.. Units		4. Intake (optional)			
	a. Max. Daily Value		b. Max. 30-day Value		c. Annual Avg. Value		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
a. BOD, Carbonaceous , 5-day, 20 Deg. C.	<2						1	mg/L				
b. Chemical Oxygen Demand (COD)	19.7						1	mg/L				
c. Total Organic Carbon (TOC)	2.81						1	mg/L				
d. Total Suspended Solids (TSS)	9						1	mg/L				
e. Total Nitrogen (as N)	0.517						1	mg/l				
f. Total Phosphorus (as P)	<0.03						1	mg/L				
g. Ammonia (as N)	<0.016						1	mg/L				
h. Flow - actual or projected	Value Not measured		Value		Value					Value		
i. Flow - design	Value NA		Value		Value					Value		
j. Specific Conductivity	Value 7.11		Value		Value		1	Mmhos/cm		Value		
k. Temperature (winter)	Value 75.2		Value		Value		1	°F		Value		
l. Temperature (summer)	Value Not measured		Value		Value					Value		
m. pH	Min. 6.67	Max. 8.86	Min.	Max.			53	STANDARD UNITS				

*Conc. = Concentration

PART B - Mark "X" in column 2a for each pollutant you know or have reason to believe is present. Mark "X" in column 2b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. Pollutant and CAS No. (if available)	2. Mark "X"		3. Effluent						4. Units		5. Intake (optional)			
	a. be- lieved present	b. be- lieved absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
			(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
a. Bromide (24949-67-9)	☒	☐	7.72						1	mg/L				
b. Chlorine, Total Residual	☒	☐	<0.006						1	Mg/l				
c. Color	☒	☐	12.2						1	Color Units				
d. Fecal Coliform	☒	☐	<1						1	MPN/100 ml				
e. Fluoride (16984-48-8)	☒	☐	0.23						1	mg/L				
f. Nitrate-Nitrite (as N)	☒	☐	0.204						1	mg/L				

1. Pollutant and CAS No. (if available)	2. Mark "X"		3. Effluent						4. Units		5. Intake (optional)			
	a. be- lieved present	b. be- lieved absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
			(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
g. Nitrogen, Total Organic (as N)	☒	☐	0.26						1	mg/L				
h. Oil and grease	☒	☐	<2.72						1	mg/L				
i. Phosphorus, Total (as P) (7723-14-0)	☒	☐	<0.03						1	mg/L				
j. Radioactivity														
(1) Alpha, Total	☒	☐	4.1+/-2.5						1	pCi/l				
(2) Beta, Total	☒	☐	27+/-11.2						1	pCi/l				
(3) Radium, Total	☒	☐	1.2+/-0.7						1	pCi/l				
(4) Radium 226, Total	☒	☐	0.3+/-0.6						1	pCi/l				
k. Sulfate (as SO ₄) (14808-79-8)	☒	☐	269						1	mg/L				
l. Sulfide (as S)	☒	☐	<1						1	mg/L				
m. Sulfite (as SO ₃) (14265-45-3)	☒	☐	5						1	mg/L				
n. Surfactants	☒	☐	<0.12						1	Mg/l LAS MW				
o. Aluminum, Total (7429-90-5)	☒	☐	0.135						1	mg/L				
p. Barium, Total (7440-39-3)	☒	☐	0.0567						1	mg/L				
q. Boron, Total (7440-42-8)	☒	☐	0.611						1	mg/L				
r. Cobalt, Total (7440-48-4)	☒	☐	<0.003						1	mg/L				
s. Iron, Total (7439-89-6)	☒	☐	0.183						1	mg/L				
t. Magnesium, Total (7439-95-4)	☒	☐	137						1	mg/L				
u. Molybdenum, Total (7439-98-7)	☒	☐	0.002						1	mg/L				
v. Manganese, Total (7439-96-5)	☒	☐	0.0127						1	mg/L				
w. Tin, Total (7440-31-5)	☒	☐	<0.005						1	mg/L				
x. Titanium, Total (7440-32-6)	☒	☐	0.00705						1	mg/L				

Facility ID. Number: FL0002275 Outfall No. I- IC0

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2a for all GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2a (secondary industries, non-process wastewater outfalls, and non-required GC/MS fractions), mark "X" in column 2b for each pollutant you know or have reason to believe is present. Mark "X" in column 2c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4-dinitrophenol, or 2-methyl-4,6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	☒	☒	☐	<0.0023						1	mg/L				
2M. Arsenic, Total (7723-14-0)	☒	☒	☐	<0.004						1	mg/L				
3M. Beryllium, Total (7440-41-7)	☒	☒	☐	<0.001						1	mg/L				
4M. Cadmium, Total (7440-43-9)	☒	☒	☐	<0.001						1	mg/L				
5M. Chromium, Total (7440-47-3)	☒	☒	☐	0.002						1	mg/L				
6M. Copper, Total (7440-50-8)	☒	☒	☐	0.002						1	mg/L				
7M. Lead, Total (7439-92-1)	☒	☒	☐	0.002						1	mg/L				
8M. Mercury, Total (7439-97-6)	☒	☒	☐	0.00142						1	ug/L				
9M. Nickel, Total (7440-02-0)	☒	☒	☐	<0.003						1	mg/L				
10M. Selenium, Total (7782-49-2)	☒	☒	☐	<0.004						1	mg/L				
11M. Silver, Total (7440-22-4)	☒	☒	☐	<0.002						1	mg/L				
12M. Thallium, Total (7440-28-0)	☒	☒	☐	<0.0005						1	mg/L				
13M. Zinc, Total (7440-66-6)	☒	☒	☐	<0.008						1	mg/L				
14M. Cyanide, Total (57-12-5)	☒	☒	☐	<0.005						1	mg/L				
15M. Phenols, Total	☒	☒	☐	0.0138						1	mg/L				
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)	☐	☐	☒												
GC/MS FRACTION -VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	☒	☐	☒	<10						1	ug/L				
2V. Acrylonitrile (107-13-1)	☒	☐	☒	<2.8						1	ug/L				

Facility ID. Number: FL0002275 Outfall No. I-IC0

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
3V. Benzene (71-43-2)	☒	☐	☒	<0.38						1	ug/L				
4V. Bis (Chloromethyl) Ether (542-88-1)	☒	☐	☒	<5							ug/l				
5V. Bromoform (75-25-2)	☒	☐	☒	<0.71						1	ug/L				
6V. Carbon Tetrachloride (56-23-5)	☒	☐	☒	<0.5						1	ug/L				
7V Chlorobenzene (108-90-7)	☒	☐	☒	<0.5						1	ug/L				
8V. Chlorodi-bromomethane (124-8-1)	☒	☐	☒	<0.5						1	ug/L				
9V. Chloroethane (74-00-3)	☒	☐	☒	<0.76						1	ug/L				
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	☒	☐	☒	<2						1	ug/L				
11V. Chloroform (67-86-3)	☒	☐	☒	<0.6						1	ug/L				
12V. Dichloro-bromomethane (75-24-4)	☒	☐	☒	<0.5						1	ug/L				
13V. Dichloro-difluoromethane (75-71-8)	☒	☐	☒	<0.85						1	ug/L				
14V. 1,1-Dichloroethane (75-34-3)	☒	☐	☒	<0.5						1	ug/L				
15V. 1,2-Dichloroethane (107-06-2)	☒	☐	☒	<0.5						1	ug/L				
16V. 1,1-Dichloroethylene (75-35-4)	☒	☐	☒	<0.5						1	ug/L				
17V. 1,2,-Dichloropropane (78-87-5)	☒	☐	☒	<0.5						1	ug/L				
18V. 1,3-Dichloropropylene (542-75-6)	☒	☐	☒	<1						1	ug/L				
19V. Ethylbenzene (100-41-4)	☒	☐	☒	<0.5						1	ug/L				
20V. Methyl Bromide (74-83-9)	☒	☐	☒	<0.98						1	ug/L				
21V. Methyl Chloride (74-87-3)	☒	☐	☒	<0.83						1	ug/L				
22V. Methylene Chloride (74-98-2)	☒	☐	☒	<3						1	ug/L				
23V. 1,1,2,2-Tetra-chloroethane (79-34-5)	☒	☐	☒	<0.5						1	ug/L				
24V. Tetrachloroethylene (127-18-4)	☒	☐	☒	<0.58						1	ug/L				

Facility ID. Number: FL0002275 Outfall No. I- ICO

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
25V. Toluene (108-88-3)	☒	☐	☒	<0.7						1	ug/L				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	☒	☐	☒	<0.5						1	ug/L				
27V. 1,1,2-Trichloroethane (71-55-6)	☒	☐	☒	<0.5						1	ug/L				
28V. 1,1,2-Trichloroethane (79-00-5)	☒	☐	☒	<0.5						1	ug/L				
29V. Trichloroethylene (79-01-6)	☒	☐	☒	<0.5						1	ug/L				
30V. Trichloro-fluoromethane (75-69-4)	☒	☐	☒	<0.52						1	ug/L				
31V. Vinyl Chloride (75-01-4)	☒	☐	☒	<0.5						1	ug/L				
GC/MS FRACTION - ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	☒	☐	☒	<2.1						1	ug/L				
2A. 2,4-Dichlorophenol (120-83-2)	☒	☐	☒	<2.86						1	ug/L				
3A. 2,4-Dimethylphenol (105-67-9)	☒	☐	☒	<3.33						1	ug/L				
4A. 4,6-Dinitro-O-Cresol (534-53-1)	☒	☐	☒	<1.9						1	ug/L				
5A. 2,4-Dinitrophenol (51-28-5)	☒	☐	☒	<3.24						1	ug/L				
6A. 2-Nitrophenol (88-75-5)	☒	☐	☒	<0.619						1	ug/L				
7A. 4-Nitrophenol (100-02-7)	☒	☐	☒	<2						1	ug/L				
8A P-Chloro-M-Cresol (59-50-7)	☒	☐	☒	<3.62						1	ug/L				
9A Pentachlorophenol (87-86-5)	☒	☐	☒	<1.72						1	ug/L				
10A Phenol (108-95-2)	☒	☐	☒	<2.48						1	ug/L				
11A 2,4,5-Trichloro-phenol (88-06-2)	☒	☐	☒	<3.33						1	ug/L				
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (63-32-9)	☒	☐	☒	<0.438						1	ug/L				
2B. Acenaphthylene (208-96-8)	☒	☐	☒	<0.533						1	ug/L				
3B. Anthracene (120-12-7)	☒	☐	☒	<0.4						1	ug/L				
4B. Benzidine (92-87-5)	☒	☐	☒	<19						1	ug/L				

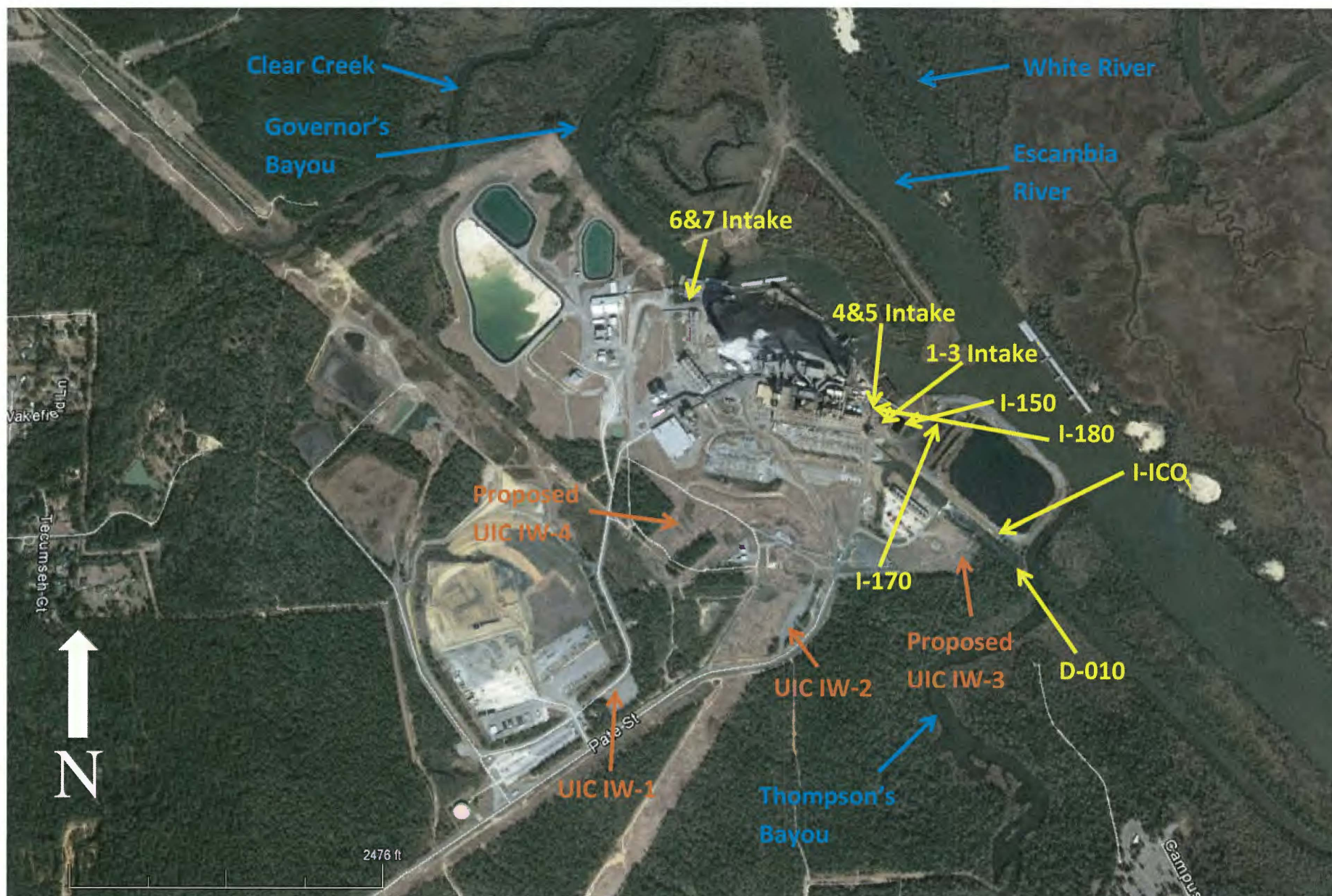
1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
5B. Benzo (a) Anthracene (56-55-3)	☒	☐	☒	<0.324						1	ug/L				
6B. Benzo (a) Pyrene (50-32-8)	☒	☐	☒	<0.41						1	ug/L				
7B. 3,4-Benzo-fluoranthene (205-99-2)	☒	☐	☒	<0.362						1	ug/L				
8B. Benzo (ghi) Perylene (191-24-2)	☒	☐	☒	<1.01						1	ug/L				
9B. Benzo (k) Fluoranthene (207-08-9)	☒	☐	☒	<0.514						1	ug/L				
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	☒	☐	☒	<0.657						1	ug/L				
11B. Bis (2-chloroethyl) Ether (111-44-4)	☒	☐	☒	<0.705						1	ug/L				
12B. Bis (2-Chloroisopropyl) Ether (102-60-1)	☒	☐	☒	<0.771						1	ug/L				
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	☒	☐	☒	<2.15						1	ug/L				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	☒	☐	☒	<0.305						1	ug/L				
15B. Butyl Benzyl Phthalate (84-68-7)	☒	☐	☒	<0.657						1	ug/L				
16B. 2-Chloronaphthalene (91-58-7)	☒	☐	☒	<0.495						1	ug/L				
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	☒	☐	☒	<1.9						1	ug/L				
18B. Chrysene (218-01-9)	☒	☐	☒	<0.467						1	ug/L				
19B. Dibenzo (a,h) Anthracene (53-70-3)	☒	☐	☒	<1.11						1	ug/L				
20B. 1,2-Dichlorobenzene (95-50-1)	☒	☐	☒	<0.543						1	ug/L				
21B. 1,3-Dichlorobenzene (541-73-1)	☒	☐	☒	<0.448						1	ug/L				
22B. 1,4-Dichlorobenzene (106-46-7)	☒	☐	☒	<0.495						1	ug/L				
23B. 3,3'-Dichlorobenzidine (92-94-1)	☒	☐	☒	<2.48						1	ug/L				
24B. Diethyl Phthalate (84-66-2)	☒	☐	☒	<0.667						1	ug/L				
25B. Dimethyl Phthalate (131-11-3)	☒	☐	☒	<0.571						1	ug/L				
26B. Di-N-Butyl Phthalate (84-74-2)	☒	☐	☒	<2.57						1	ug/L				
27B. 2,4-Dinitrotoluene (121-14-2)	☒	☐	☒	<1.81						1	ug/L				
28B. 2,6-Dinitrotoluene (606-20-2)	☒	☐	☒	<1.81						1	ug/L				

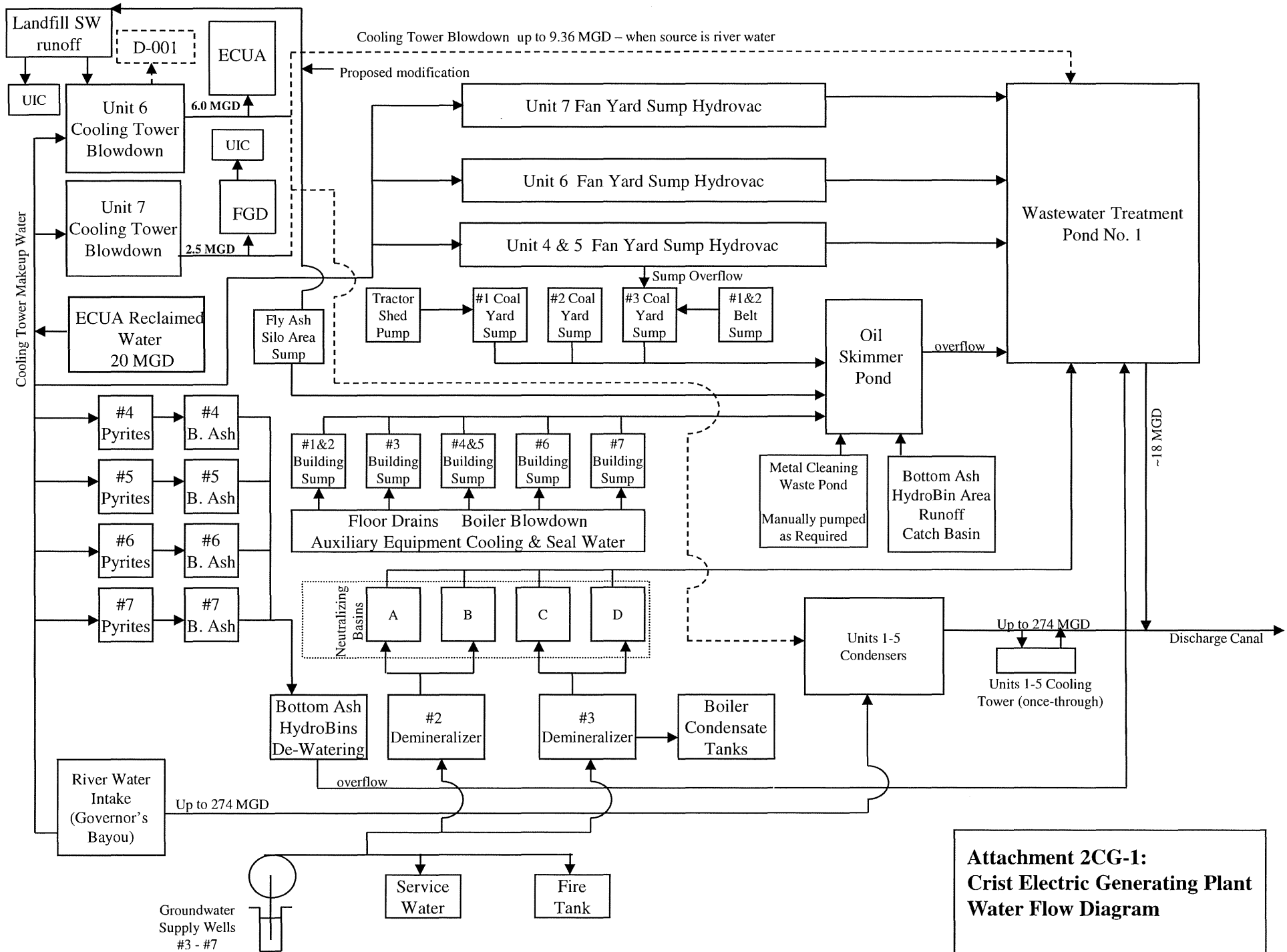
1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
29B. Di-N-Octyl Phthalate (117-84-0)	☒	☐	☒	<0.419						1	ug/L				
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	☒	☐	☒	<0.952						1	ug/L				
31B. Fluoranthene (206-44-0)	☒	☐	☒	<0.733						1	ug/L				
32B. Fluorene (86-73-7)	☒	☐	☒	<0.533						1	ug/L				
33B. Hexachlorobenzene (118-74-1)	☒	☐	☒	<0.238						1	ug/L				
34B. Hexachlorobutadiene (87-68-3)	☒	☐	☒	<3.43						1	ug/L				
35B. Hexachlorocyclopentadiene (77-47-4)	☒	☐	☒	<2.48						1	ug/L				
36B. Hexachloroethane (67-72-1)	☒	☐	☒	<4						1	ug/L				
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)	☒	☐	☒	<0.971						1	ug/L				
38B. Isophorone (78-59-1)	☒	☐	☒	<0.543						1	ug/L				
39B. Naphthalene (91-20-3)	☒	☐	☒	<0.6						1	ug/L				
40B. Nitrobenzene (98-95-9)	☒	☐	☒	<0.524						1	ug/L				
41B N-Nitrosodimethylamine (62-75-9)	☒	☐	☒	<3.33						1	ug/L				
42B. N-Nitrosodi-N-Propylamine (621-64-7)	☒	☐	☒	<3.14						1	ug/L				
43B. N-Nitro-sodiphenylamine (86-30-6)	☒	☐	☒	<0.448						1	ug/L				
44B Phenanthrene (85-01-8)	☒	☐	☒	<0.39						1	ug/L				
45B. Pyrene (129-00-0)	☒	☐	☒	<1.04						1	ug/L				
46B. 1,2,4-Trichlorobenzene (120-82-1)	☒	☐	☒	<0.505						1	ug/L				
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)	☐	☐	☒	<0.00288						1	ug/L				
2P. -BHC (319-84-6)	☐	☐	☒	<0.00346						1	ug/L				
3P -BHC (319-85-7)	☐	☐	☒	<0.00288						1	ug/L				
4P. -BHC (58-89-9)	☐	☐	☒	<0.0026						1	ug/L				
5P. -BHC (319-86-8)	☐	☐	☒	<0.024						1	ug/L				

Facility ID. Number: FL0002275

Outfall No. I- IC0

1. Pollutant and CAS No. (if available)	2. Mark "X"			3. Effluent						4. Units		5. Intake (optional)			
	a. testing required	b. believed present	c. believed absent	a. Maximum Daily Value		b. Max. 30-day Value (if available)		c. Long Term Avg. Value (if available)		d. No. of Analyses	a. Conc.	b. Mass	a. Long Term Avg. Value		b. No. of Analyses
				(1) Conc.	(2) Mass	(1) Conc.	(2) Mass	(1) Conc.	(2) Mass				(1) Conc.	(2) Mass	
6P. Chlordane (57-74-9)	☐	☐	☒	<0.125						1	ug/L				
7P. 4,4'-DDT (50-29-3)	☐	☐	☒	<0.00375						1	ug/L				
8P. 4,4'-DDE (72-55-9)	☐	☐	☒	<0.00385						1	ug/L				
9P. 4,4'-DDD (72-54-8)	☐	☐	☒	<0.00288						1	ug/L				
10P. Dieldrin (60-57-1)	☐	☐	☒	<0.00567						1	ug/L				
11P. -Endosulfan (115-29-7)	☐	☐	☒	<0.00288						1	ug/L				
12P. -Endosulfan (115-29-7)	☐	☐	☒	<0.00712						1	ug/L				
13P. Endosulfan Sulfate (1031-07-8)	☐	☐	☒	<0.00202						1	ug/L				
14P. Endrin (72-20-8)	☐	☐	☒	<0.00288						1	ug/L				
15P. Endrin Aldehyde (7421-92-4)	☐	☐	☒	<0.00269						1	ug/L				
16P. Heptachlor (76-44-8)	☐	☐	☒	<0.00298						1	ug/L				
17P. Heptachlor Epoxide (1024-57-3)	☐	☐	☒	<0.00308						1	ug/L				
18P. PCB-1242 (53469-21-9)	☐	☐	☒	<0.173						1	ug/L				
19P. PCB-1254 (11097-69-1)	☐	☐	☒	<0.298						1	ug/L				
20P. PCB-1221 (11104-28-2)	☐	☐	☒	<0.212						1	ug/L				
21P. PCB-1232 (11141-16-5)	☐	☐	☒	<0.394						1	ug/L				
22P. PCB-1248 (12672-29-6)	☐	☐	☒	<0.0192						1	ug/L				
23P. PCB-1260 (11096-82-5)	☐	☐	☒	<0.0327						1	ug/L				
24P. PCB-1016 (12674-11-2)	☐	☐	☒	<0.0462						1	ug/L				
25P. Toxaphene (8001-35-2)	☐	☐	☒	<0.288						1	ug/L				





**Attachment 2CG-1:
Crist Electric Generating Plant
Water Flow Diagram**

Attachment 2CG-2

SECTION III-D (page 2CG-16): Describe practices to be followed to ensure adequate wastewater treatment during emergencies such as power loss and equipment failures causing shutdown of pollution abatement equipment of the proposed/permitted facilities.

Back up pumps are available for facility sumps. Question is not applicable for wastewater flows entering ash pond where the method of treatment is sedimentation.

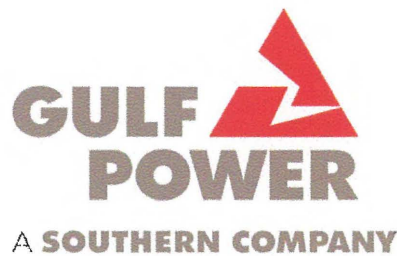
SECTION III-E (page 2CG-16). List the method(s) and location(s) of flow measurement.

Question is not applicable for wastewater flows entering IWTP or discharge to groundwater.

Attachment 4
Groundwater Summary Report

**Groundwater Summary Report
Gulf Power Company
Crist Electrical Generating Plant
Pensacola, Florida**

July 2015



**Prepared by:
Gulf Power Company
Environmental Affairs
One Energy Place
Pensacola, FL 32520**

CERTIFICATION

**PROFESSIONAL GEOLOGIST LICENSED IN THE STATE OF
FLORIDA**

This is to certify that I have reviewed and approve the contents of the Groundwater
Summary Report for Gulf Power Company, Crist Electric Generating Plant, Pensacola,
Florida.

William B. Smith

7/3/15

William B. Smith
Gulf Power Company

Richard M. Markey

7/3/15

Richard M. Markey
State of Florida License
#0000265
Gulf Power Company
One Energy Place
Pensacola, Fl. 32520-0328
(850) 444-6573

Introduction

On January 28, 2011, the Florida Department of Environmental Protection issued a new National Pollution Discharge and Elimination System (NPDES) permit number FL0002275 to Gulf Power's Plant Crist in Escambia County, Florida. Section III.13 of the new permit requires the following:

A written technical report ("Two-Year Technical Report") shall be prepared and submitted to the Department every two and one-half years and updated at the time of the permit renewal. The report shall be prepared by a qualified professional and shall contain but not be limited to the following items:

- A. Tabular displays of any data which shows that a monitoring parameter has been detected, and graphical displays of any leachate key indicator parameters detected.
- B. Trend analyses of any monitoring parameters consistently detected.
- C. Comparisons among shallow, middle, and deep zone wells.
- D. Comparisons between background water quality and the water quality in detection and compliance wells.
- E. Correlations between related parameters.
- F. Discussion of erratic and/or poorly correlated data.
- G. Interpretation of groundwater contour maps.
- H. Evaluation of the water quality monitoring frequency and sampling locations based on site conditions.

The technical report shall be submitted under separate cover, no later than November 13, 2010, and every two and one half years thereafter. [62-701.510(9)(b)]

As a result of this renewal, the groundwater summary report provides an evaluation of groundwater data from March 2013 to October 2014. A copy of the report requirements, as listed in the permit, is included in Appendix A. The tasks described above are included in Appendices B through G.

The current monitoring network consists of thirty-five wells for determining water quality and groundwater flow direction at three areas of the site and eight surface water sampling points. These areas are described in the permit as the Ash Landfill, Gypsum Storage Area 1, Gypsum Storage Area 2, and Surface Water Sampling Points. The current monitoring network consists of the following:

Ash Landfill Groundwater Monitoring Wells

<u>Well Name</u>	<u>Designation</u>	<u>Approximate Location</u>	<u>Test Site Number</u>
MWB-1	Background	Unit 5	9106
MWC-3	Compliance	Unit 5	9107
MWC-4	Compliance	Unit 5	9108
GE-5D	Detection	Unit 5 (Gypsum Area 1)	9109
MWC-8	Compliance	Unit 5	9112
MWC-9	Compliance	Unit 5	8942
MWB-2	Background	Unit 2	9113
GW-1S	Background	Unit 2 (Gypsum Area 2)	9114
MWI-1	Detection	Unit 2	9115

MWI-2	Detection	Unit 2	9116
GE-5S	Detection	Unit 2 (Gypsum Area 1)	9117
MWC-10	Compliance	Unit 2	9118
MWC-11	Compliance	Unit 1	9121
MWC-12	Compliance	Unit 1	9122
MWP-1	Compliance	Unit 1	9123
MWP-2	Compliance	Unit 1	9124
MWP-3	Piezometer	Unit 1	9125
MWP-4	Piezometer	Unit 1	9126
MWP-7	Piezometer	Unit 1	9129
MWP-8	Piezometer	Unit 2	9130
MWP-9	Piezometer	Unit 5	9131
MWP-10	Piezometer	Unit 2	9132
MWP-11	Piezometer	Unit 5	9133
MWP-12	Piezometer	Unit 2	9134
MWP-13	Piezometer	Unit 5	9135

Gypsum Storage Area 1 and Area 2 Groundwater Monitoring Wells

<u>Well Name</u>	<u>Designation</u>	<u>Approximate Location</u>	<u>Test Site Number</u>
GW-1S	Background	Unit 2, Gypsum Area 2	9114
GE-1S	Detection	Unit 2, Gypsum Area 1	22857
GE-1D	Detection	Unit 5, Gypsum Area 1	22858
GE-2S	Detection	Unit 2, Gypsum Area 1	22859
GE-2D	Detection	Unit 5, Gypsum Area 1	22860
GE-3S	Detection	Unit 2, Gypsum Area 1	22861
GE-3D	Detection	Unit 5, Gypsum Area 1	22862
GE-4S	Detection	Unit 2, Gypsum Area 1	22863
GE-4D	Detection	Unit 2, Gypsum Area 1	22864
GE-5S	Detection	Unit 2, Gypsum Area 1	9117
GE-5D	Detection	Unit 5, Gypsum Area 1	9109
GE-6S	Detection	Unit 2, Gypsum Area 1	22865
GE-6D	Detection	Unit 5, Gypsum Area 1	22866

Surface Water Sampling Points

<u>Surface Water Name</u>	<u>Designation</u>	<u>Approximate Location</u>	<u>Test Site Number</u>
SW-1	Up Gradient	Approx. 150 ft. W of GW-1S	22867
SW-2	Down Gradient	Approx. 225 ft. SSW of GW-2S	22868
SW-3	Down Gradient	Approx. 60 ft. WSW of GW-3S	22869
SW-4	Down Gradient	Approx. 430 ft. WNW of GW-4S	22870
SW-5	Down Gradient	Approx. 800 ft. W of GE-1S	22871
SW-6	Down Gradient	Approx. 980 ft. NNW of GE-1S	22872
SW-7	Down Gradient	Approx. 1,870 ft. NE of GE-1S	22873
SW-8	Down Gradient	Approx. 270 ft. NE of GE-6S	22874

A. Tabular Displays of Any Data Which Shows that a Monitoring Parameter has been Detected, and Graphical Displays of any Leachate Key Indicator Parameters Detected:

As required in Permit Number FL0002275, tables and graphs of groundwater quality data, including hydrographs and rainfall, have been included in this report. The table of water quality is located in Appendix B. Results greater than or equal to the PQL (Practical Quantitation Limit) are reported as the measured quantity. Results less than the PQL and greater than or equal to the MDL (Method Detection Limit) are reported as the laboratory's MDL value. These values are deemed equal to the MDL when necessary to calculate an average for that parameter and when determining compliance with permit limits. Results less than the MDL are reported by entering one-half the MDL value. The same data presented in graphical form is located in Appendix C (Unit 1 monitor wells), Appendix D (Unit 2 monitor wells), Appendix E (Unit 5 monitor wells), and Appendix F (Surface Water Sampling Points).

Hydrographs for the Perched, Shallow, and Deep Sand and Gravel zones are included in Appendix G. Tables of rainfall data and water levels are also located in Appendix G.

B. Trend Analyses of Monitoring Parameters Consistently Detected:

As mentioned, all water quality data has been placed in tabular form (Appendix B), as well as, graphical form (Appendices C-F). The following is an interpretation of trends noticed among the monitored parameters.

Perch Sand and Gravel Aquifer (Unit 1) Trends:

Monitor well MWC-11: Arsenic, cadmium, chromium, copper, iron, lead, mercury, nickel, potassium, selenium, zinc, and TSS concentrations were below their MDLs or PQLs for all sample events. Sulfate concentrations remained below the PQL in March 2013 and March 2014, showed an increase in September of 2013, and remained below the MDL in October 2014. Aluminum, chloride, magnesium, sodium, manganese, pH, turbidity, specific conductivity, ORP and DO levels remained stable. TDS concentrations have shown a decrease since March 2013.

Monitor well MWC-12: Aluminum, arsenic, cadmium, chromium, copper, iron, lead, mercury, manganese, nickel, potassium, selenium, sulfate and TSS concentration were below their MDLs or PQLs for all sample events. Zinc concentrations remained below the MDL for all sample events with the exception of March 2014 where concentrations remained low. Magnesium, sodium, chloride, TDS, pH, specific conductivity, turbidity, ORP, and DO levels remained stable.

Shallow Sand and Aquifer (Unit 2) Trends:

Monitor well MWB-2: Arsenic, cadmium, chromium, copper, iron, lead, mercury, nickel, selenium, potassium, zinc, and TSS concentrations remained below their MDLs or PQLs for all sample events. Aluminum concentrations remained below the PQL for all events with the exception of March 2014 where the concentration remained low. Sulfate concentrations remained below the PQL in September 2013 and March 2014, below the MDL in October 2014,

and low in March 2013. Chloride concentrations remained stable with a higher concentration in September 2013. Manganese, magnesium, sodium, TDS, pH, specific conductivity, turbidity, ORP, and DO levels remained stable.

Monitor well GW-1S Ash Landfill sampling: Arsenic, cadmium, chromium, copper, iron, manganese, mercury, nickel, lead, selenium, potassium, zinc, sulfate, and TSS concentrations remained below their MDLs or PQLs for all sample events. Aluminum concentrations remained below the PQL for all events with the exception of the March 2013 where the level remained low. Magnesium, sodium, chloride, TDS, pH, specific conductivity, turbidity, ORP, and DO levels remained stable.

Monitor well MWI-1: Cadmium, chromium, copper, iron, lead, zinc, and TSS concentrations remained below their MDLs or PQLs for all sample events. Magnesium, TDS, and specific conductivity levels remained stable with higher concentrations in October 2014. Chloride concentration remained stable with higher concentrations in September 2013. Aluminum, arsenic, manganese, mercury, nickel, potassium, selenium, sodium, sulfate, pH, turbidity, ORP, and DO levels remained stable.

Monitor well MWI-2: Arsenic, cadmium, chromium, iron, lead, mercury, nickel, selenium, zinc, and TSS concentrations remained below their MDLs or PQLs for all sample events. Aluminum concentrations remained below the MDL or PQL for all sample events except the March 2013 event where concentrations remained low. Copper concentrations stayed below the MDL for all events with the exception of the September 2013 event where the concentration remained low. Sulfate concentrations rose in September 2013 and March 2014 and remained low in March 2013 and October 2014. ORP levels remained stable for all events with a lower level detected in October 2014. Manganese, magnesium, potassium, sodium, chloride, TDS, pH, specific conductivity, turbidity, and DO levels remained stable.

Monitor well GE-5S Ash Landfill sampling: Aluminum, cadmium, chromium, copper, lead, mercury, nickel, selenium, and zinc concentrations remained below their MDLs or PQLs for all sample events. Potassium concentrations remained stable with a higher concentration detected in March 2014. Sodium concentrations remained stable with a lower concentration detected in March 2013. Turbidity levels remained stable with lower levels detected in 2014. Arsenic, iron, manganese, magnesium, chloride, sulfate, TDS, TSS, pH, specific conductivity, ORP, and DO levels remained stable.

Monitor well MWC-10: Arsenic, cadmium, copper, lead, selenium, zinc, and TSS concentrations remained below their MDLs or PQLs for all sample events. Iron concentrations remained below the MDL for all sample events with the exception of October 2014 where concentrations were found to be higher. Nickel, sodium, chloride, and turbidity levels remained stable with higher levels detected in October 2014. Mercury levels were found to be below the PQL in March 2013 and were elevated for all other sample events. Aluminum, chromium, manganese, magnesium, potassium, sulfate, TDS, pH, specific conductivity, ORP, and DO levels remained stable.

Monitor well GW-1S Gypsum Area sampling: Thallium, sulfate, and bromide concentrations remained below the MDLs or PQLs for all sample events. Calcium, arsenic, mercury,

magnesium, potassium, selenium, and sodium concentrations remained stable with higher concentrations in September 2013. Antimony, alkalinity, chloride, TDS, pH, specific conductivity, DO, turbidity, and ORP levels remained stable.

Monitor well GE-1S: Antimony and alkalinity concentrations remained below their MDLs for all sample events. Calcium, magnesium, sodium, and TDS concentrations remained stable with a lower concentration in September 2013. Chloride, sulfate, and specific conductivity levels remained relatively stable with higher levels in March 2013. ORP levels remained stable with a higher level detected in September of 2013. Arsenic, mercury, potassium, selenium, thallium, bromide, pH, DO, and turbidity levels remained stable.

Monitor well GE-2S: Antimony, thallium, and alkalinity concentrations remained below their MDLs for all sample events. Calcium, sodium, and specific conductivity levels showed an increase over the sample period. Arsenic, mercury, magnesium, potassium, selenium, chloride, sulfate, bromide, TDS, pH, DO, turbidity, and ORP levels remained stable.

Monitor well GE-3S: Antimony, arsenic, mercury, thallium and bromide concentrations remained below their MDLs or PQLs for all sample events. Alkalinity concentrations remained stable with a higher concentration found in September 2013. Calcium, magnesium, potassium, selenium, sodium, chloride, sulfate, TDS, pH, specific conductivity, DO, turbidity, and ORP levels remained stable.

Monitor well GE-4S: Antimony, thallium, and alkalinity concentrations remained below their MDLs throughout all sample events. Mercury levels remained stable with a higher concentration found in April 2014. Bromide levels remained below the PQL for all sample events with the exception of March 2013 where levels increased. Sulfate concentrations remained stable for all sample events with a higher concentration in March 2013. Turbidity increased in September 2013 and remained stable for all other events. Arsenic, calcium, magnesium, potassium, selenium, sodium, chloride, TDS, pH, specific conductivity, DO, and ORP levels remained stable.

Monitor well GE-5S Gypsum Area sampling: Antimony, mercury, selenium, thallium, and bromide concentrations remained below their MDLs or PQLs for all sample events. Turbidity levels were found to be lower in 2014 than levels in 2013. Arsenic, calcium, magnesium, potassium, sodium, alkalinity, chloride, sulfate, TDS, pH, specific conductivity, DO, and ORP levels remained stable.

Monitor well GE-6S: Antimony and alkalinity concentrations remained below their MDLs or PQLs for all sample events. Bromide concentrations remained below the MDL or PQL in March 2013 and October 2014 and remained stable in September 2013 and April 2014. Turbidity and mercury levels remained stable for all sample events with higher levels detected in September 2013. Arsenic, calcium, magnesium, potassium, selenium, sodium, thallium, chloride, sulfate, TDS, pH, specific conductivity, DO, and ORP levels remained stable.

Deep Sand and Gravel Aquifer (Unit 5) Trends:

Monitor well MWB-1: Arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, selenium, zinc, sulfate, and TSS concentrations remained below their MDLs or PQLs for all sample events. Sodium concentrations remained stable with lower results detected in March 2013. Chloride concentrations remained stable with a higher concentration found in September 2013. Aluminum, magnesium, potassium, pH, specific conductivity, TDS, turbidity, ORP, and DO levels remained stable.

Monitor well MWC-3: Arsenic, cadmium, chromium, copper, iron, lead, nickel, zinc, and TSS concentrations remained below their MDLs or PQLs for all sample events. Magnesium, selenium, sodium, sulfate, TDS, and specific conductivity levels remained stable with higher levels found in 2014. Manganese, mercury, and chloride concentrations remained stable for all sample events with higher concentrations detected in March 2014. Aluminum, potassium, and pH levels remained stable with higher concentrations detected in October 2014. Turbidity levels remained stable with lower levels detected in 2014. ORP levels remained stable with a low level found in October 2014. DO concentrations remained stable.

Monitor well MWC-4: Chromium, copper, iron, lead, and zinc concentrations remained below their MDLs or PQLs for all sample events. Aluminum, arsenic, nickel, and selenium concentrations remained stable with higher concentrations found in September 2013 and October 2014. Chloride levels remained stable with a lower level found in March 2013. Specific conductivity levels remained stable with lower levels in 2014. Turbidity levels remained stable with a higher level detected in March 2013. Cadmium, manganese, mercury, magnesium, potassium, sodium, sulfate, TDS, TSS, pH, ORP, and DO levels remained stable.

Monitor well GE-5D Ash Landfill sampling: Arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, potassium, selenium, zinc, and sulfate concentrations remained below their MDLs or PQLs for all sample events. Turbidity levels remained stable with a higher level found in September 2013. Aluminum, magnesium, sodium, chloride, TDS, TSS, pH, specific conductivity, ORP, and DO levels remained stable.

Monitor well MWC-8: Aluminum, arsenic, cadmium, copper, iron, lead, and zinc concentrations remained below their MDLs or PQLs for all sample events. Chloride concentrations remained stable with a lower concentration found in October 2014. TDS concentrations remained stable with lower concentrations found in September 2013 and October 2014. Chromium, manganese, magnesium, mercury, nickel, potassium, selenium, sodium, sulfate, TSS, pH, specific conductivity, turbidity, ORP, and DO levels remained stable.

Monitor well MWC-9: Arsenic, cadmium, chromium, iron, mercury, nickel, potassium, selenium, and TSS concentrations remained below their MDLs or PQLs for all sample events. Lead and chloride concentrations remained stable with a higher concentration found in September 2013. Manganese and turbidity levels remained stable with higher levels found in October 2014. Zinc concentrations remained stable with lower concentrations found in 2014. Chloride levels remained stable with a higher concentration found in September 2013.

Aluminum, magnesium, sodium, TDS, pH, specific conductivity, ORP, and DO levels remained stable.

Monitor well GE-1D: Antimony, arsenic, mercury, selenium, and thallium concentrations remained below their MDLs or PQLs for all sample events. Calcium, sodium, chloride, and turbidity concentrations remained stable with lower concentrations found in April 2014. Magnesium, potassium, sulfate, TDS, and specific conductivity levels were lower in 2014 than in 2013. Alkalinity levels increased in September 2013 and October 2014 and decreased in March 2013 and April 2014. Bromide levels remained below the PQL in September 2013 and April 2014 and remained stable in March 2013 and October 2014. DO and pH levels remained stable. ORP remained stable and showed lower levels in September 2013.

Monitor well GE-2D: Antimony, thallium, and alkalinity concentrations remained below their MDLs for all sample events. Mercury concentrations were higher in 2013 than in 2014. Calcium and potassium concentrations remained stable with higher concentrations detected in October 2014. Chloride concentrations remained stable with lower levels detected in October 2014. Bromide concentrations remained stable in 2013 and concentrations dropped below the PQL in 2014. Sulfate concentrations remained stable with a concentration found below the PQL for March 2013. ORP levels remained stable with a lower level detected in March 2013. Arsenic, magnesium, selenium, sodium, TDS, pH, specific conductivity, DO, and turbidity levels remained stable.

Monitor well GE-3D: Antimony, arsenic, selenium, thallium, mercury, potassium, bromide, and alkalinity concentrations remained below their MDLs or PQLs for all sample events. Magnesium concentrations were found to be stable in 2013 and dropped below the PQL during 2014. Sulfate concentrations were higher in 2013 than in 2014. TDS concentrations were found to be stable and dropped below the MDL during October 2014. Turbidity levels remained stable with an increase in concentration in March 2013. ORP levels remained stable for all events with a lower level found in March 2013. Calcium, sodium, chloride, pH, specific conductivity, and DO levels remained stable.

Monitor well GE-4D: Antimony, arsenic, mercury, thallium, and bromide concentrations remained below their MDLs or PQLs for the monitoring period. Turbidity levels remained stable with a higher level found in September 2013. DO concentrations were found to be lower in 2013 than in 2014. Calcium, magnesium, potassium, selenium, sodium, alkalinity, chloride, sulfate, TDS, pH, specific conductivity, and ORP levels remained stable.

Monitor well GE-5D Gypsum Area sampling: Antimony, arsenic, mercury, selenium, thallium, alkalinity, potassium, bromide, and sulfate concentrations remained below their MDLs or PQLs for the monitoring period. TDS concentrations were stable for all sample events with a higher concentration in March 2013. Turbidity levels remained stable with a higher level found in September 2013. Calcium, magnesium, sodium, chloride, pH, specific conductivity, DO, and ORP levels remained stable.

Monitor well GE-6D: Antimony, arsenic, mercury, selenium, thallium, and bromide concentrations remained below their MDLs or PQLs for the monitoring period. Calcium,

alkalinity, sulfate, specific conductivity, and turbidity levels remained stable with higher levels in March 2013. ORP levels were lower in 2013 than in 2014. DO remained stable with the higher level in April 2014. TDS and pH levels were found to be higher in 2013 than in 2014. Magnesium, potassium, sodium, and chloride remained stable.

Surface Water Sampling Points

Sampling Point SW-1: Antimony, arsenic, mercury, potassium, selenium, thallium, alkalinity, and bromide concentrations remained below their MDLs or PQLs for the monitoring period. Sulfate levels remained stable with a decrease below the PQL in September 2013. TDS remained stable with levels decreasing below the MDL and PQL in September 2013 and March 2014, respectively. Turbidity levels were found to be higher in 2013 than in 2014. ORP levels were found to be lower in March 2013 and remained stable for all other sample events. Calcium, magnesium sodium, chloride, pH, specific conductivity, and DO levels remained stable.

Sampling Point SW-2: Antimony, arsenic, mercury, potassium, selenium, thallium, alkalinity, and bromide concentrations remained below their MDLs or PQLs for the monitoring period. Sulfate concentrations remained stable and dropped below the MDL or PQL during September 2013 and October 2014. TDS concentrations remained stable with a level below the MDL found in September 2013. Conductivity levels remained stable with a higher level found in March 2014. DO remained stable with a lower level found in October 2014. Turbidity levels stayed stable with a higher level found in March 2013. Calcium, magnesium, sodium, chloride, pH, and ORP levels remained stable.

Sampling Point SW-3: Antimony, arsenic, mercury, selenium, thallium, and bromide concentrations remained below their MDLs or PQLs for the monitoring period. Sulfate and turbidity levels remained stable with higher levels found in March 2013. ORP levels remained stable with a lower level found in March 2013. Calcium, magnesium, potassium, sodium, alkalinity, chloride, TDS, pH, specific conductivity, and DO levels remained stable.

Sampling Point SW-4: Antimony, arsenic, mercury, selenium, thallium, and bromide concentrations remained below their MDLs or PQLs for the monitoring period. Calcium, magnesium, sodium, chloride, sulfate, TDS, and specific conductivity levels were found to be higher in September 2013 and October 2014 and lower in March 2013 and 2014. Potassium concentrations remained stable with a higher concentration found in October 2014. DO and turbidity levels remained stable with lower levels found in October 2014. Alkalinity, pH, and ORP levels remained stable.

Sampling Point SW-5: Antimony, arsenic, mercury, selenium, thallium, and bromide concentrations remained below their MDLs or PQLs for the monitoring period. Calcium, magnesium, potassium, sodium, alkalinity, chloride, sulfate, TDS, and specific conductivity levels were found to be higher in September 2013 and October 2014 and lower in March 2013 and 2014. DO concentrations were found to be lower in September 2013 and October 2014 and higher in March 2013 and 2014. Turbidity levels remained stable with a higher level found in March 2013. ORP and pH levels remained stable.

Sampling Point SW-6: Antimony, arsenic, selenium, thallium, and bromide concentrations remained below their MDLs and PQLs for the monitoring period. Calcium, magnesium, potassium, sodium, alkalinity, chloride, sulfate, TDS, and specific conductivity levels were found to be higher in September 2013 and October 2014 and lower in March 2013 and 2014. Mercury levels were higher in March 2013 and dropped below the MDL for all other sample events. DO, pH, turbidity, and ORP levels remained stable.

Sampling Point SW-7: Antimony, arsenic, mercury, selenium, and thallium concentrations remained below their MDLs or PQLs for the monitoring period. Calcium, magnesium, potassium, sodium, chloride, sulfate, TDS, specific conductivity and ORP levels were found to be higher in September 2013 and October 2014 and lower in March 2013 and 2014. Alkalinity concentrations remained stable with a concentration found below the MDL in October 2014. Bromide levels remained below the MDL or PQL for all events with the exception of October 2014 where levels were slightly higher. Turbidity levels remained stable with a higher level found in March 2013. DO and pH levels remained stable.

Sampling Point SW-8: Antimony, arsenic, mercury, selenium, and thallium concentrations remained below their MDLs for the monitoring period. Calcium, magnesium, potassium, sodium, alkalinity, chloride, sulfate, TDS, specific conductivity, and ORP levels were found to be higher in September 2013 and October 2014 and lower in March 2013 and 2014. Bromide levels remained below the MDL or PQL for all events with the exception of October 2014 where a higher level was detected. Turbidity levels remained stable with a higher level detected in March 2013. DO and pH levels remained stable.

C. Comparison Among Shallow, Middle, and Deep Zone Wells:

Ash Landfill Monitoring Wells:

The Ash Landfill monitoring wells consist of wells located in the shallow, middle, and deep zones. Aluminum, arsenic, cadmium, chromium, copper, iron, lead, mercury, nickel, selenium, zinc, TSS, pH, ORP, turbidity, and DO levels are typically consistent throughout all wells zones. Manganese, potassium, sodium, chloride, sulfate, and TDS concentrations are periodically higher in the middle and deep zone wells. The middle zone typically contains a higher concentration of magnesium. Specific conductivity levels in the middle and deep zone rise to higher levels than the shallow zone, but in some locations have lower levels particularly in the deep zone.

Gypsum Area Monitoring Wells:

The Gypsum Storage Area monitoring system consists of wells located in the middle and deep zones. Antimony, selenium, thallium, bromide, pH, specific conductivity, DO, turbidity, and ORP levels are typically consistent throughout both well zones. Arsenic, calcium, mercury, magnesium, sodium, chloride, and sulfate tend to have higher levels in several wells such as GE-2D. There is no consistent difference in TDS and alkalinity between the two well zones with the exception of a few elevated concentrations in the deep zone. Potassium levels are generally consistent among the middle and deep zone with the exception of the Unit 2 well GE-6S which had higher concentrations.

D. Comparison Between Background Water Quality and the Water Quality in Detection and Compliance Wells:

In order to compare background wells versus intermediate and compliance wells, all water quality data was placed in tabular form for each aquifer zone. These tables are located in Appendix B.

Perch Sand and Gravel Aquifer (Unit 1):

Arsenic, cadmium, chromium, copper, iron, lead, mercury, nickel, potassium, selenium, zinc, sulfate, TSS, pH, specific conductivity, ORP, and DO levels are consistent for both monitoring wells at Unit 1. Aluminum, manganese, chloride, and turbidity levels are higher in MWC-11 compared to MWC-12. MWC-12 typically has higher levels of magnesium, sodium, and TDS compared to MWC-11.

Shallow Sand and Aquifer (Unit 2) Ash Landfill:

Aluminum, arsenic, cadmium, chromium, copper, iron, lead, nickel, selenium, zinc, TSS, and pH are typically consistent with the background well MWB-2 over the monitoring period. Manganese, magnesium, potassium, sodium, chloride, sulfate, TDS, and specific conductivity results are typically higher in nearly all wells when compared to MWB-2. Mercury concentrations are consistent when compared to MWB-2 with the exception of MWC-10 which has elevated concentrations since April 2014. Turbidity levels in background well MWB-2 are comparable to MWI-1, MWI-2, and MWC-10; higher levels are typically found in GW-1S and GE-5S. DO and ORP levels are consistent in all wells with the exception of MWI-2 and GE-5S where lower levels were detected.

Shallow Sand and Aquifer (Unit 2) Gypsum Area:

Antimony, mercury, selenium, thallium, pH, and turbidity levels are typically consistent with the background well GW-1S. Arsenic, calcium, magnesium, potassium, sodium, chloride, sulfate, TDS, and specific conductivity results are typically higher in nearly all monitoring wells when compared to GW-1S. Compared to GW-1S, alkalinity concentrations are lower in monitoring wells GE-1S, GE-2S, GE-4S, and GE-6S but are higher in GE-3S and GE-5S. Bromide concentrations are consistent in GE-3S, GE-4S, and GE-5S, when compared to background well GW-1S, but higher levels are seen in GE-1S, GE-2S, and GE-6S. DO levels tend to be lower in all wells, when compared to the background well GW-1S. ORP levels are typically consistent with the background well with the exception of monitoring well GE-5S, which showed lower levels.

Deep Sand and Gravel Aquifer (Unit 5) Ash Landfill:

Cadmium, chromium, iron, lead, zinc, TSS, pH, turbidity, ORP, and DO levels are typically consistent with the background well MWB-1. Aluminum and arsenic concentrations are consistent with MWB-1 in all monitoring wells with the exception of MWC-4 which had higher

concentrations over the monitoring period. Copper concentrations are consistent in all wells, when compared to the background well, with the exception of MWC-9 which showed higher concentrations for the monitoring period. Manganese, mercury, nickel, TDS, and specific conductivity concentrations are typically higher in MWC-4 and MWC-9 but remained consistent for all other wells. When compared to MWB-1, magnesium and chloride typically have lower concentrations in GE-5D and higher concentrations in all other wells. MWC-3, MWC-4, and MWC-8 have higher concentrations of sodium, potassium, selenium, and sulfate when compared to the background well.

Deep Sand and Gravel Aquifer (Unit 5) Gypsum Area:

Antimony, thallium, bromide, pH, turbidity, and ORP levels are consistent among all monitoring wells. GE-2D typically has higher levels of arsenic, calcium, mercury, magnesium, and sodium compared to the other monitoring wells which have levels that are fairly consistent. Potassium, chloride, sulfate, TDS, and specific conductivity concentrations are lower in monitoring wells GE-3D, GE-5D, and GE-6D. Higher concentrations of selenium were found at GE-2D and GE-4D. Alkalinity is higher in GE-1D and GE-4D. GE-3D and GE-5D tend to have higher concentrations of DO.

E. Correlation Between Related Parameters:

Ash Landfill Monitoring Parameters:

Trace metals concentrations in all wells are below the MDL or PQL for most all sample events with the exception of sodium, magnesium, manganese, and potassium. All monitoring wells in the system show low concentrations of TSS and turbidity. Middle and deep zone wells that have an increase in TDS, chloride, and sulfate also experienced an increase in specific conductivity.

Gypsum Area Monitoring Parameters:

Trace metals concentrations in all wells are below the MDL or PQL for most all sample events with the exception of calcium, magnesium, potassium, selenium, and sodium. All monitoring wells in the system show low levels of turbidity. Higher levels of chloride, sulfate, TDS, and specific conductivity typically coincide in the monitoring system.

F. Discussion of Erratic and/or Poorly Correlated Data:

All monitoring well parameters were found to be stable with the exception of MWC-10 which showed elevated concentrations for the April 2014 and October 2014 monitoring events. Additional samples were collected and an assessment report was prepared for submittal in December 2014. The assessment report on mercury detections has been submitted to the Department for review.

G. Interpretation of Groundwater Contour Maps:

For each semi-annual sampling event, since March 2013, a potentiometric map has been created for each of the three monitored groundwater units. These maps can be found in Appendix H.

The Unit 1 potentiometric maps depict that the groundwater flow is moving northeast in the perched Sand and Gravel Aquifer for all monitoring periods except the October 2014 event which shows the flow traveling to the northeast. Rainfall events can cause temporary affects on flow directions in this zone.

Groundwater flow in Unit 2, the Shallow Sand and Gravel Aquifer, flows generally north and east. Flow directions on each map indicate that groundwater flow from ash storage areas are being properly monitored by the existing network.

The Deep Sand and Gravel Aquifer flow maps indicate that groundwater flow in the Unit 5 zone is generally towards the north and east. Flow direction is similar for each sample period.

H. Evaluation of the Water Quality Monitoring Frequency, Sampling Locations Based on Site Conditions, and Physical Condition of Monitoring Wells:

Monitoring frequency appears to be providing a suitable amount of data to correctly monitor the groundwater conditions at this site. All monitoring wells are in good physical shape with the exception of the following two issues.

1. Monitor well GE-2D appears to be reading erroneous water quality data. This well is detecting similar water quality as in well GE-2S, which may indicate a possible problem with the casing and grout. As a result, Gulf Power has requested the abandonment and replacement of GE-2D.
2. Monitor well MWC-10 has detected mercury. Based on the assessment conducted by Geosyntec Consultants, the mercury detected in this well is related to geochemical conditions and ubiquitous mercury in the aquitard and saturated soils. Based on the assessment report, Gulf Power recommends that MWC-10's designation be modified to a detection well. Also, Gulf Power recommends that well MW-D be added as a detection well in the upcoming permit renewal.

Appendix A
Permit Condition III
Groundwater Requirements

PERMITTEE: Gulf Power Company
FACILITY: Scholz Electric Generating Plant

PERMIT NUMBER: FL0002283-004 (Major)
EXPIRATION DATE: September 22, 2015

Source Facility

1. Date and Time Shipped
2. Amount of Residuals Shipped
3. Degree of Treatment (if applicable)
4. Name and ID Number of Residuals Management Facility or Treatment Facility
5. Signature of Responsible Party at Source Facility
6. Signature of Hauler and Name of Hauling Firm

Residuals Management Facility

1. Date and Time Received
2. Amount of Residuals Received
3. Name and ID Number of Source Facility
4. Signature of Hauler
5. Signature of Responsible Party at Residuals Management Facility

These records shall be kept for five years and shall be made available for inspection upon request by the Department. A copy of the hauling records information maintained by the source facility shall be provided upon delivery of the residuals to the residuals management facility or treatment facility. The permittee shall report to the Department within 24 hours of discovery any discrepancy in the quantity of residuals leaving the source facility and arriving at the residuals management facility or treatment facility. [62-640.880(4)]

7. Storage of residuals or other solids at the permitted facility shall require prior written notification to the Department if the storage lasts longer than 30 days. [62-640.300(4)]

B. Industrial Sludge Management Requirements

1. The permittee shall be responsible for proper treatment, management, use or land application of its sludges.
2. Disposal of sludge in a solid waste management facility permitted by the Department shall be in accordance with the requirements of Chapter 62-701, F.A.C. Storage, transportation, and disposal of sludge/solids characterized as hazardous waste shall be in compliance with requirements of Chapter 62-730, F.A.C.
3. The permittee shall keep records of the amount of sludge disposed, transported, or incinerated. If a person other than the permittee is responsible for sludge transporting, disposal, or incineration, the permittee shall also keep the following records:
 - a. Name, address and telephone number of any transporter, and any manifests or bill of lading used;
 - b. Name and location of the site of disposal, treatment or incineration;
 - c. Name, address, and telephone number of the entity responsible for the disposal, treatment, or incineration site.

III. GROUND WATER REQUIREMENTS

1. During the period of operation authorized by this permit, the permittee shall sample ground water in accordance with this permit and the approved ground water monitoring plan prepared under 62-520, F.A.C.
2. The following monitoring wells shall be sampled for the ground water discharge:

Monitoring Well ID	Alternate Well Name and/or Description of Monitoring Location	Latitude			Longitude			Depth (Feet)	Aquifer Monitored	New or Existing
		°	'	"	°	'	"			
MWB-205	MW-205MD	30	40	18	84	53	35	-	Floridan	Existing
MWB-2051	MW-205S	30	40	18	84	53	35	-	Surficial	Existing
MWC-2	WSW-2	30	40	19	84	53	17	-	Floridan	Existing
MWC-203	MW-203MD	30	39	59	84	53	15	-	Floridan	Existing
MWC-204	MW-204MD	30	39	57	84	53	28	-	Floridan	Existing
MWC-210	MW-210MD	30	40	6	84	53	14	-	Floridan	Existing
MWC-212	MW-212MD	30	39	55	84	53	22	-	Floridan	Existing
MWC-2031	MW-203S	30	39	59	84	53	15	-	Surficial	Existing
MWI-204S	MWI-204S, Intermediate	30	39	57	84	53	28	-	Surficial	Existing

PERMITTEE: Gulf Power Company
FACILITY: Scholz Electric Generating Plant

PERMIT NUMBER: FL0002283-004 (Major)
EXPIRATION DATE: September 22, 2015

submittal. The report shall be submitted by a qualified professional and shall contain the following items at a minimum:

- a. Tables and graphs of water quality data, including hydrographs, for all monitoring wells. Rainfall data should be included with the hydrographs.
 - b. A comparison of water quality results between background well and downgradient wells.
 - c. A summary of all violations of applicable water quality standards.
 - d. Ground water contour maps for each sampling event.
 - e. A discussion of any data that is thought to be inconsistent or suspect.
 - f. A summary of the physical condition of the monitoring system. This should be based on visual observation and sampling records.
9. The permittee's discharge to ground water shall not cause a violation of water quality standards for ground waters at the boundary of the zone of discharge, in accordance with Rules 62-520.400 and 62-520.420, F.A.C.
 10. The ground water minimum criteria specified in Rule 62-520.400 F.A.C., shall be met within the zone of discharge. *[62-520.400 and 62-520.420(4)]*
 11. If the concentration for any constituent listed in Condition III.3 in the natural background quality of the ground water is greater than the stated maximum, or in the case of pH is also less than the minimum, the representative background quality shall be the prevailing standard. *[62-520.420(2)]*
 12. Water levels shall be recorded before evacuating each well for sample collection. Elevation references shall include the top of the well casing and land surface at each well site (NAVD allowable) at a precision of plus or minus 0.01 foot. *[62-520.600(11)(c)]*
 13. Ground water monitoring wells shall be purged prior to sampling to obtain representative samples. *[62-160.210]*
 14. Analyses shall be conducted on unfiltered samples, unless filtered samples have been approved by the Department's Northwest District Office as being more representative of ground water conditions. *[62-520.310(5)]*
 15. If any monitoring well becomes damaged or inoperable, the permittee shall notify the Department's Northwest District Office immediately and a detailed written report shall follow within seven days. The written report shall detail what problem has occurred and remedial measures that have been taken to prevent recurrence. All monitoring well design and replacement shall be approved by the Department's Northwest District Office prior to installation. *[62-520.600][62-620.320(6)]*
 16. All piezometers and monitoring wells not part of the approved ground water monitoring plan are to be plugged and abandoned in accordance with Rule 62-532.500(4), F.A.C., unless future use is intended. *[62-532.500(4)]*
 17. The permittee shall provide verbal notice to the Department as soon as practical after discovery of a sinkhole within an area for the management or application of wastewater or sludge. The permittee shall immediately implement measures appropriate to control the entry of contaminants, and shall detail these measures to the Department in a written report within 7 days of the sinkhole discovery.
 18. Ground water monitoring test results shall be submitted on Part D of Form 62-620.910(10) in accordance with Condition I.C.3. *[62-520.600(11)(b)]*

IV. ADDITIONAL LAND APPLICATION REQUIREMENTS

1. When the three-month average daily flow for the most recent three consecutive months exceeds 50 percent of the permitted capacity of the treatment plant or reuse and disposal systems, the permittee shall submit to the Department a capacity analysis report. This initial capacity analysis report shall be submitted within 180 days after the last day of the last month of the three-month period referenced above. The capacity analysis report shall be prepared in accordance with Rule 62-600.405, F.A.C. *[62-600.405(4)]*

Appendix B

Summary of Water Quality Results

Crist Plant Groundwater Monitoring Plan

Table B.1 - Unit 1 Comparison Between Background, Intermediate, and Compliance Wells

Well Type and Unit	Sample Date	Groundwater Elevation(ft NGVD)	pH (field)	Specific Conductance umhos/cm	Aluminum (Total) mg/L	Arsenic (Total) mg/L	Cadmium (Total) mg/L	Chloride (Total) mg/L	Chromium (Total) mg/L	Copper (Total) mg/L	Iron (Total) mg/L	Lead (Total) mg/L	Manganese (Total) mg/L	Mercury (Total) mg/L	Magnesium (Total) mg/L	Nickel (Total) mg/L	Potassium (Total) mg/L	Selenium (Total) mg/L	Sodium (Total) mg/L	Sulfate (Total) mg/L	Zinc (Total) mg/L	TDS (Total) mg/L	TSS (Total) mg/L	Turbidity (field) NTU	OPP (+/-)	DO (mg/L)	
MWC-11	C/Unit 1	3/25/2013	92.62	4.46	43	0.036	0.00033	0.000295	8	0.000315	0.00095	0.0125	0.000085	0.0021	0.000035	0.69	0.000035	0.089	0.000165	4.6	0.027	0.007	36	1.6	67	214	2.72
MWC-11	C/Unit 1	9/11/2013	95.74	4.52	37	0.0664	0.00065	0.0000475	5.92	0.00125	0.00055	0.033	0.0001	0.00556	0.000035	0.621	0.001	0.17	0.0006	4.06	1.04	0.00415	16	1.6	5.49	236	7.26
MWC-11	C/Unit 1	3/26/2014	94.67	4.56	40	0.0505	0.00065	0.0000395	6.53	0.00125	0.00055	0.0165	0.001	0.00907	0.000035	0.668	0.001	0.17	0.0005	4.31	0.121	0.00415	16	1.6	1.7	343	2.61
MWC-11	C/Unit 1	10/16/2014	91.85	4.57	36	0.0576	0.00065	0.000045	6.59	0.00125	0.00055	0.033	0.001	0.00702	0.000035	0.726	0.002	0.17	0.0005	4	0.35	0.00415	8	3.2	4.81	269	4.92
MWC-12	C/Unit 1	3/25/2013	12.71	4.46	45	0.0085	0.00033	0.000295	4.7	0.000315	0.00095	0.0125	0.000085	0.00105	0.000035	0.7	0.000035	0.089	0.000165	4.9	0.027	0.007	30	1.6	0.68	210	2.36
MWC-12	C/Unit 1	9/13/2013	13.62	4.68	42	0.0115	0.00065	0.0000475	5.03	0.00125	0.00055	0.0165	0.0001	0.001	0.000035	0.779	0.002	0.17	0.0005	4.96	0.027	0.00415	28	1.6	1.05	310	6.42
MWC-12	C/Unit 1	3/24/2014	13.71	4.66	44	0.0115	0.00065	0.0000475	5.27	0.00125	0.0011	0.0165	0.0001	0.001	0.000035	0.703	0.001	0.17	0.0005	4.18	0.121	0.0408	28	1.6	0.31	348	7.13
MWC-12	C/Unit 1	10/16/2014	14.84	4.38	37	0.0115	0.00065	0.0000475	4.55	0.00125	0.00055	0.0165	0.0001	0.001	0.000035	0.821	0.002	0.17	0.0005	5.03	0.35	0.00415	24	1.6	1.77	289	5.57

Crist Plant Groundwater Monitoring Plan

Table B.2 - Unit 2 Ash Landfill Comparison Between Background, Intermediate, and Compliance Wells

	Well Type and Unit	Sample Date	Groundwater Elevation (ft NGVD)	pH (field)	Specific Conductance umhos/cm	Aluminum (Total) mg/L	Arsenic (Total) mg/L	Cadmium (Total) mg/L	Chloride (Total) mg/L	Chromium (Total) mg/L	Copper (Total) mg/L	Iron (Total) mg/L	Lead (Total) mg/L	Manganese (Total) mg/L	Mercury (Total) mg/L	Magnesium (Total) mg/L	Nickel (Total) mg/L	Potassium (Total) mg/L	Selenium (Total) mg/L	Sodium (Total) mg/L	Sulfate (Total) mg/L	Zinc (Total) mg/L	TDS (Total) mg/L	TSS (Total) mg/L	Turbidity (field) NTU	ORP (+/-)	DO (mg/L)
MWB-2	B/Unit 2	3/25/2013	11.75	4.53	38	0.029	0.00033	0.000295	5.9	0.00083	0.00095	0.0125	0.000085	0.0021	0.000035	0.66	0.0007	0.089	0.000185	3.3	1	0.007	22	1.6	0.64	184	7.16
MWB-2	B/Unit 2	9/11/2013	12.59	4.59	36	0.0115	0.00065	0.0000475	29.9	0.00125	0.00055	0.0165	0.0001	0.00541	0.00007	0.746	0.002	0.085	0.0005	3.41	0.135	0.00415	12	1.6	0.87	253	8.45
MWB-2	B/Unit 2	3/27/2014	13.38	4.75	0.91	0.0115	0.00065	0.0000475	5.74	0.00125	0.00055	0.0165	0.0001	0.00568	0.00007	0.716	0.001	0.085	0.0005	3.25	0.121	0.00415	3.4	1.6	0.91	324	7.85
MWB-2	B/Unit 2	10/15/2014	15.2	4.63	31	0.023	0.00065	0.000095	5.33	0.00125	0.00055	0.033	0.0002	0.0005	0.000035	0.961	0.002	0.17	0.0005	4.54	0.35	0.00415	14	1.6	4.78	237	7.47
GW-1S	B/Unit 2	3/21/2013	11.89	4.91	48	0.041	0.00033	0.000295	4.7	0.00083	0.00095	0.0125	0.000085	0.0021	0.000035	0.65	0.0007	0.089	0.000185	4.8	0.027	0.007	1.7	1.6	1.46	146	6.3
GW-1S	B/Unit 2	9/9/2013	12.84	4.79	42	0.023	0.00065	0.0000475	4.99	0.00125	0.00055	0.0165	0.0001	0.001	0.00007	0.729	0.002	0.17	0.001	4.94	0.027	0.00415	18	1.6	3.72	263	6.73
GW-1S	B/Unit 2	3/24/2014	12.9	4.9	45	0.023	0.00065	0.0000475	5.09	0.00125	0.00055	0.0165	0.0001	0.001	0.000035	0.714	0.002	0.17	0.0005	4.72	0.121	0.00415	14	1.6	1.77	307	6.79
GW-1S	B/Unit 2	10/10/2014	13.93	4.96	51	0.023	0.00065	0.0000475	4.9	0.00125	0.00055	0.033	0.0001	0.001	0.000035	0.92	0.002	0.17	0.0005	5.71	0.35	0.00415	12	1.6	2.46	281	7.92
MW1-1	D/Unit 2	3/23/2013	6.33	4.42	224	0.043	0.00033	0.000295	40	0.000315	0.00095	0.0125	0.000085	0.005	0.00061	4.4	0.0031	2	0.00033	22	26	0.007	120	1.6	0.71	148	4.20
MW1-1	D/Unit 2	9/13/2013	6.74	4.59	244	0.023	0.00065	0.0000475	206	0.00125	0.00055	0.0165	0.0001	0.117	0.00116	5.85	0.002	2.53	0.001	24.4	168	0.00415	108	1.6	1.15	288	4.53
MW1-1	D/Unit 2	3/28/2014	6.73	4.8	261	0.055	0.00065	0.0000475	42.9	0.00125	0.00055	0.0165	0.0001	0.1	0.00119	6.09	0.002	2.37	0.001	25.1	38.2	0.00415	140	1.6	0.5	317	3.98
MW1-1	D/Unit 2	10/13/2014	6.15	4.68	474	0.155	0.00279	0.000095	47.1	0.00125	0.00055	0.0165	0.0002	0.331	0.00281	20.4	0.00218	2.84	0.00779	44.2	118	0.0083	300	1.6	0.3	327	3.81
MW1-2	D/Unit 2	3/23/2013	9.49	5.91	1489	0.037	0.00033	0.000295	59	0.000315	0.00095	0.0125	0.000085	0.061	0.000035	11	0.0035	75	0.000185	120	14	0.007	950	1.6	0.72	69	0.51
MW1-2	D/Unit 2	9/10/2013	10.06	6.12	1295	0.023	0.00065	0.0000475	68.5	0.00125	0.000773	0.0165	0.0001	0.0735	0.000035	10.3	0.001	65.9	0.0005	114	487	0.00415	856	1.6	0.51	66	0.33
MW1-2	D/Unit 2	3/25/2014	10.52	6.27	1243	0.0115	0.00065	0.000095	65.9	0.00125	0.00055	0.0165	0.0001	0.0658	0.000035	9.89	0.001	59.5	0.0005	108	463	0.00415	822	1.6	0.32	146	0.19
MW1-2	D/Unit 2	10/13/2014	10.42	6.38	1215	0.0115	0.00065	0.000095	92.5	0.00125	0.00055	0.0165	0.0001	0.0816	0.000035	12.8	0.001	62.7	0.0005	125	46.3	0.00415	816	1.6	0.34	-12	1.02
GE-SS	I/Unit 2	3/22/2013	8.09	5.62	627	0.0085	0.0032	0.000295	52	0.000315	0.00095	20	0.000085	0.15	0.000035	8.9	0.0035	3.2	0.000185	0.036	91	0.007	260	7	9.99	-68	0.10
GE-SS	I/Unit 2	9/9/2013	8.86	6.05	521	0.0115	0.0013	0.0000475	55.7	0.00125	0.00055	16.1	0.0001	0.146	0.000035	7.51	0.001	3.01	0.0005	33.1	65.1	0.00415	272	10	2.85	-18	0.27
GE-SS	I/Unit 2	3/25/2014	8.92	6.14	481	0.0115	0.0093	0.000095	43.4	0.00125	0.00055	9.69	0.0001	0.165	0.000035	6.77	0.001	31.6	0.0005	25.9	46.4	0.00415	269	1.8	0.46	-18	0.27
GE-SS	I/Unit 2	10/10/2014	9.32	6.09	551	0.0115	0.0081	0.0000475	30.8	0.00125	0.00055	14.9	0.0001	0.103	0.000035	7.79	0.002	2.56	0.0005	24.6	105	0.00415	250	14	0.8	46	0.3
MWC-10	C/Unit 2	3/28/2013	7.35	4.57	213	0.0085	0.00033	0.000295	7.1	0.0048	0.00095	0.0125	0.000085	0.12	0.00007	2.5	0.0042	16	0.00033	13	59	0.007	140	1.6	1.05	202	6.12
MWC-10	C/Unit 2	9/9/2013	7.86	4.92	301	0.0115	0.00065	0.0000475	17.6	0.0025	0.00055	0.0165	0.0001	0.158	0.000744	2.84	0.0064	17.4	0.0005	25.1	76.1	0.00415	124	1.6	0.5	276	6.80
MWC-10	C/Unit 2	4/1/2014	8.21	4.76	235	0.0115	0.00065	0.0000475	32.1	0.00125	0.00055	0.0165	0.0001	0.106	0.00476	1.38	0.002	7.55	0.0005	27.8	43.1	0.00415	130	1.6	0.33	313	5.84
MWC-10	C/Unit 2	10/9/2014	9.51	4.95	409	0.064	0.00065	0.0000475	69.5	0.00899	0.00055	0.125	0.0001	0.369	0.00804	3.93	0.0121	9.96	0.001	66.8	47.8	0.0083	198	1.6	2.28	300	7.04

Crist Plant Groundwater Monitoring Plan

Table B.3 - Unit 5 Ash Landfill Comparison Between Background, Intermediate, and Compliance Wells

	Well Type and Unit	Sample Date	Groundwater Elevation(ft NGVD)	pH (field)	Specific Conductance umhos/cm	Aluminum (Total) mg/L	Arsenic (Total) mg/L	Cadmium (Total) mg/L	Chloride (Total) mg/L	Chromium (Total) mg/L	Copper (Total) mg/L	Iron (Total) mg/L	Lead (Total) mg/L	Manganese (Total) mg/L	Mercury (Total) mg/L	Magnesium (Total) mg/L	Nickel (Total) mg/L	Potassium (Total) mg/L	Selenium (Total) mg/L	Sodium (Total) mg/L	Sulfate (Total) mg/L	Zinc (Total) mg/L	TDS (Total) mg/L	TSS (Total) mg/L	Turbidity (field) NTU	ORP (+/-)	DO (mg/L)
MWB-1	B/Unit 5	3/25/2013	9.12	4.69	29	0.049	0.00033	0.000295	3.4	0.00063	0.00095	0.0125	0.00017	0.00105	0.000035	0.45	0.0007	0.47	0.00033	0.0028	0.027	0.007	32	1.6	1.07	184	7.26
MWB-1	B/Unit 5	9/11/2013	12.58	4.6	28	0.0115	0.00065	0.0000475	18.6	0.00125	0.00055	0.0165	0.0001	0.0001	0.000035	0.455	0.002	0.17	0.0005	2.81	0.135	0.00415	14	1.6	1.36	259	6.56
MWB-1	B/Unit 5	3/27/2014	10.75	4.96	28	0.0115	0.00065	0.0000475	3.6	0.00125	0.00055	0.033	0.0002	0.0001	0.000035	0.439	0.001	0.645	0.0005	2.58	0.121	0.00415	1.7	1.6	0.62	313	7.29
MWB-1	B/Unit 5	10/15/2014	13	4.96	29	0.0115	0.00065	0.0000475	3.32	0.00125	0.00055	0.0165	0.0001	0.0001	0.000035	0.599	0.002	0.17	0.0005	3.64	0.35	0.00415	10	1.6	1.57	287	7.27
MWC-3	C/Unit 5	3/23/2013	5.91	5.56	93	0.0085	0.00033	0.000295	13	0.000315	0.00095	0.0125	0.000085	0.00105	0.000035	0.71	0.00035	8.2	0.00033	8.9	0.027	0.007	30	1.6	1.11	120	3.54
MWC-3	C/Unit 5	9/13/2013	6.37	6.81	151	0.0115	0.00065	0.0000475	32	0.00125	0.00055	0.0165	0.0001	0.0001	0.00007	1	0.001	24.5	0.0005	12.2	4.15	0.00415	84	1.6	1.59	153	6.05
MWC-3	C/Unit 5	3/26/2014	6.23	5.35	747	0.0115	0.00065	0.0000475	95	0.00125	0.00055	0.0165	0.0001	0.359	0.000956	24.1	0.002	5.37	0.00623	58.5	193	0.00415	446	1.6	0.2	246	5.79
MWC-3	C/Unit 5	10/13/2014	6.26	9.13	404	0.0634	0.00065	0.0000475	27.4	0.00125	0.00055	0.0165	0.0001	0.0001	0.00007	7.16	0.001	54.9	0.00442	39.9	44	0.00415	236	1.6	0.38	25	5.07
MWC-4	C/Unit 5	3/23/2013	8.21	5.7	1119	1.1	0.002	0.000295	14	0.00063	0.00095	0.0125	0.00017	0.58	0.0002	6.3	0.0028	38	0.0062	57	350	0.007	730	3.2	2.34	124	3.11
MWC-4	C/Unit 5	9/10/2013	8.84	4.2	1084	2.81	0.0144	0.000095	57.6	0.00125	0.0011	0.0165	0.0002	0.671	0.000503	7.8	0.00639	38.9	0.00933	49.3	408	0.0083	702	1.6	0.58	442	4.83
MWC-4	C/Unit 5	3/25/2014	8.77	5.82	888	0.177	0.0097	0.000566	54.2	0.00125	0.00055	0.0165	0.0001	0.6	0.00007	5.93	0.001	36.6	0.00632	38.9	332	0.0083	570	6	0.19	238	5.51
MWC-4	C/Unit 5	10/13/2014	9.25	4.25	888	3.14	0.0228	0.000095	44.9	0.00125	0.0011	0.0165	0.0002	0.748	0.000214	8.78	0.00771	30.1	0.0112	52.6	316	0.0083	596	1.6	0.71	388	6.42
GE-5D	D/Unit 5	3/22/2013	8.54	4.86	25	0.035	0.00033	0.000295	3.6	0.000315	0.00095	0.0125	0.000085	0.00105	0.00007	0.37	0.00035	0.089	0.000165	2.6	0.027	0.007	10	1.6	1.09	180	6.02
GE-5D	D/Unit 5	9/10/2013	9.03	4.9	29	0.0115	0.00065	0.0000475	3.79	0.00125	0.00055	0.0165	0.001	0.001	0.000035	0.369	0.001	0.17	0.0005	2.56	0.027	0.00415	6	1.6	2.28	274	6.13
GE-5D	D/Unit 5	3/25/2014	8.48	5.18	25	0.0115	0.00065	0.000095	3.88	0.00125	0.00055	0.0165	0.001	0.001	0.000035	0.353	0.001	0.17	0.0005	2.42	0.121	0.00415	1.7	6	0.57	312	6.97
GE-5D	D/Unit 5	10/10/2014	10.25	5.15	31	0.0115	0.00065	0.0000475	3.13	0.00125	0.00055	0.0165	0.0001	0.0001	0.000035	0.413	0.001	0.17	0.0005	2.65	0.35	0.00415	6	1.6	0.74	284	7.71
MWC-8	C/Unit 5	3/26/2013	7.57	4.86	387	0.017	0.00033	0.000295	32	0.003	0.00095	0.025	0.000085	0.0021	0.00067	4	0.0036	4.9	0.0026	50	88	0.007	230	1.6	0.91	169	4.75
MWC-8	C/Unit 5	9/10/2013	7.75	5.13	312	0.0115	0.00065	0.0000475	29.3	0.00125	0.00055	0.0165	0.0001	0.0001	0.000462	2.92	0.00524	3.12	0.001	43.1	66.9	0.00415	144	1.6	0.61	239	6.26
MWC-9	C/Unit 5	4/1/2014	7.78	5.27	288	0.0115	0.00065	0.0000475	41.4	0.00125	0.00055	0.0165	0.0001	0.0001	0.000525	3.59	0.002	3.45	0.00271	46.2	92.2	0.00415	298	7	0.33	278	5.42
MWC-9	C/Unit 5	10/14/2014	8.95	5.03	221	0.0115	0.00065	0.0000475	17	0.00125	0.00055	0.0165	0.0001	0.00084	0.000035	3.81	0.00775	6.41	0.001	45.1	126	0.0083	144	1.6	1.06	270	6.10
MWC-9	C/Unit 5	3/26/2013	NA	4.75	41	0.026	0.00033	0.000295	4.9	0.000315	0.00095	0.025	0.00017	0.0021	0.000035	0.71	0.0007	0.089	0.000165	3.2	2.1	0.024	42	1.6	0.89	195	6.27
MWC-9	C/Unit 5	9/11/2013	NA	4.99	35	0.0115	0.00065	0.0000475	22.5	0.00125	0.00055	0.033	0.00239	0.00088	0.000035	0.808	0.002	0.085	0.0005	3.25	0.135	0.0247	34	1.6	0.96	247	9.21
MWC-9	C/Unit 5	5/24/2014	NA	5.01	32	0.0115	0.00065	0.0000475	4.5	0.00125	0.0141	0.033	0.0001	0.00711	0.000035	0.643	0.0001	0.085	0.0005	3.23	0.35	0.0083	20	1.6	0.44	53	8.37
MWC-9	C/Unit 5	10/15/2014	NA	4.6	35	0.023	0.00065	0.0000475	4.86	0.00125	0.00068	0.0165	0.0002	0.0112	0.000035	0.945	0.002	0.17	0.0005	4.09	1.47	0.0083	24	1.6	2.18	215	4.43

Crist Plant Groundwater Monitoring Plan

Table B.4 - Unit 2 Gypsum Storage Area Comparison Between Background, Intermediate, and Compliance Wells

	Well Type and Unit	Sample Date	Groundwater Elevation (ft NGVD)	pH (field) SU	Specific Conductance (Field) umhos/cm	Antimony (Total) mg/L	Arsenic (Total) mg/L	Calcium (Total) mg/L	Mercury (Total) mg/L	Magnesium (Total) mg/L	Potassium (Total) mg/L	Selenium (Total) mg/L	Sodium (Total) mg/L	Thallium (Total) mg/L	Bicarbonate Alkalinity (Total)	Bromide (Total) mg/L	Chloride (Total) mg/L	Sulfates (Total) mg/L	TDS (Total) mg/L	Dissolved Oxygen (Field)	Turbidity (Field) NTU	Temperature (Field) °C	Oxidation-Reduction Potential
GW-1S	B/UNIT 2	3/21/2013	11.89	4.91	46	0.00025	0.00033	1.4	0.000035	0.68	0.089	0.00033	4.9	0.00025	3.1	0.0335	4.5	0.027	34	6.3	1.46	22.3	146
GW-1S	B/UNIT 2	9/9/2013	12.84	4.79	42	0.00115	0.019	855	0.00213	79.9	18.8	0.0168	192	0.00025	1.78	0.0335	4.95	0.027	16	6.73	3.72	23.7	263
GW-1S	B/UNIT 2	3/24/2014	12.9	4.9	45	0.00115	0.00065	1.32	0.000035	0.71	0.17	0.0005	4.75	0.00025	0.49	0.037	5.12	0.121	28	6.79	1.77	22.1	307
GW-1S	B/UNIT 2	10/10/2014	13.93	4.96	51	0.00115	0.00065	1.16	0.000035	0.833	0.17	0.0005	5.24	0.00025	1.52	0.074	4.72	0.35	1.7	7.92	2.46	22	281
GE-1S	B/UNIT 2	3/20/2013	3.26	3.83	11890	0.00042	0.011	1700	0.0017	170	21	0.035	310	0.00058	0.49	22	3400	670	410	0.16	4.49	21.2	190
GE-1S	B/UNIT 2	9/10/2013	3.21	4.59	6108	0.00115	0.00065	1.23	0.000035	0.695	0.17	0.0005	4.74	0.00025	0.49	14.9	1890	345	6350	1.19	3.32	24.2	325
GE-1S	B/UNIT 2	4/4/2014	3.24	4.14	4998	0.00115	0.0183	765	0.00154	84.9	16.7	0.0136	158	0.00025	0.49	0.74	1520	326	4920	0.81	1.05	21.2	27
GE-1S	B/UNIT 2	10/8/2014	2.85	4.09	6983	0.00115	0.0165	1060	0.00162	92.6	28.1	0.018	257	0.00025	0.49	11.7	1200	281	17500	1.47	2.12	24.0	188
GE-2S	B/UNIT 2	3/21/2013	1.35	4.14	1276	0.00042	0.002	120	0.0011	28	0.85	0.0032	23	0.00025	0.49	2.6	350	2.3	940	2.45	2.19	26.5	113
GE-2S	B/UNIT 2	9/11/2013	1.51	4.12	1995	0.00115	0.0225	205	0.00328	58.7	1.2	0.00849	30.7	0.00025	0.49	0.335	594	0.135	1850	2.12	4.4	26.1	366
GE-2S	B/UNIT 2	4/5/2014	1.1	3.97	2760	0.00115	0.0276	290	0.00516	71.4	1.41	0.00593	43.7	0.00025	0.49	5.89	546	0.605	1850	1.78	0.92	22.9	300
GE-2S	B/UNIT 2	10/10/2014	1.35	4.04	3328	0.00115	0.039	397	0.00526	79.9	1.6	0.0144	60.2	0.00025	0.49	0.74	881	3.5	1850	1.57	2.81	22.9	401
GE-3S	B/UNIT 2	3/22/2013	4.27	4.9	146	0.00042	0.00033	11	0.000035	2.3	1.8	0.0033	8.8	0.00025	11	0.0335	12	24	74	3	3.73	24.1	132
GE-3S	B/UNIT 2	9/11/2013	4.57	5.18	152	0.00115	0.00065	13.2	0.000035	2.58	1.7	0.00545	11.1	0.00025	53.3	0.067	17.7	22.2	90	2.54	4.59	25.8	262
GE-3S	B/UNIT 2	4/5/2014	4.39	5.08	154	0.00115	0.00065	11.3	0.000035	2.05	1.48	0.0039	11.9	0.00025	10.1	0.074	19.4	17	82	3.39	2	24.2	282
GE-3S	B/UNIT 2	10/10/2014	4.55	5.18	141	0.00115	0.00065	12.6	0.000035	2.03	1.5	0.00528	14	0.00025	14	0.074	16.1	16.3	84	2.37	4.24	25.7	227
GE-4S	B/UNIT 2	3/20/2013	5.49	4.2	833	0.00042	0.00066	44	0.00091	7.5	33	0.0039	69	0.00025	0.49	1.3	49	1200	550	0.79	0.8	18.4	378
GE-4S	B/UNIT 2	9/10/2013	5.6	4.21	850	0.00115	0.00911	54	0.000736	9.17	35.5	0.0058	78	0.00025	0.49	0.67	56.4	294	516	0.6	2.58	24	436
GE-4S	B/UNIT 2	4/3/2014	5.69	4.38	783	0.00115	0.00745	47.4	0.00163	8.75	32	0.00341	72.4	0.00025	0.49	0.074	62.9	250	452	0.93	0.54	19.5	415
GE-4S	B/UNIT 2	10/8/2014	5.26	4.47	865	0.00115	0.00992	53.8	0.000361	9.62	34.9	0.00633	76.6	0.00025	0.49	0.074	44.2	434	538	0.57	0.6	25.2	348
GE-5S	B/UNIT 2	3/22/2013	8.09	5.62	627	0.00042	0.0028	51	0.00007	8.7	3.1	0.000165	36	0.00025	87	0.0335	50	91	270	0.19	9.99	20.1	-68
GE-5S	B/UNIT 2	9/9/2013	8.86	6.05	521	0.0015	0.0026	51.5	0.000035	7.35	3.08	0.0005	32.3	0.00025	92.5	0.067	54.5	62.4	248	0.27	2.85	23	-18
GE-5S	B/UNIT 2	3/25/2014	8.92	6.14	481	0.0015	0.00279	52.7	0.000035	6.81	2.71	0.0005	25.9	0.00025	109	0.074	44.5	47.4	252	0.27	0.46	18.9	-18
GE-5S	B/UNIT 2	10/10/2014	9.32	6.09	551	0.00115	0.00382	62.1	0.000035	7.97	2.68	0.0005	25.1	0.00025	130	0.074	30.4	109	300	0.3	0.8	22.9	-66
GE-6S	B/UNIT 2	3/21/2013	3.98	4.27	18133	0.00042	0.0058	2400	0.00071	270	81	0.035	790	0.0012	0.49	6.7	5400	1100	16000	0.18	0.74	20	163
GE-6S	B/UNIT 2	9/11/2013	3.86	4.24	16250	0.00115	0.0221	2580	0.00107	230	77.2	0.0391	711	0.0005	0.49	46.5	5480	930	21300	0.12	2.19	22.3	382
GE-6S	B/UNIT 2	4/4/2014	3.92	4.33	16999	0.00115	0.017	2720	0.000482	232	74.3	0.0443	621	0.0005	0.49	27.8	6300	1060	17700	0.12	0.74	21.5	287
GE-6S	B/UNIT 2	10/10/2014	3.35	4.29	18772	0.00115	0.0207	3390	0.000232	235	79.1	0.0277	886	0.00129	0.49	0.037	4440	586	19100	0.26	1.68	21.7	306

Crist Plant Groundwater Monitoring Plan
Table B.5 -Surface Water Data

	Well Type and Unit	Sample Date	Groundwater Elevation (ft NGVD)	pH (field) SU	Specific Conductance (Field) umhos/cm	Antimony (Total) mg/L	Arsenic (Total) mg/L	Calcium (Total) mg/L	Mercury (Total) mg/L	Magnesium (Total) mg/L	Potassium (Total) mg/L	Selenium (Total) mg/L	Sodium (Total) mg/L	Thallium (Total) mg/L	Bicarbonate Alkalinity (Total)	Bromide (Total) mg/L	Chloride (Total) mg/L	Sulfates (Total) mg/L	TDS (Total) mg/L	Dissolved Oxygen (Field)	Turbidity (Field) NTU	Temperature (Field) °C	Oxidation- Reduction Potential
SW-1	face Wa	3/24/2013	N/D	5.33	48	0.00042	0.00033	1.1	0.000035	0.57	0.089	0.000165	3.3	0.00025	0.49	0.0335	6.2	2.4	8	7.65	6.32	18.2	N/D
SW-1	face Wa	9/12/2013	N/D	5.24	65	0.00115	0.00065	0.895	0.000035	0.447	0.085	0.0005	3.14	0.00025	0.49	0.0335	6.11	0.027	3.4	5.44	4.14	23	185
SW-1	face Wa	3/31/2014	N/D	5.47	76	0.00115	0.00065	0.853	0.00007	0.462	0.085	0.0005	2.39	0.00025	0.49	0.037	4.47	1.85	1.7	6.34	1.43	16	175
SW-1	face Wa	10/13/2014	N/D	4.22	29	0.00115	0.00065	0.82	0.000035	0.477	0.17	0.0005	3.24	0.00025	0.49	0.074	5.38	1.04	14	5.08	1.85	23	178
SW-2	face Wa	3/24/2013	N/D	5.28	49	0.00042	0.00033	1.8	0.000035	0.74	0.0445	0.000165	3.3	0.00025	2.6	0.0335	6	2.6	32	7.69	9.48	19	N/D
SW-2	face Wa	9/12/2013	N/D	5.19	55	0.0015	0.00065	1.37	0.000035	0.806	0.085	0.0005	4.96	0.00025	2.87	0.0335	8.77	0.027	1.7	6.07	3.44	22.1	140
SW-2	face Wa	3/31/2014	N/D	6.17	85	0.0015	0.00065	2.32	0.000035	0.701	0.17	0.0005	3.16	0.00025	2.35	0.037	5.58	2.02	26	6.01	1.66	19.1	110
SW-2	face Wa	10/13/2014	N/D	4.23	42	0.00115	0.00065	1.28	0.000035	0.623	0.17	0.0005	4.66	0.00025	4.22	0.074	7.17	0.35	18	3.35	1.87	21.7	188
SW-3	face Wa	3/24/2013	N/D	5.39	86	0.00042	0.00033	6.7	0.000035	1.1	1.1	0.000165	4.7	0.00025	14	0.0335	6.9	7.4	38	7.71	8.58	18.5	N/D
SW-3	face Wa	9/12/2013	N/D	5.64	74	0.00115	0.00065	5.98	0.000035	1.11	0.924	0.0005	4.81	0.00025	21.5	0.0335	7.61	2.83	16	6.11	3.86	22.2	131
SW-3	face Wa	3/31/2014	N/D	6.31	122	0.00115	0.00065	5.13	0.00007	0.966	0.853	0.0005	4.11	0.00025	10.9	0.037	6.85	3.46	24	7.21	4.75	16.2	110
SW-3	face Wa	10/13/2014	N/D	4.45	59	0.00115	0.00065	4.9	0.000035	1.13	0.81	0.0005	5.26	0.00025	12.8	0.074	6.75	2.06	20	5.66	2.63	21.3	218
SW-4	face Wa	3/24/2013	N/D	5.47	75	0.00042	0.00033	4.6	0.000035	1.2	0.8	0.000165	5.5	0.00025	9.7	0.0335	6.7	4.9	36	8.11	19.2	18.1	N/D
SW-4	face Wa	9/12/2013	N/D	6.32	270	0.00115	0.00065	13.1	0.000035	4.82	1.9	0.0005	29	0.00025	12.2	0.067	57.8	13.9	122	6.33	11.2	27.5	186
SW-4	face Wa	3/31/2014	N/D	6.07	82	0.00115	0.00065	4.85	0.000035	1.15	0.832	0.0005	4.9	0.00025	6.83	0.037	7.23	3.67	38	7.5	10.7	16.7	145
SW-4	face Wa	10/13/2014	N/D	6.08	740	0.00115	0.00065	7.49	0.000035	10.2	3.29	0.0005	64.7	0.00025	8.33	0.074	134	15.6	264	4.29	2.9	21.7	194
SW-5	face Wa	3/24/2013	N/D	5.7	87	0.00042	0.00033	5.8	0.00007	1.7	1.2	0.000165	8.3	0.00025	9.5	0.035	12	5.2	46	7.24	18.3	18	N/D
SW-5	face Wa	9/12/2013	N/D	6.52	345	0.00115	0.00065	15.1	0.000035	5.72	2.35	0.0005	39.9	0.00025	28	0.067	74.4	16.3	168	4	7.3	27.8	146
SW-5	face Wa	3/31/2014	N/D	6.18	131	0.00115	0.00065	5.64	0.00007	1.27	0.94	0.0005	5.42	0.00025	8.2	0.037	9.91	3.96	30	7.52	7.54	17.1	127
SW-5	face Wa	10/13/2014	N/D	6.36	3271	0.00115	0.00065	22.6	0.000035	40.9	13.4	0.0005	347	0.00025	13.2	0.37	498	121	1290	5.87	5.76	22.9	205
SW-6	face Wa	3/24/2013	N/D	5.68	128	0.00042	0.00033	6.6	0.00025	2.1	1.2	0.000165	11	0.00025	9.8	0.0335	19	6	6	4.77	19.7	18.2	N/D
SW-6	face Wa	9/12/2013	N/D	6.6	440	0.00115	0.00065	14.5	0.000035	7.13	2.83	0.0005	53.8	0.00025	29.1	0.067	97.2	20	222	3.64	20.2	27.5	143
SW-6	face Wa	3/31/2014	N/D	6.21	151	0.00115	0.00065	7.49	0.000035	1.53	1.05	0.0005	7.03	0.00025	9.24	0.037	14.9	5.41	48	7.48	11.4	17.3	110
SW-6	face Wa	10/13/2014	N/D	6.51	3570	0.00115	0.00065	33.6	0.000035	63.4	21.1	0.0005	682	0.00025	26.9	0.74	727	208	1930	5.32	20.7	23.2	206
SW-7	face Wa	3/24/2013	N/D	5.77	132	0.00042	0.00033	6	0.00007	2.1	1.1	0.000165	12	0.00025	11	0.0335	22	6.4	68	4.27	18.8	18.1	N/D
SW-7	face Wa	9/12/2013	N/D	6.72	561	0.00115	0.00065	13.9	0.000035	9.52	3.58	0.0005	76	0.00025	24.6	0.067	139	26.1	310	3.75	8.35	28	142
SW-7	face Wa	3/31/2014	N/D	6.25	149	0.00115	0.00065	6.94	0.000035	1.33	0.935	0.0005	6.78	0.00025	11.4	0.037	14.5	5.48	48	7.4	13.1	16.8	71
SW-7	face Wa	10/13/2014	N/D	6.42	4865	0.00115	0.00065	45.4	0.000035	112	33	0.0005	886	0.00025	0.49	15.5	1120	279	2940	5.17	2.86	23.9	217
SW-8	face Wa	3/24/2013	N/D	5.81	119	0.00042	0.00033	7.7	0.000035	2.1	1.2	0.000165	13	0.00025	26	0.0335	19	7.1	ND	4.21	17	17.6	N/D
SW-8	face Wa	9/12/2013	N/D	6.74	926	0.00115	0.00065	15.6	0.000035	14.9	5.23	0.0005	120	0.00025	36	0.067	211	35.3	456	3.84	7.16	27.9	134
SW-8	face Wa	3/31/2014	N/D	5.91	135	0.00115	0.00065	6.95	0.000035	1.21	0.878	0.0005	6.51	0.00025	14	0.037	8.41	5.22	42	7.8	12	16.8	64
SW-8	face Wa	10/13/2014	N/D	6.36	6025	0.00115	0.00065	47.2	0.000035	122	39.2	0.0005	1030	0.00025	40.5	14.4	1370	345	3730	5.16	4.09	24.1	221

ND: No data; Sample was sent to laboratory for analysis, parameter was not measured

N/A: Not Applicable; Parameter analysis not required for surface water sampling

Crist Plant Groundwater Monitoring Plan

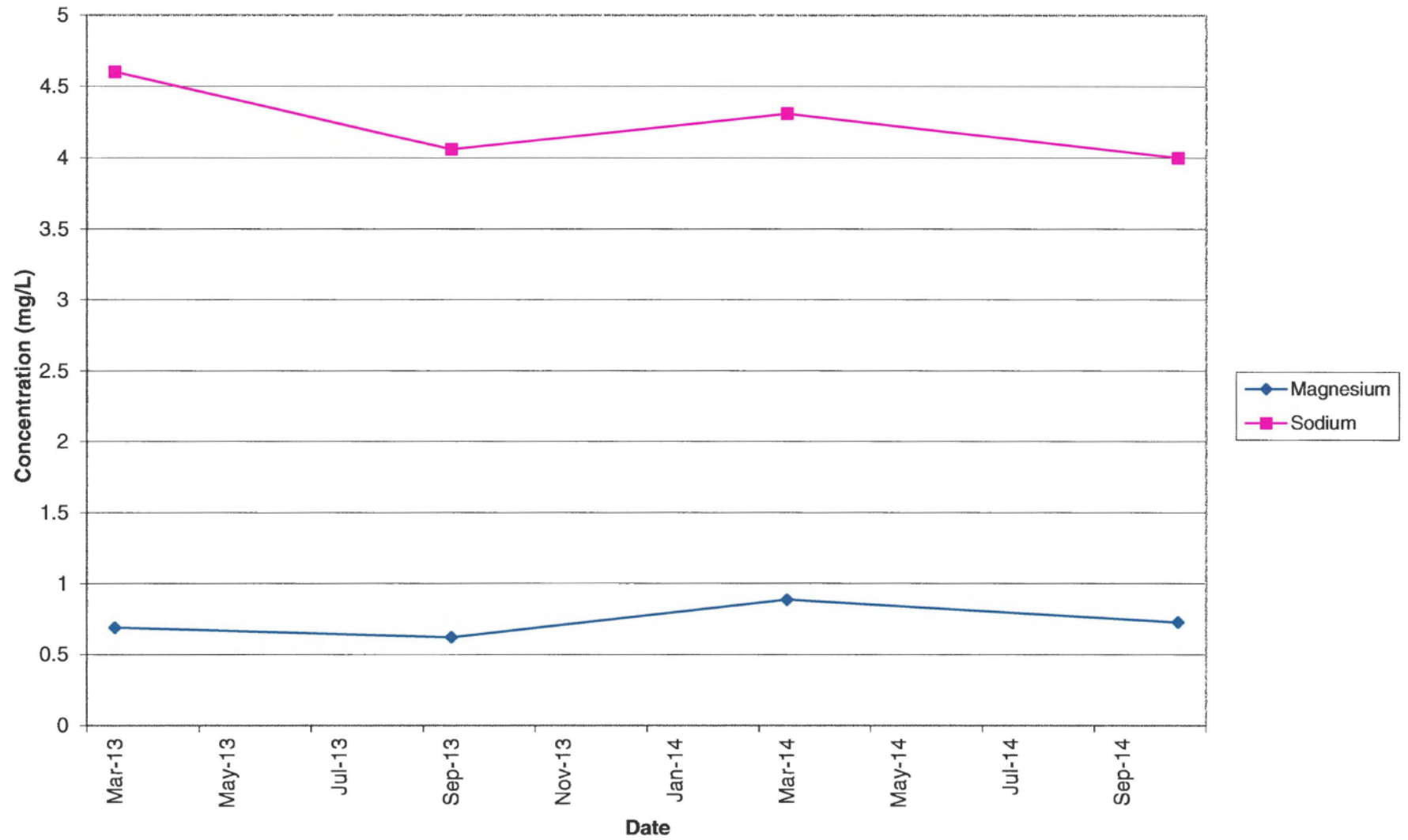
Table B.6 - Unit 5 Gypsum Storage Area Comparison Between Background, Intermediate, and Compliance Wells

Well Type and Unit	Sample Date	Groundwater Elevation (ft NGVD)	pH (field) SU	Specific Conductance (Field) umhos/cm	Antimony (Total) mg/L	Arsenic (Total) mg/L	Calcium (Total) mg/L	Mercury (Total) mg/L	Magnesium (Total) mg/L	Potassium (Total) mg/L	Selenium (Total) mg/L	Sodium (Total) mg/L	Thallium (Total) mg/L	Alkalinity (Total) mg/L	Bromide (Total) mg/L	Chloride (Total) mg/L	Sulfates (Total) mg/L	TDS (Total) mg/L	Oxygen (Field) mg/L	Turbidity (Field) NTU	Temperature (Field) °C	Reduction Potential (Field)
GE-1D D/Unit 5	3/20/2013	3.38	5.2	1872	0.00042	0.00066	270	0.000035	14	5.5	0.00033	18	0.00025	6.7	3	370	46	1200	0.21	2.6	21	97
GE-1D D/Unit 5	9/10/2013	3.73	7.77	1839	0.00115	0.00065	321	0.000035	2.45	3.65	0.0005	15.8	0.00025	22	0.335	540	13.4	1450	0.08	5.8	25.1	-288
GE-1D D/Unit 5	4/4/2014	3.05	5.64	113	0.00115	0.00065	12.4	0.000035	0.512	0.919	0.0005	3.02	0.00025	5.62	0.074	26.4	2.9	102	0.64	0.97	22.8	19
GE-1D D/Unit 5	10/8/2014	3.56	6.32	1032	0.00115	0.00065	142	0.000035	0.495	1.58	0.0005	8.15	0.00025	23.7	1.89	248	5.99	614	0.18	4.17	23.9	75
GE-2D D/Unit 5	3/21/2013	1.89	4.14	4789	0.00042	0.013	670	0.009	93	5	0.028	59	0.00025	0.49	7.9	1100	14	4000	1.85	1.51	22.8	174
GE-2D D/Unit 5	9/11/2013	2.11	4.27	5785	0.00115	0.0701	955	0.0102	104	6.29	0.0374	82.6	0.00025	0.49	12	1640	294	7310	1.84	2.39	23.8	535
GE-2D D/Unit 5	4/4/2014	1.77	4.05	6304	0.00115	0.0687	967	0.00765	110	8.65	0.0276	118	0.00025	0.49	0.74	2030	331	5830	1.9	0.21	21.8	554
GE-2D D/Unit 5	10/8/2014	2.02	4.07	8521	0.00115	0.0757	1570	0.00369	120	11.9	0.0421	173	0.00025	0.49	1.48	742	769	6440	1.6	1.04	24.5	544
GE-3D D/Unit 5	3/22/2013	6.99	4.37	35	0.00042	0.00033	0.89	0.00007	0.29	0.089	0.000165	2.2	0.00025	0.49	0.0335	2.7	6.7	24	3.49	9.9	22.4	130
GE-3D D/Unit 5	9/11/2013	7.3	4.42	40	0.00115	0.00065	0.965	0.000035	0.321	0.17	0.0005	2.31	0.00025	0.49	0.0335	3.85	5.28	20	3.62	4.79	25.3	329
GE-3D D/Unit 5	4/5/2014	5.81	4.04	33	0.00115	0.00065	0.401	0.000035	0.043	0.17	0.0005	2.31	0.00025	0.49	0.037	3.5	1.87	18	5.96	4.21	22.4	399
GE-3D D/Unit 5	10/10/2014	8.2	3.76	48	0.00115	0.00065	0.407	0.000035	0.043	0.17	0.0005	2.14	0.00025	0.49	0.074	3.08	2.9	1.7	4.13	4.55	23.8	346
GE-4D D/Unit 5	3/20/2013	6.34	5.07	471	0.00042	0.00033	26	0.000035	8.4	7.9	0.0032	43	0.00025	6.3	0.067	65	86	270	1.89	0.82	19.6	151
GE-4D D/Unit 5	9/10/2013	6.81	5.61	477	0.00115	0.00065	29.7	0.000035	8.63	8.54	0.0035	42.1	0.00025	6.96	0.335	69.5	90	240	1.62	2.51	24	227
GE-4D D/Unit 5	4/3/2014	6.7	5.15	390	0.00115	0.00065	20.9	0.000035	7.14	7.48	0.00381	35.5	0.00025	3.24	0.074	61	68.6	210	5.63	0.48	20.8	247
GE-4D D/Unit 5	10/8/2014	6.86	5.58	410	0.00115	0.00065	25	0.000035	6.81	7.1	0.00392	33.7	0.00025	11.5	0.037	49.8	92.1	212	3.9	0.5	24.2	215
GE-5D D/Unit 5	3/22/2013	8.54	4.86	25	0.00042	0.00033	0.44	0.000035	0.36	0.089	0.000165	2.5	0.00025	0.49	0.0335	3.4	0.027	22	6.02	1.09	19.4	180
GE-5D D/Unit 5	9/10/2013	9.03	4.9	23	0.00115	0.00065	0.567	0.000035	0.403	0.17	0.0005	2.7	0.00025	0.49	0.0335	3.97	0.027	3.4	6.13	2.28	23	274
GE-5D D/Unit 5	3/25/2014	8.48	5.18	25	0.00115	0.00065	0.55	0.000035	0.369	0.17	0.0005	2.49	0.00025	0.49	0.037	3.95	0.121	6	6.97	0.57	18.2	312
GE-5D D/Unit 5	10/10/2014	10.25	5.15	31	0.00115	0.00065	0.499	0.000035	0.359	0.17	0.0005	2.39	0.00025	0.49	0.074	3.13	0.35	10	7.71	0.74	22	284
GE-6D D/Unit 5	3/21/2013	4.29	5.25	102	0.00042	0.00033	9.7	0.000035	0.96	1.4	0.000165	4.5	0.00025	7	0.0335	15	8.8	16	0.33	5.1	20.3	100
GE-6D D/Unit 5	9/11/2013	4.65	5.11	72	0.00115	0.00065	2.89	0.000035	0.772	0.927	0.0005	4.3	0.00025	0.49	0.0335	9.35	5.68	30	1.22	3.32	22.9	167
GE-6D D/Unit 5	4/4/2014	4.39	4.18	79	0.00115	0.00065	4.39	0.000035	0.941	0.927	0.0005	4.64	0.00025	0.49	0.037	14.2	4.75	1.7	3.46	2.8	21.9	351
GE-6D D/Unit 5	10/9/2014	4.52	3.61	84	0.00115	0.00065	3.78	0.000035	0.878	0.779	0.0005	4.65	0.00025	0.49	0.074	11.8	4.52	8	1.01	4.4	22.7	288

Appendix C

Unit 1 Water Quality Graphs

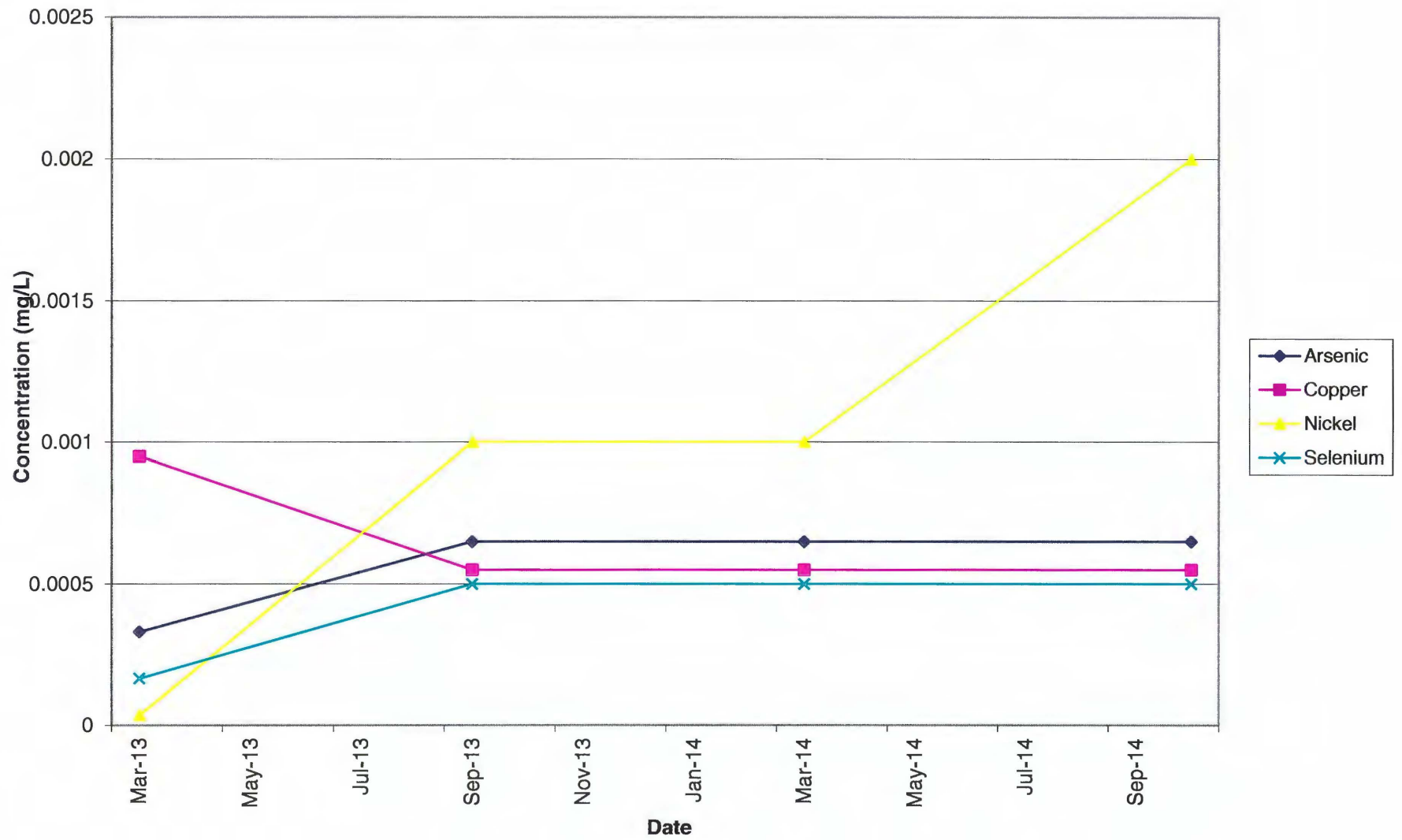
MWC-11 Metals (Part 1)



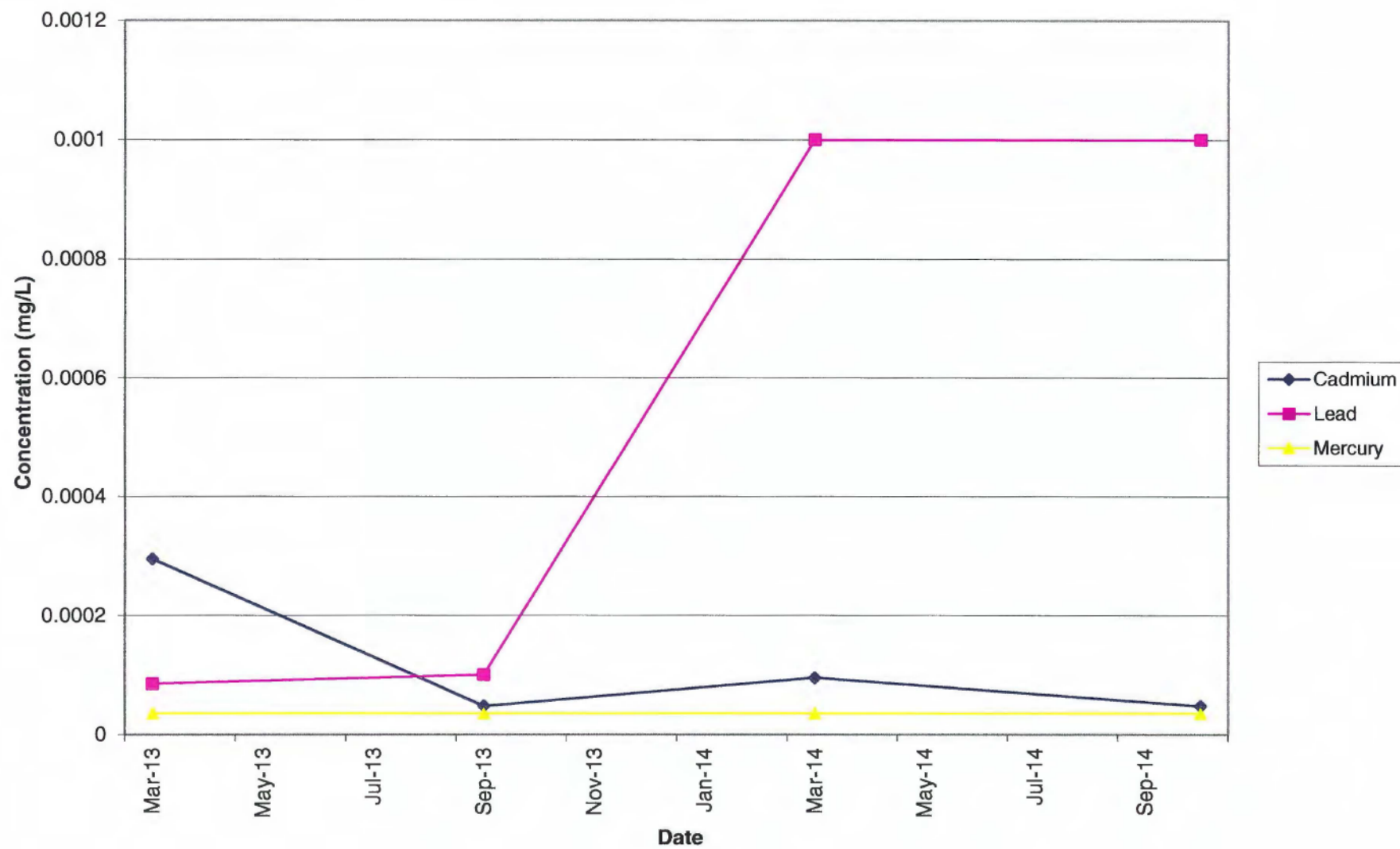
MWC-11 Metals (Part 2)



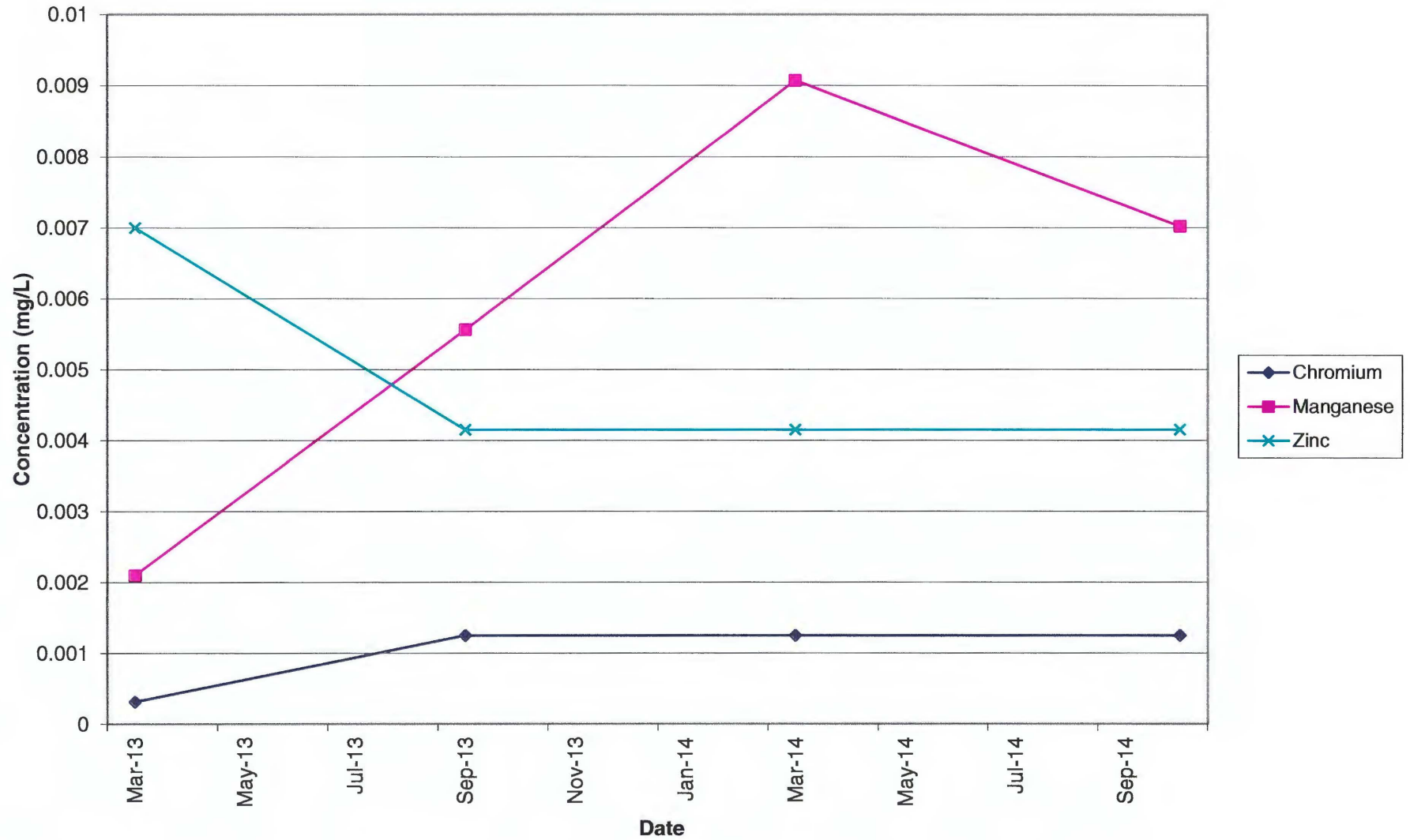
MWC-11 Metals (Part 3)



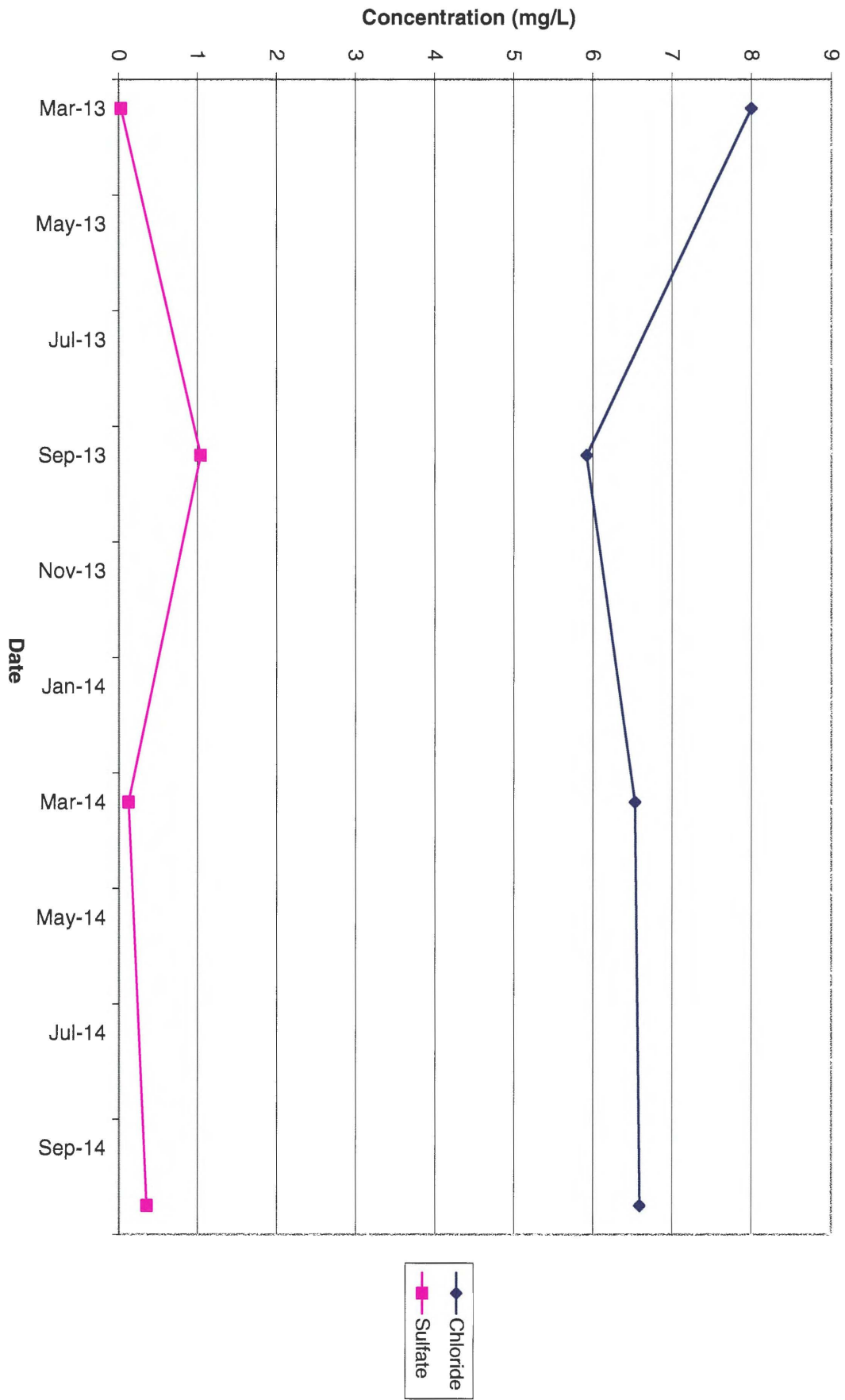
MWC-11 Metals (Part 4)



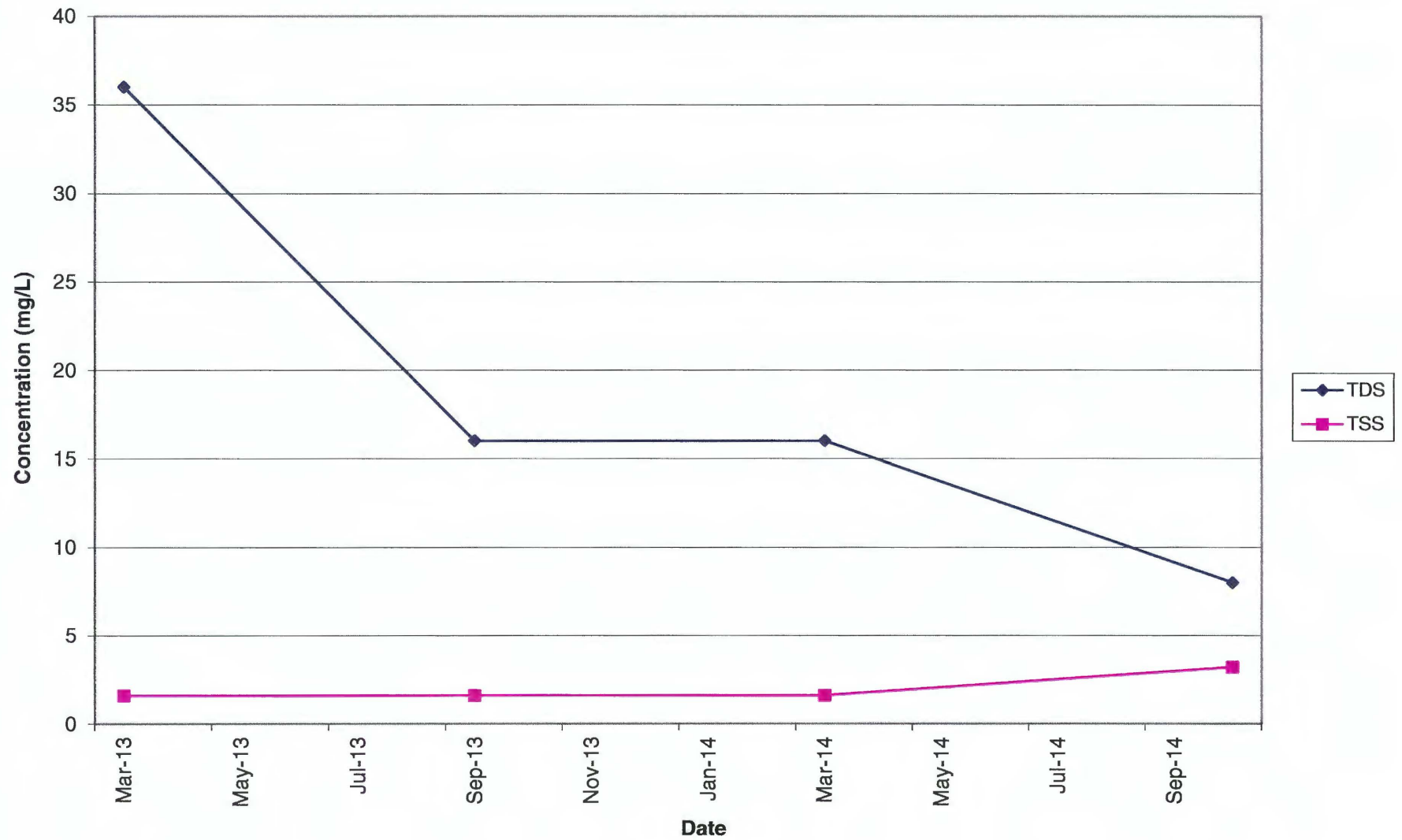
MWC-11 Metals (Part 5)



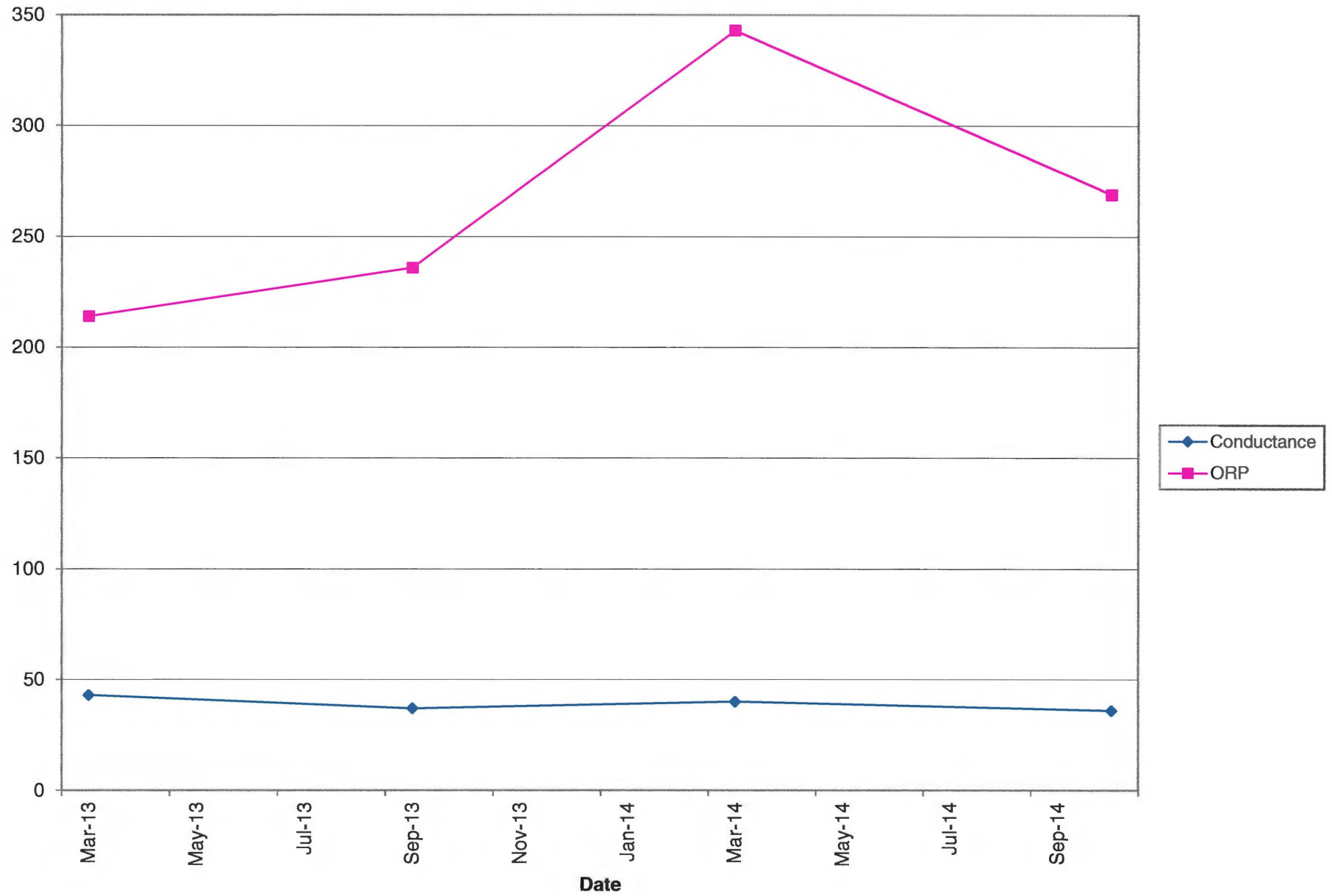
MWC-11 General Chemistry (Part 1)



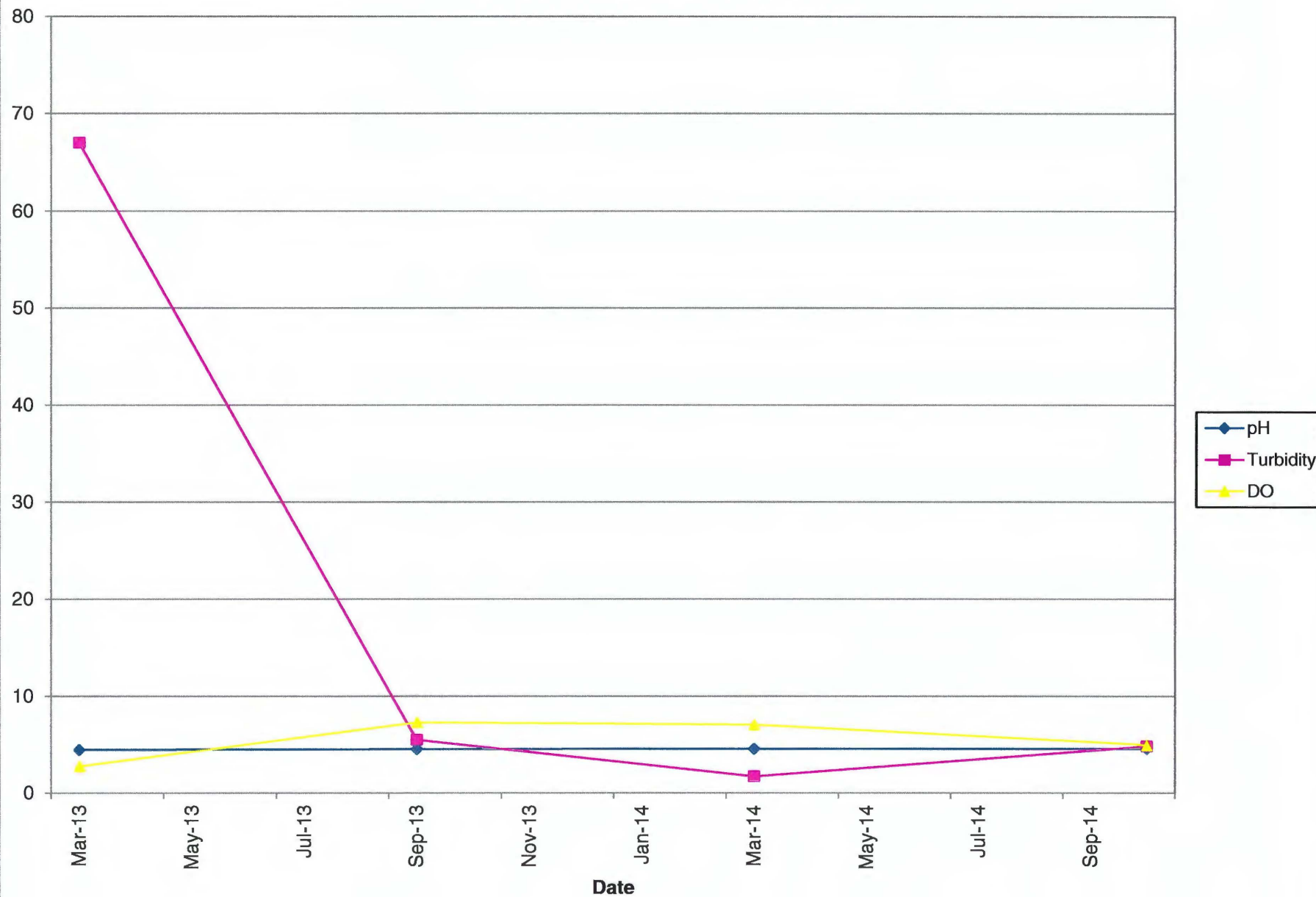
MWC-11 General Chemistry (Part 2)



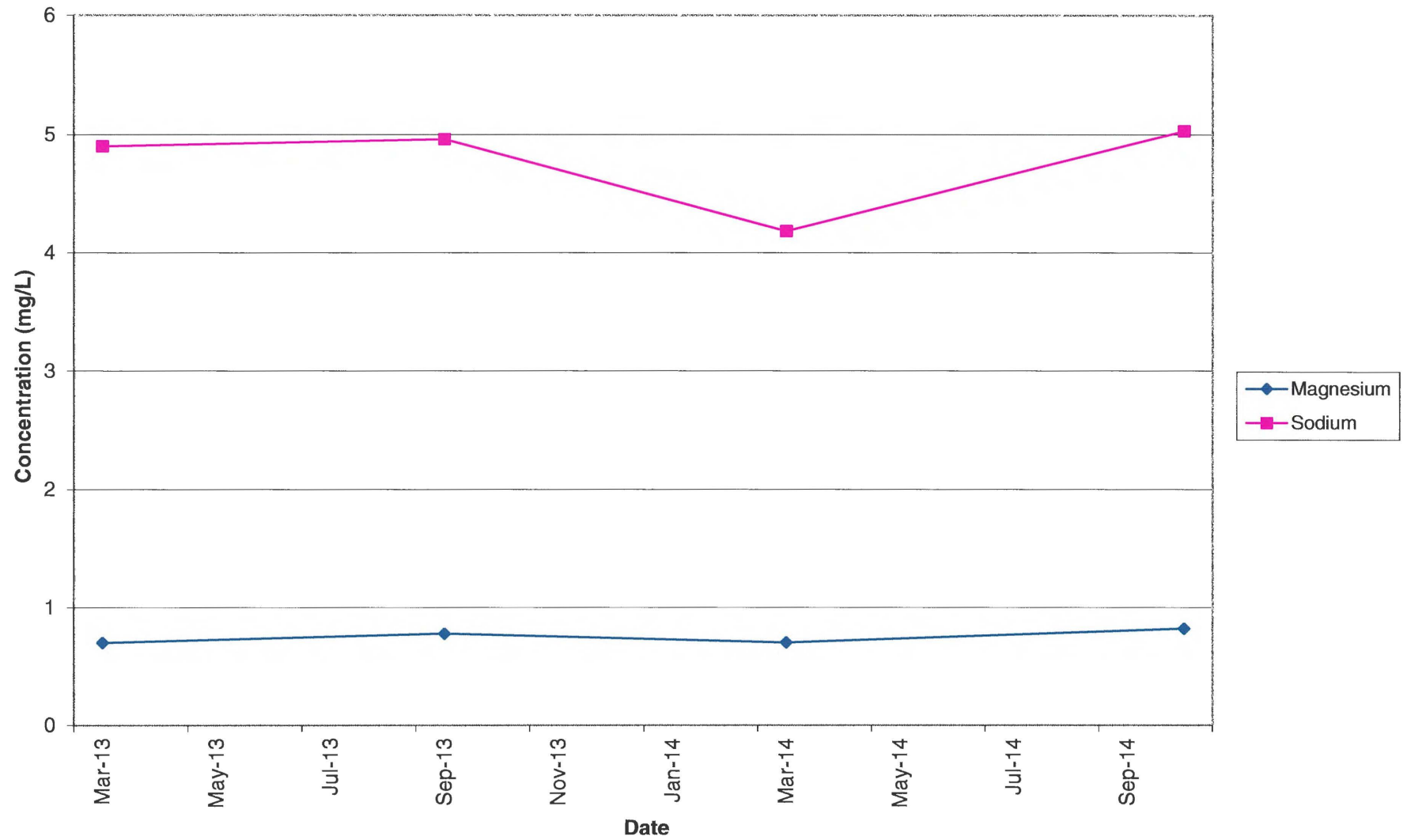
MWC-11 Field Parameters (Part 1)



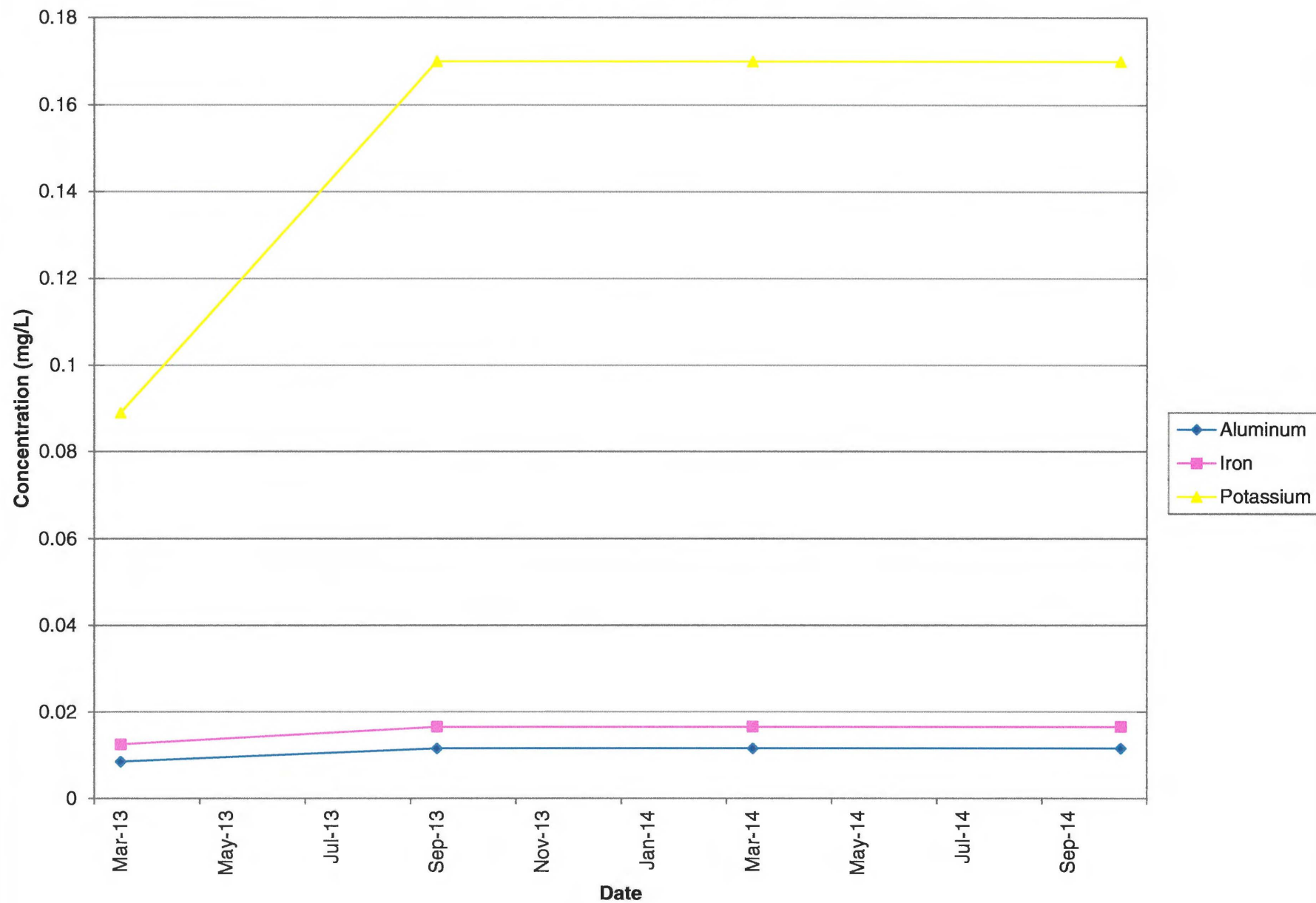
MWC-11 Field Parameters (Part 2)



MWC-12 Metals (Part 1)



MWC-12 Metals (Part 2)



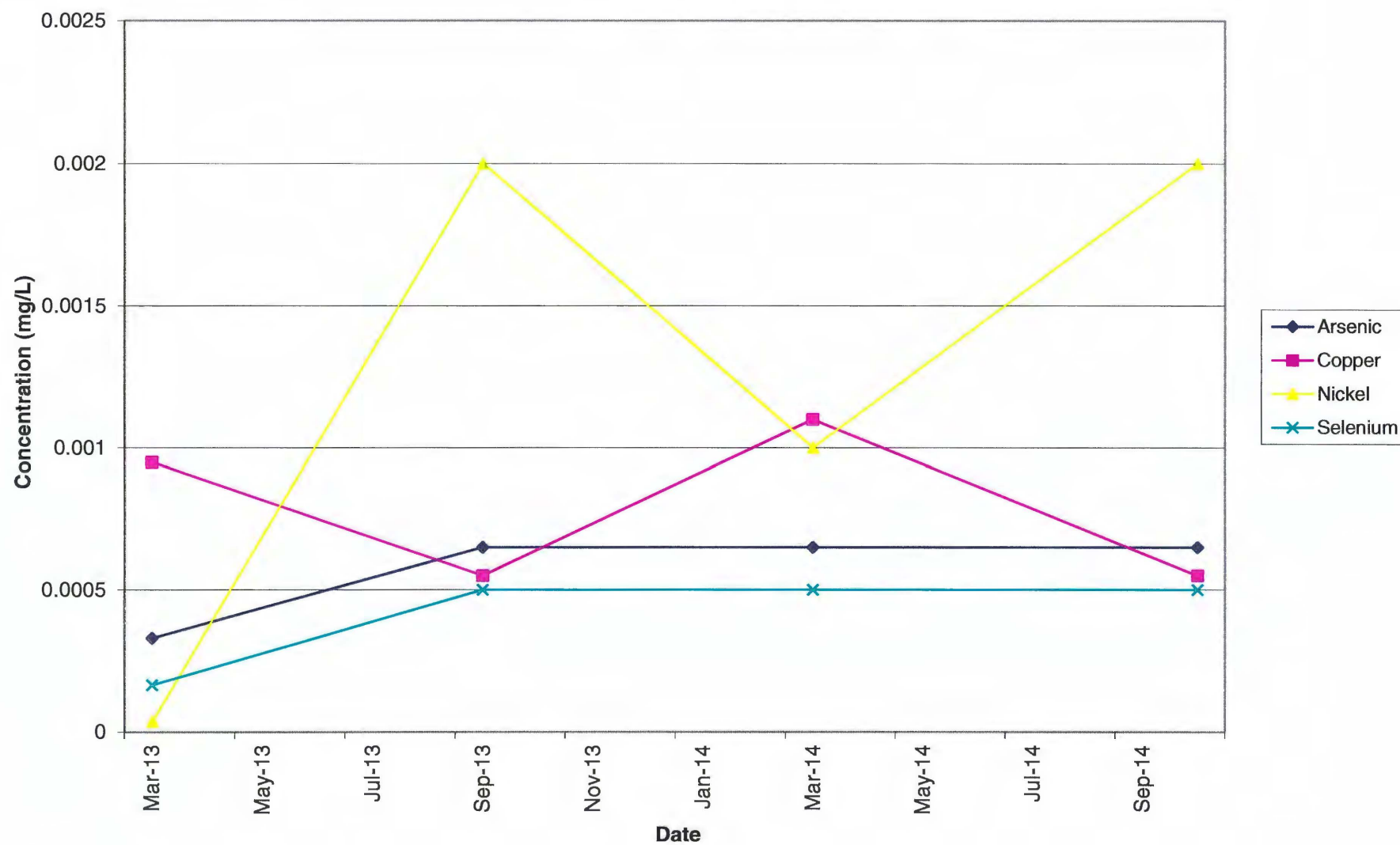
Oerting, John D.

From: Klinglesmith, Candace H.
Sent: Tuesday, February 10, 2015 10:21 AM
To: Oerting, John D.
Cc: Ritenour, Susan D.; Sims, Sandy
Subject: Foundation-January 2015
Attachments: R&D15.xlsx; LIST-Categories.xlsx

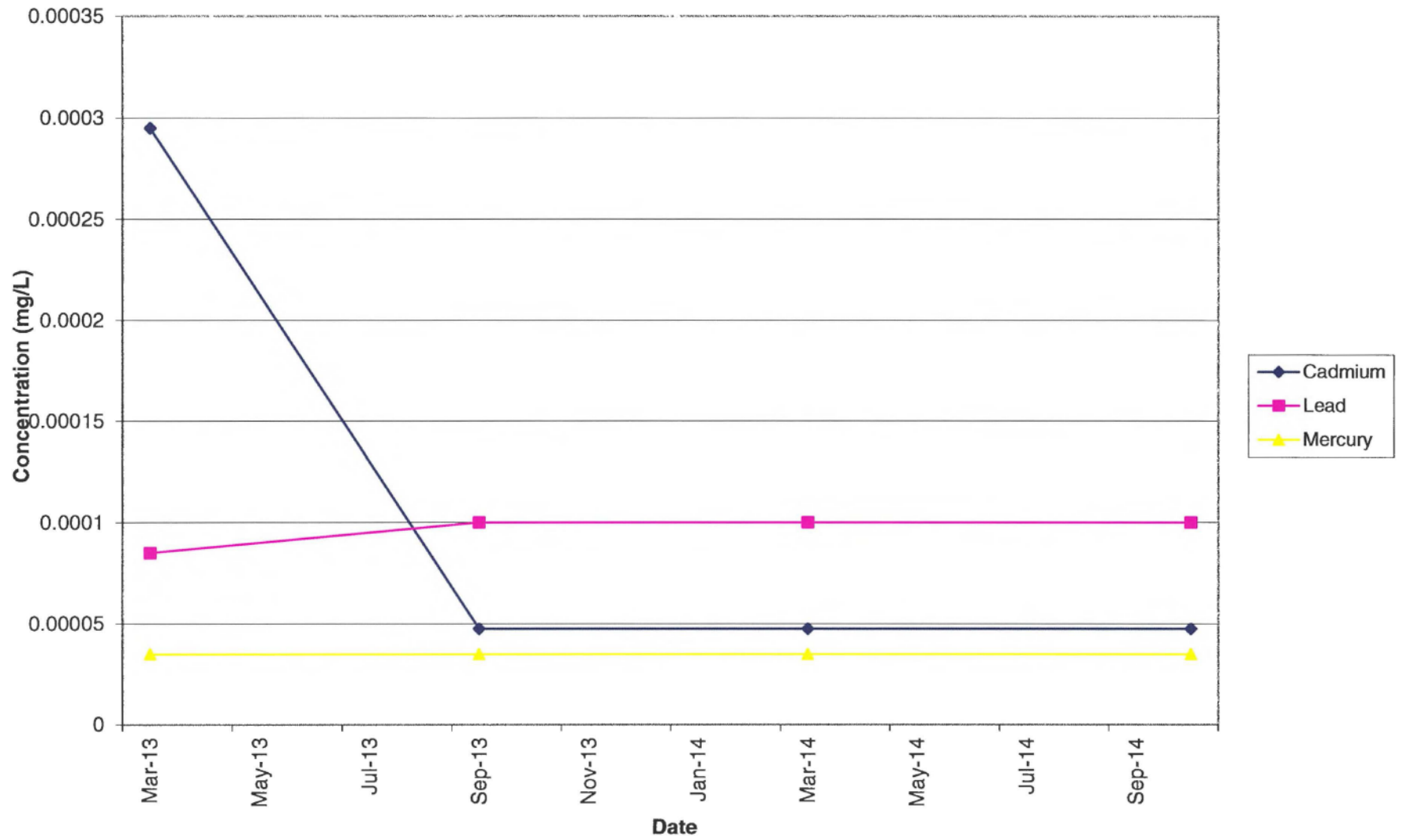
Attached is the January report for the Foundation.

Candy

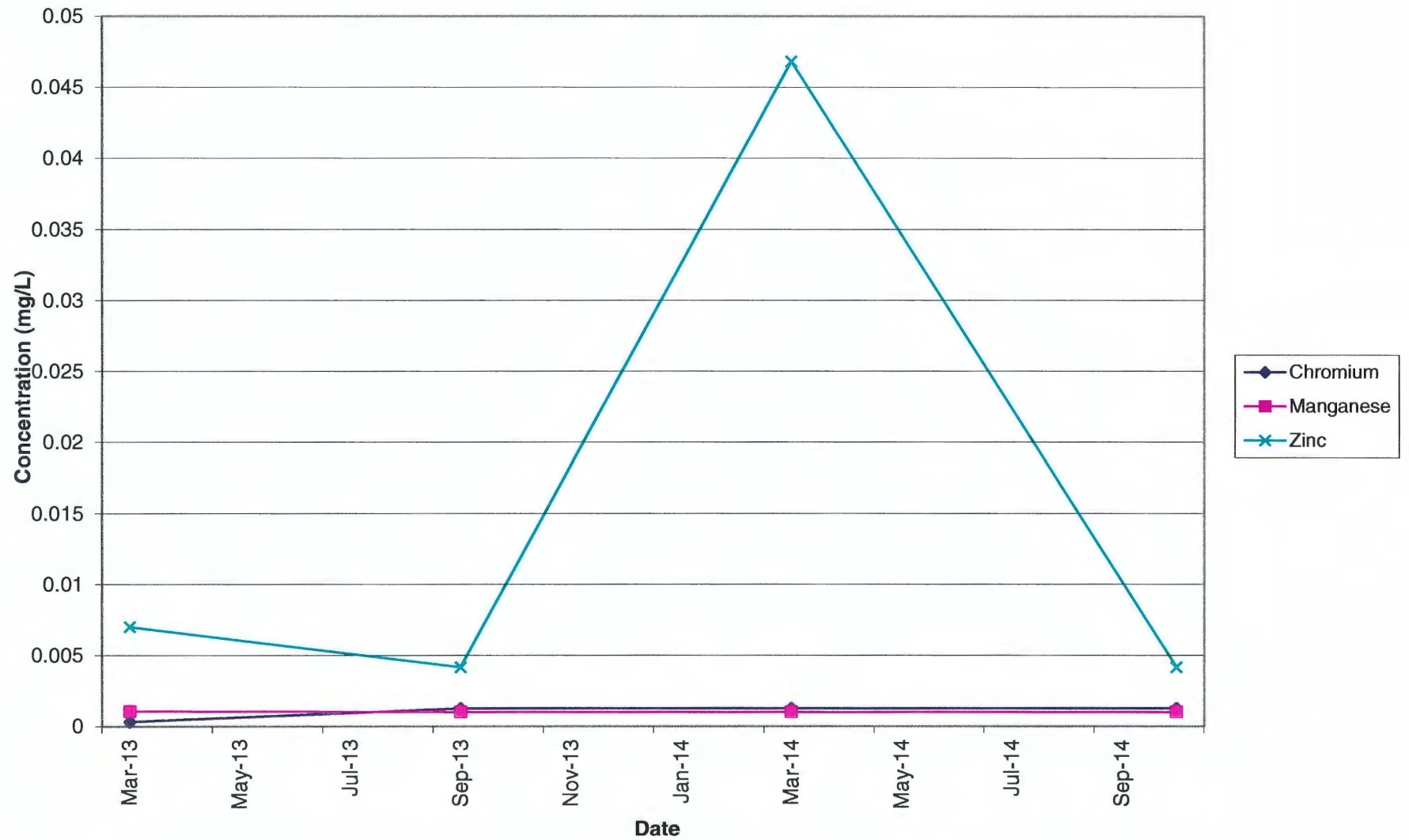
MWC-12 Metals (Part 3)



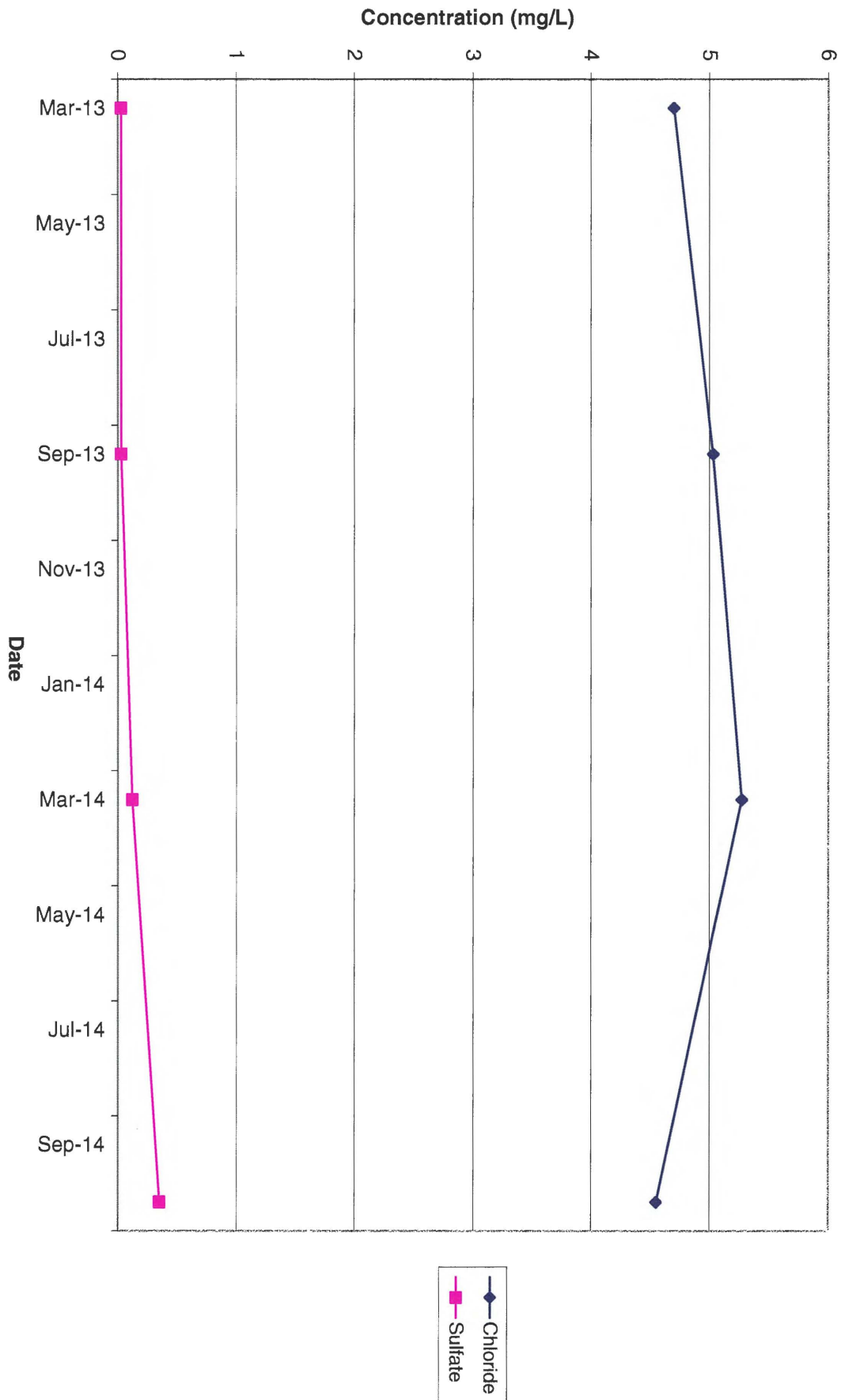
MWC-12 Metals (Part 4)



MWC-12 Metals (Part 5)



MWC-12 General Chemistry (Part 1)



GULF POWER FOUNDATION, INC.

Statement of Receipts and Disbursements For Period January 1, 2015 Through January 31 2015

CASH IN BANK-JANUARY 1, 2015	\$ 18,333.14
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RECEIPTS

Interest (checking)	0.18	
Transferring Investments	100,000.00	
Deposits	0.00	
Total Receipts:		\$ 100,000.18

DISBURSEMENTS

Operating Expenditures:		
Federal Taxes	0.00	
State Filing Fee	0.00	
Bank Service Fees/Checks	0.00	
Preparation of Return	0.00	
Audit	0.00	
Total	0.00	
Contributions - See Schedule A	14,010.00	
Total Disbursements:		\$ 14,010.00

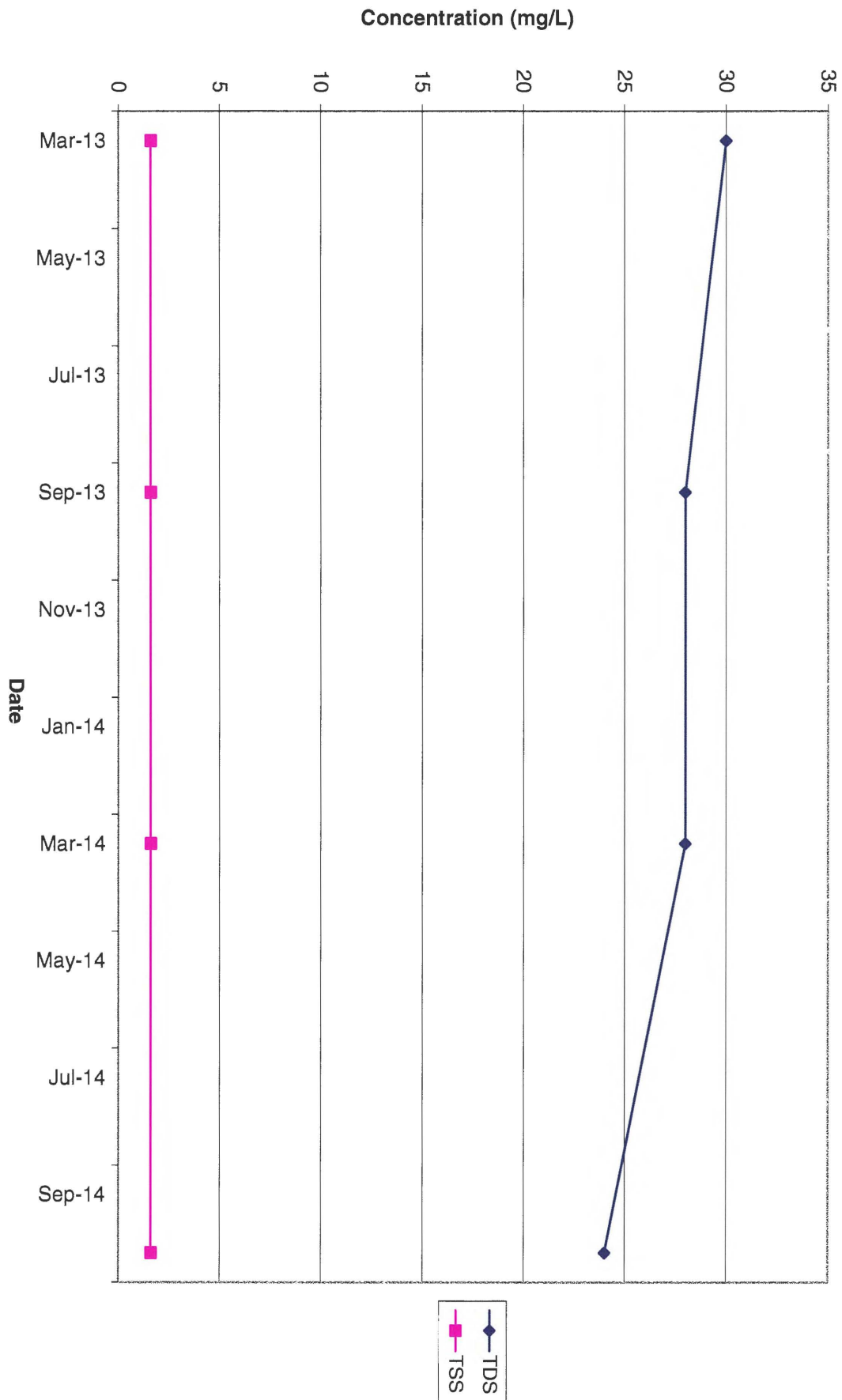
CASH IN BANK-JANUARY 31, 2015	\$ 104,323.32
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INVESTMENTS

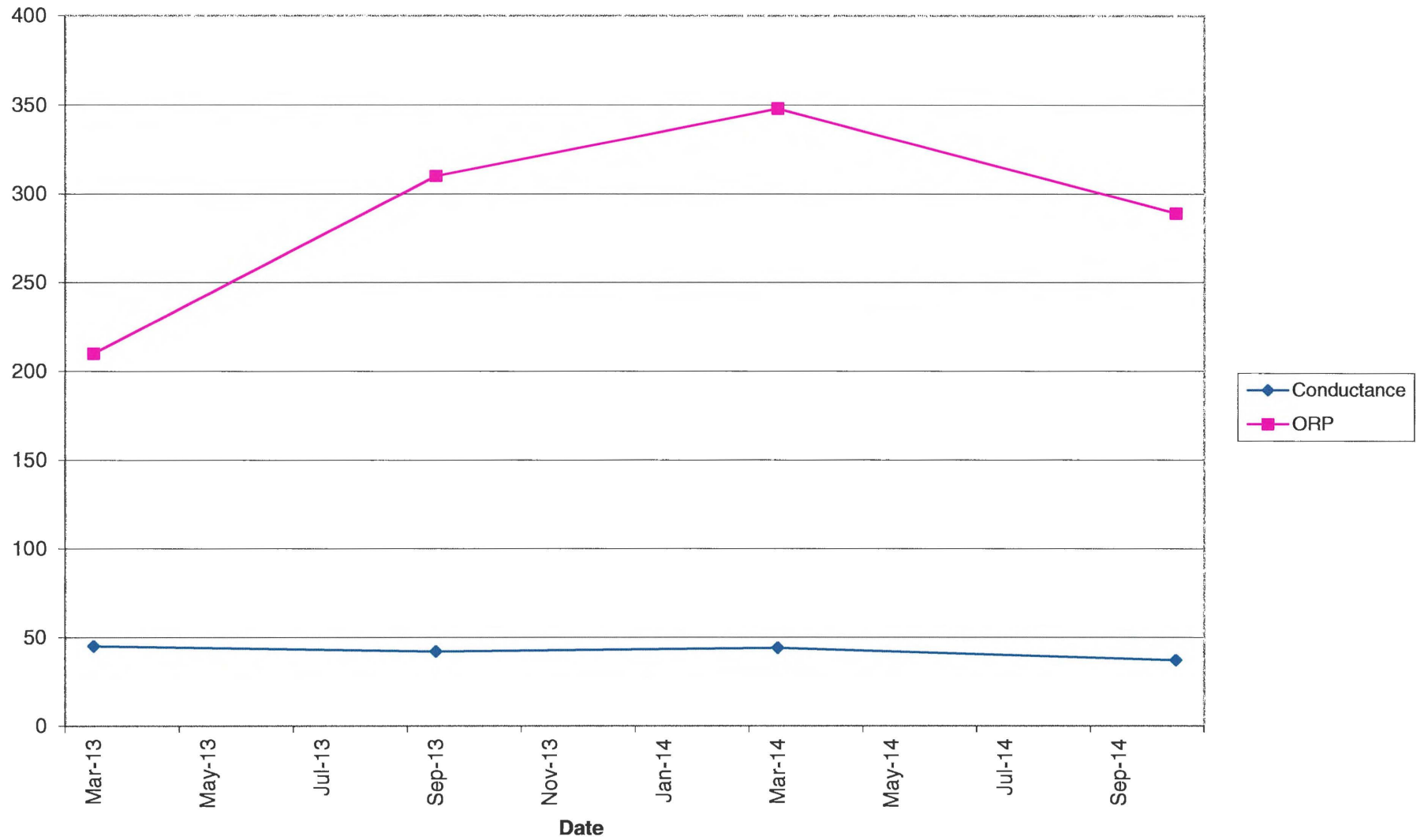
	12/31/2014	1/31/2015	
Vanguard Treasury Money Market	104,271.91	104,272.80	
Vanguard Bond Market Index	1,303,661.79	1,333,935.50	
Vanguard Stock Market Index	2,951,594.10	2,770,390.46	
Total Investments:			\$ 4,208,598.76

CASH IN BANK AND INVESTMENTS-JANUARY 31, 2015	\$ 4,312,922.08
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MWC-12 General Chemistry (Part 2)



MWC-12 Field Parameters (Part 1)



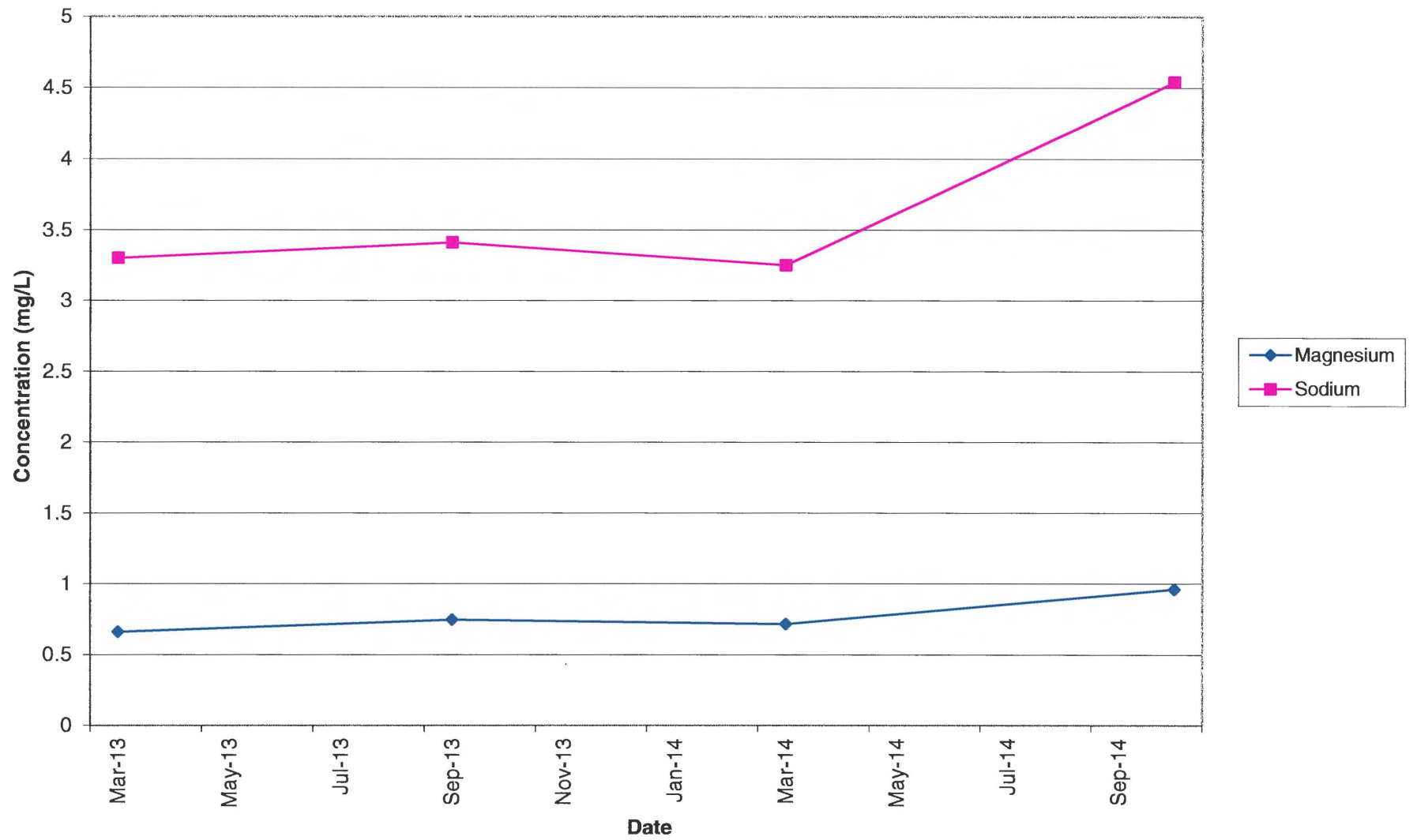
MWC-12 Field Parameters (Part 2)



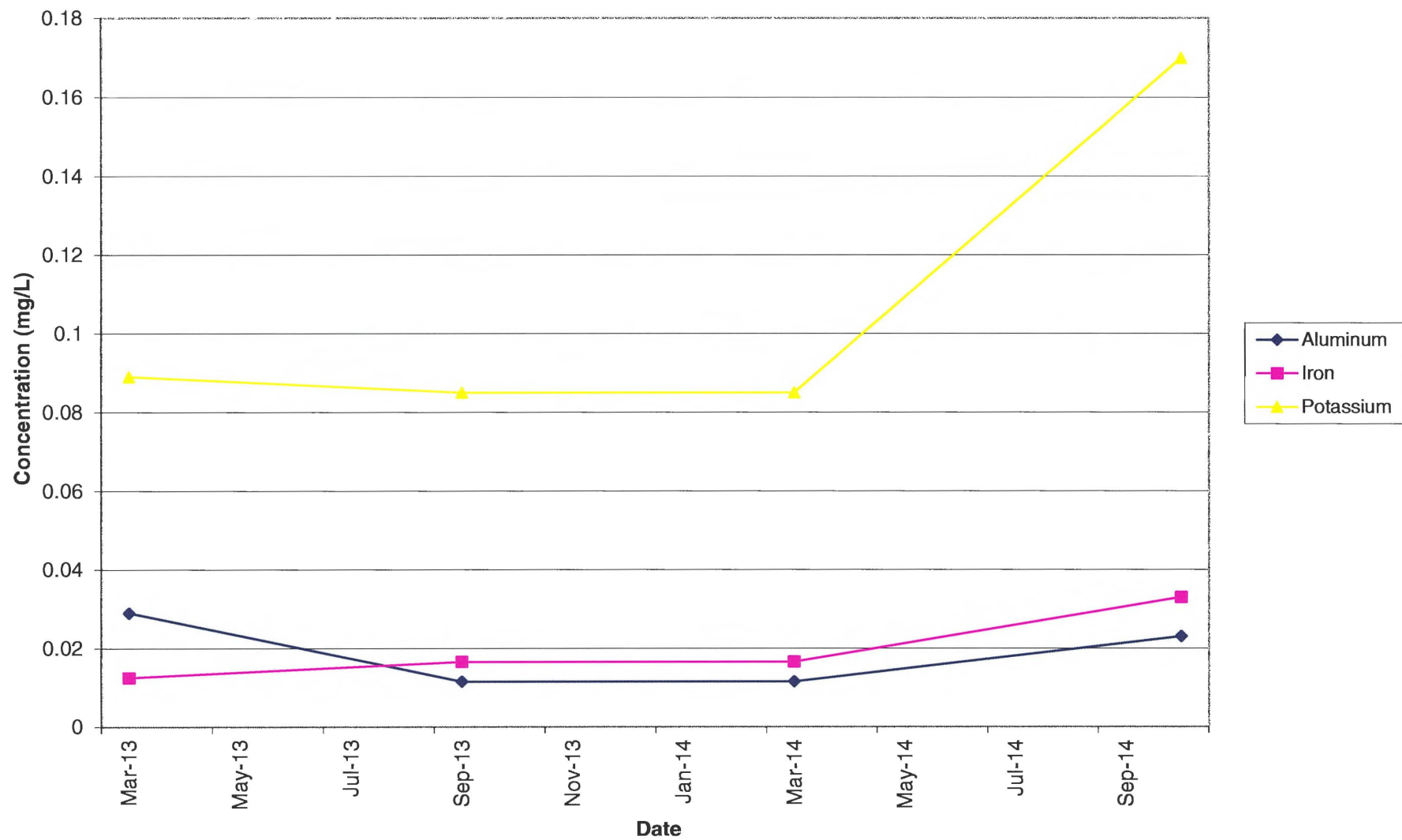
Appendix D

Unit 2 Water Quality Graphs

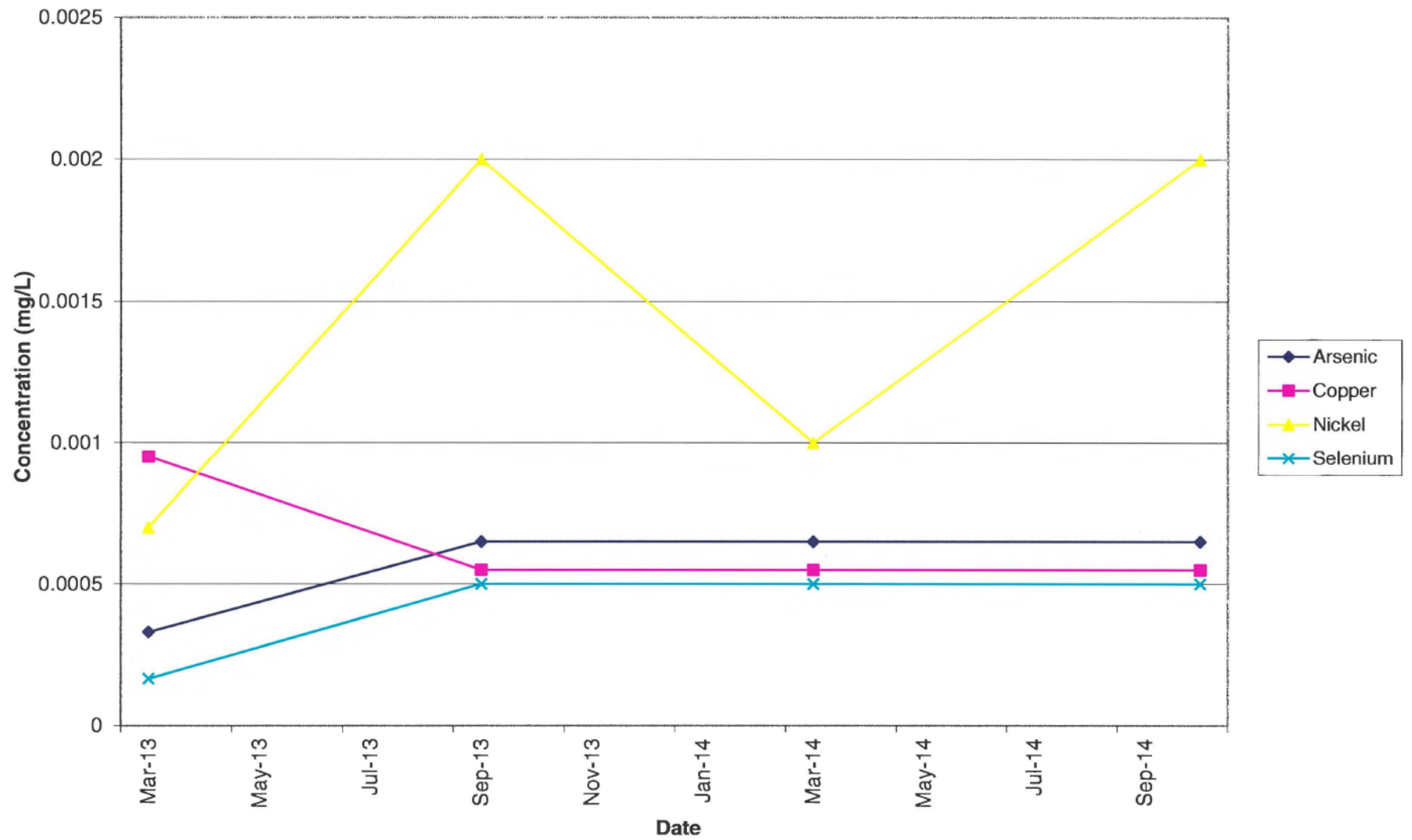
MWB-2 Metals (Part 1)



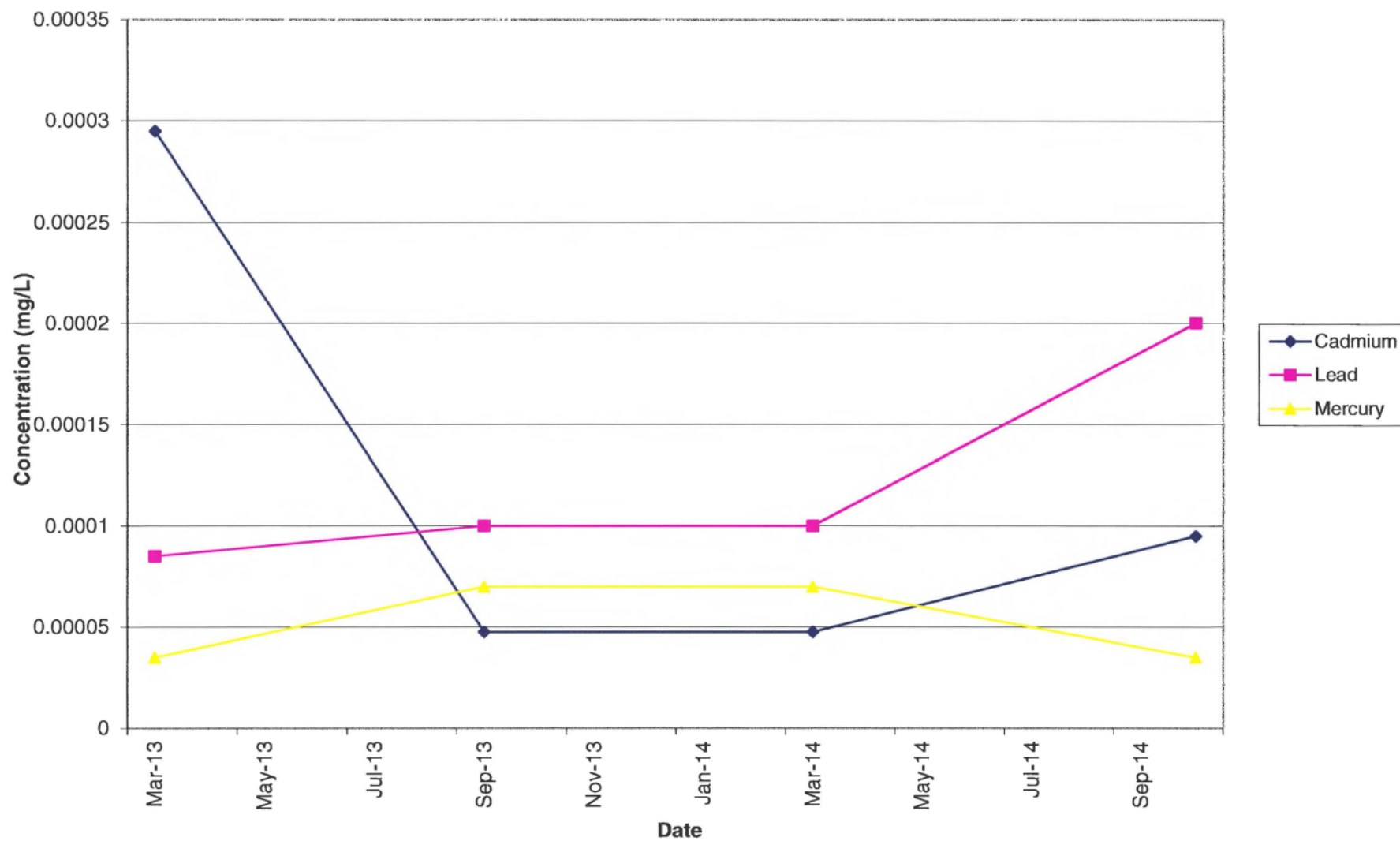
MWB-2 Metals (Part 2)



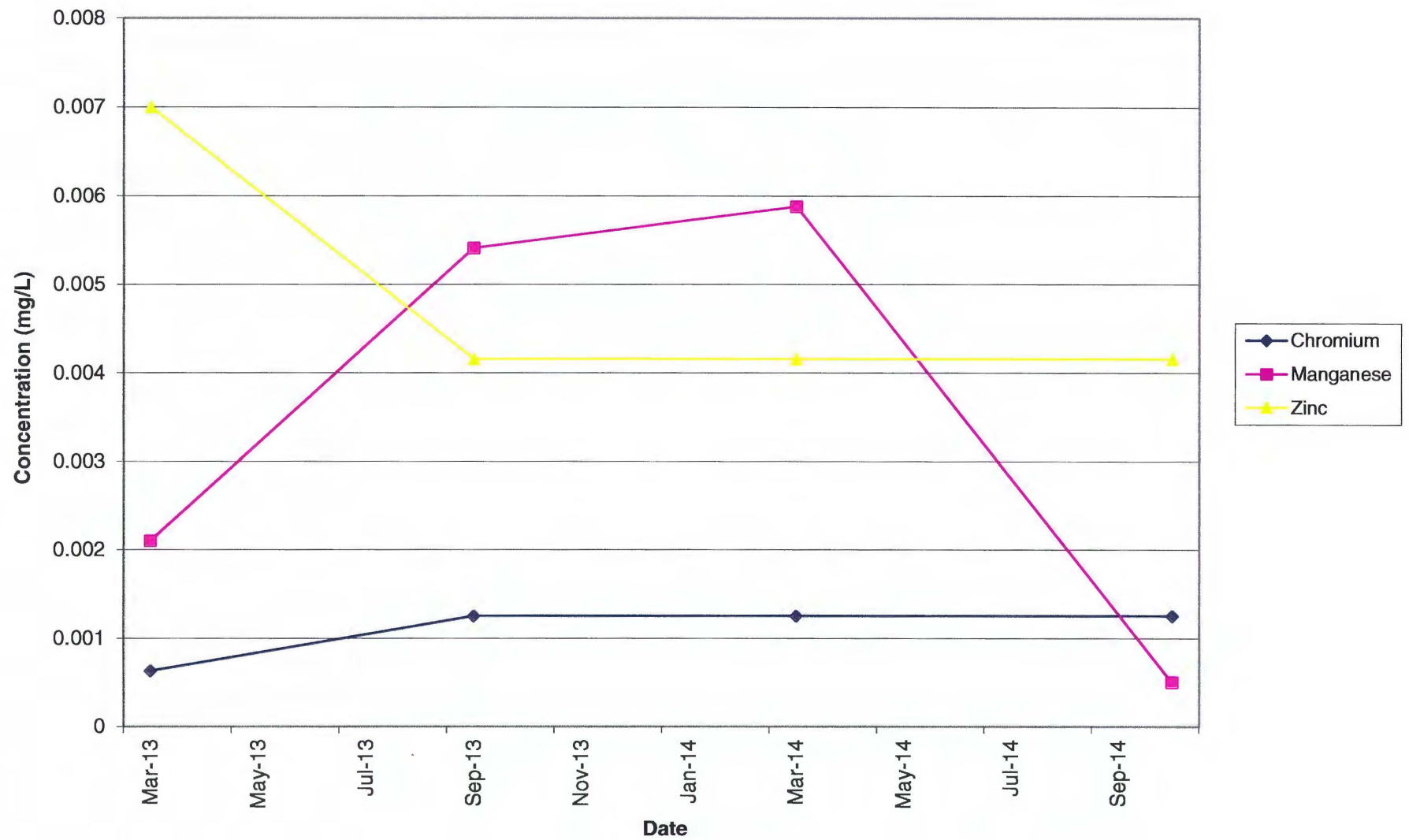
MWB-2 Metals (Part 3)



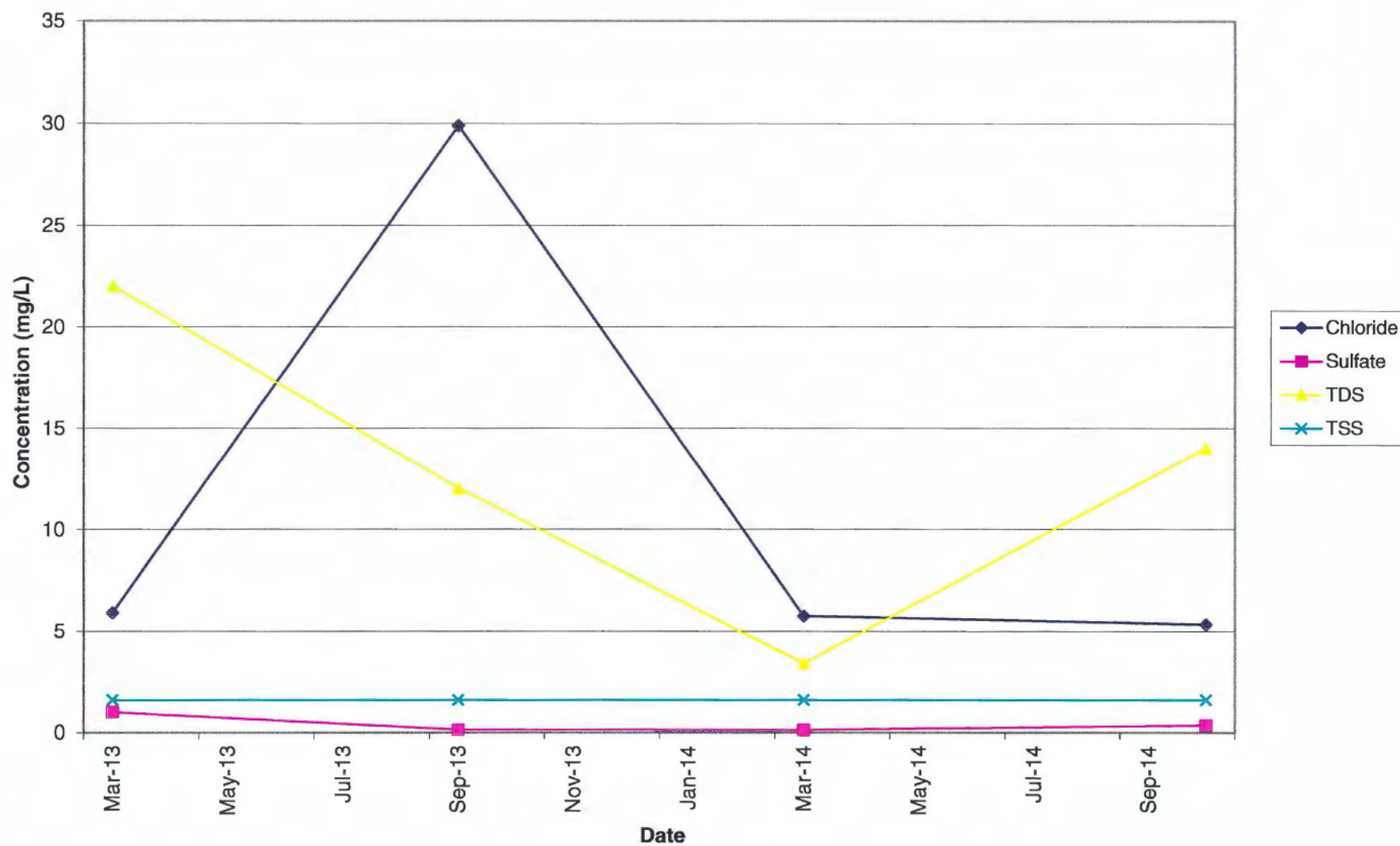
MWB-2 Metals (Part 4)



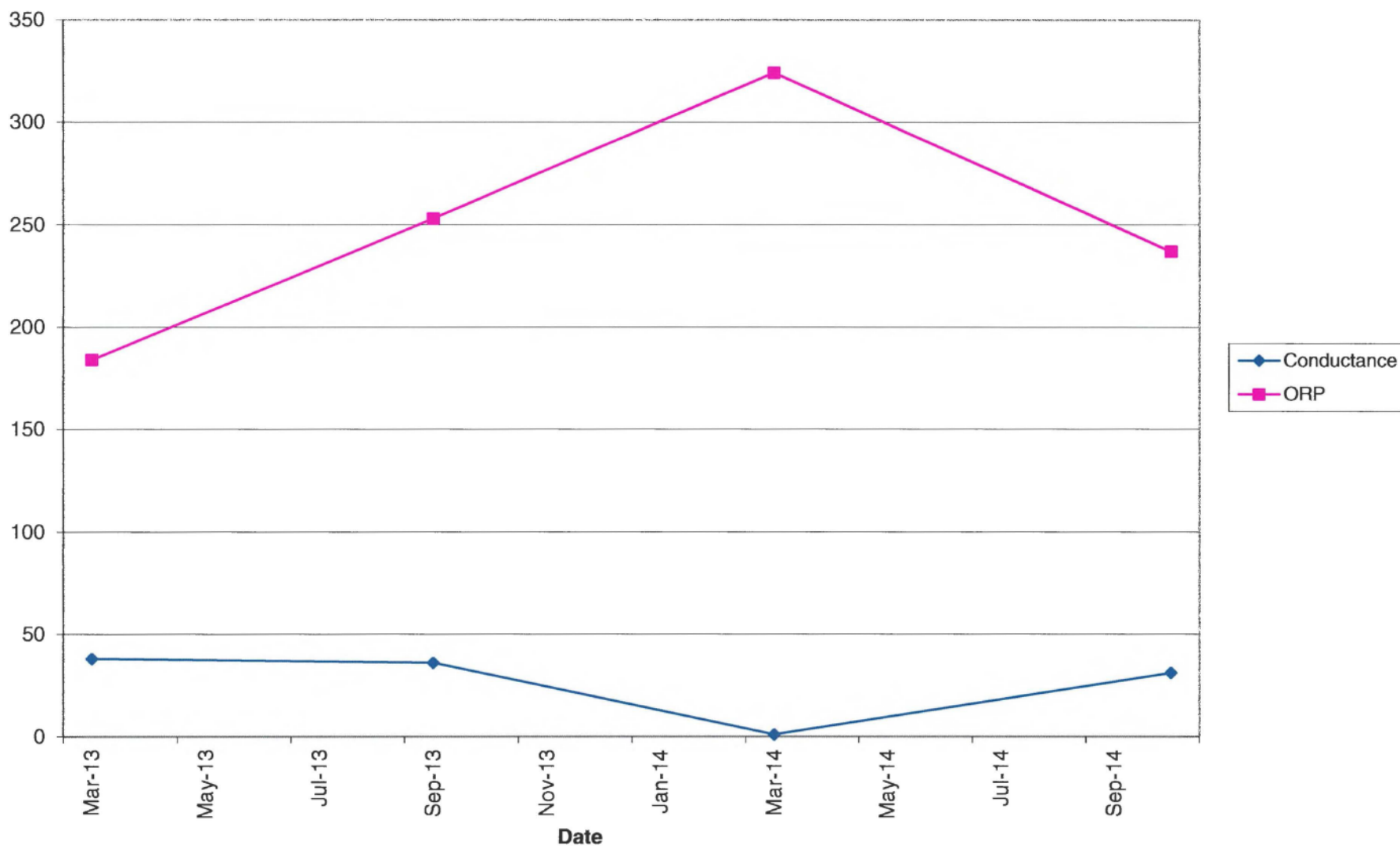
MWB-2 Metals (Part 5)



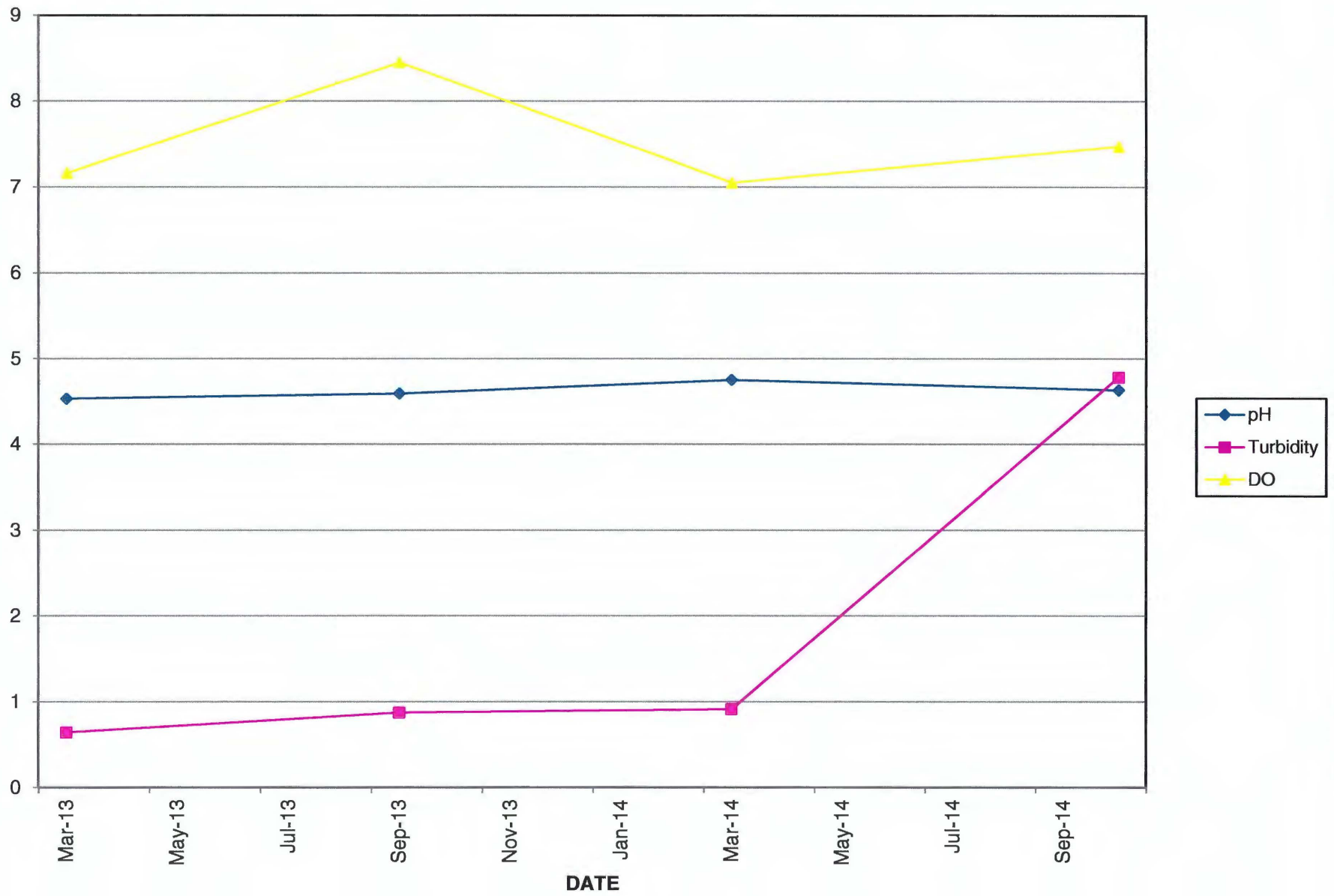
MWB-2 General Chemistry



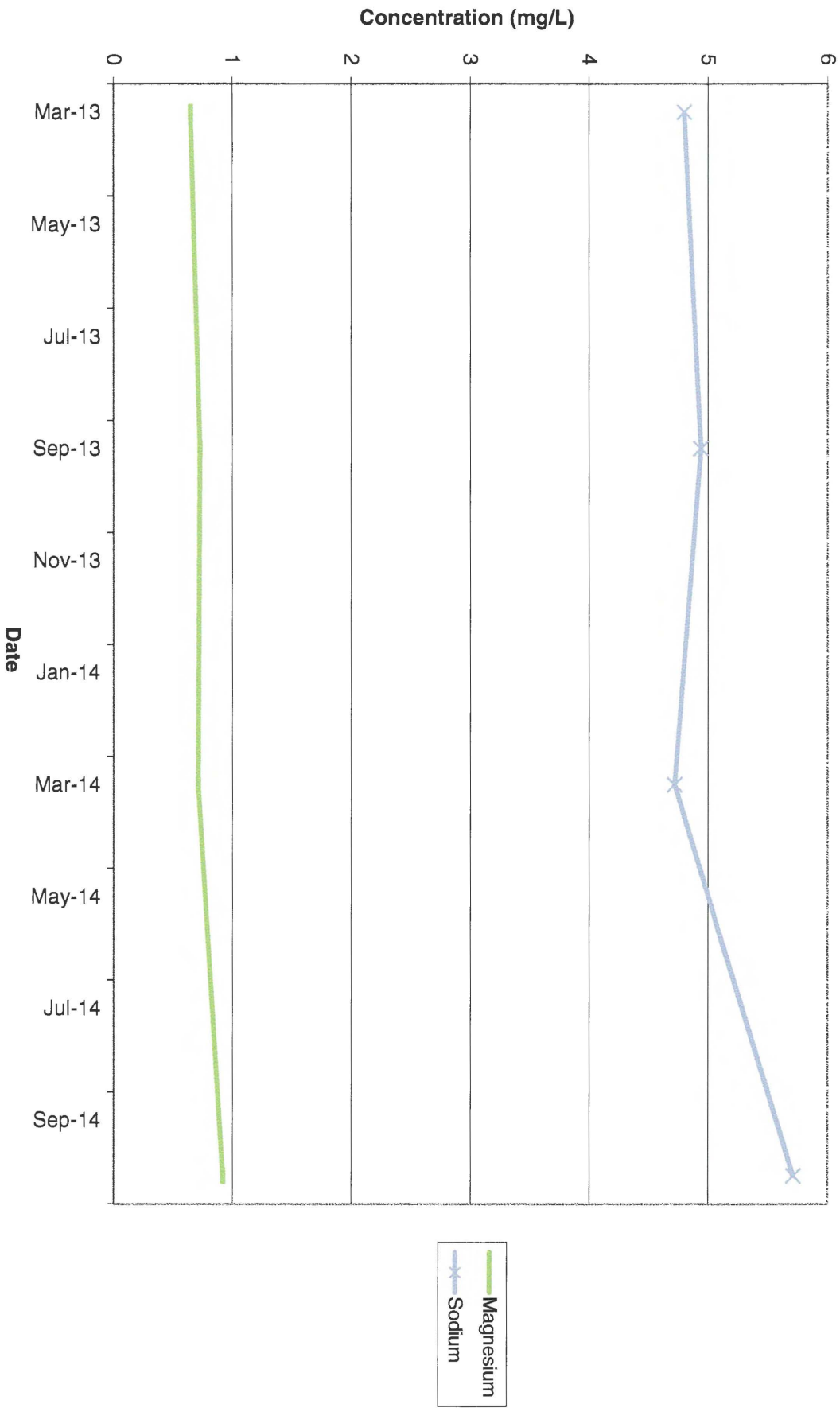
MWB-2 Field Parameters (Part 1)



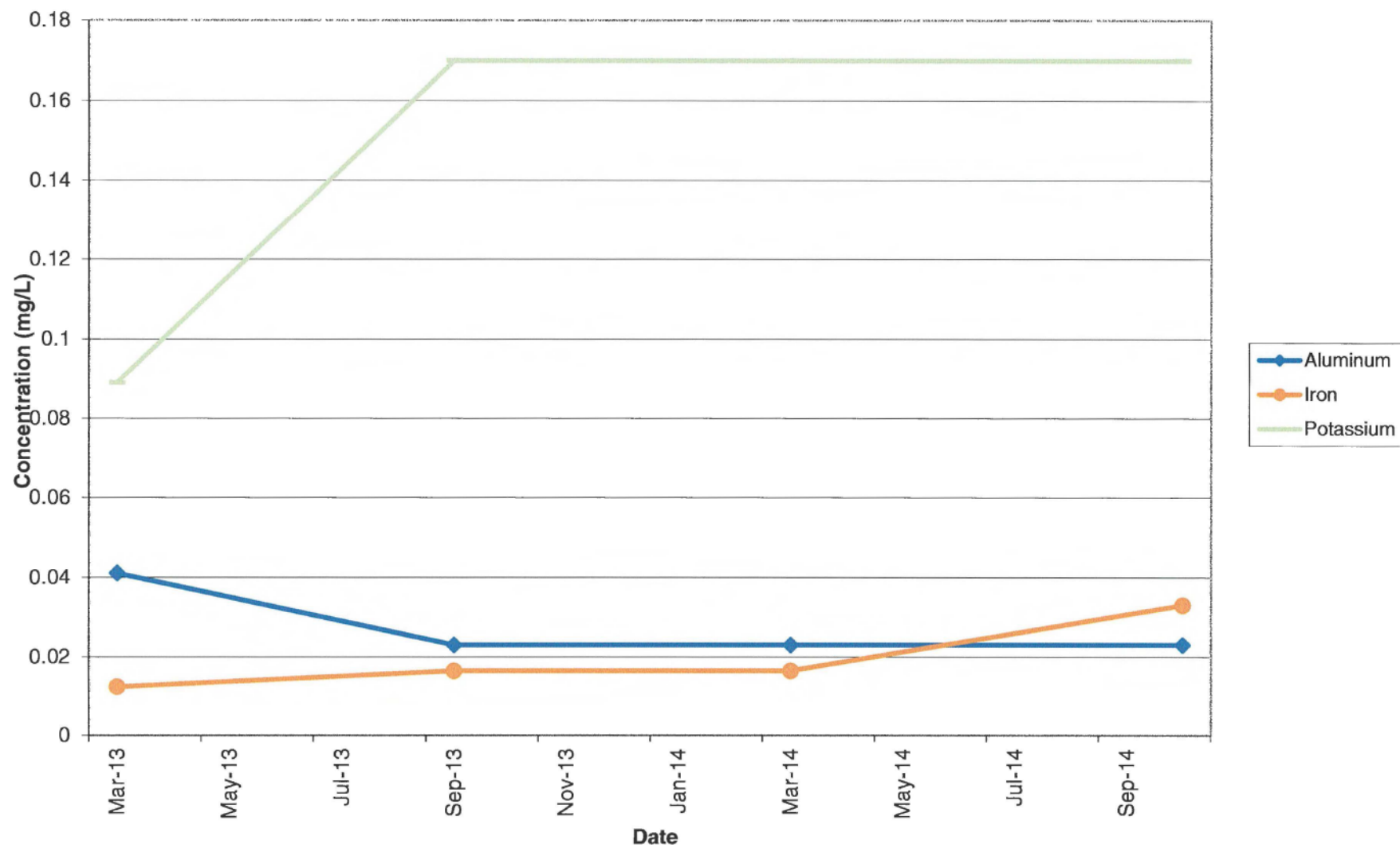
MWB-2 Field Parameters (Part 2)



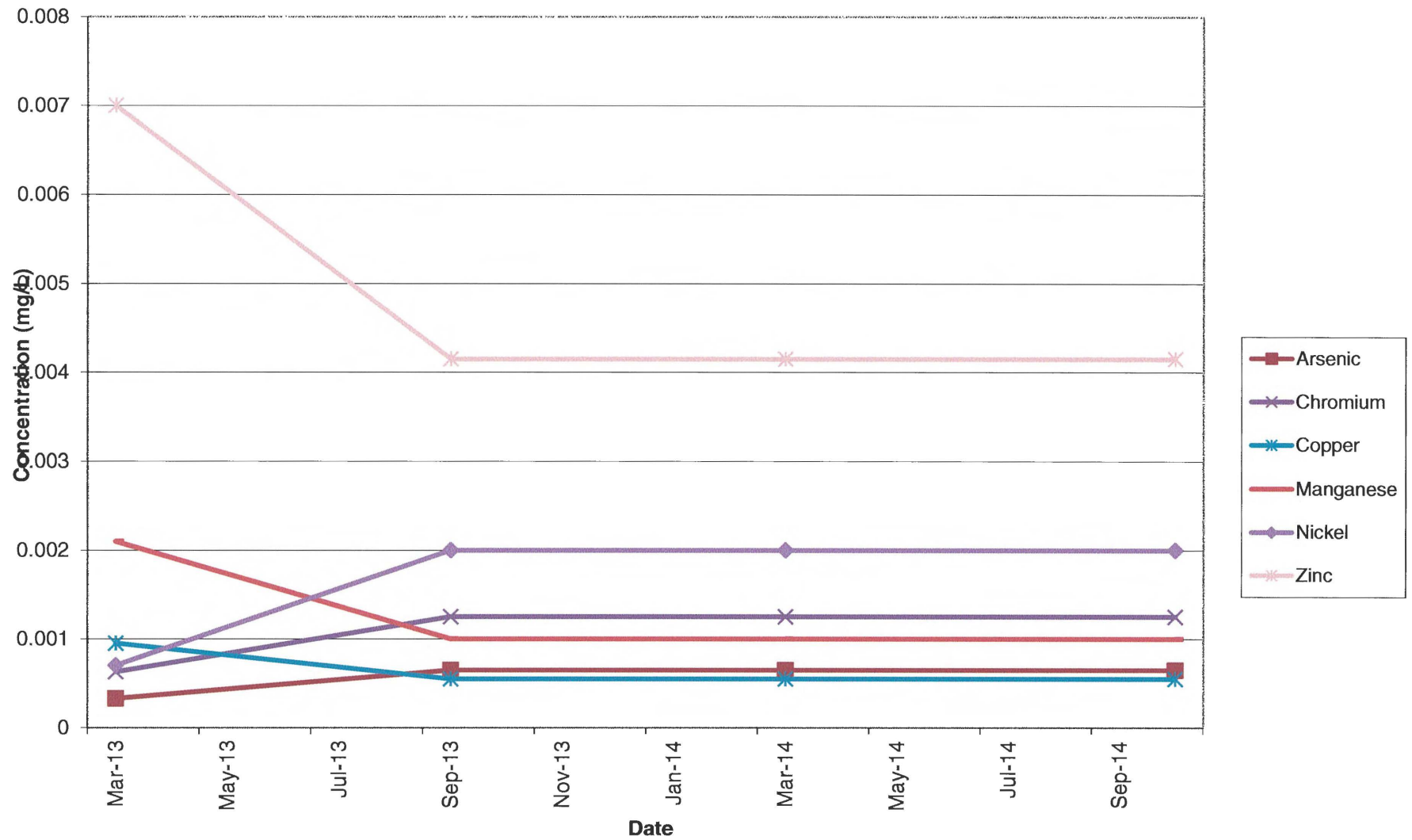
GW-1S Metals (Part 1)



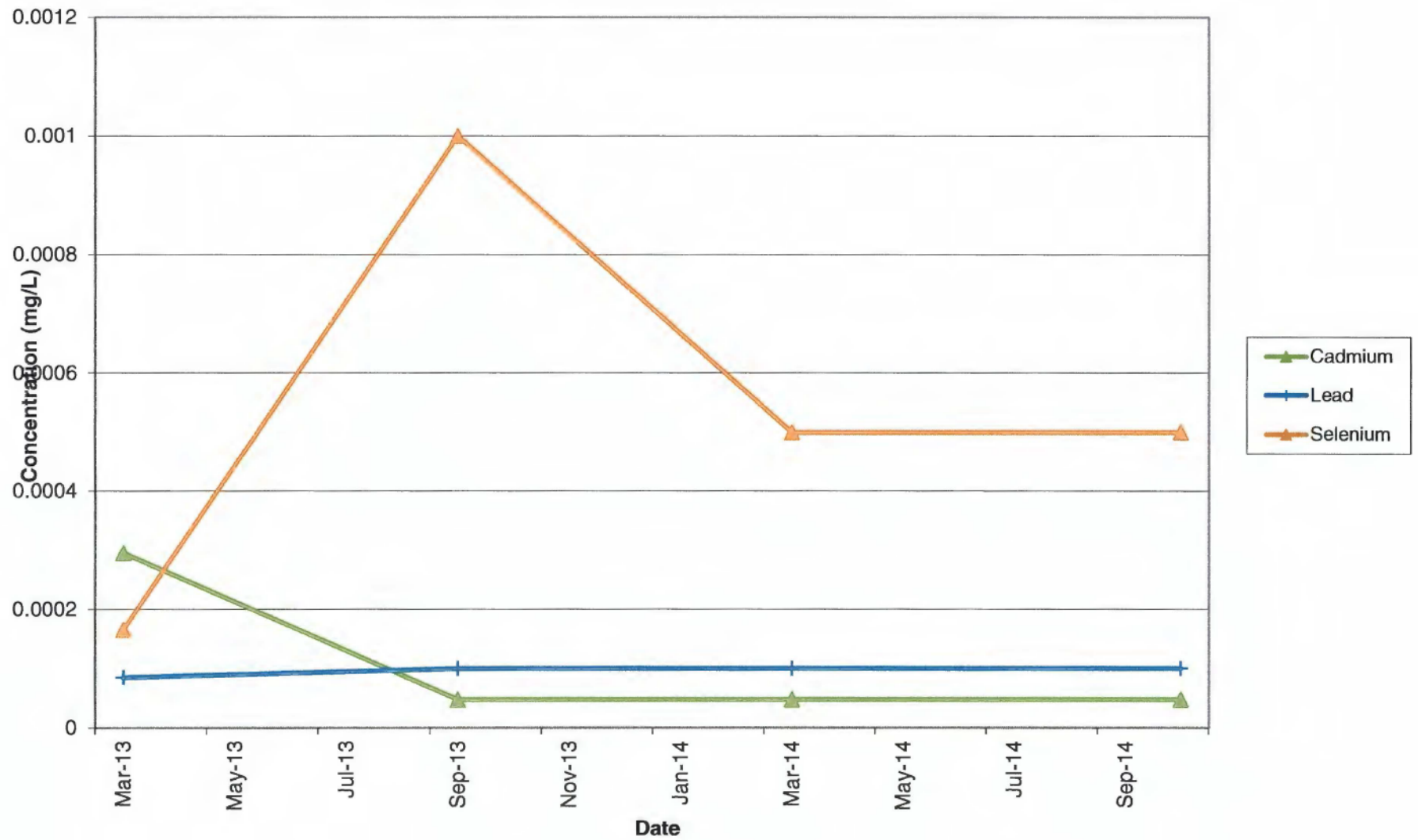
GW-1S Metals (Part 2)



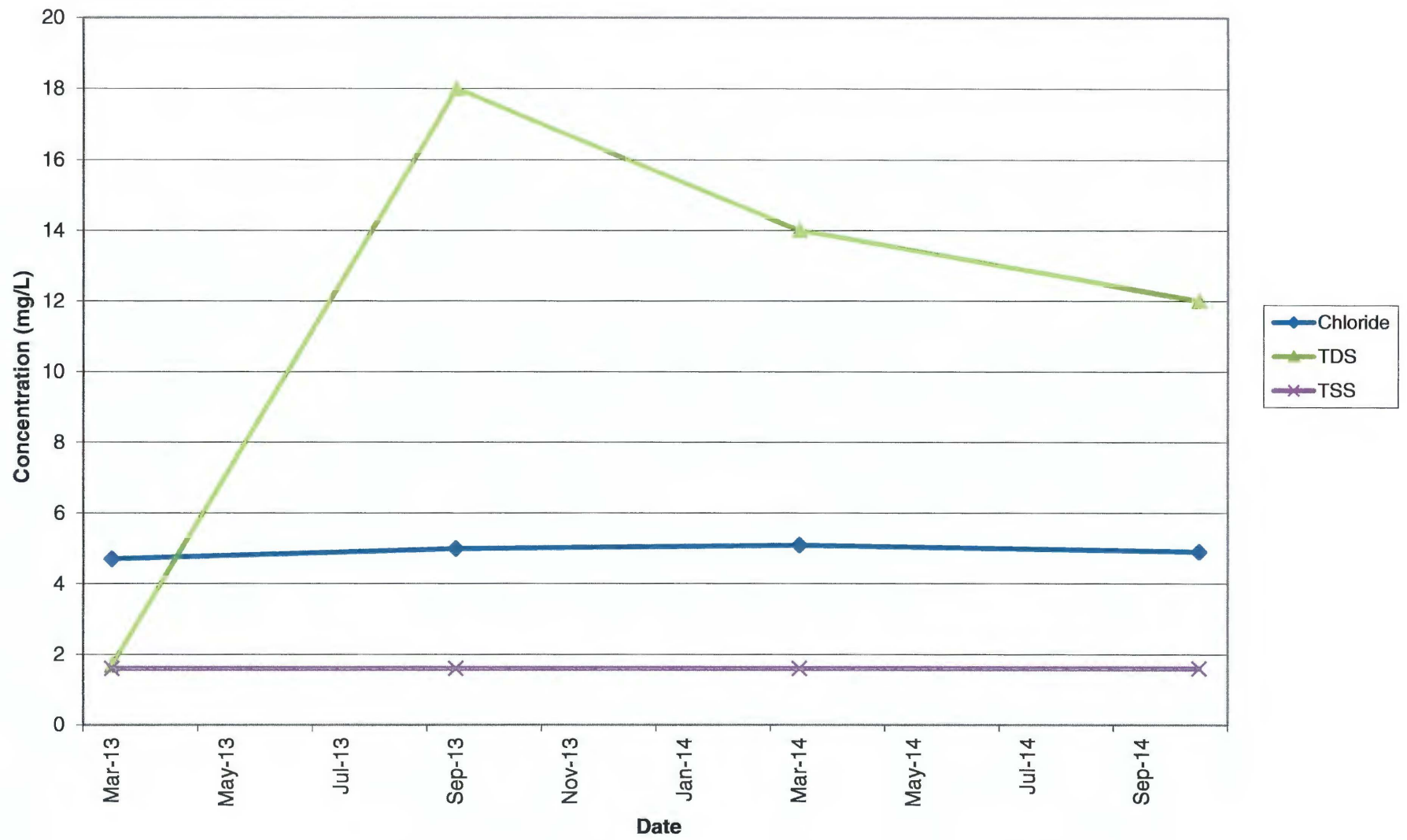
GW-1S Metals (Part 3)



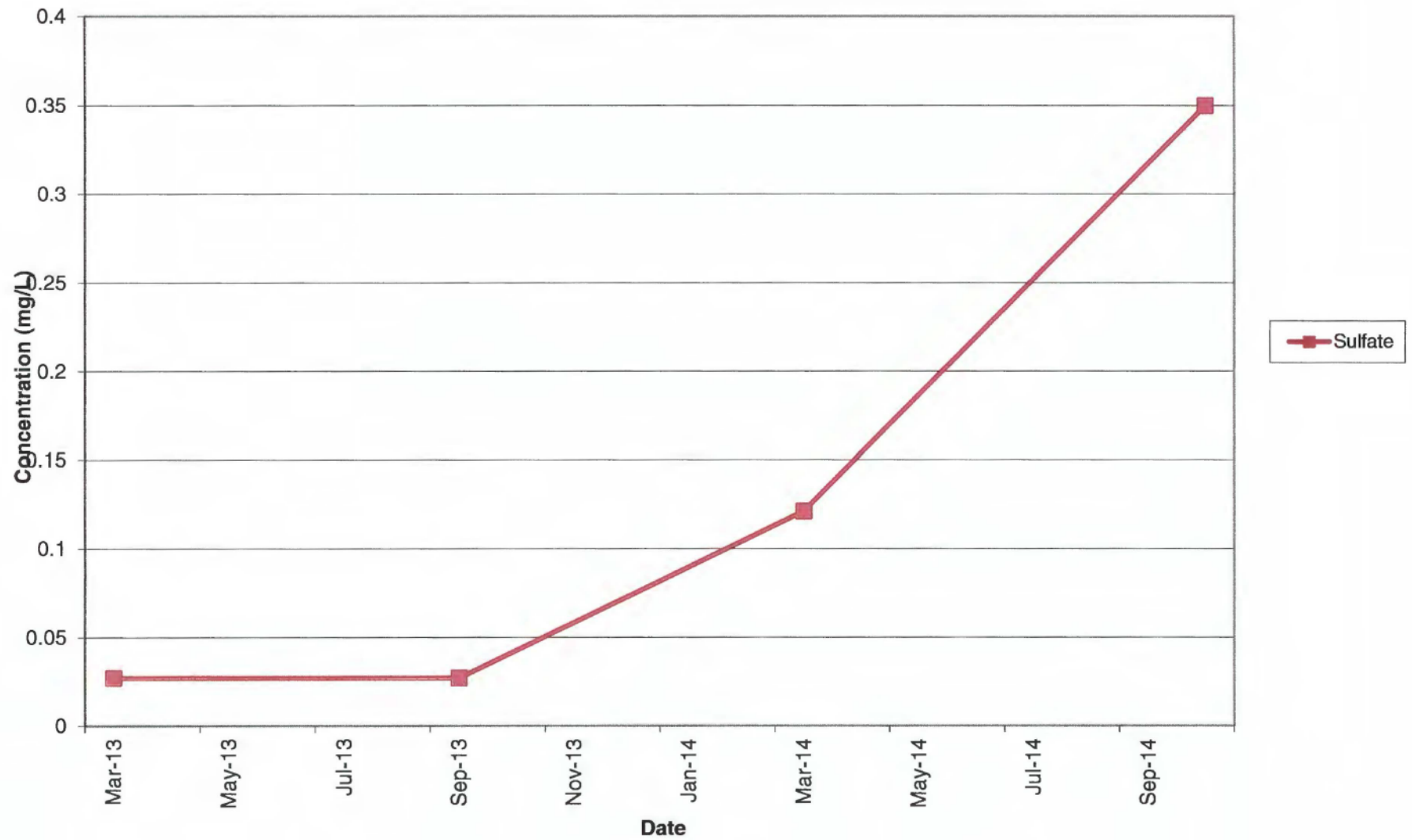
GW-1S Metals (Part 4)



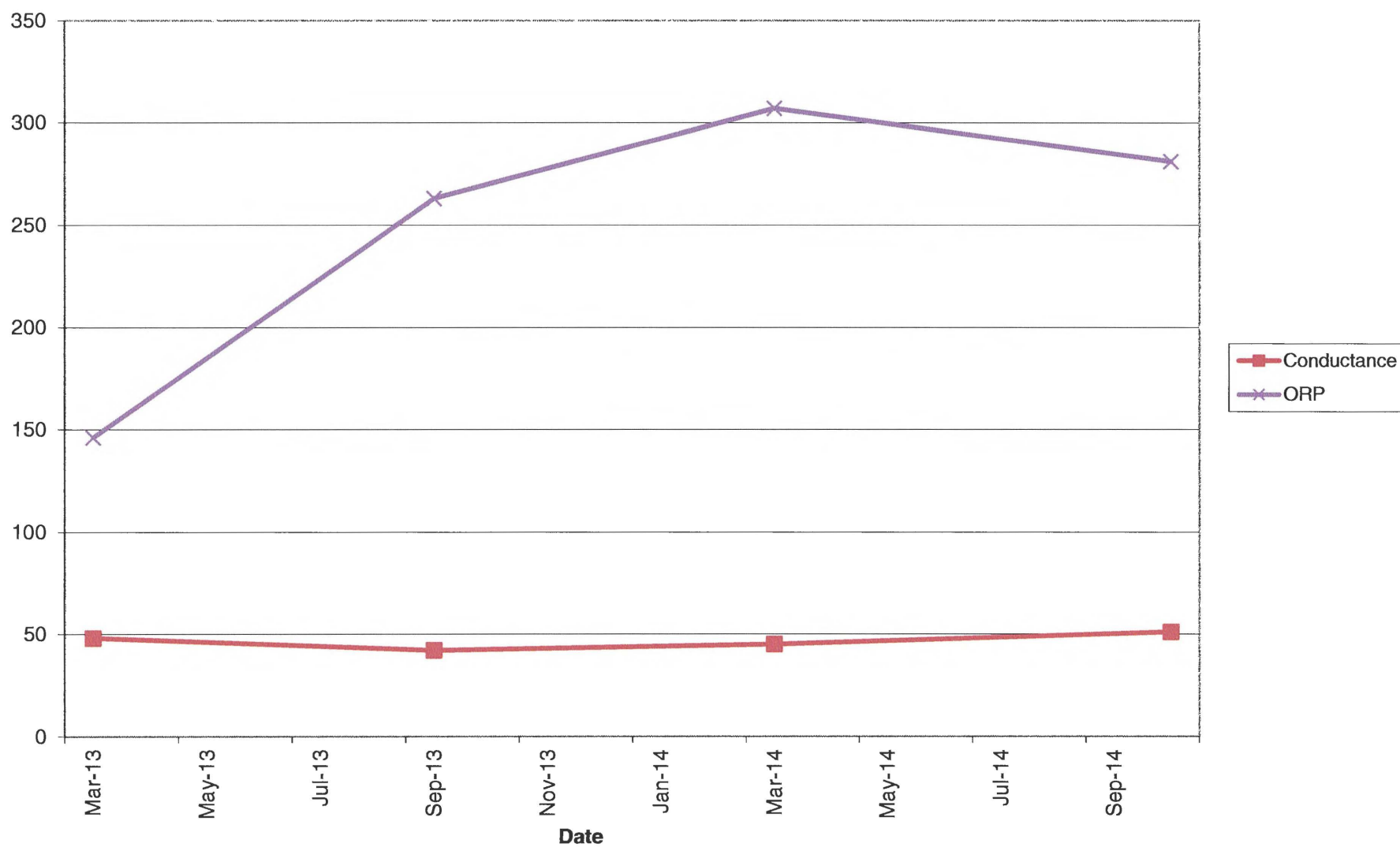
GW-1S General Chemistry (Part 1)



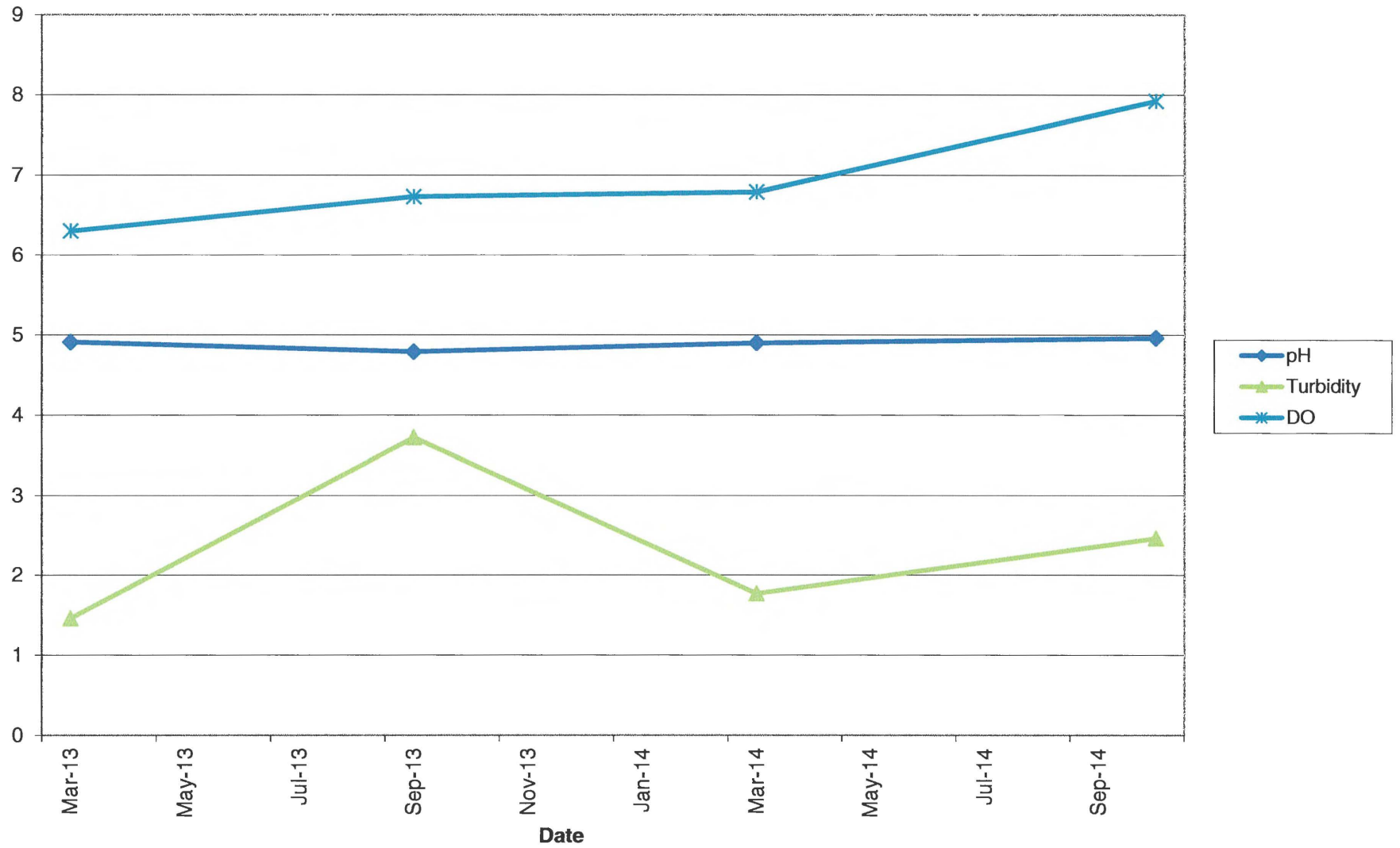
GW-1S General Chemistry (Part 2)



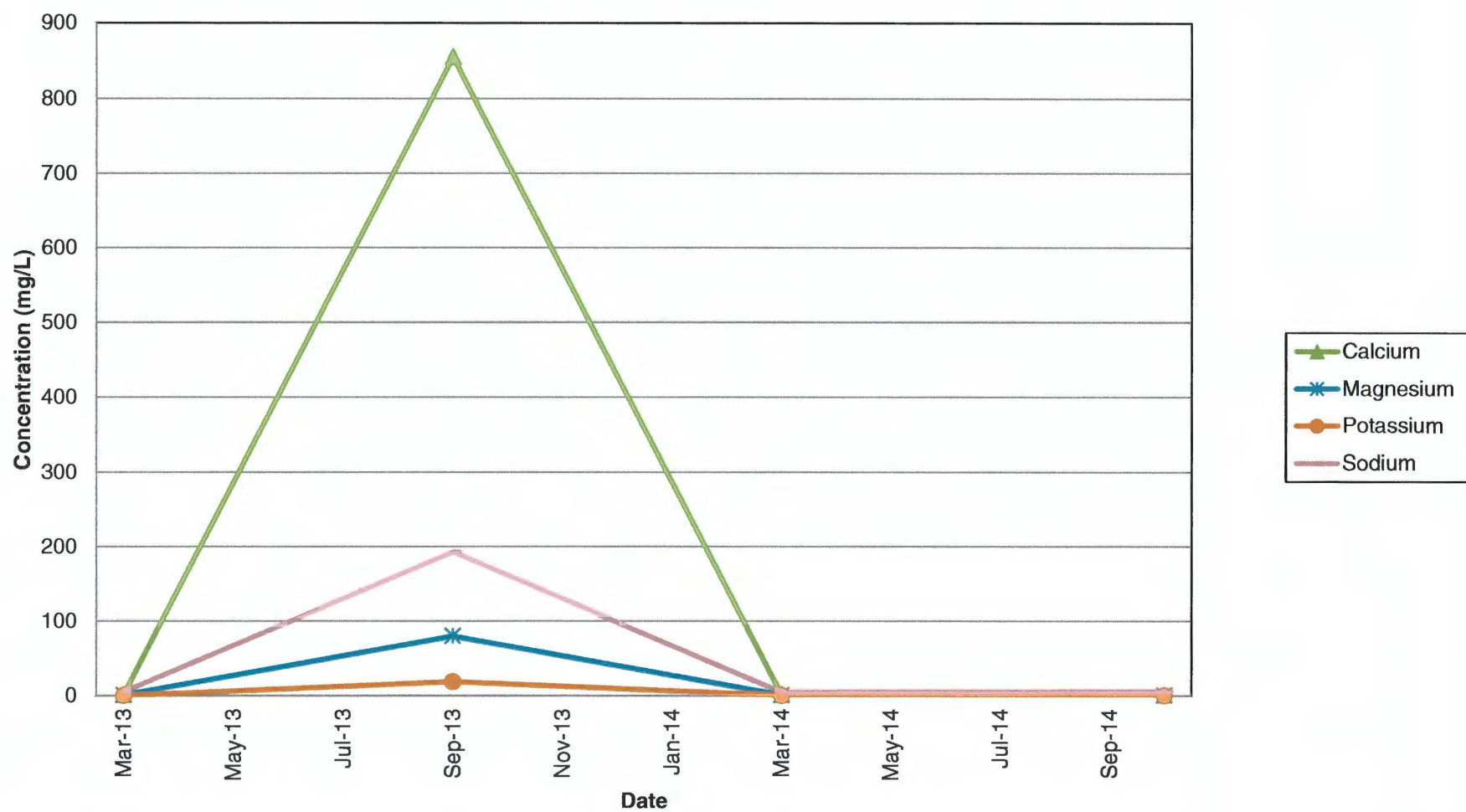
GW-1S Field Parameters (Part 1)



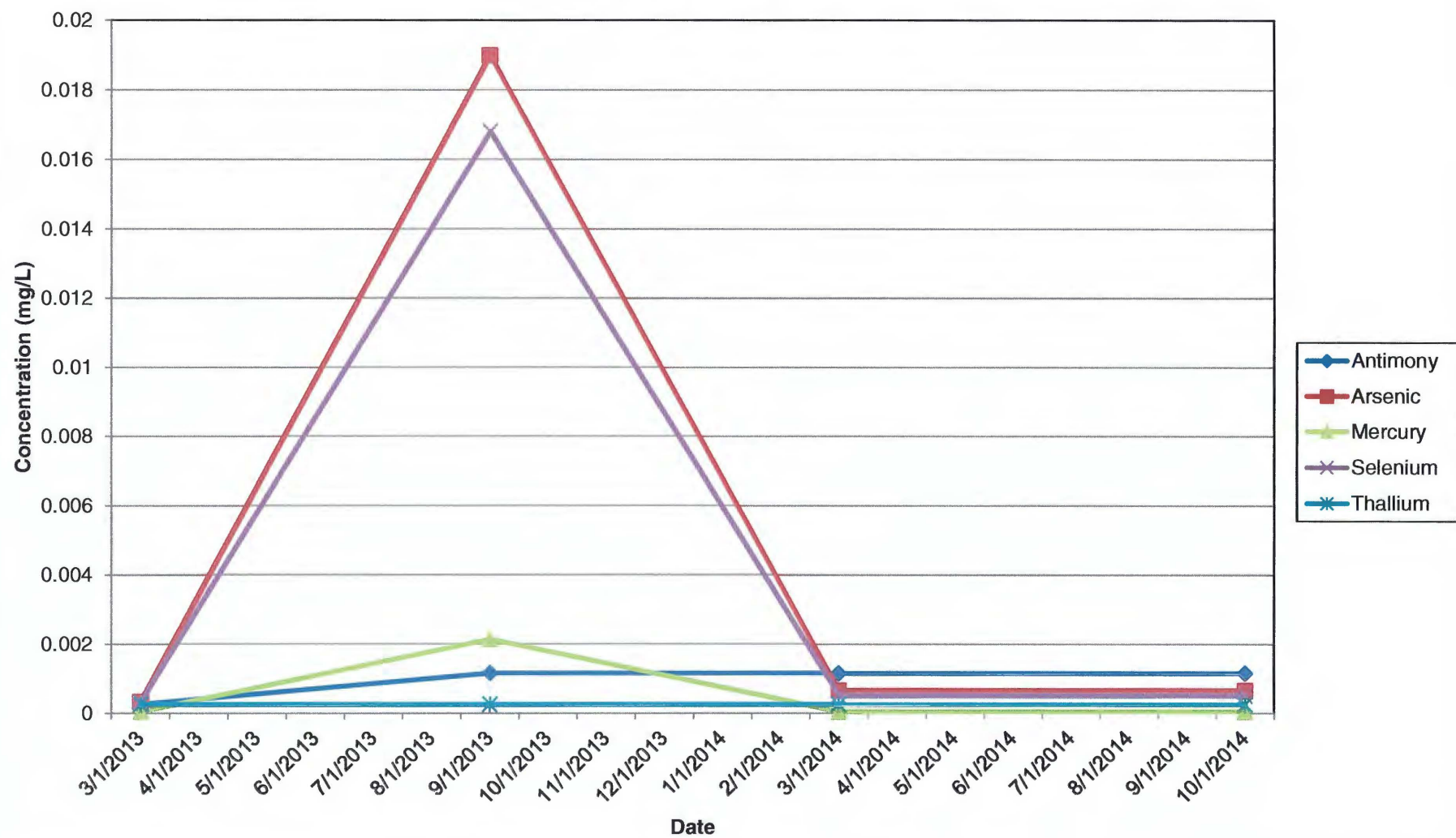
GW-1S Field Parameters (Part 2)



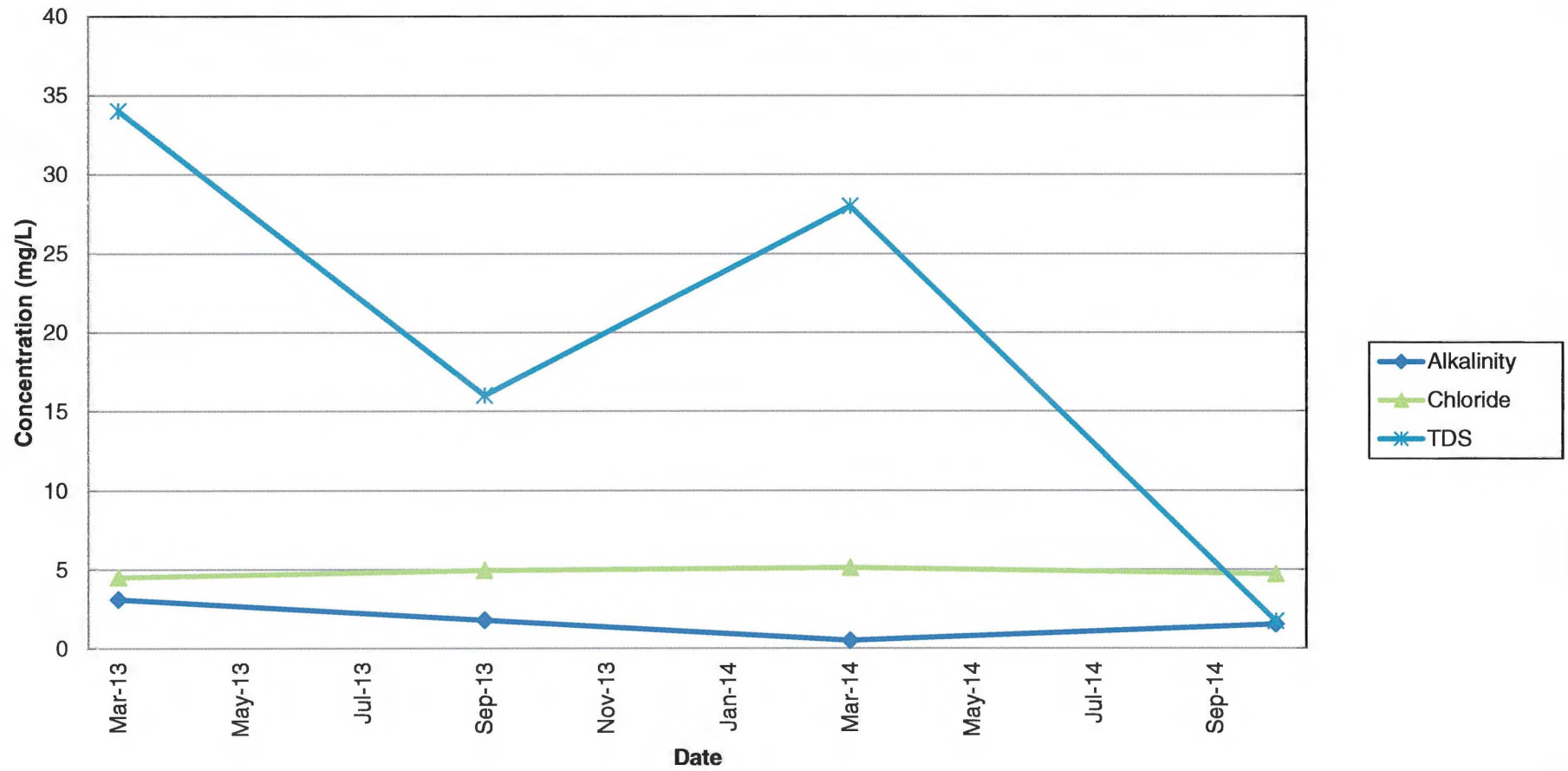
GW-1S Metals (Part 1)



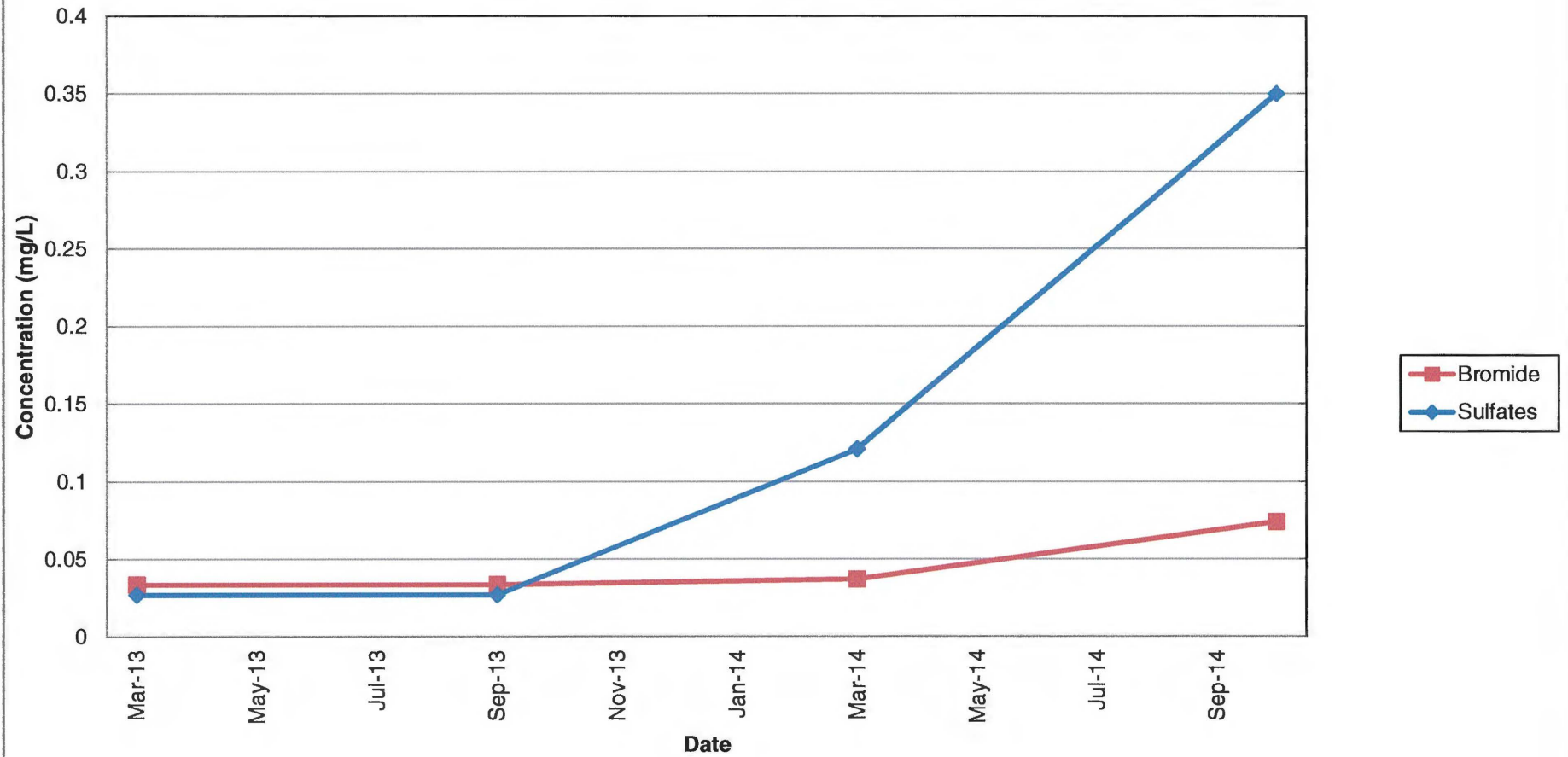
GW-1S Metals (Part 2)



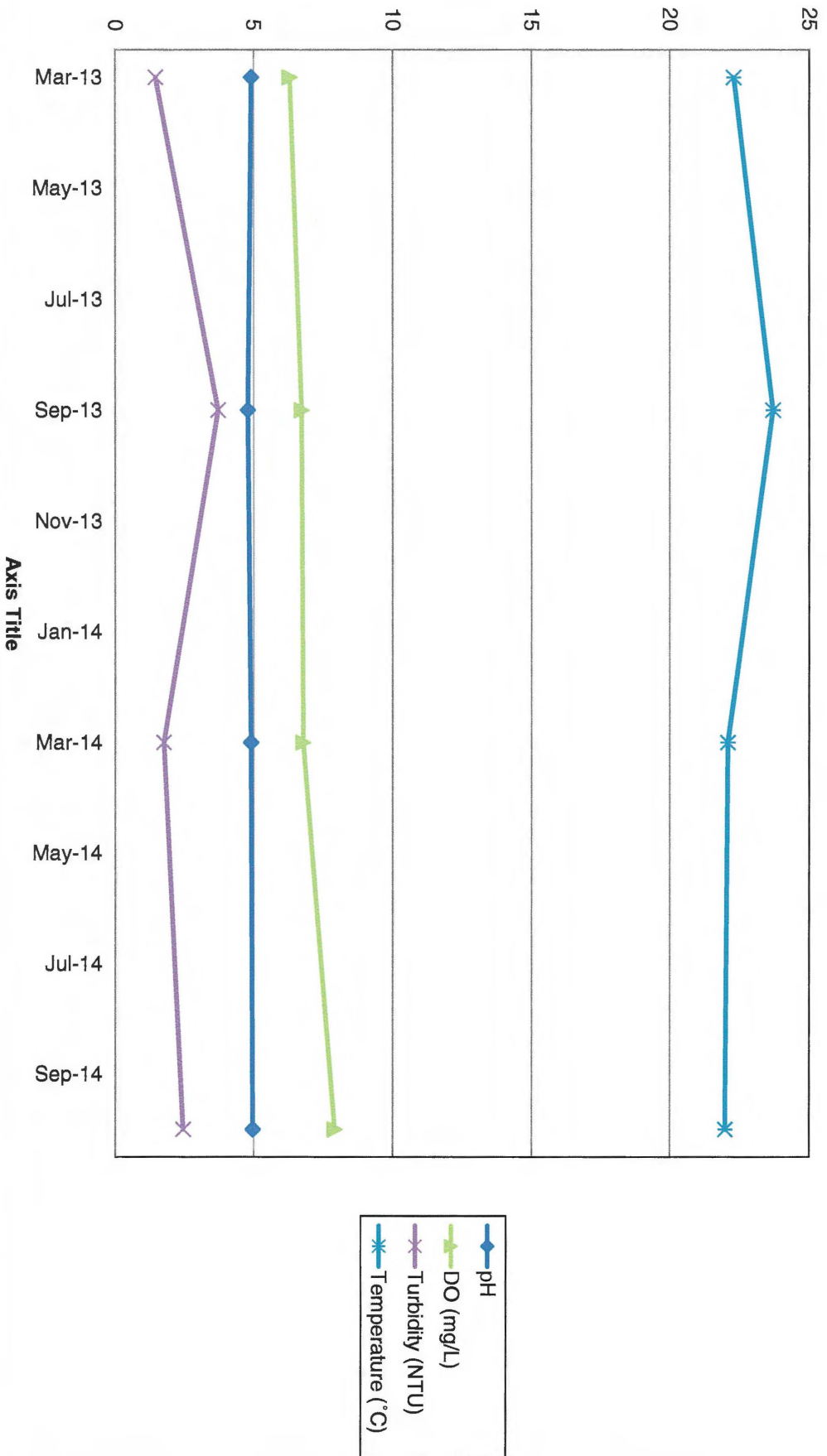
GW-1S General Chemistry



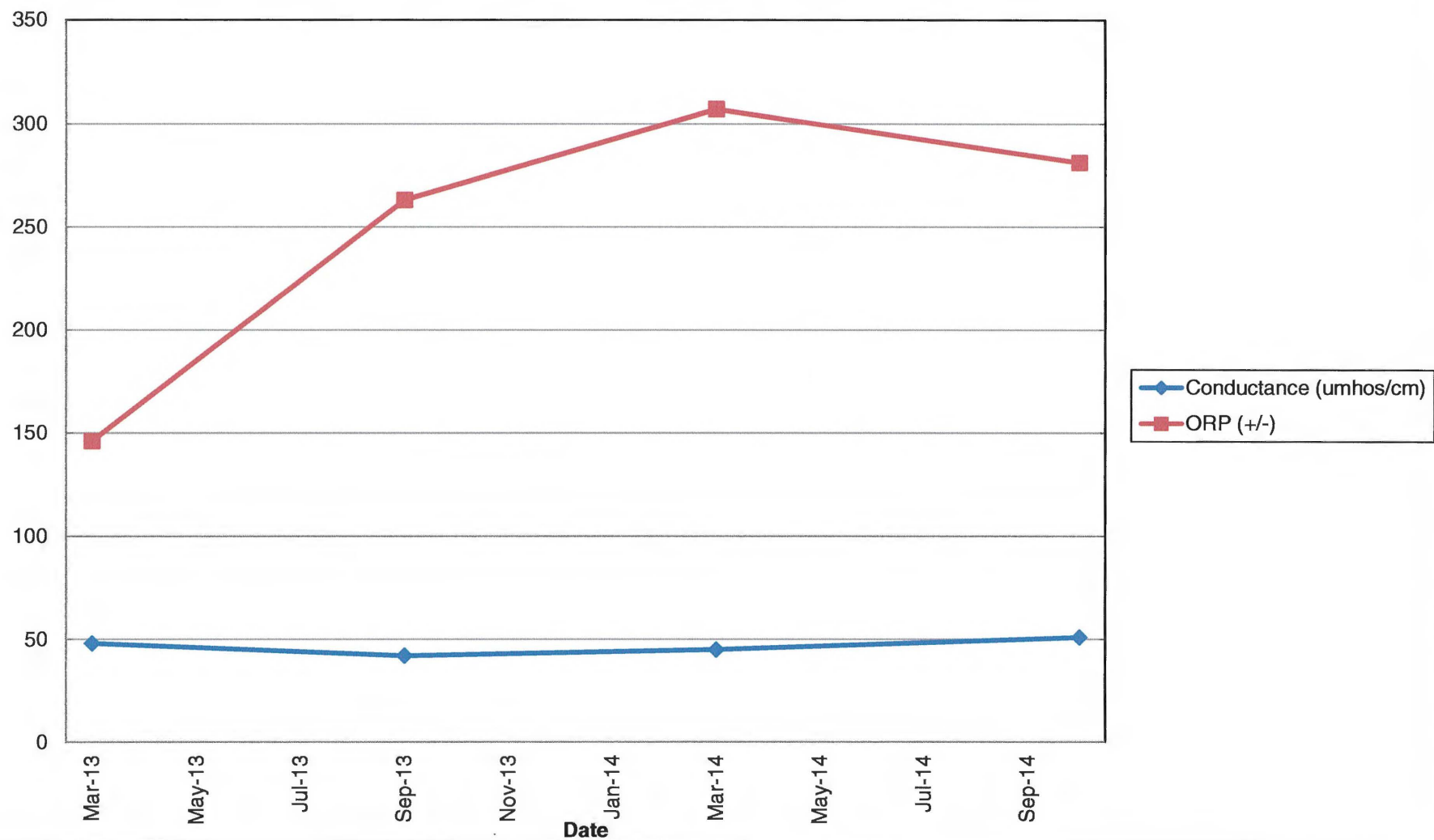
GW-1S General Chemistry



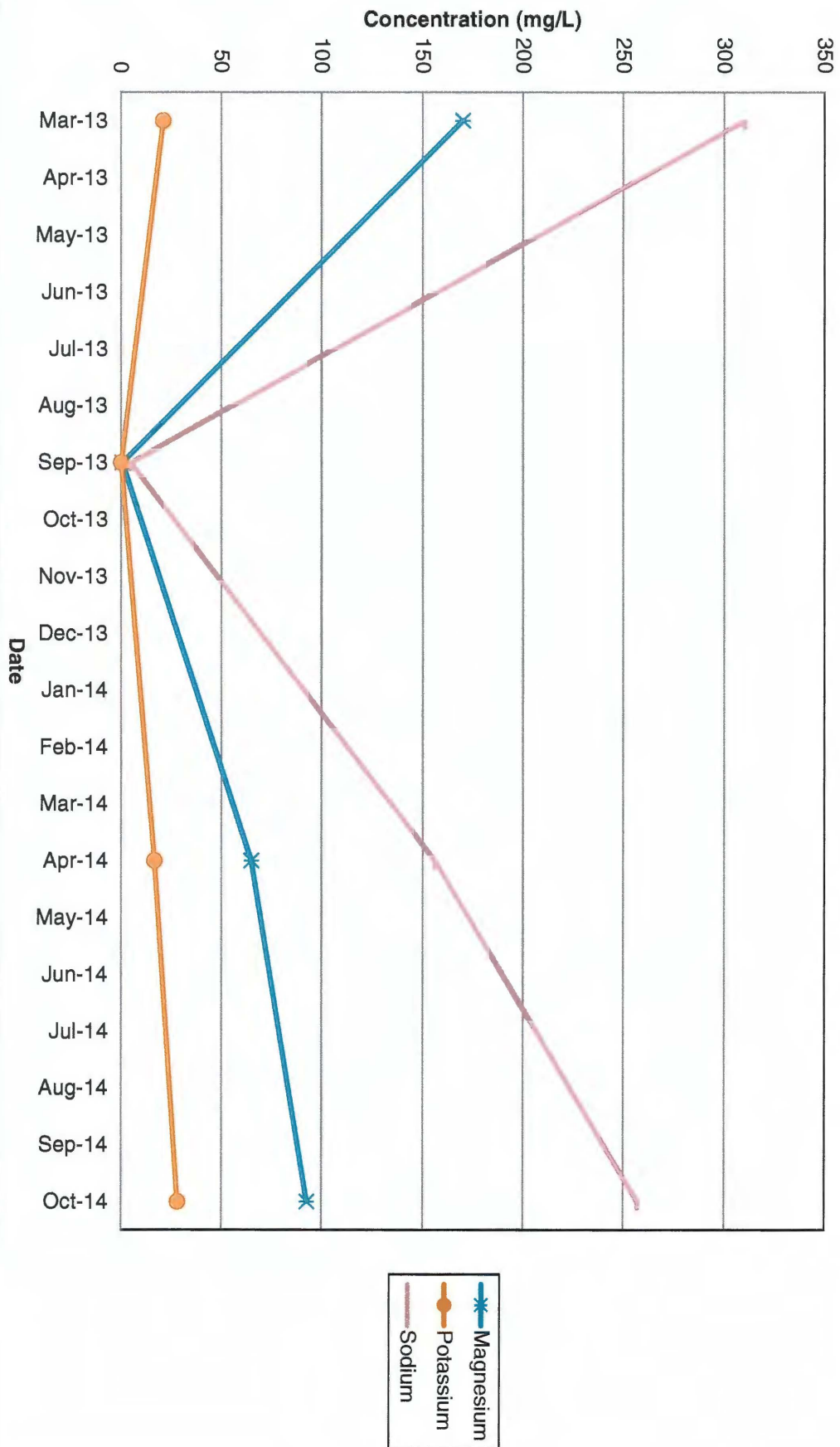
GW-1S Field Parameters (Part 1)



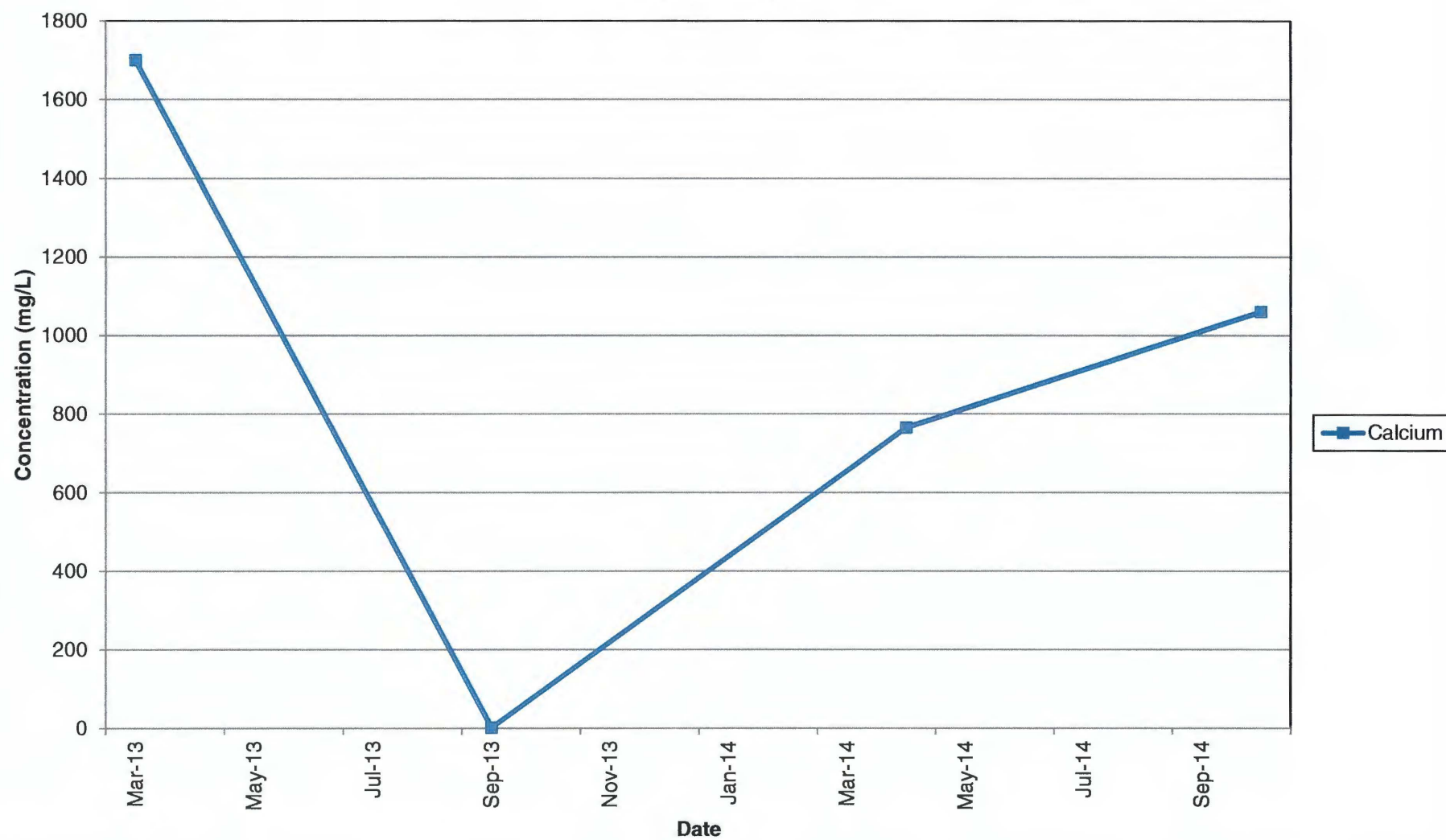
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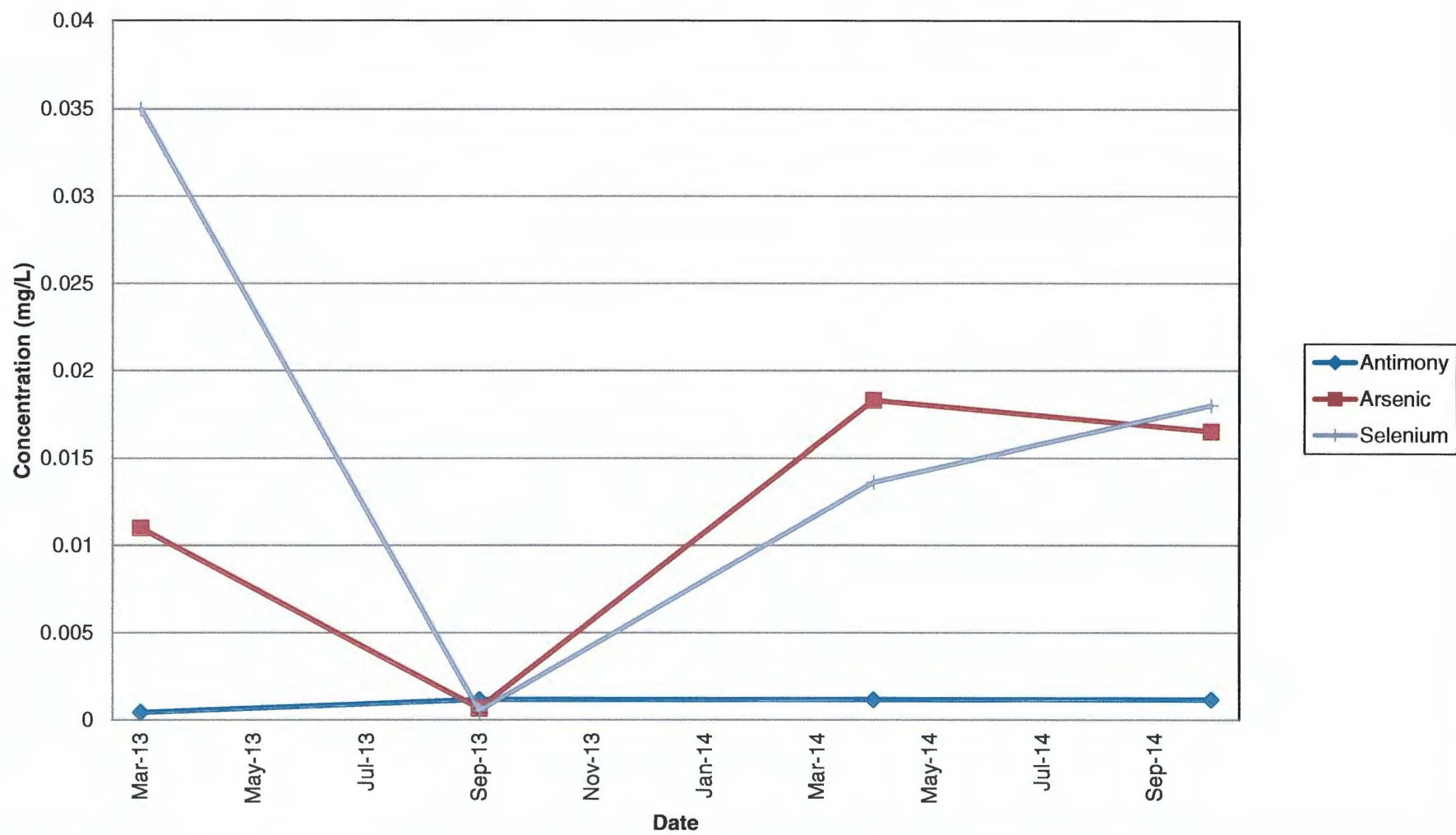
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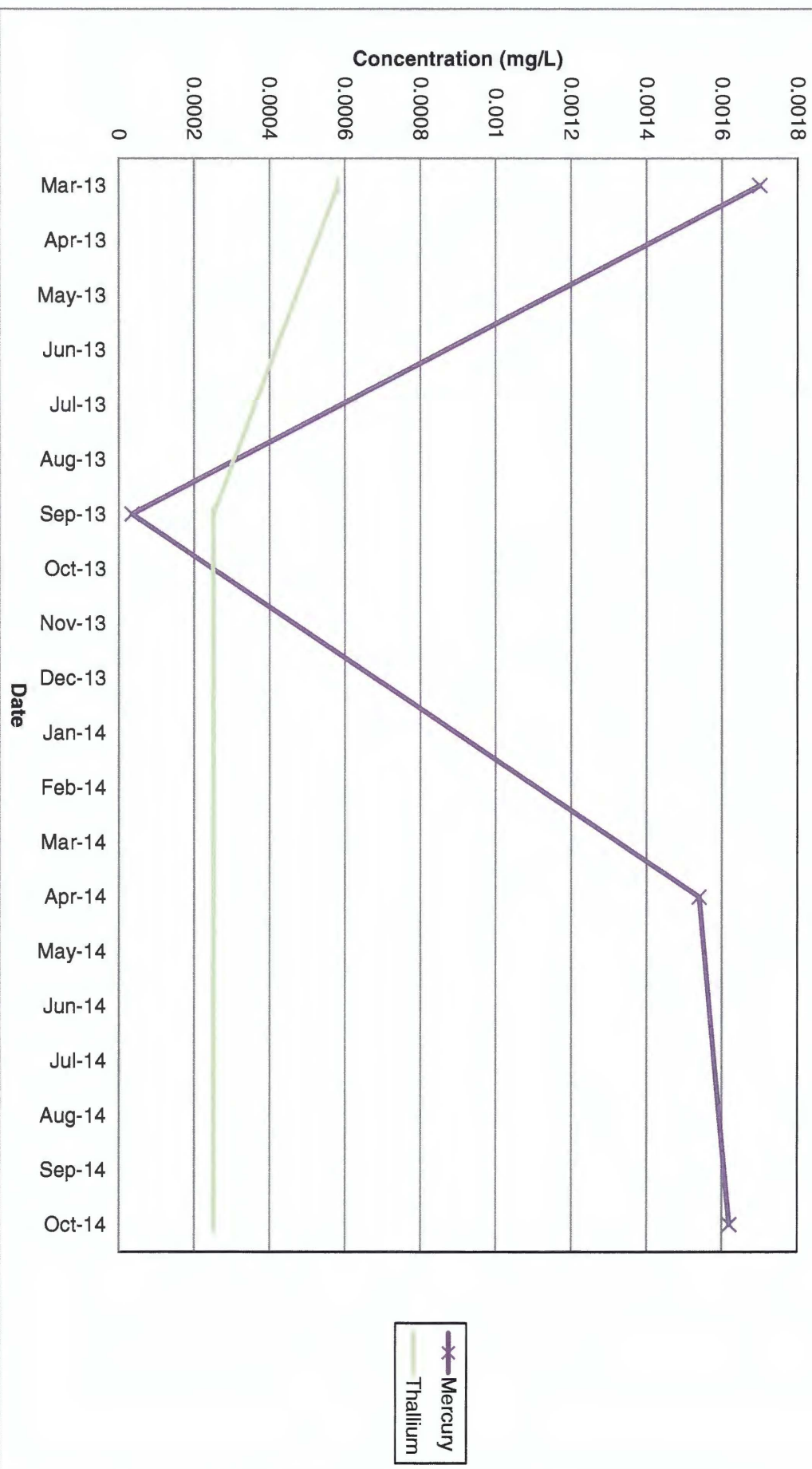
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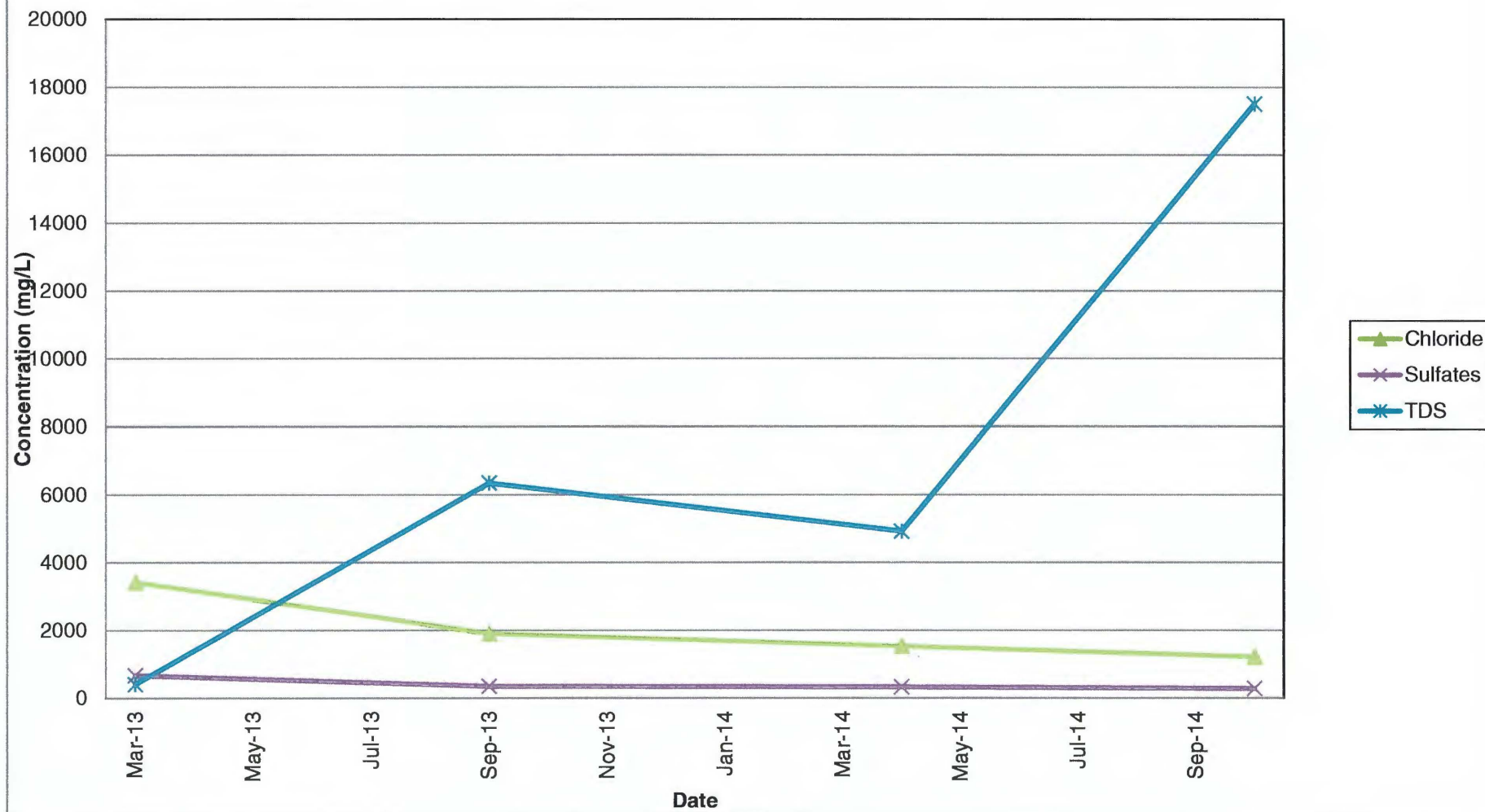
GE-1S Metals (Part 3)



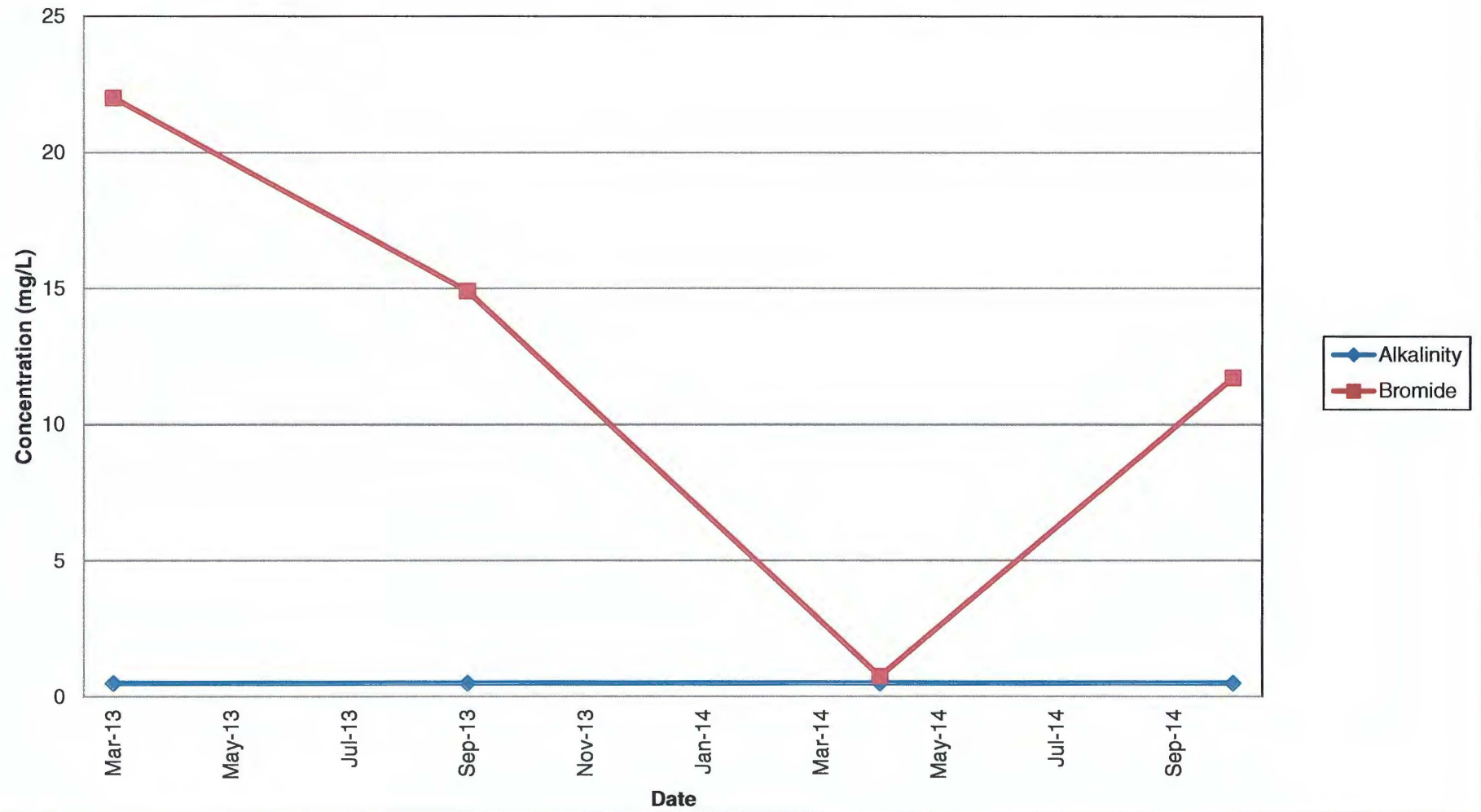
GE-1S Metals (Part 4)



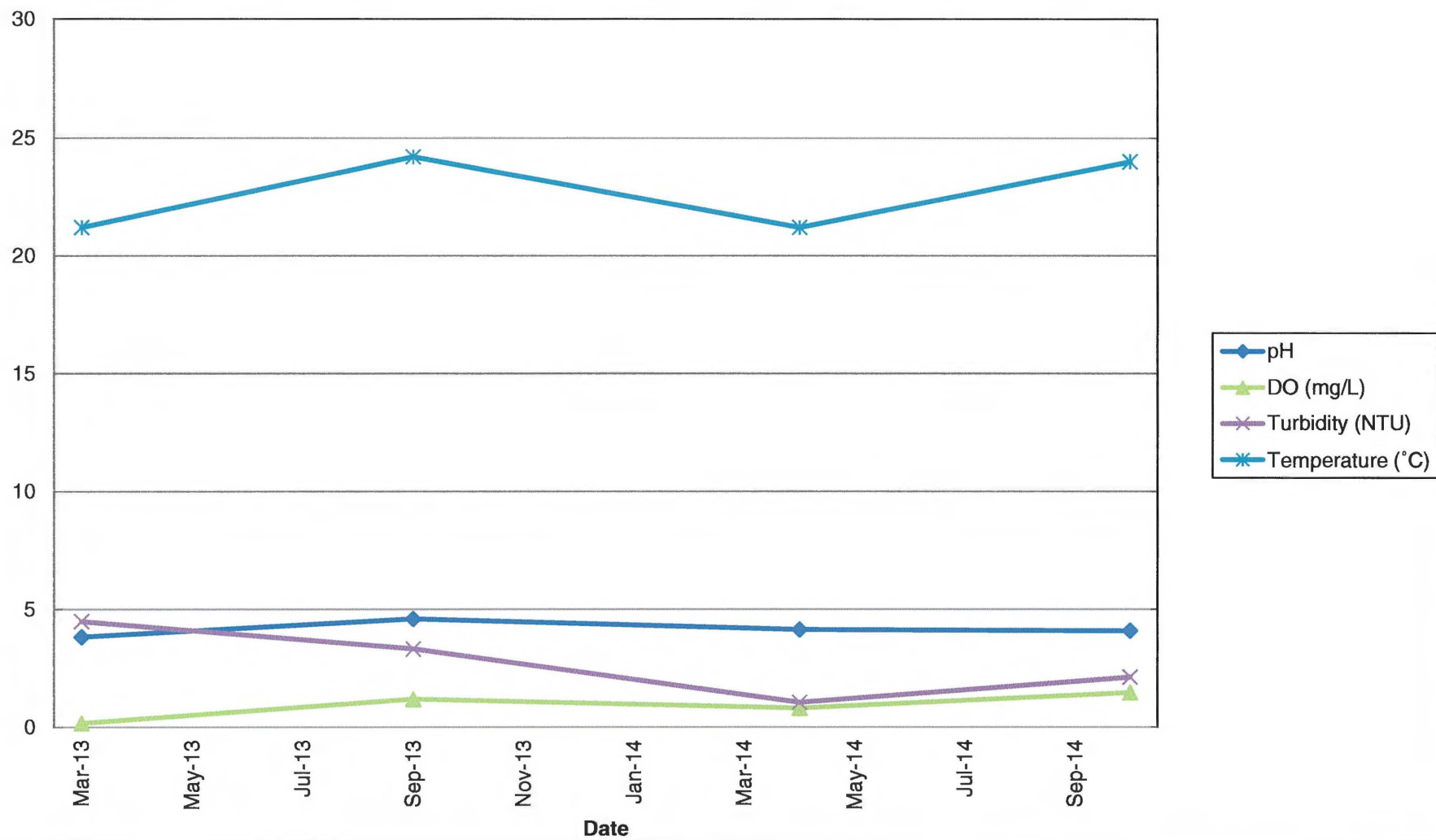
GE-1S General Chemistry (Part 1)



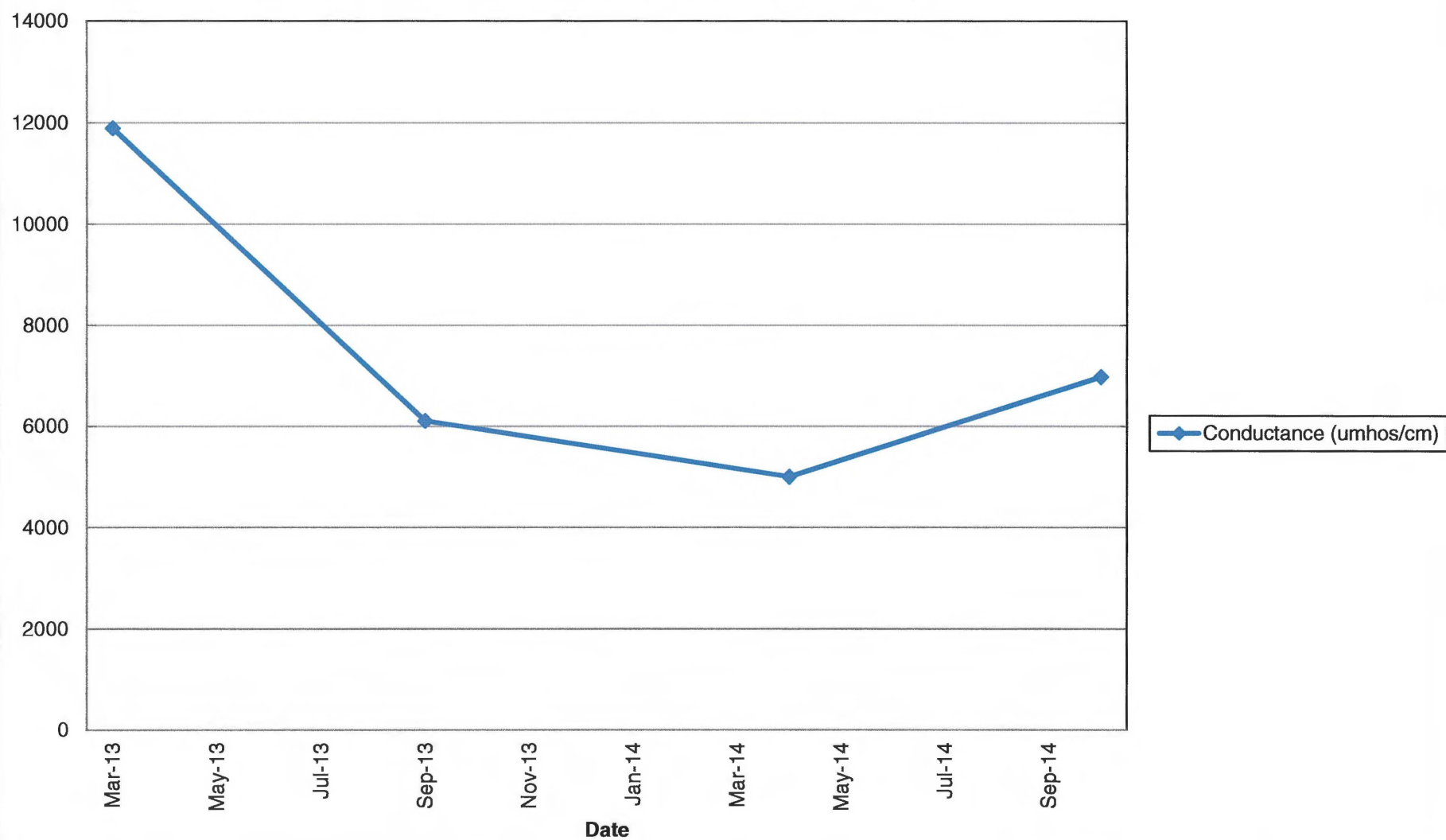
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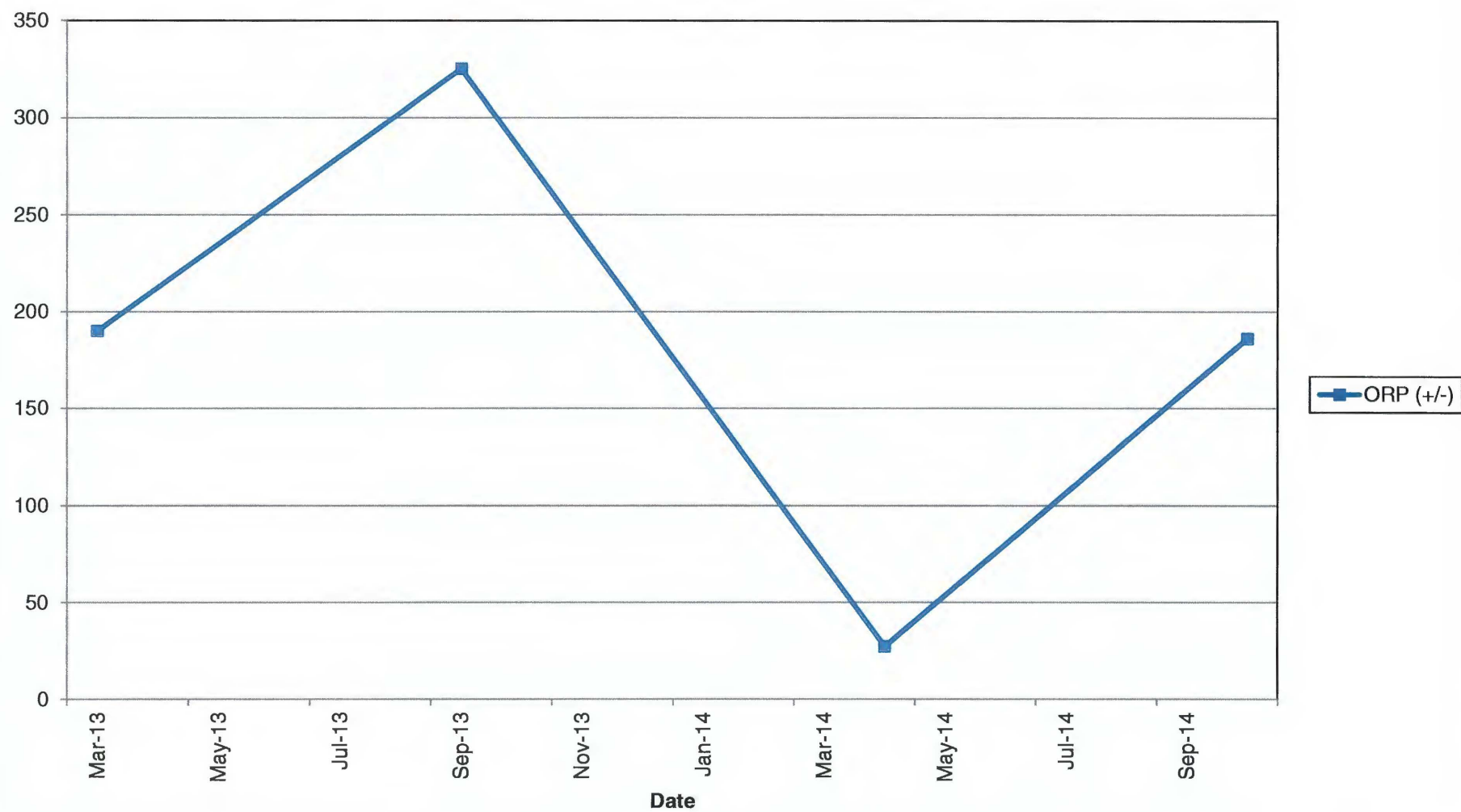
GE-1S Field Parameters (Part 1)



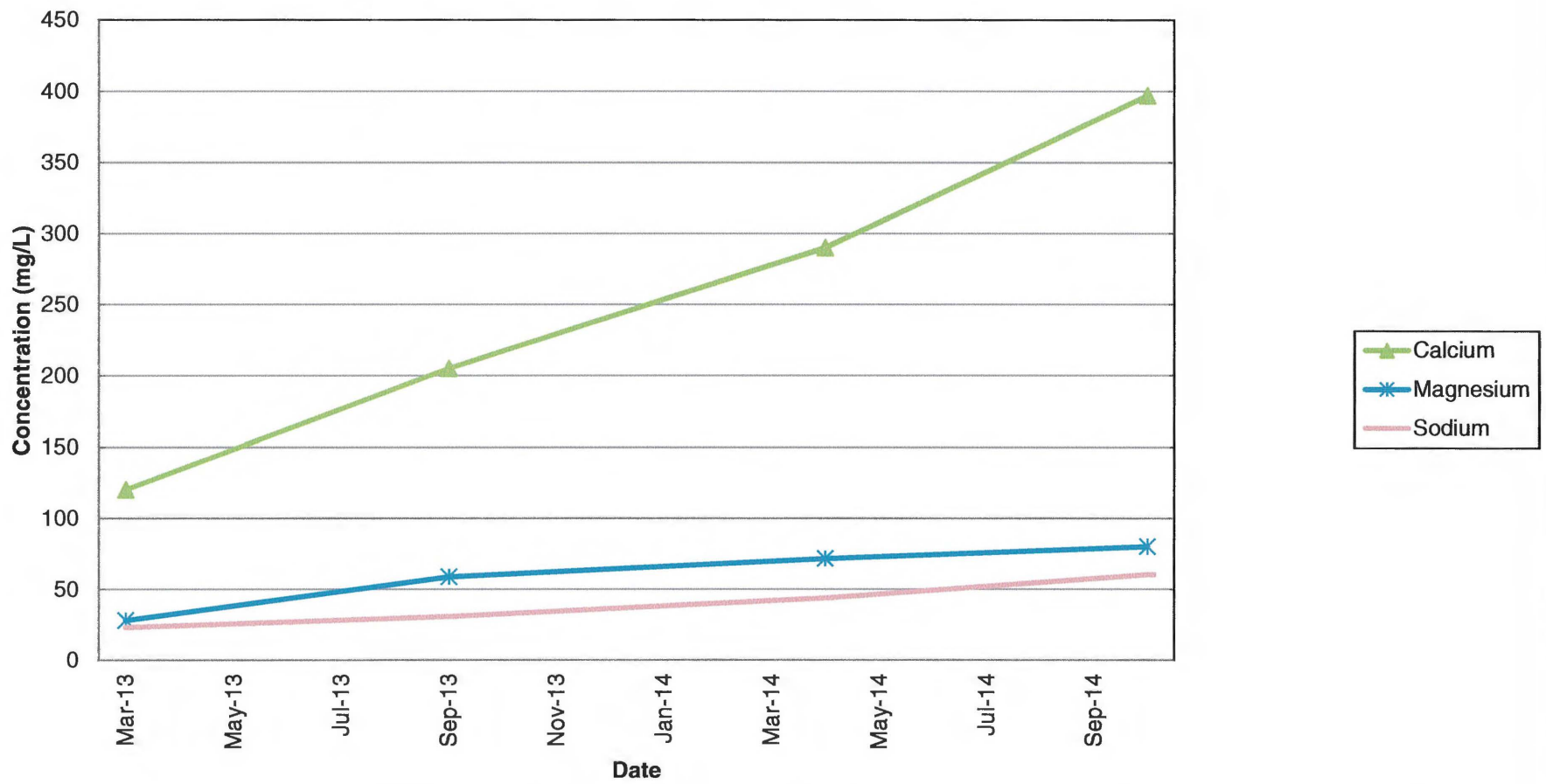
GE-1S Field Parameters (Part 2)



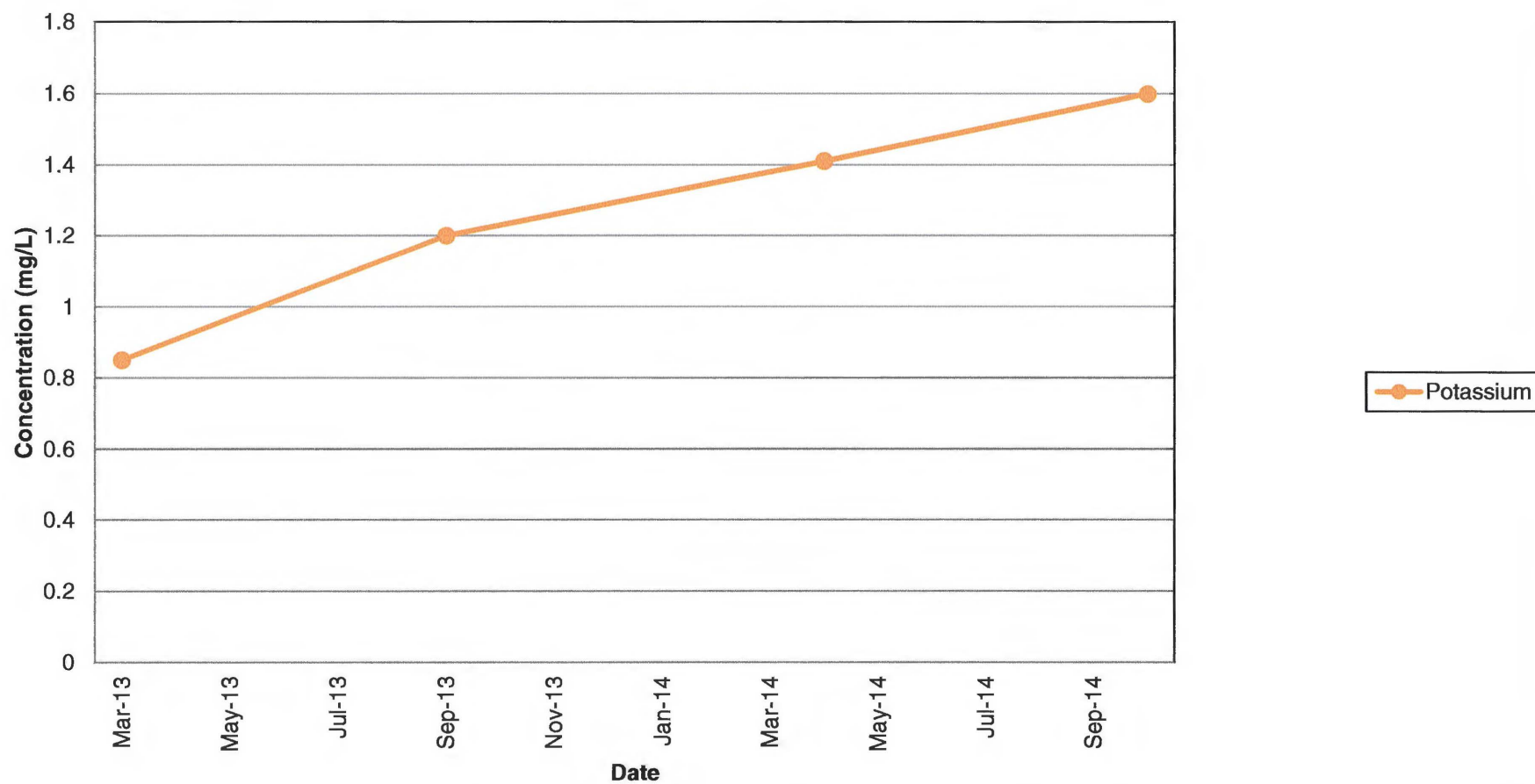
GE-1S Field Parameters (Part 3)



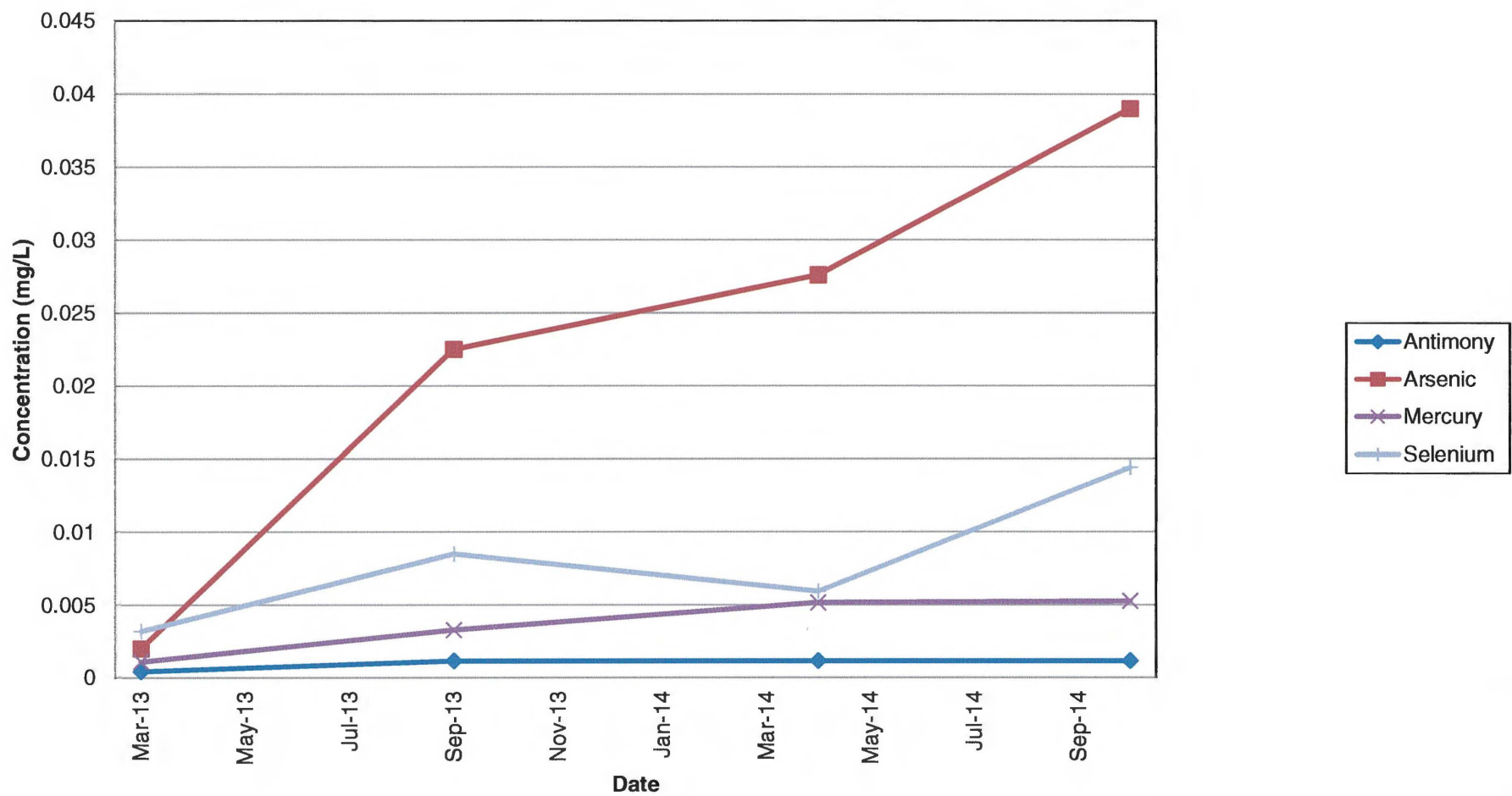
GE-2S Metals (Part 1)



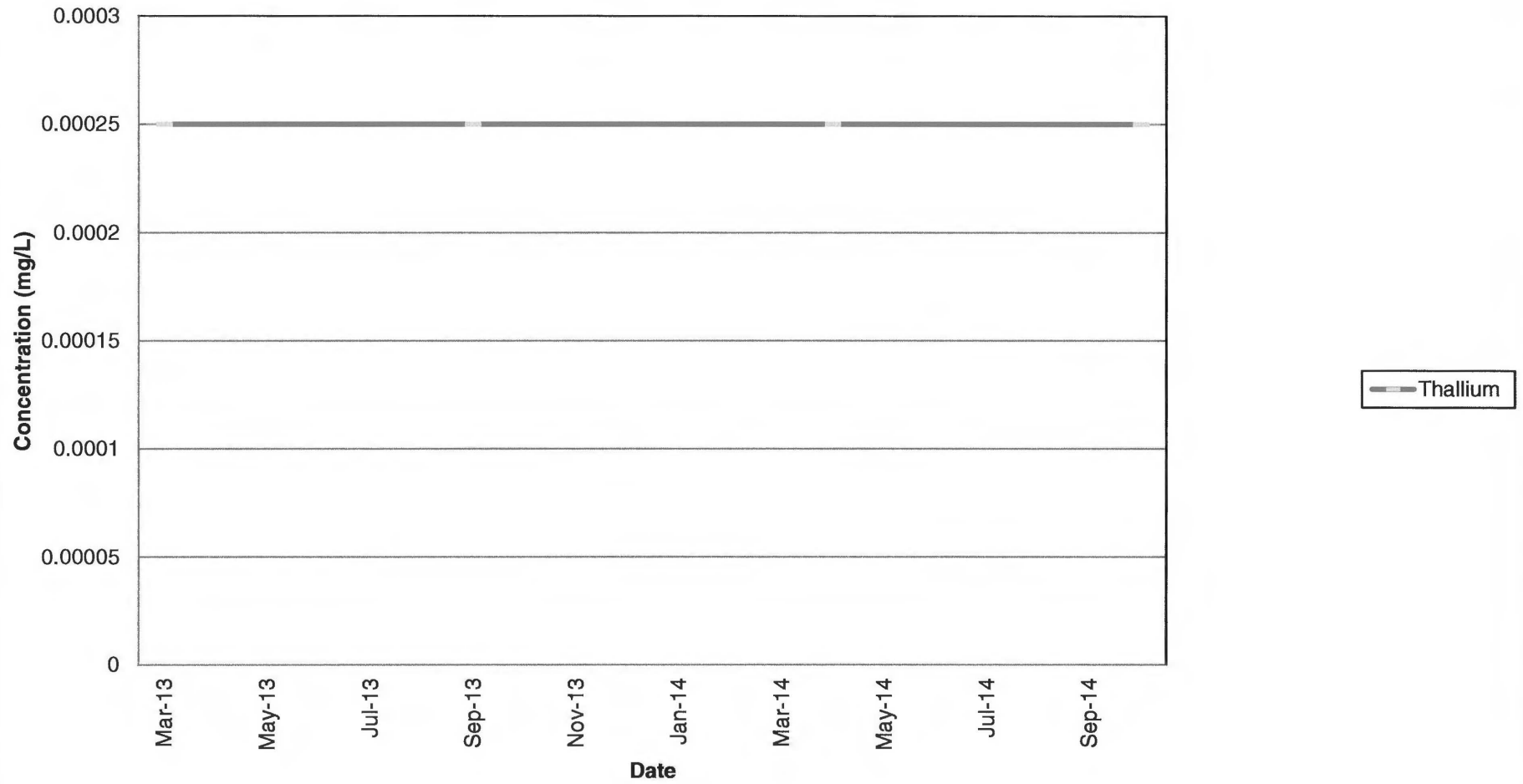
GE-2S Metals (Part 2)



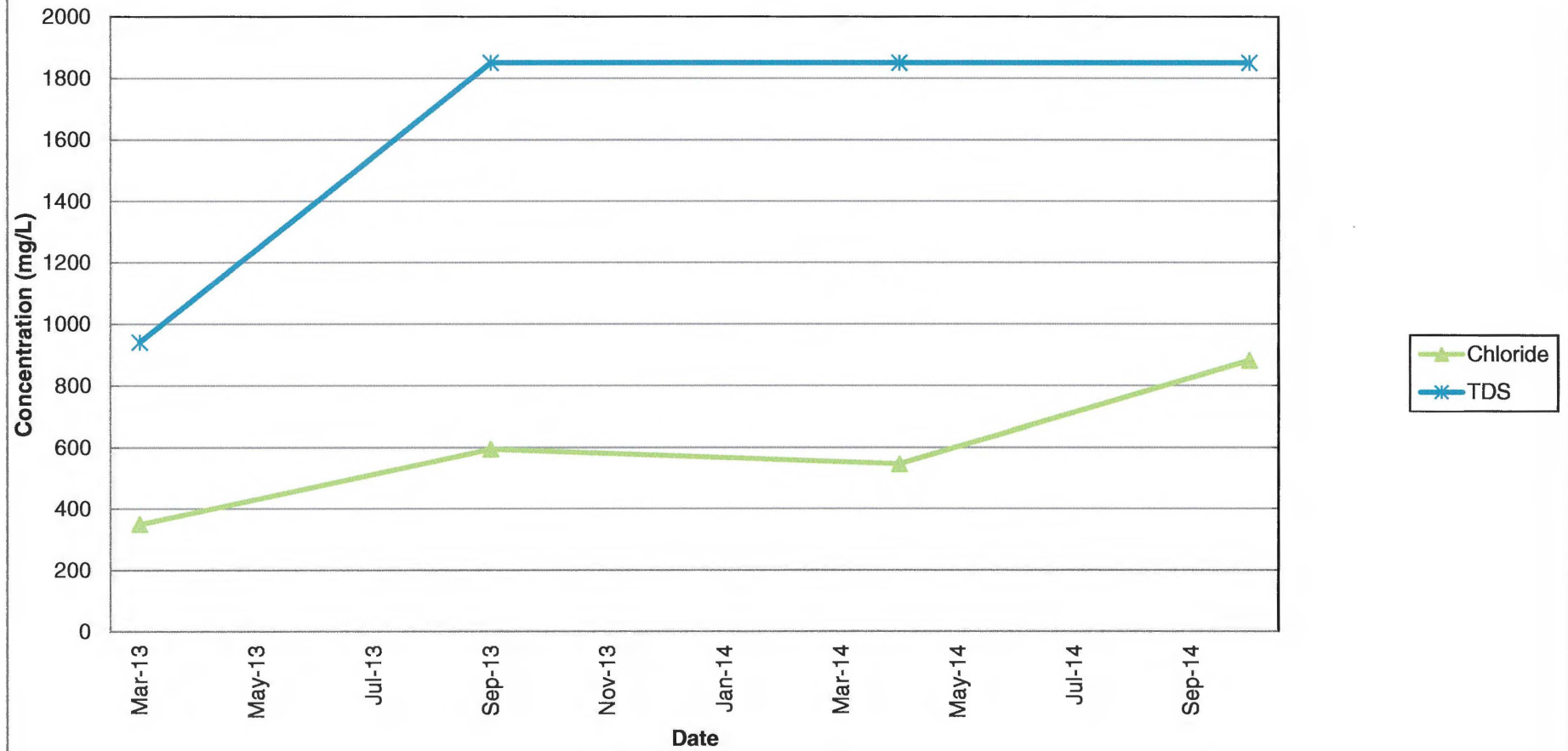
GE-2S Metals (Part 3)



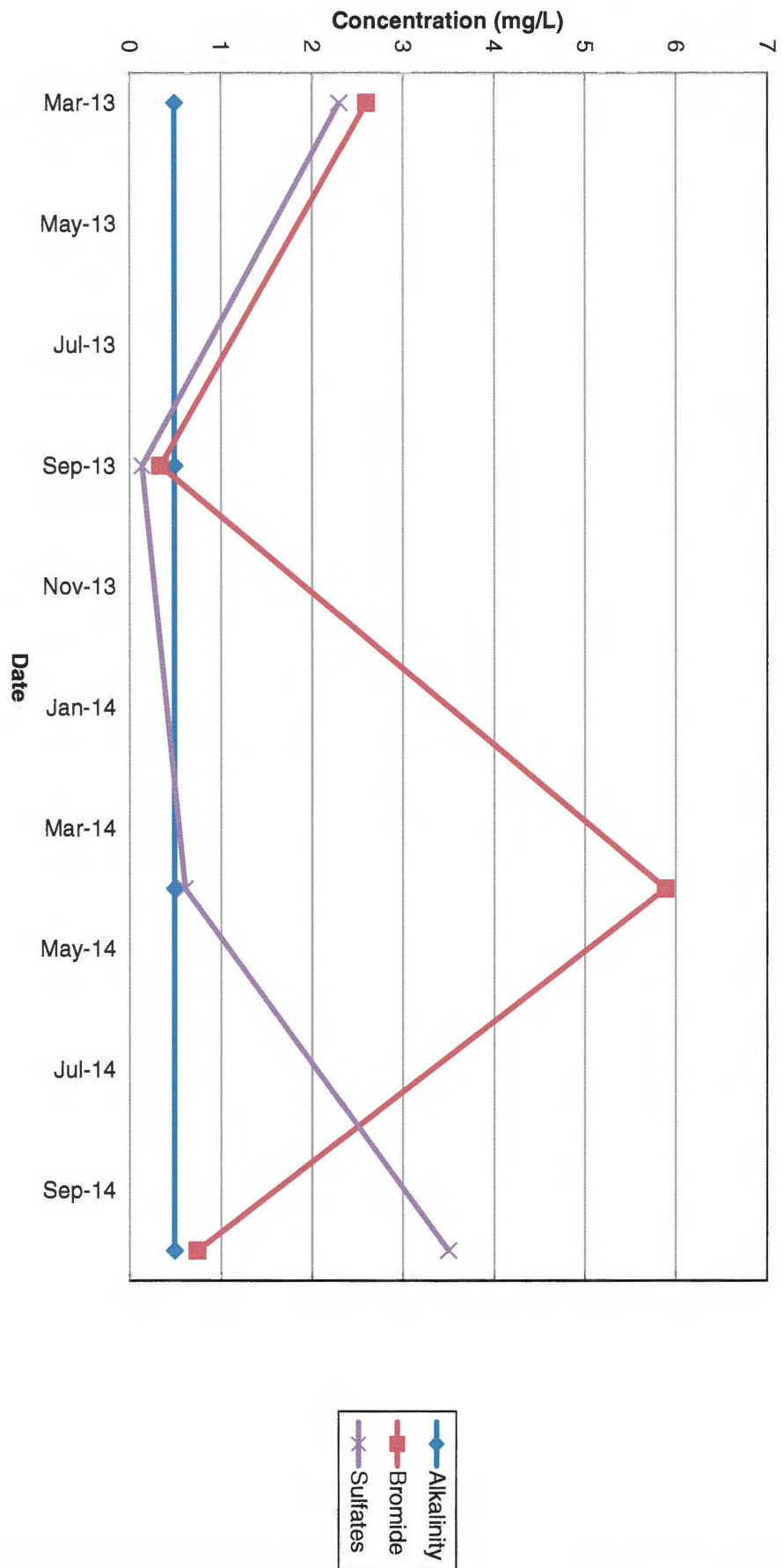
GE-2S Metals (Part 4)



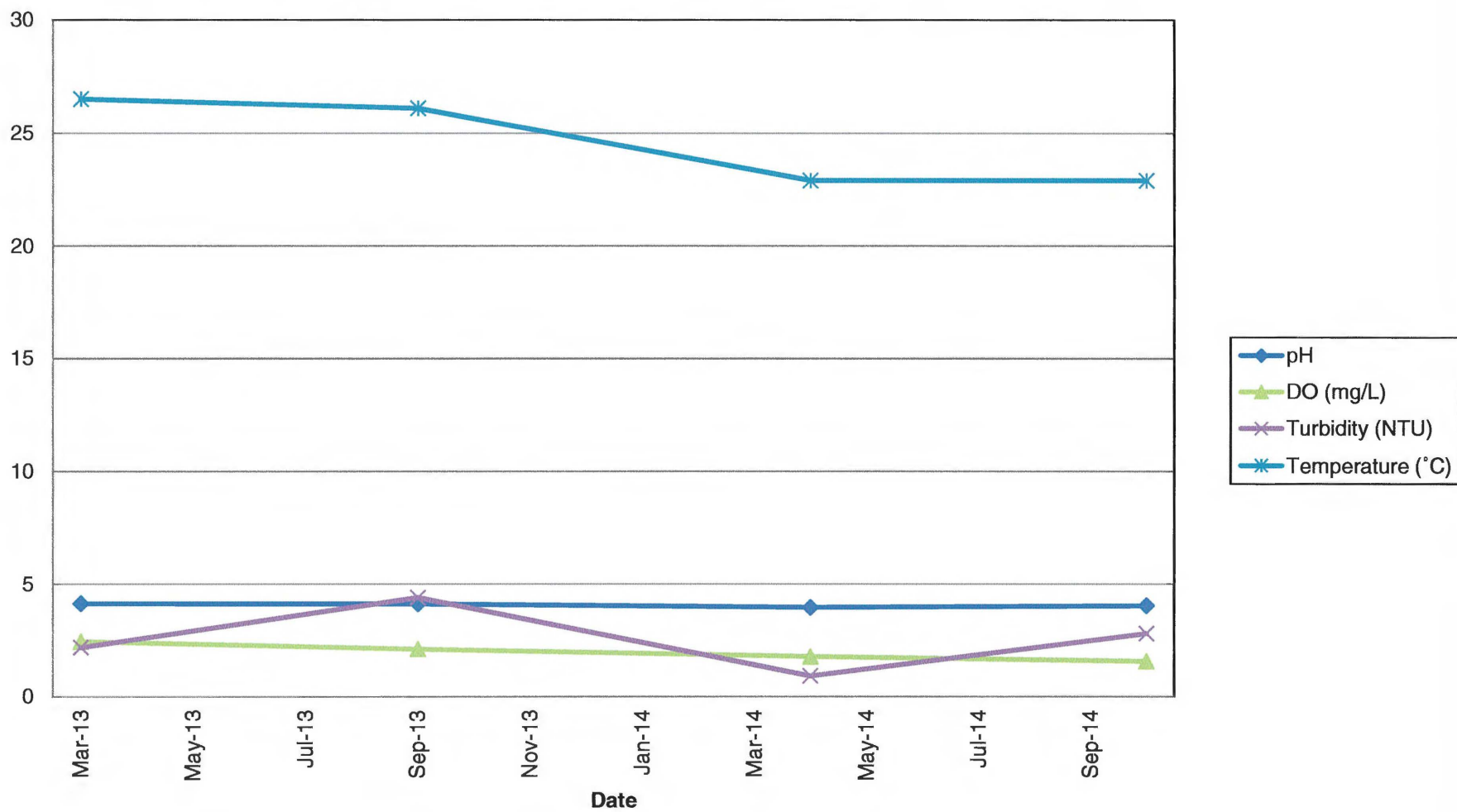
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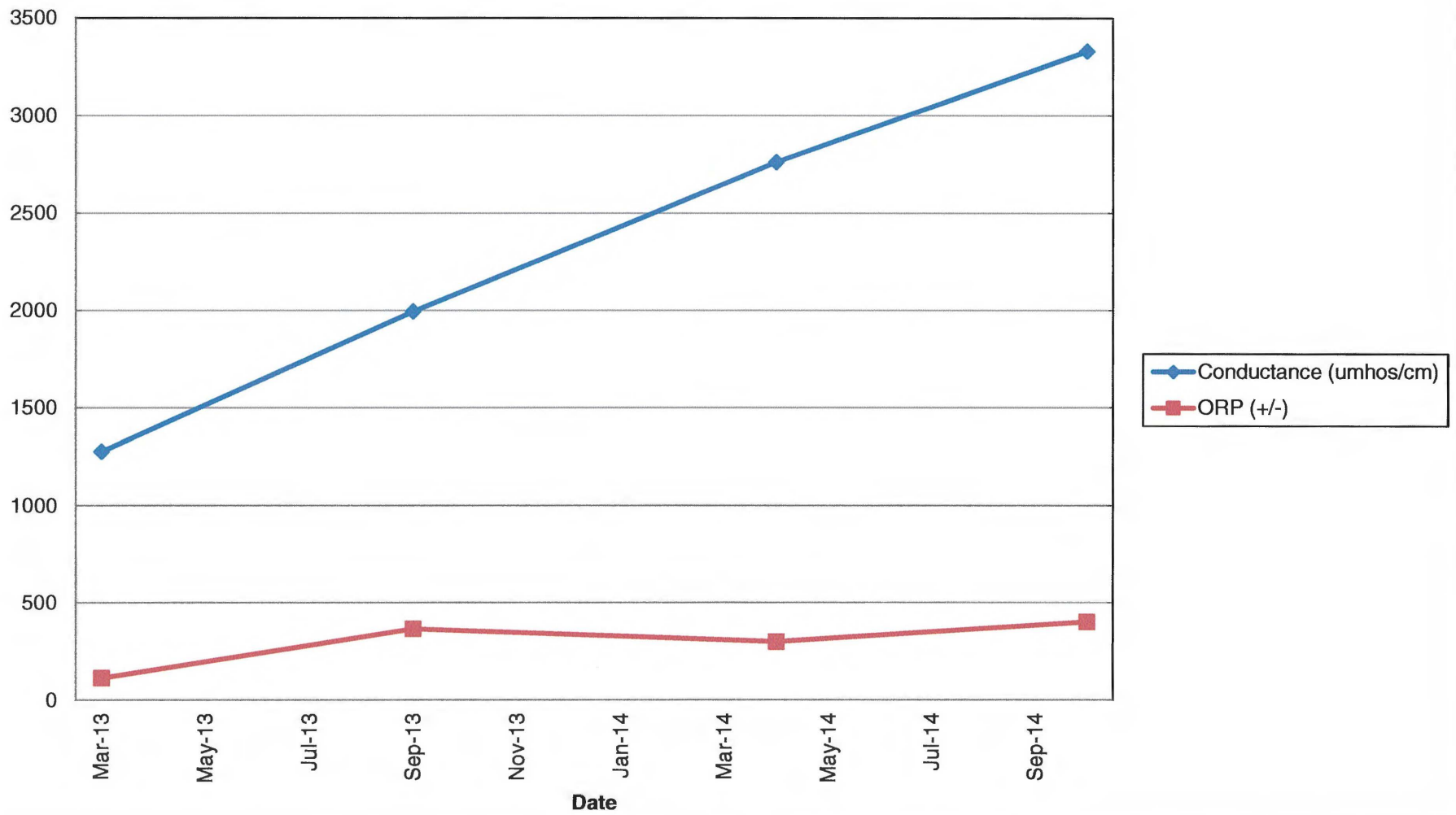
GE-2S General Chemistry (Part 2)



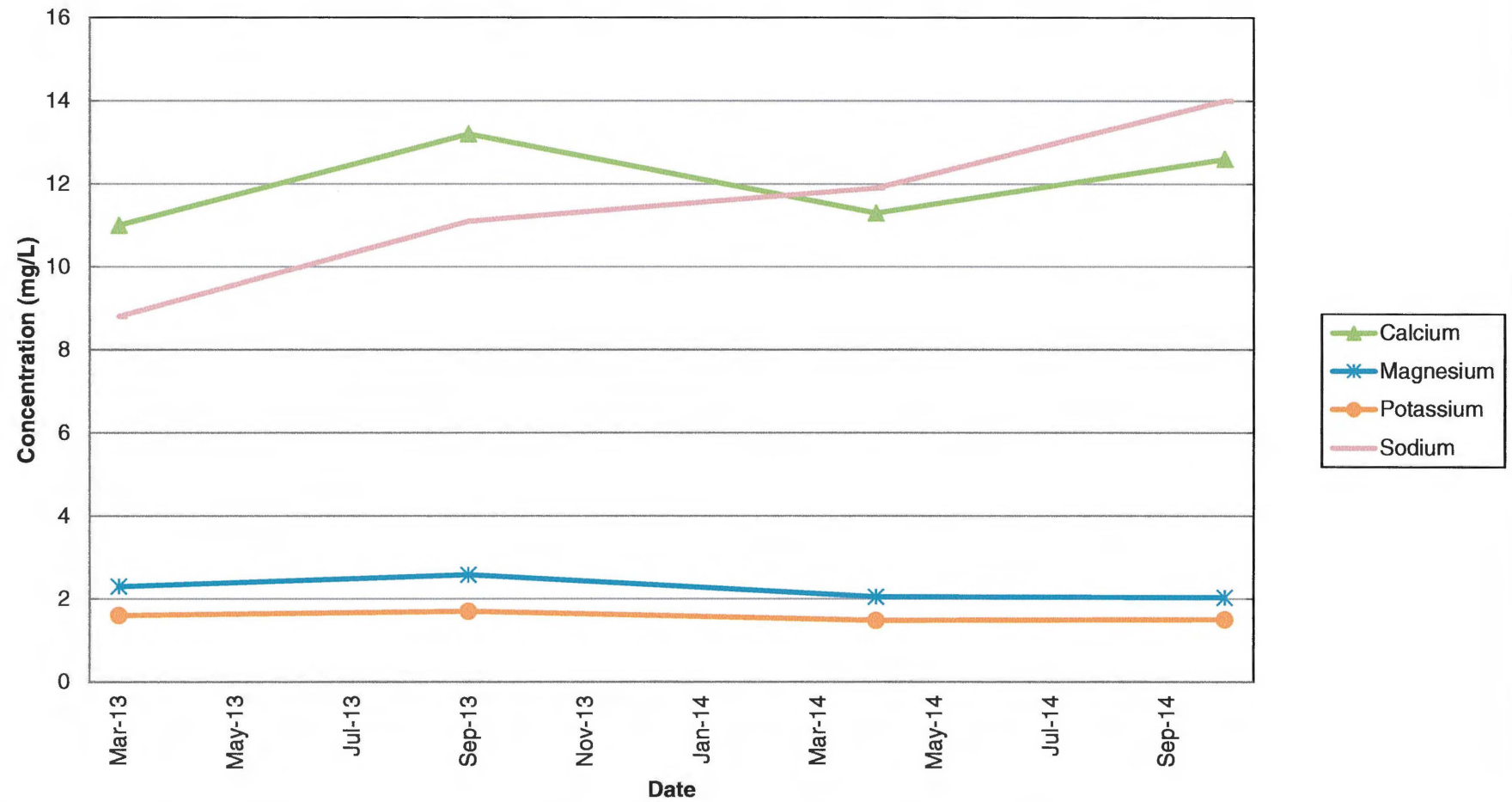
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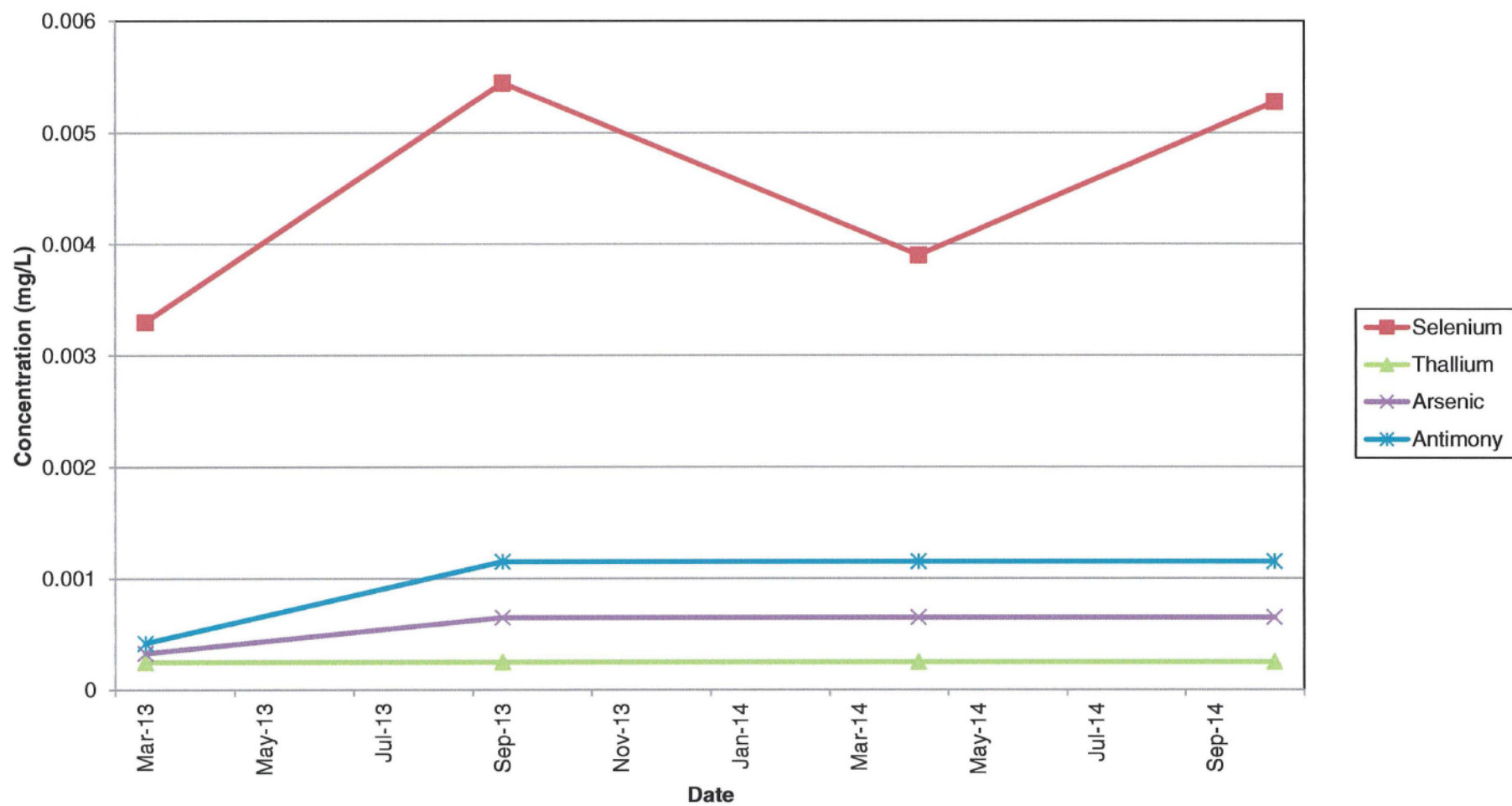
GE-2S Field Parameters (Part 2)



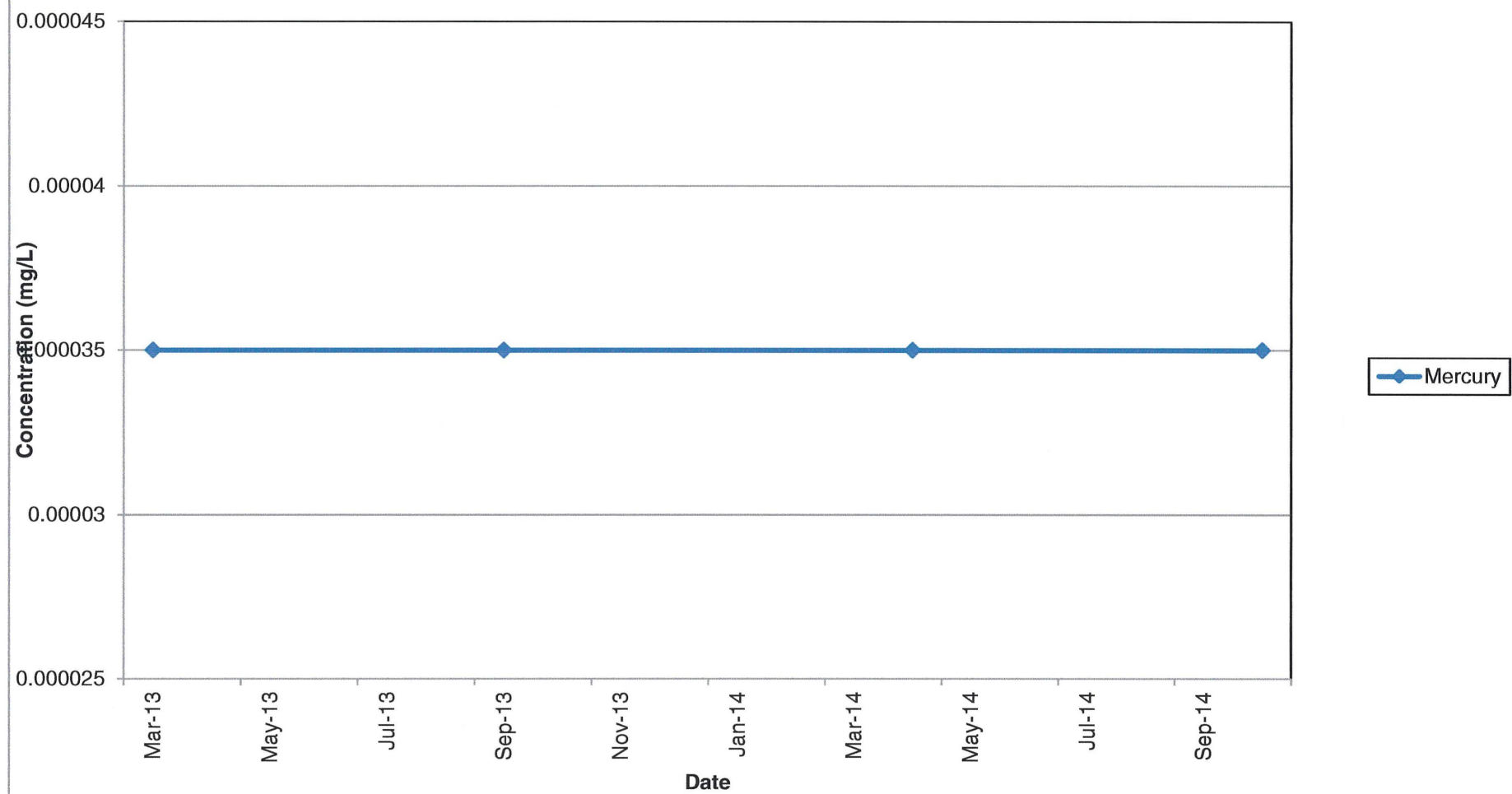
GE-3S Metals (Part 1)



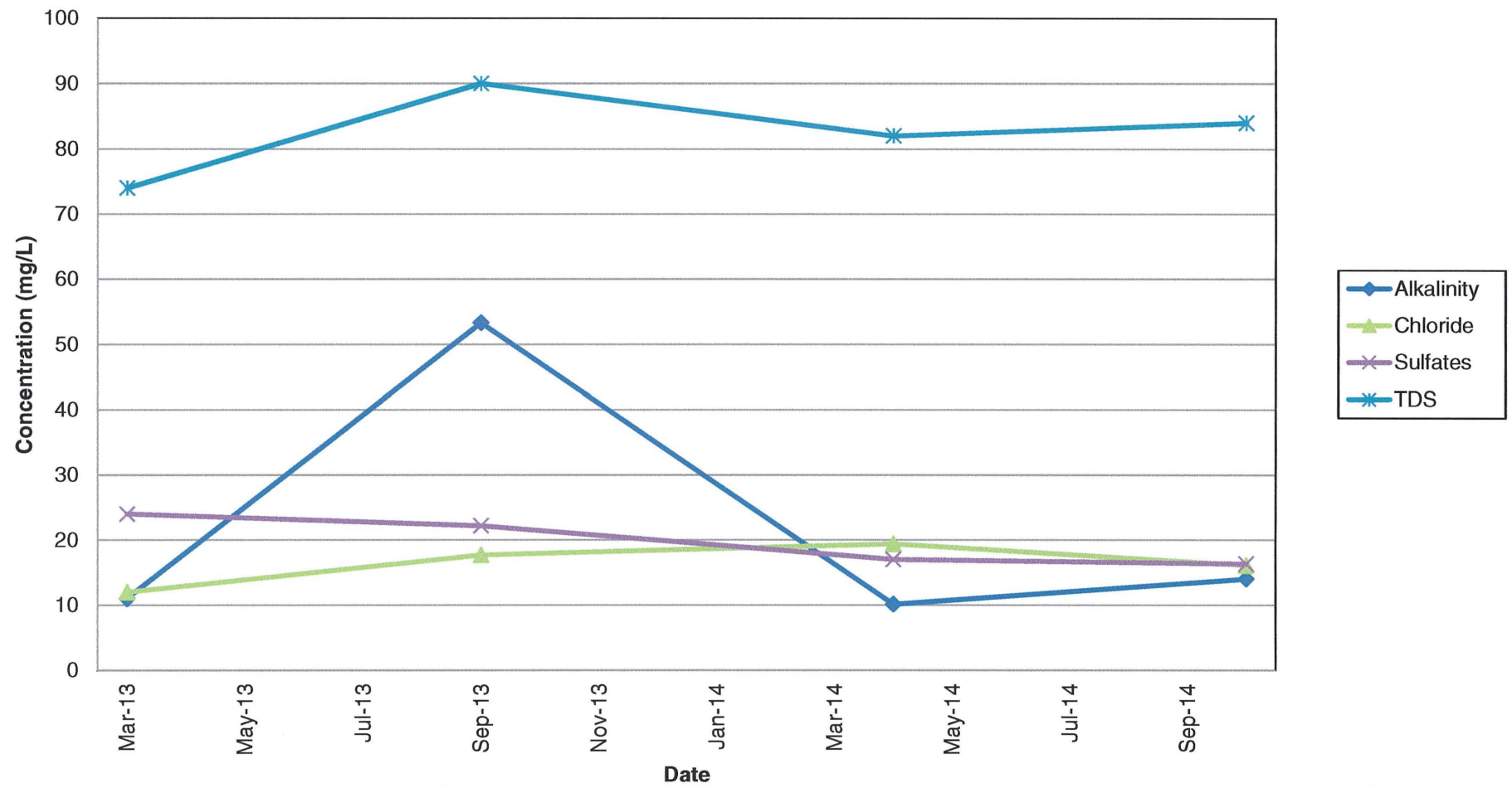
GE-3S Metals (Part 2)



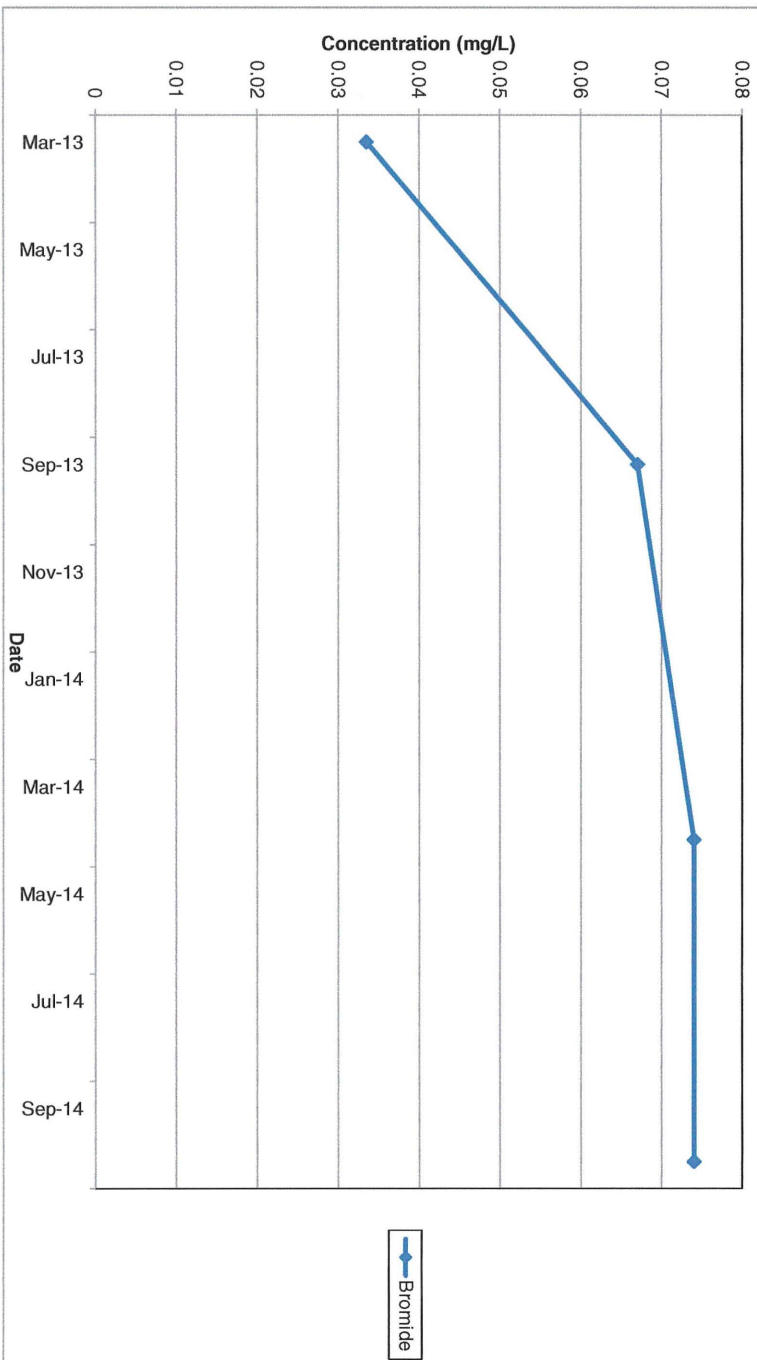
GE-3S Metals (Part 3)



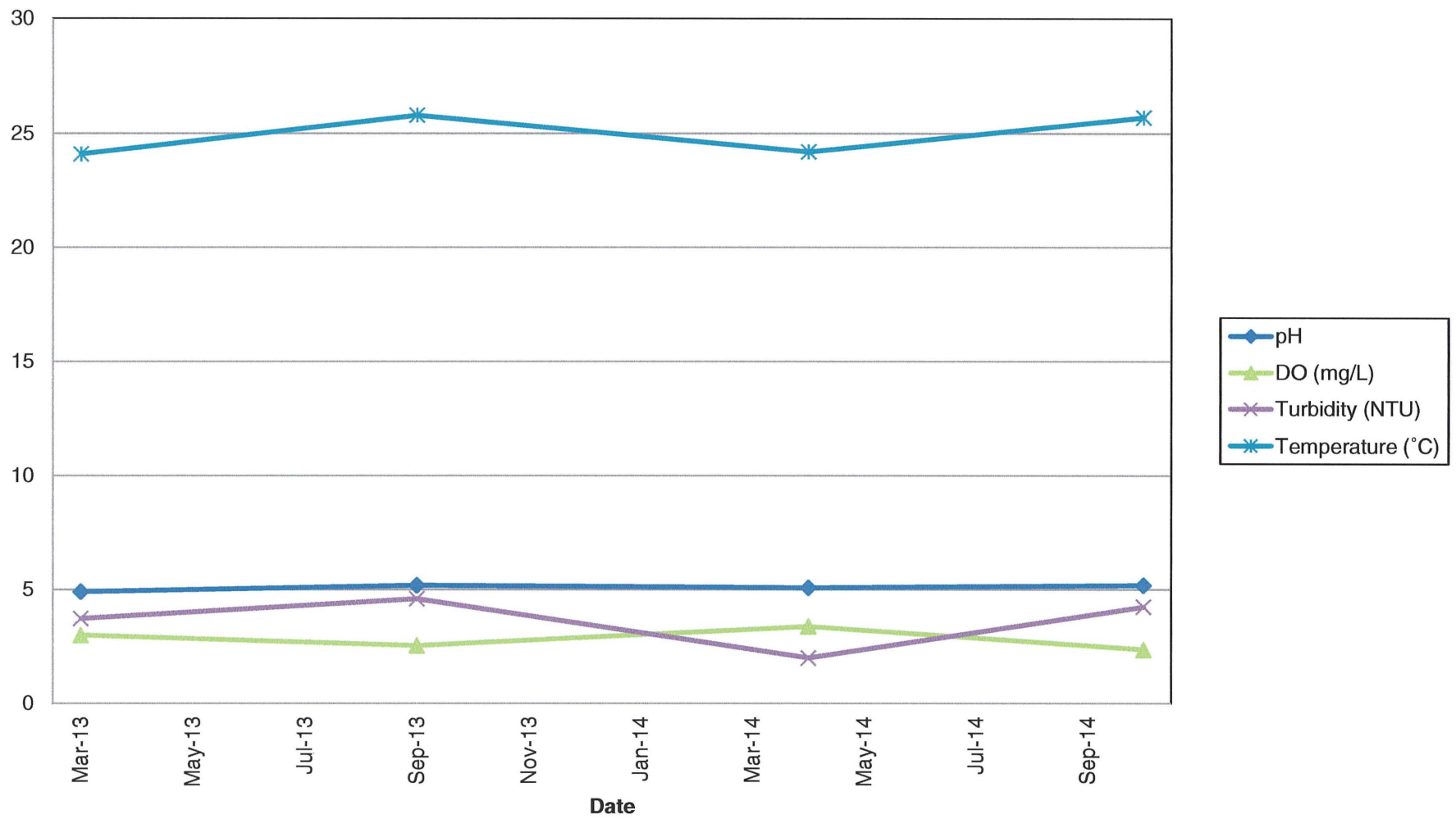
GE-3S General Chemistry (Part 1)



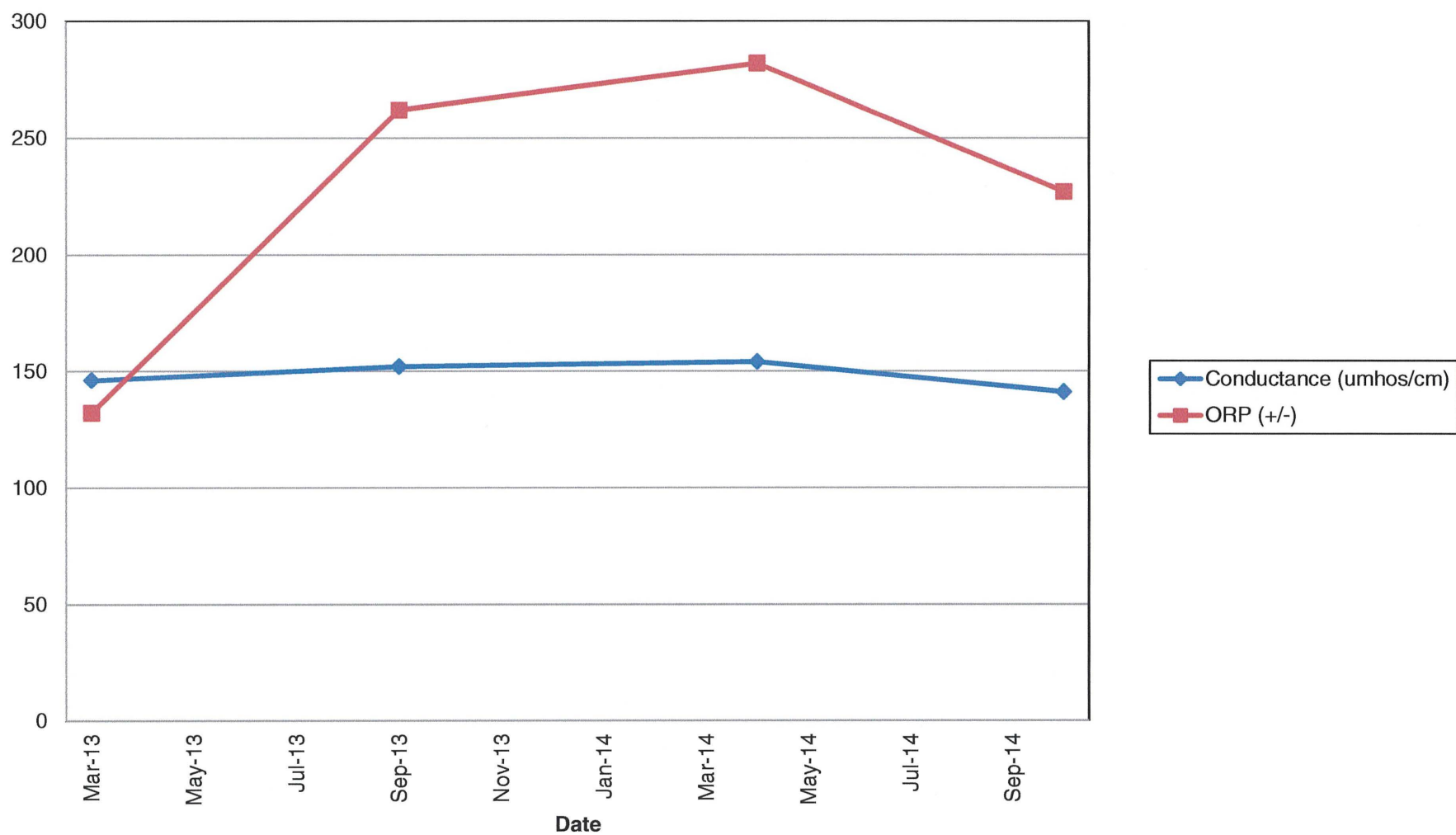
GE-3S General Chemistry (Part 2)



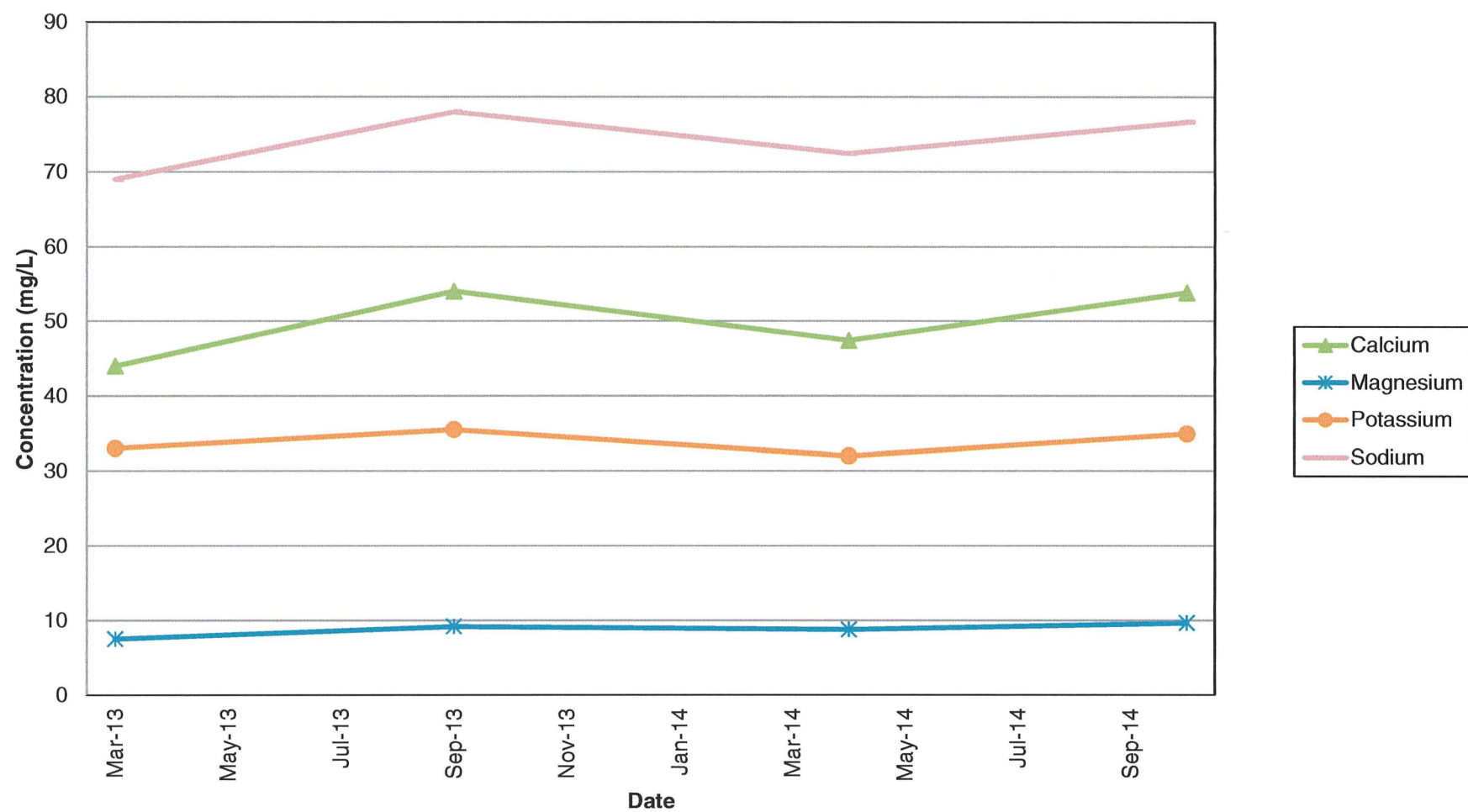
GE-3S Field Parameters (Part 1)



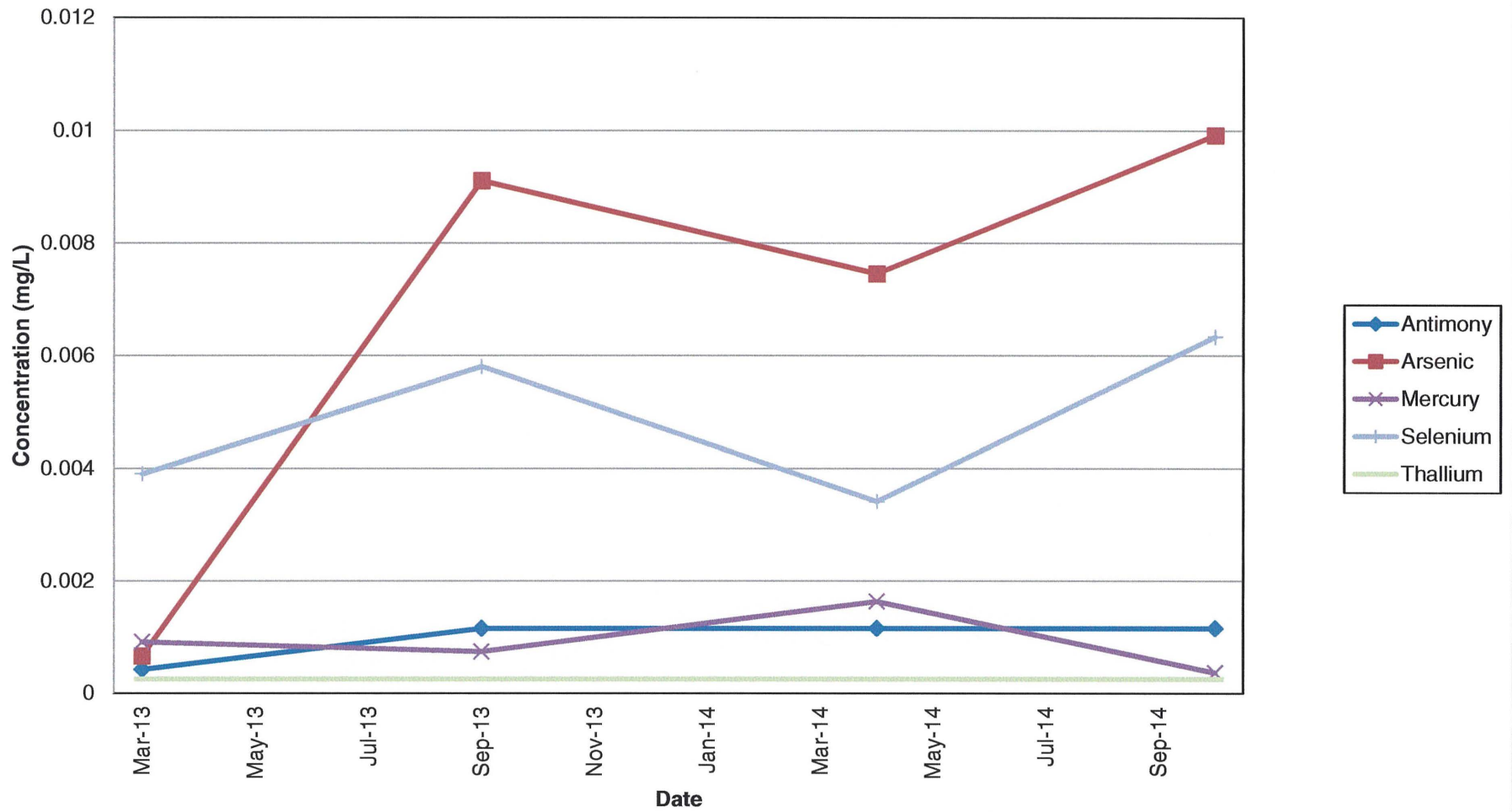
GE-3S Field Parameters (Part 2)



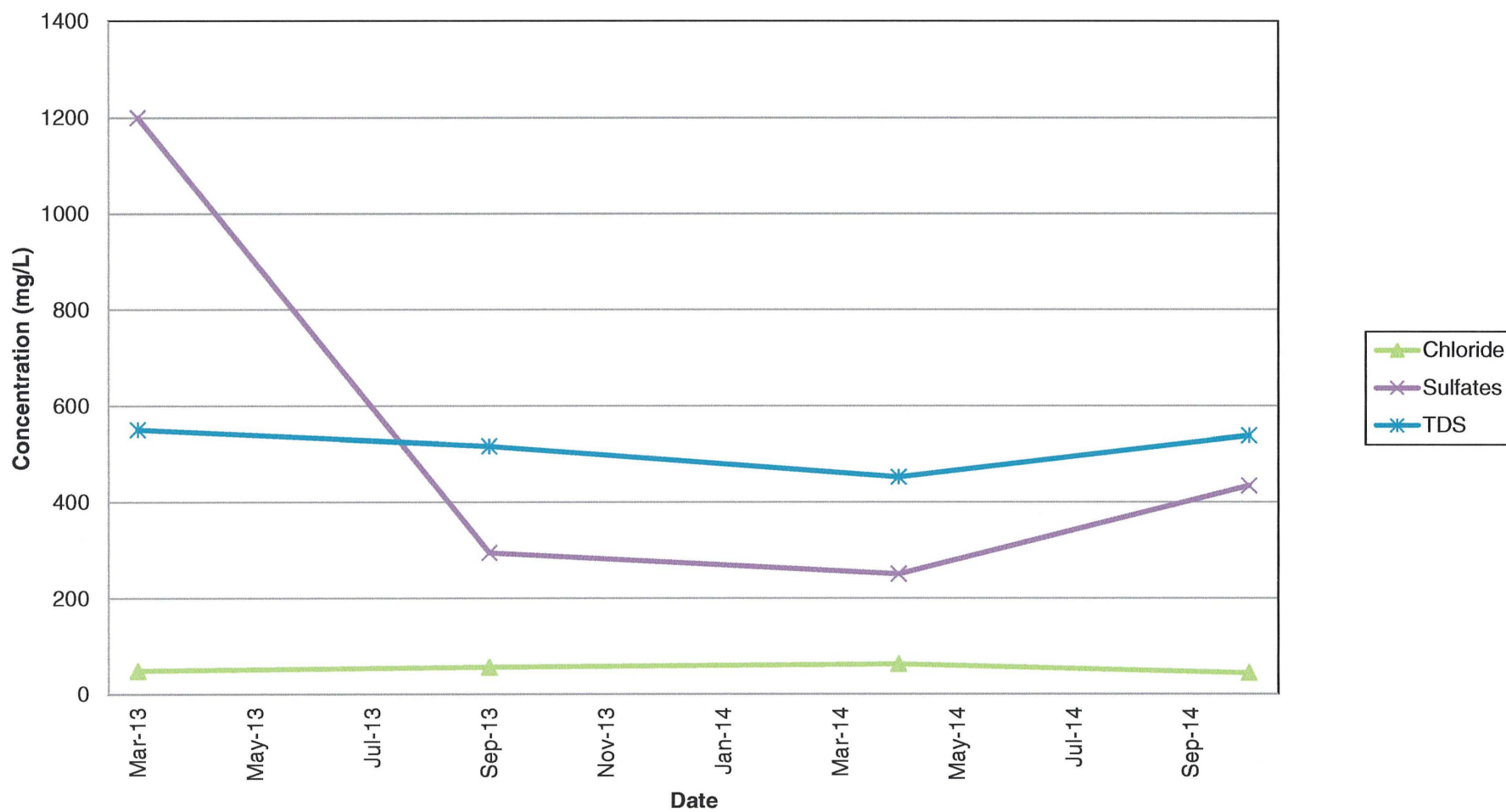
GE-4S Metals (Part 1)



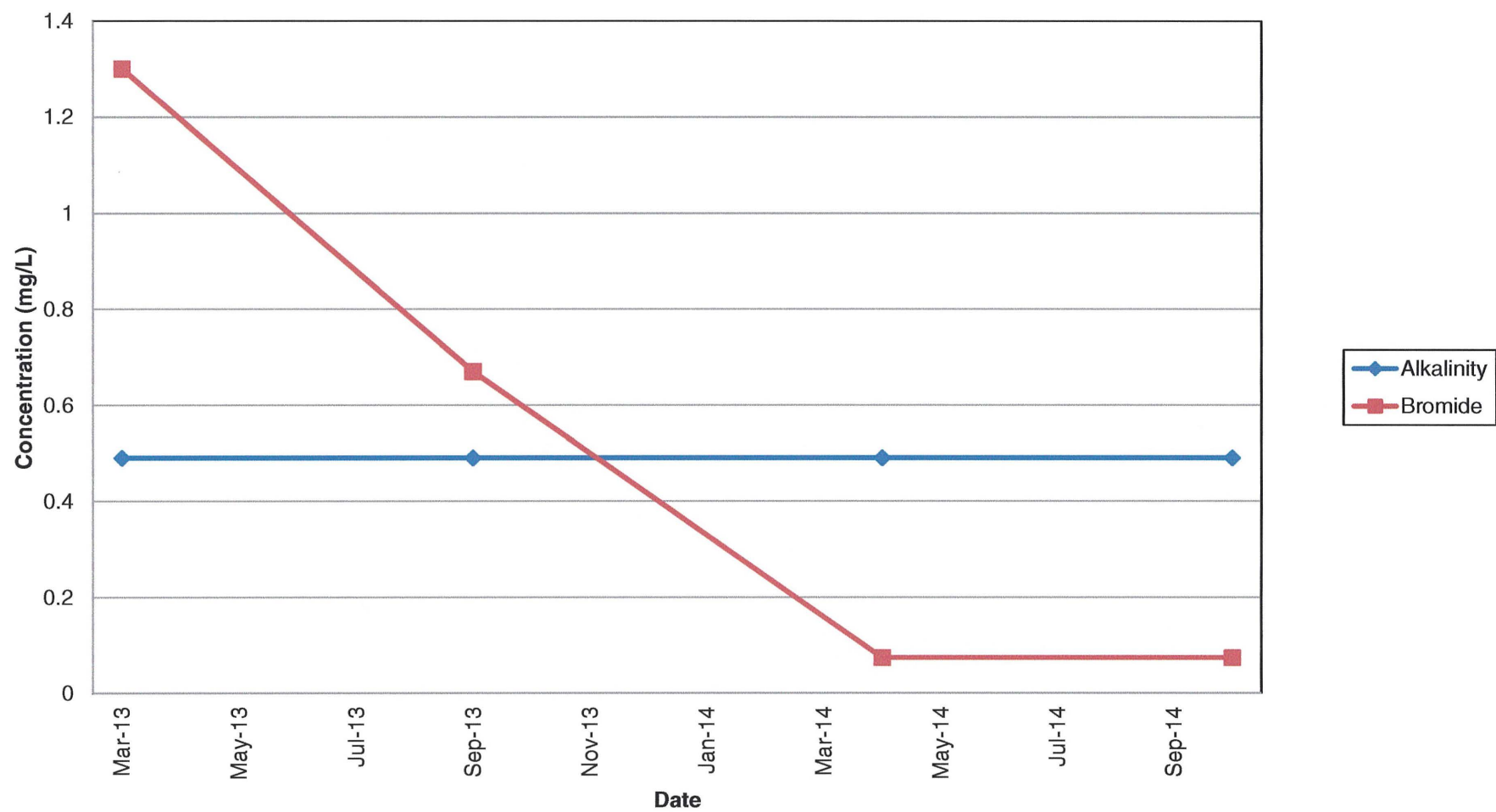
GE-4S Metals (Part 2)



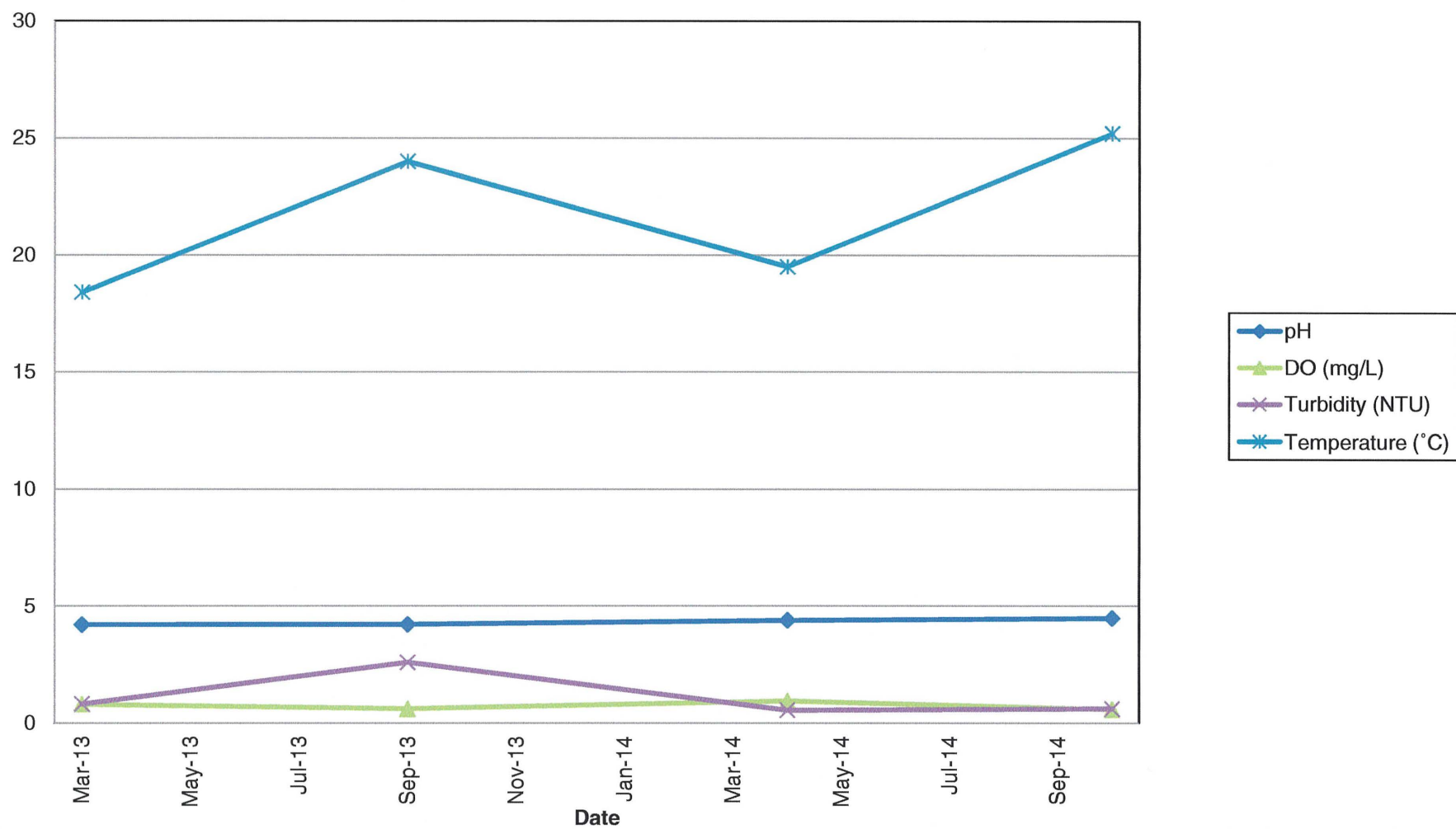
GE-4S General Chemistry (Part 1)



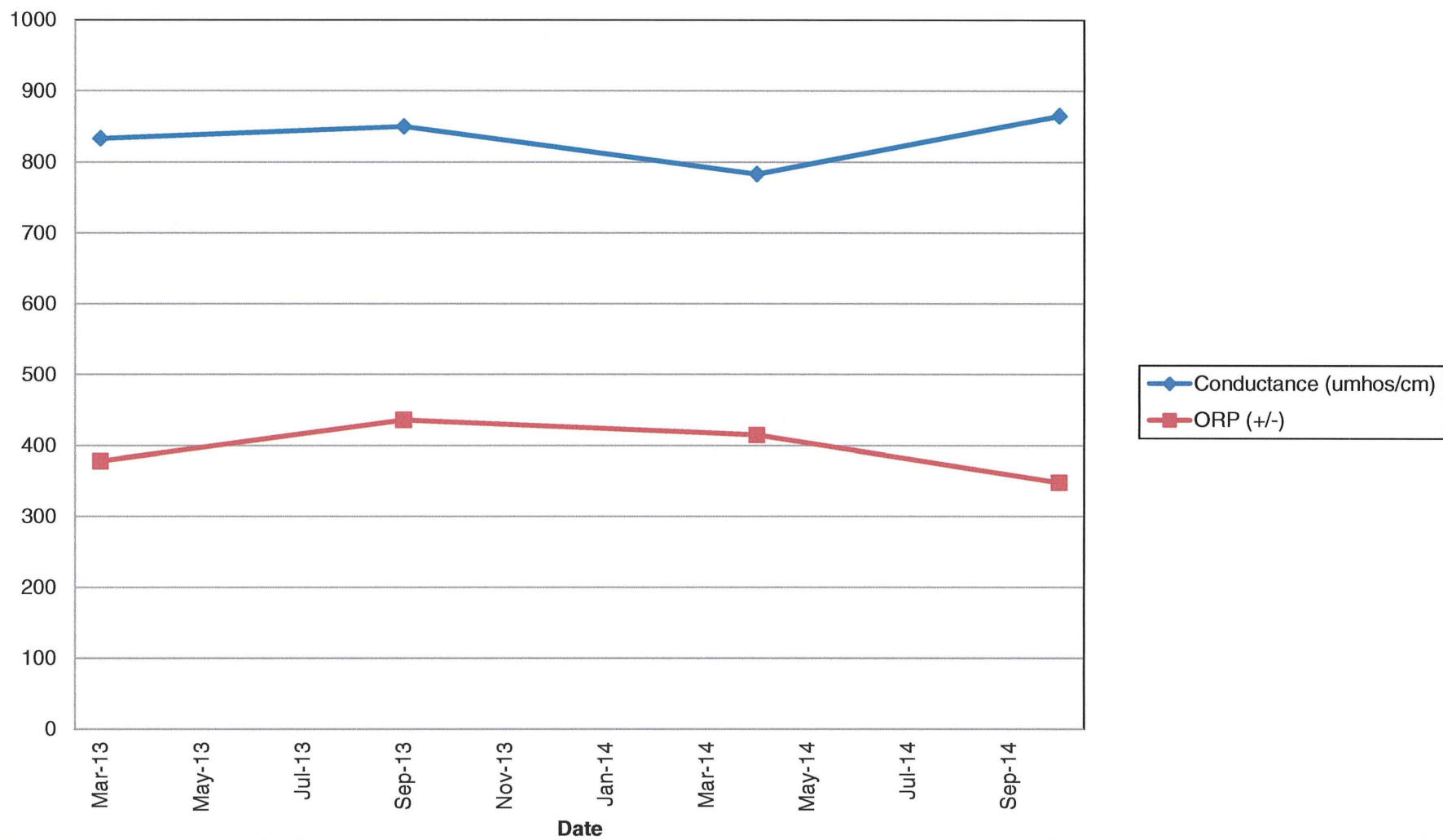
GE-4S General Chemistry (Part 2)



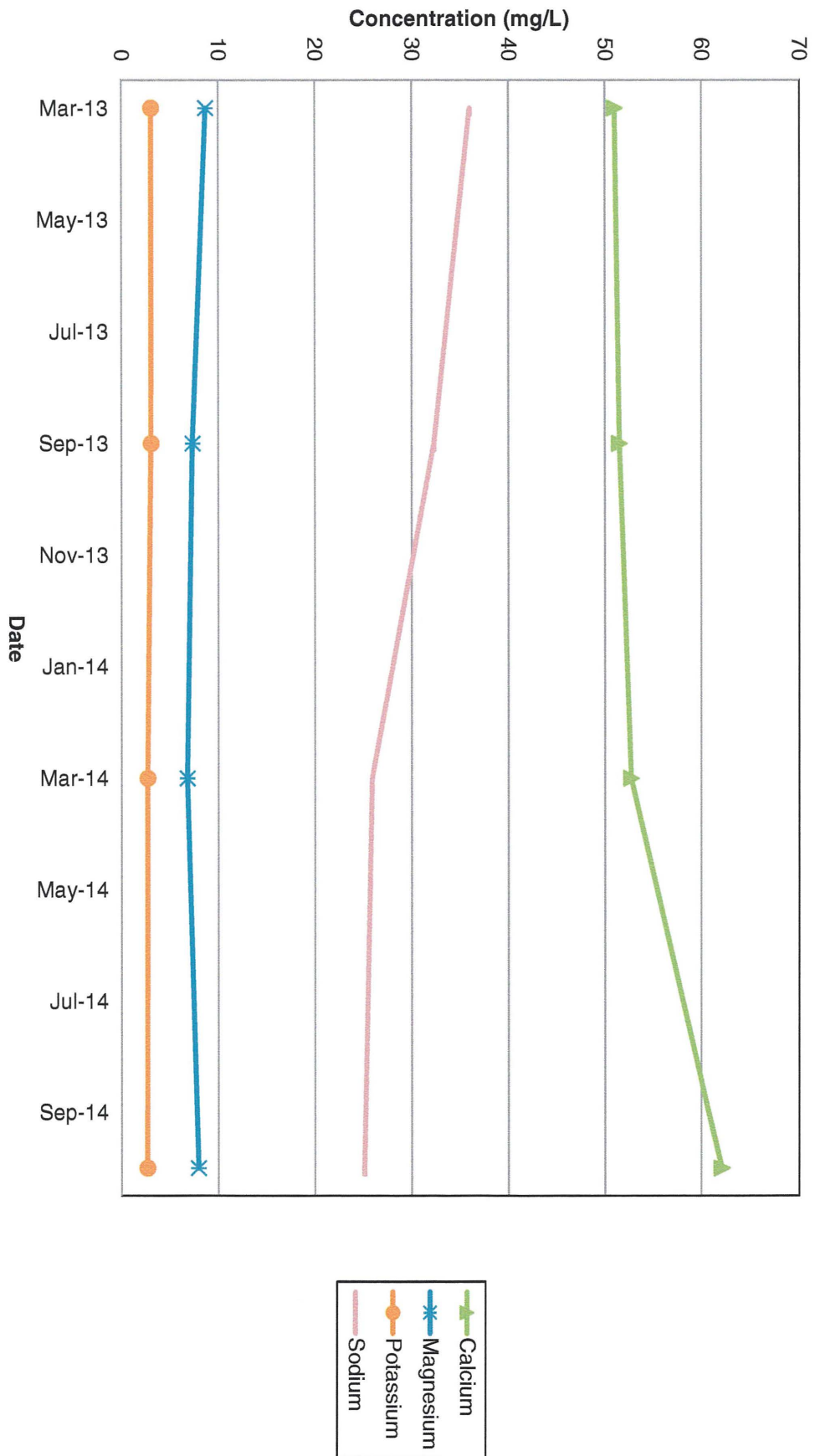
GE-4S Field Parameters (Part 1)



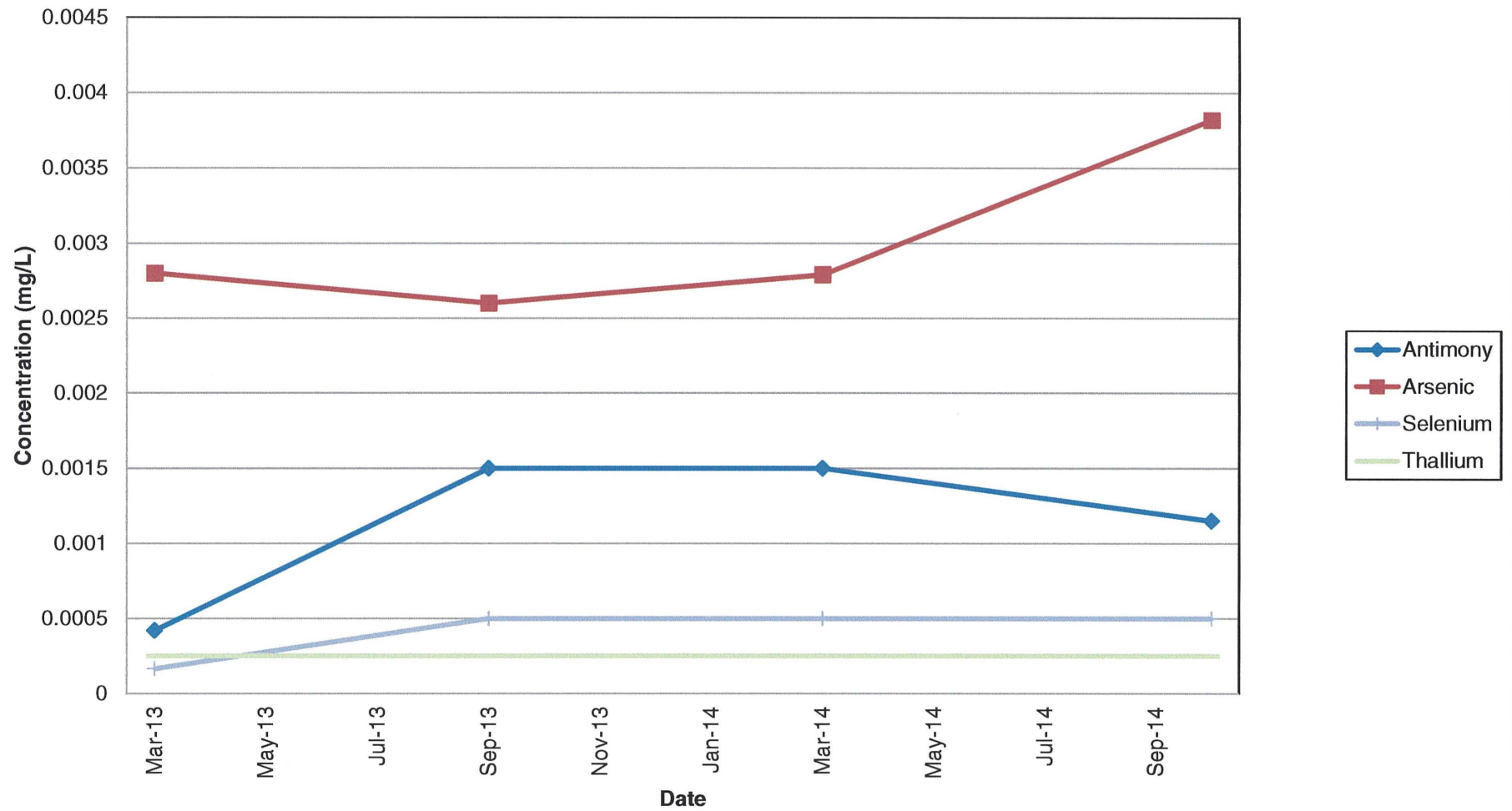
GE-4S Field Parameters (Part 2)



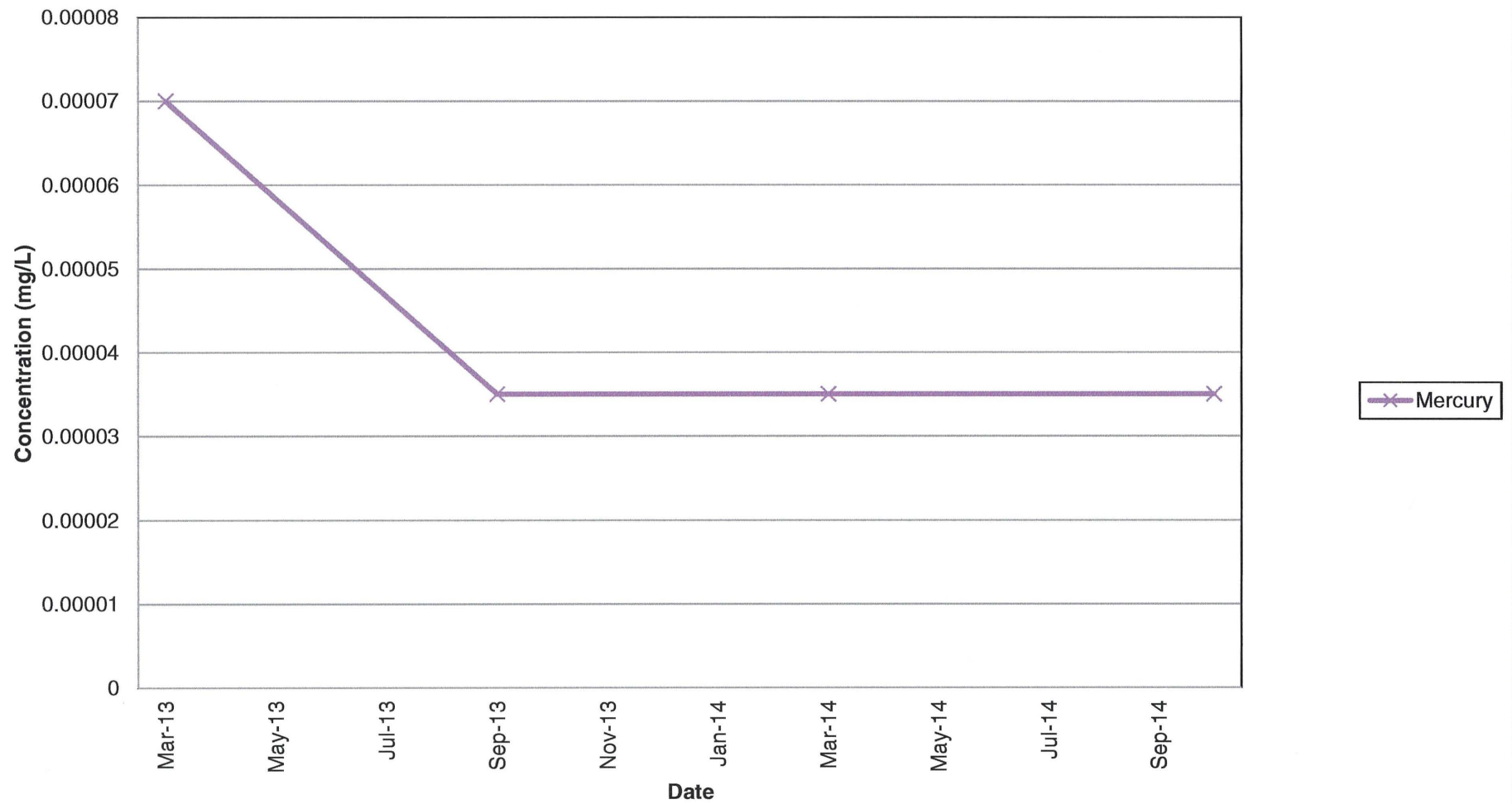
GE-5S Metals (Part 1)



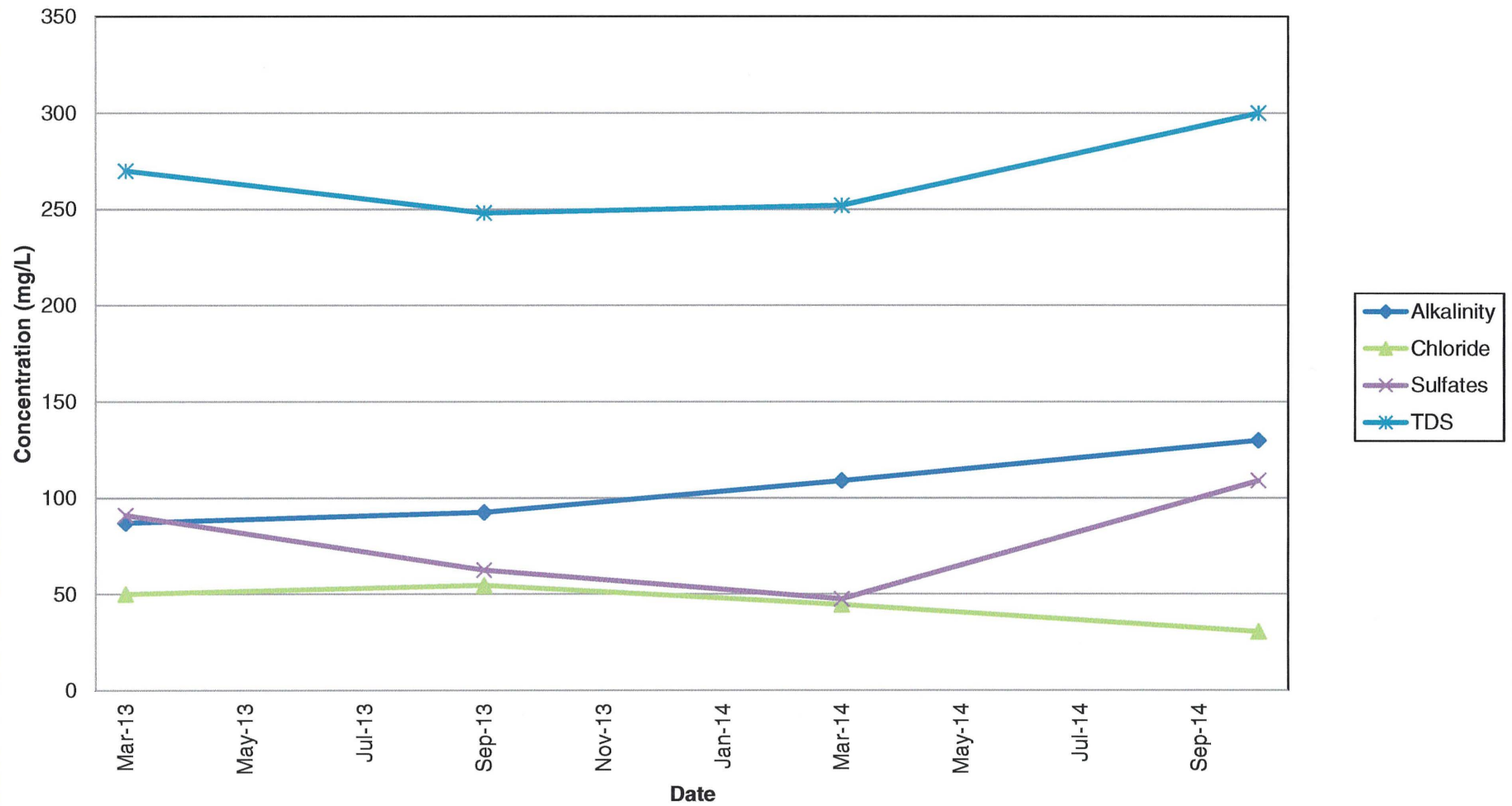
GE-5S Metals (Part 2)



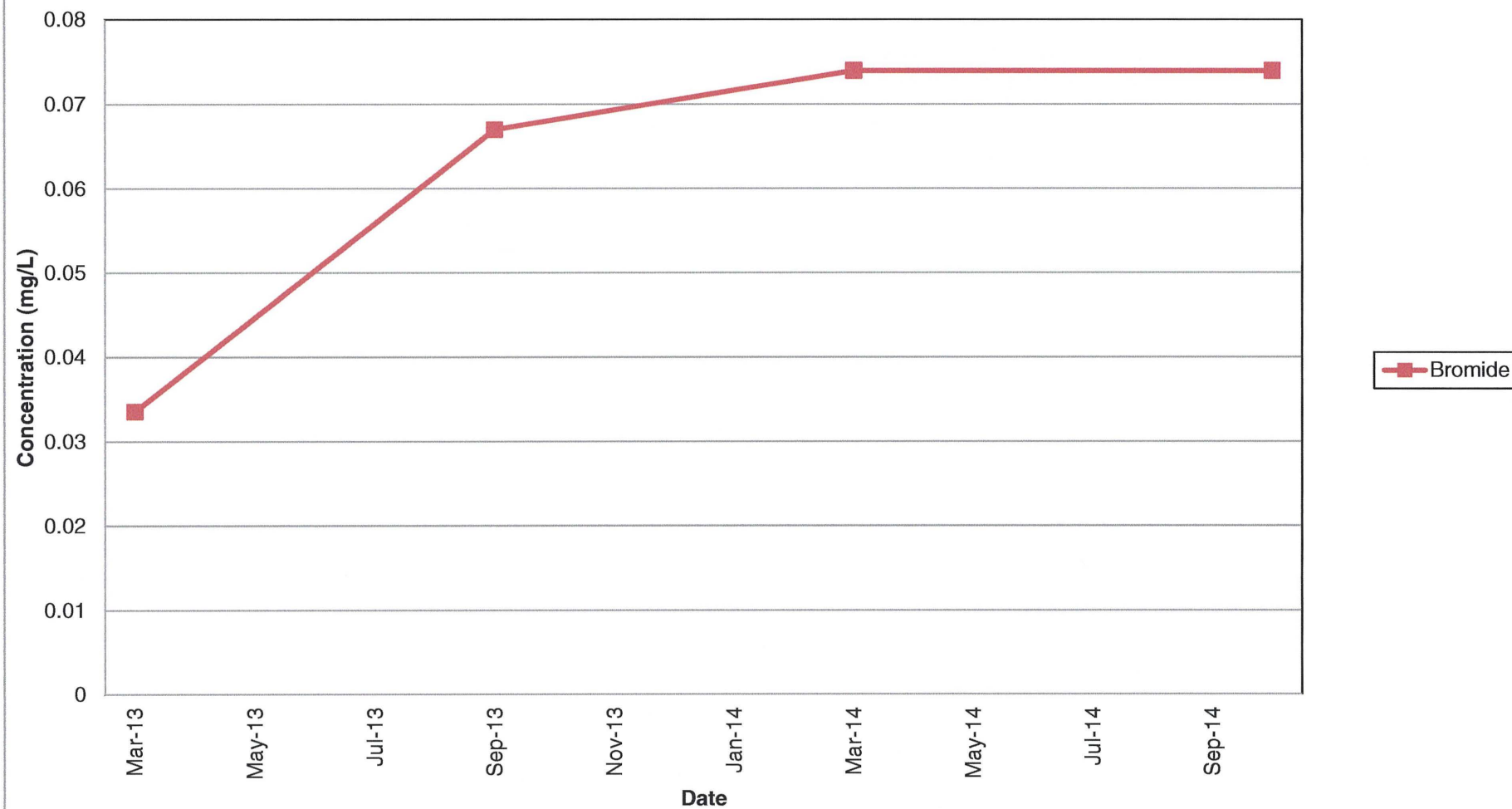
GE-5S Metals (Part 3)



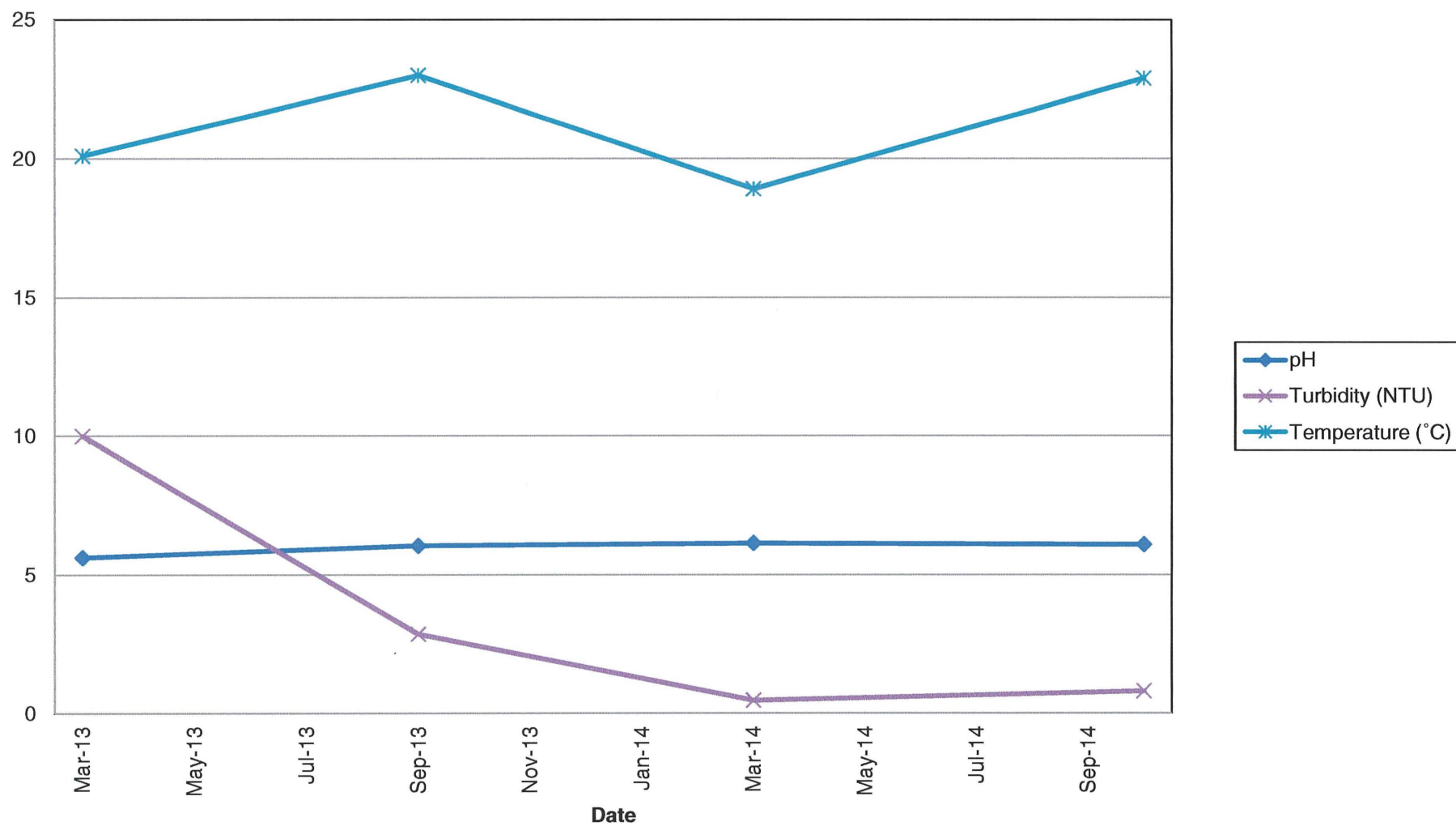
GE-5S General Chemistry (Part 1)



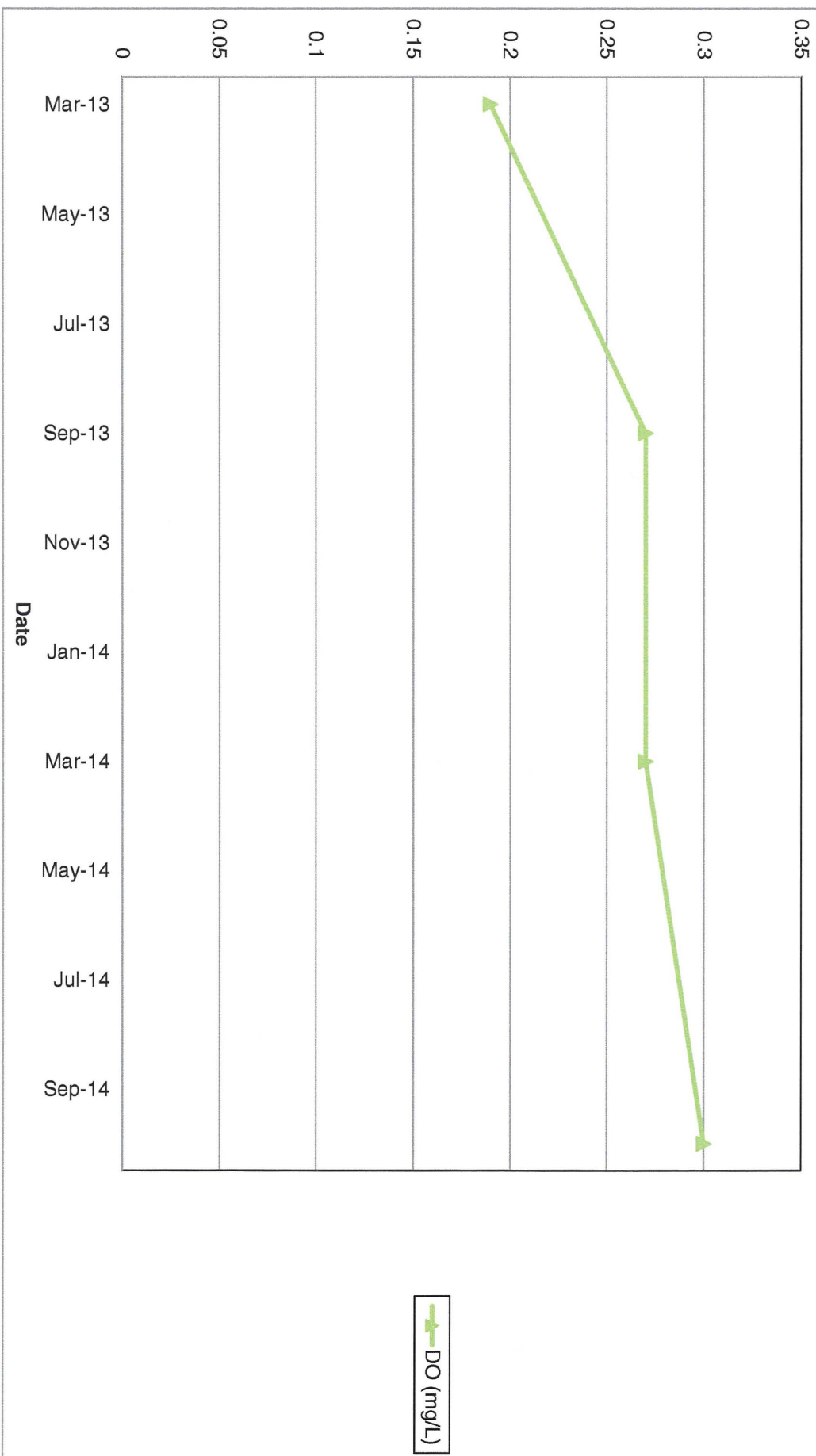
GE-5S General Chemistry (Part 2))



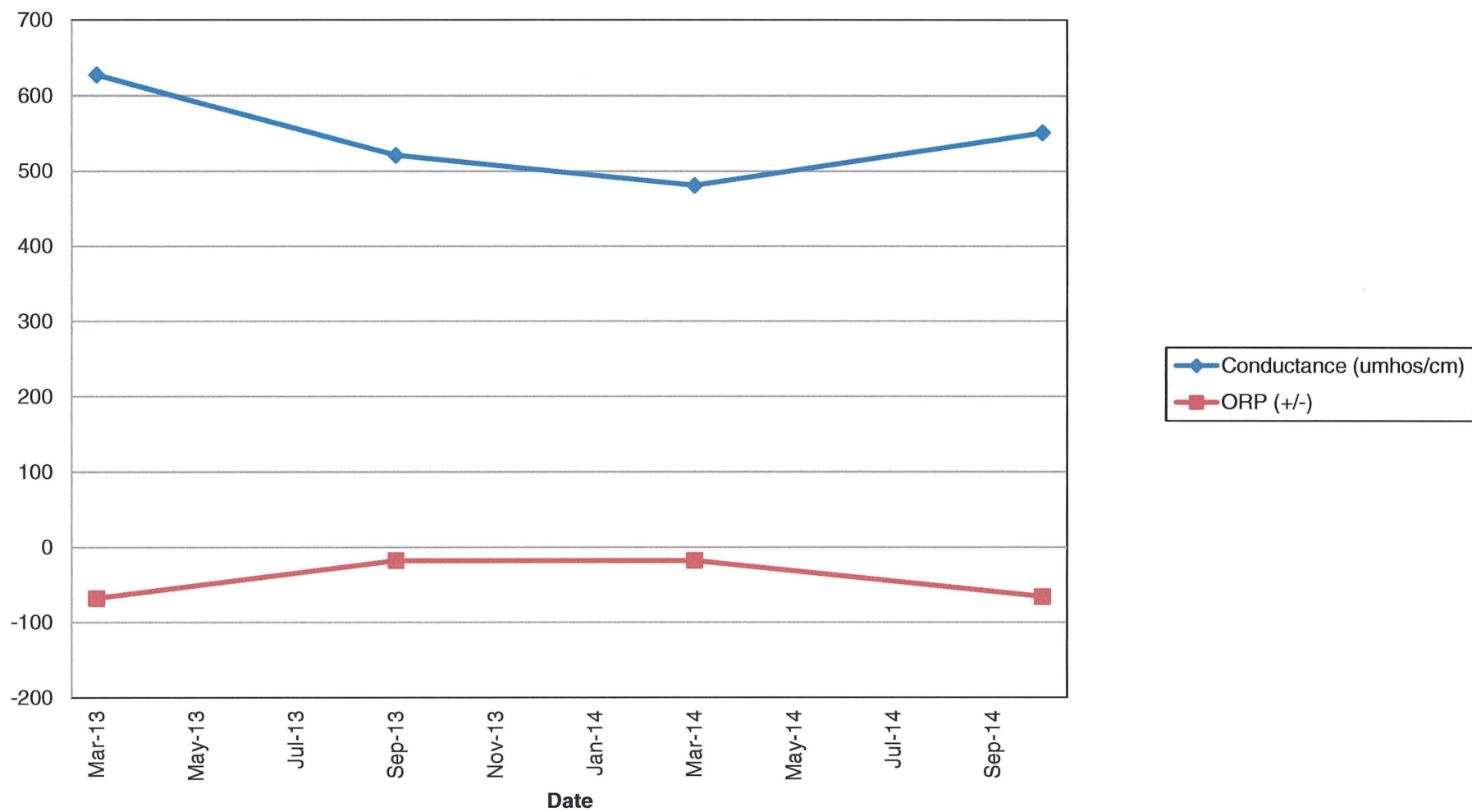
GE-5S Field Parameters (Part 1)



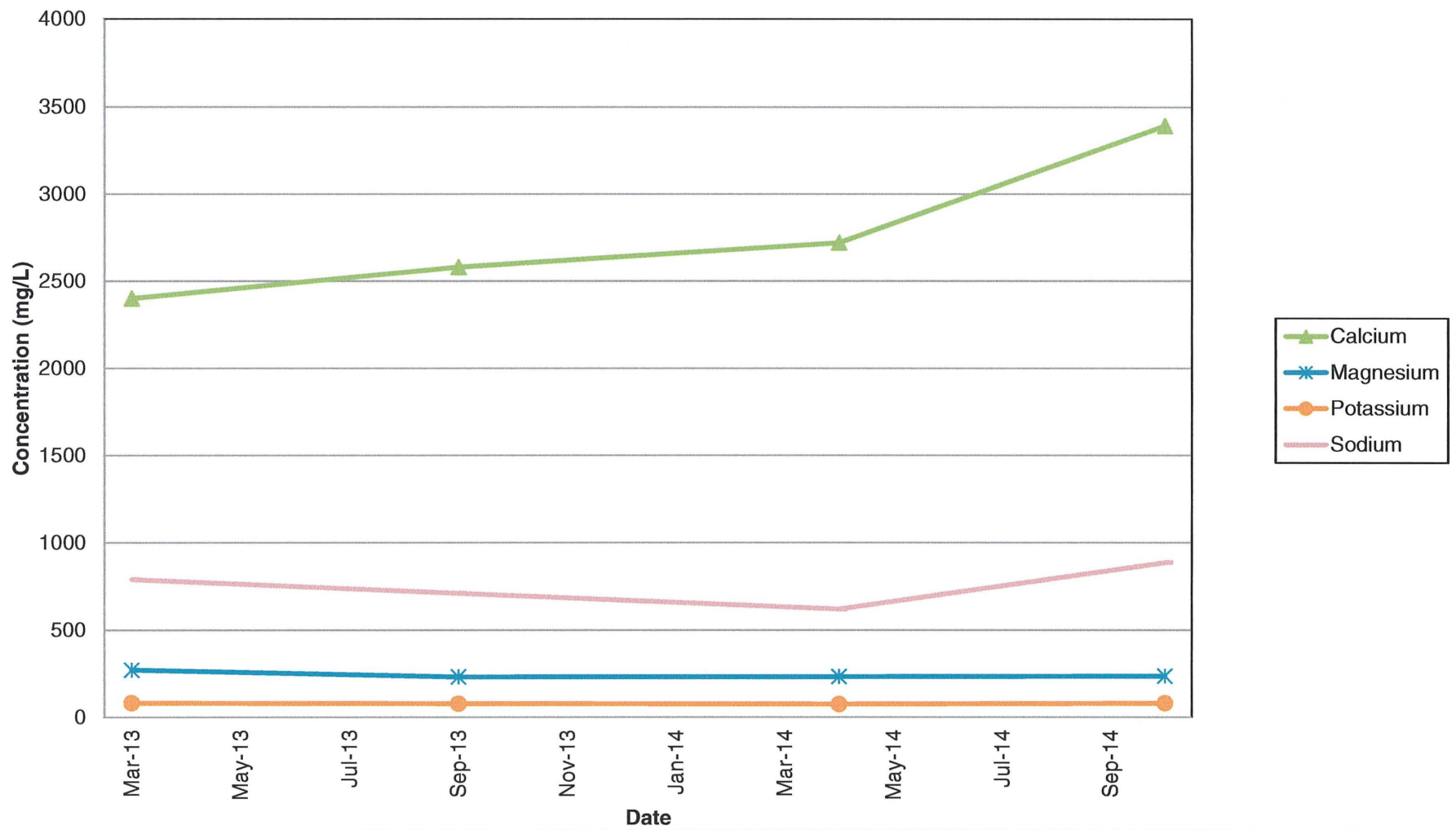
GE-5S Field Parameters (Part 2)



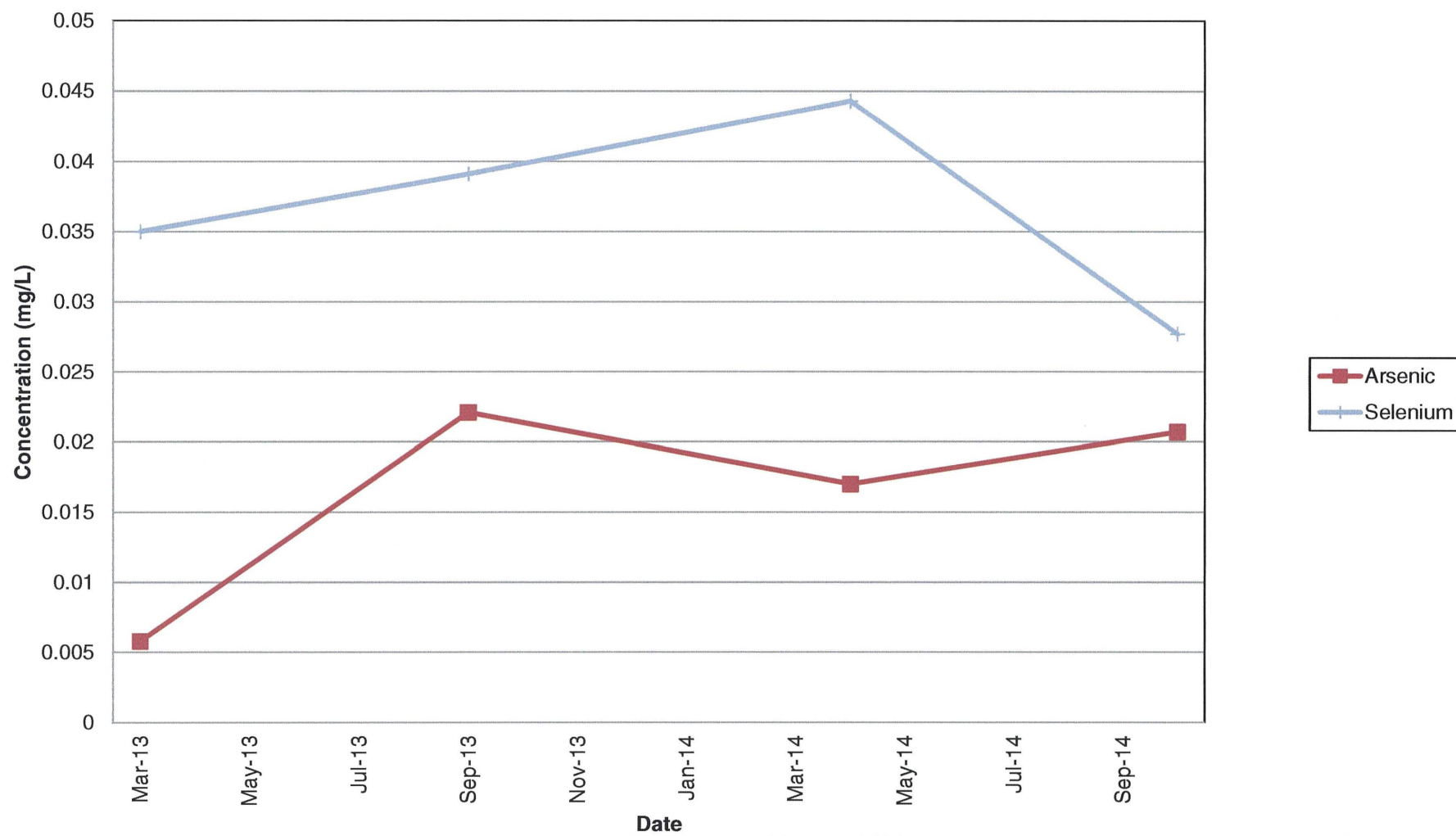
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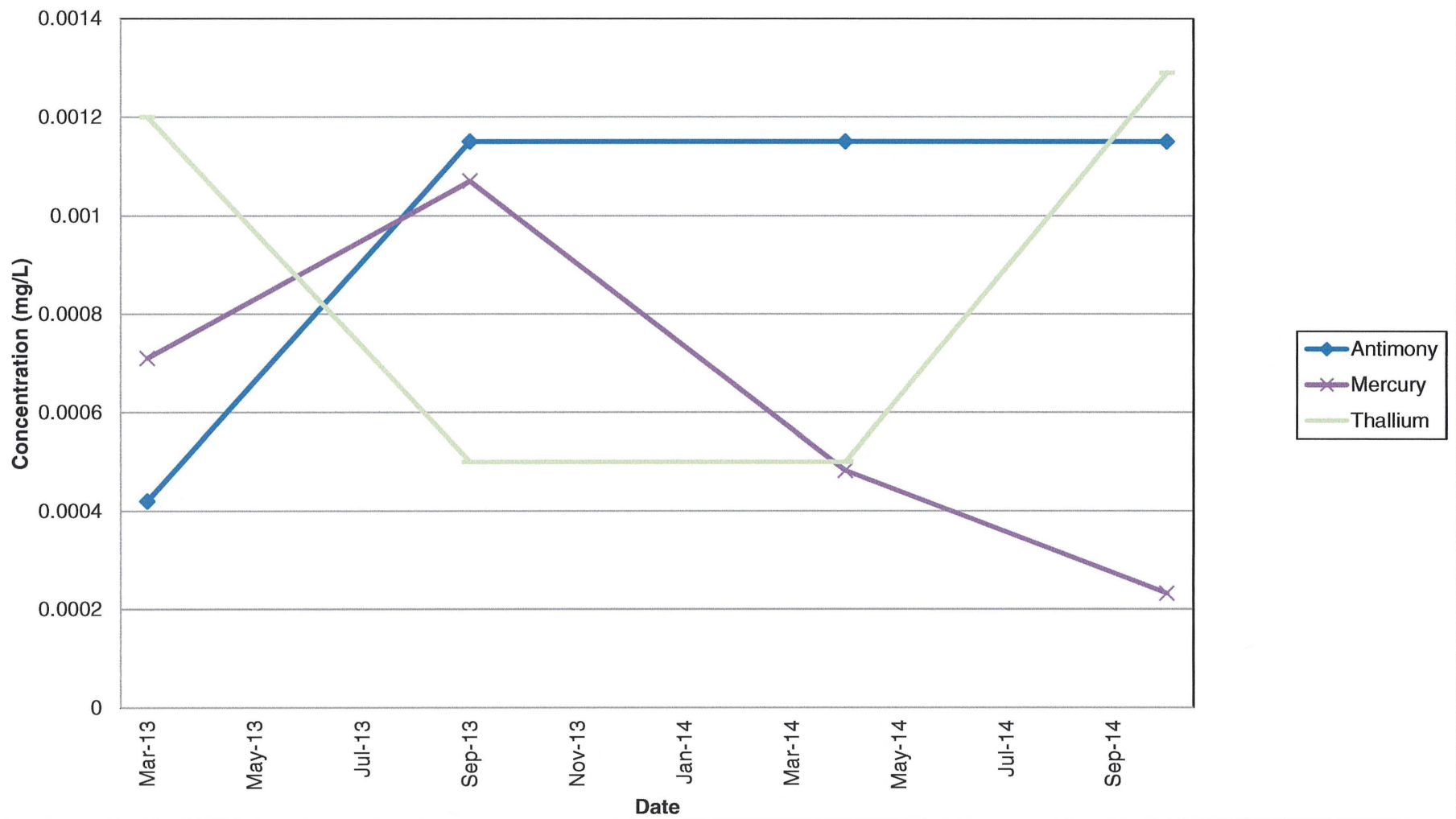
GE-6S Metals (Part 1)



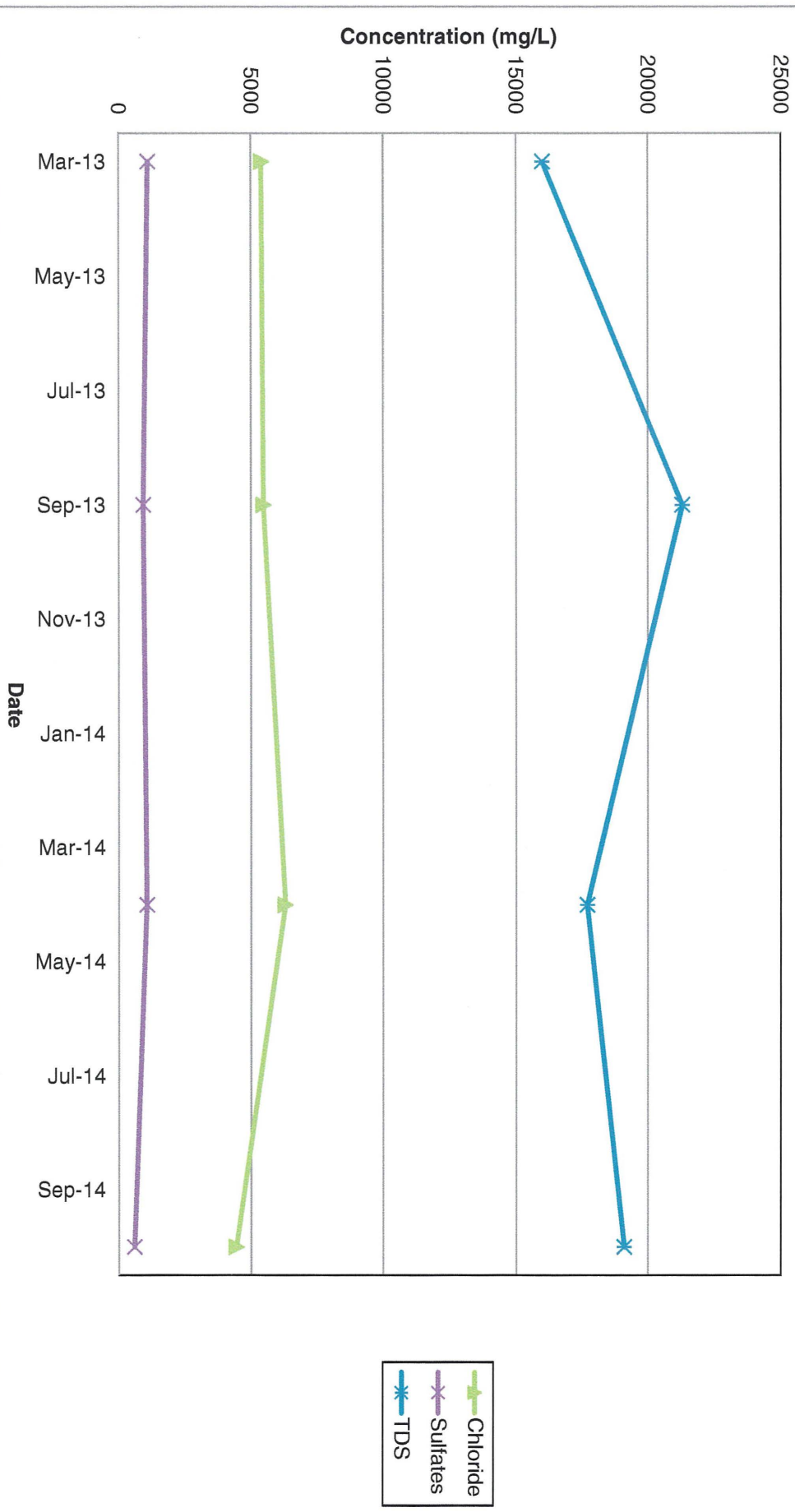
GE-6S Metals (Part 2)



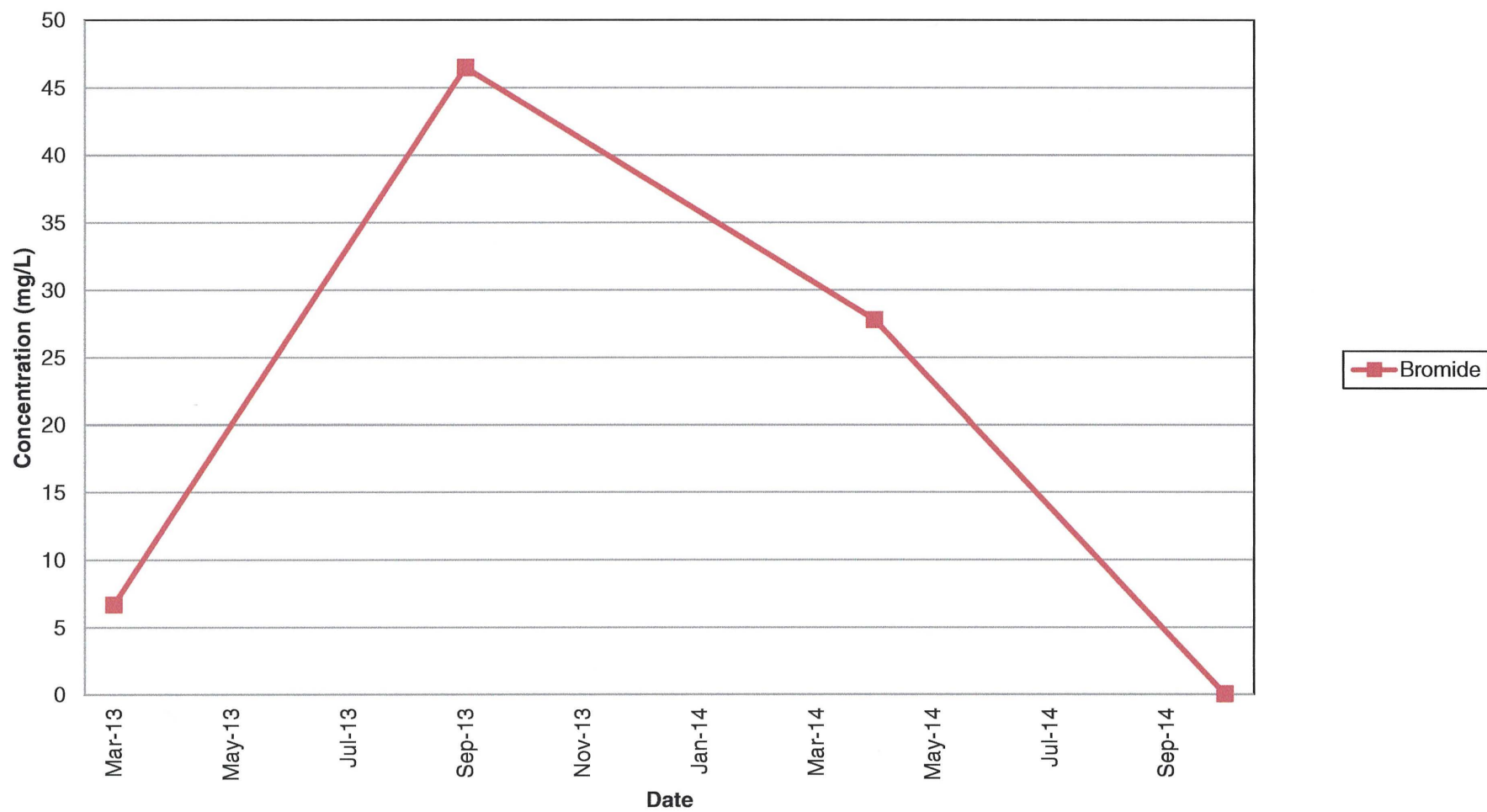
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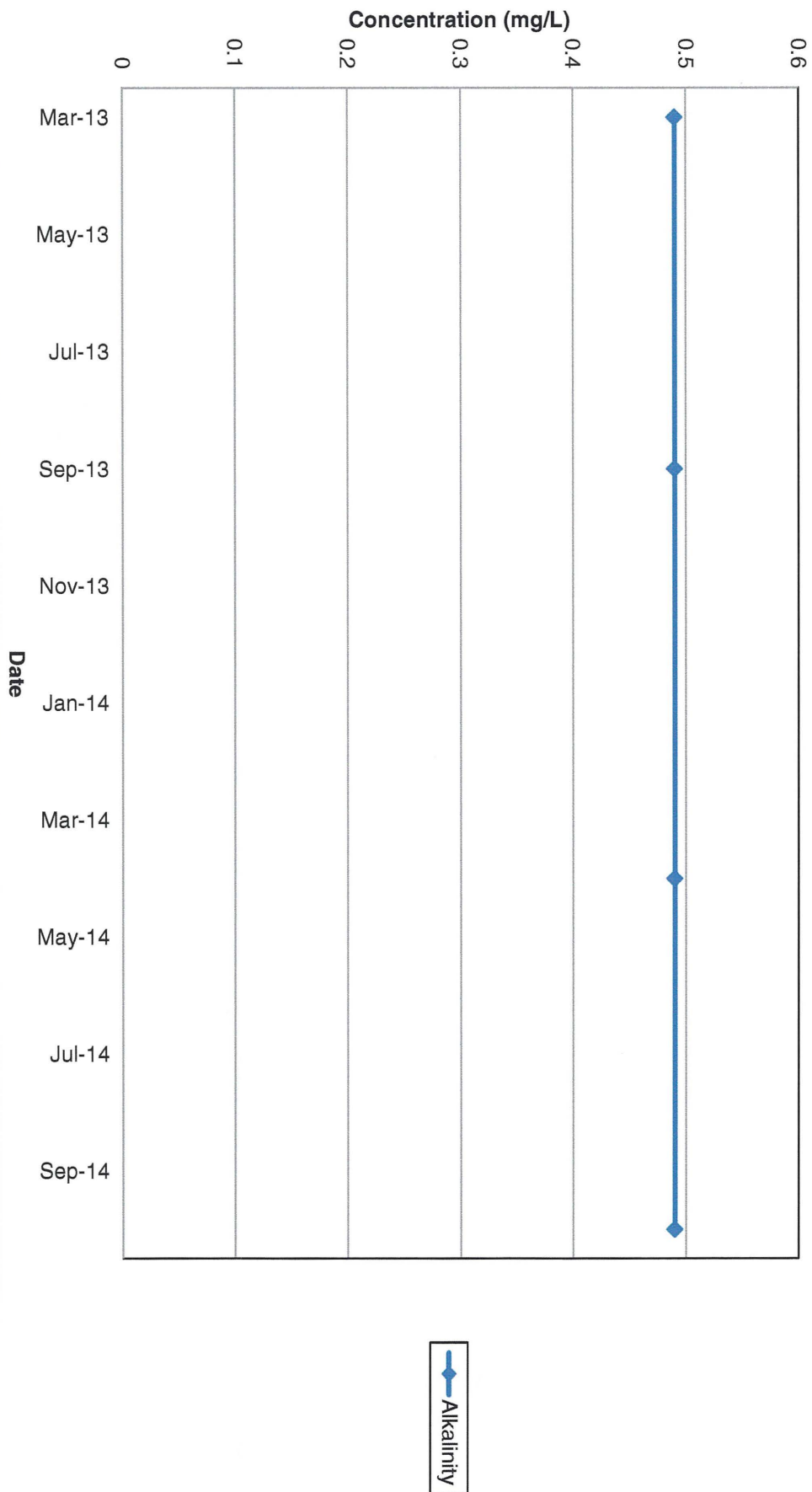
GE-6S General Chemistry (Part 1)



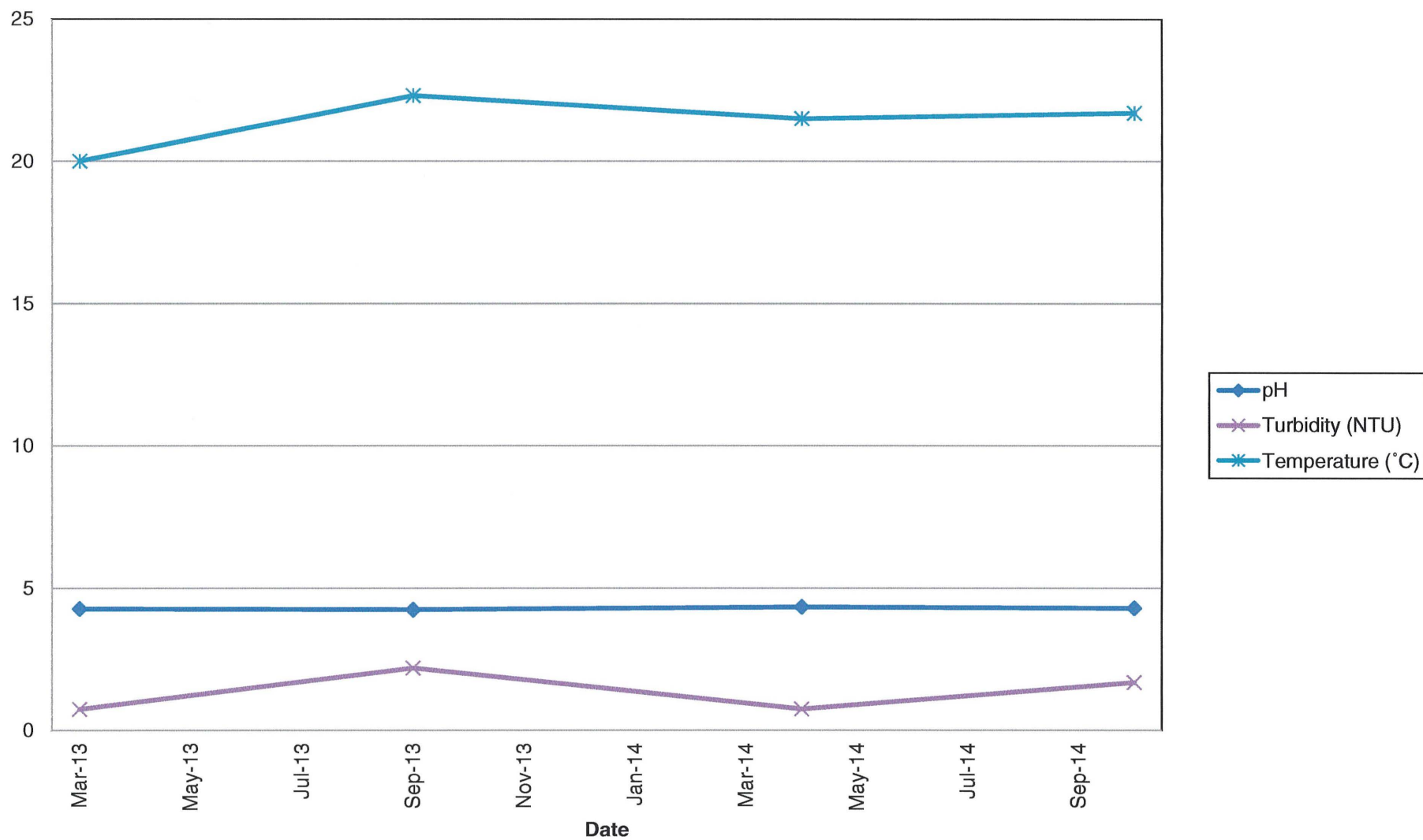
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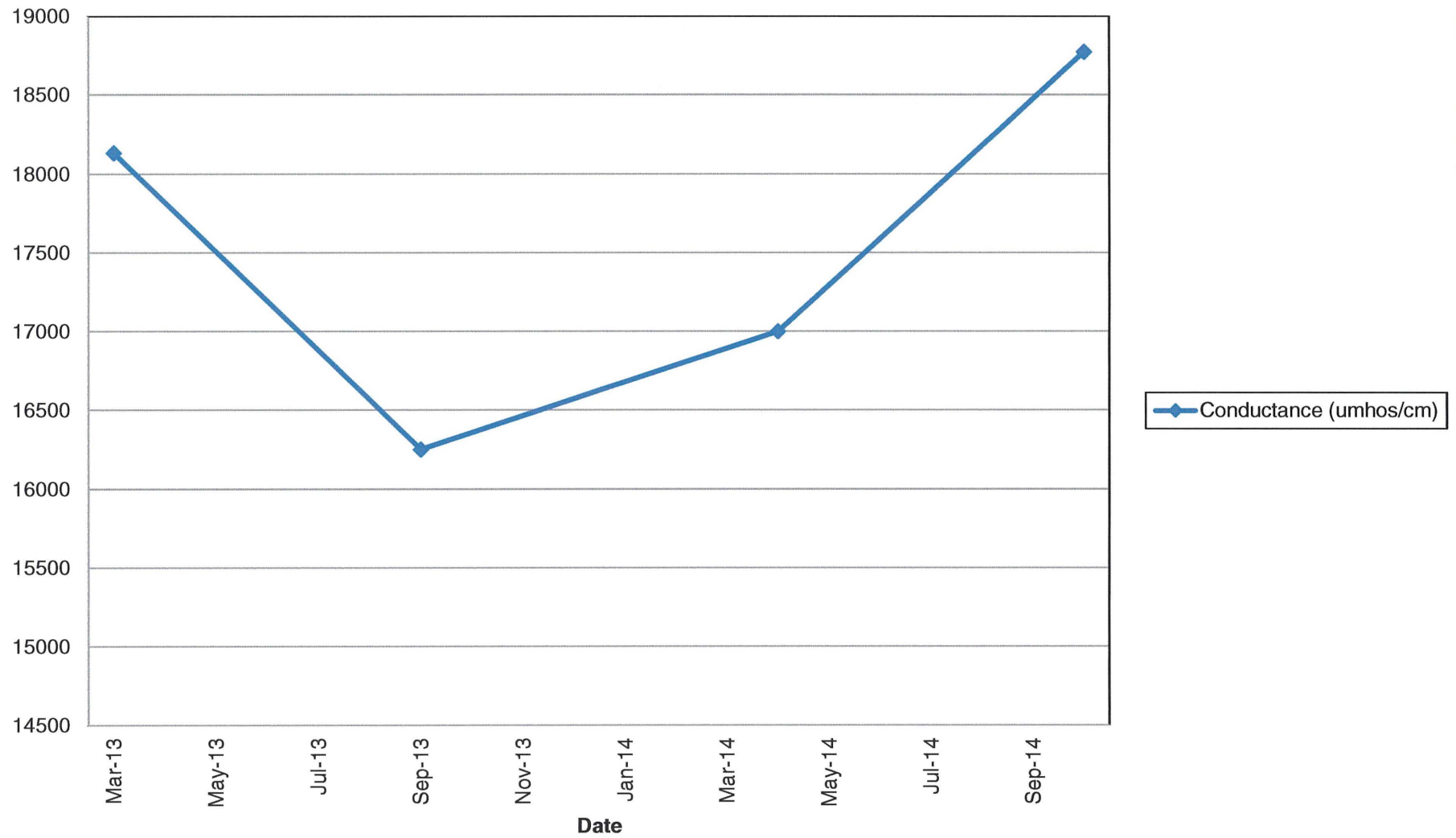
GE-6S General Chemistry (Part 3)



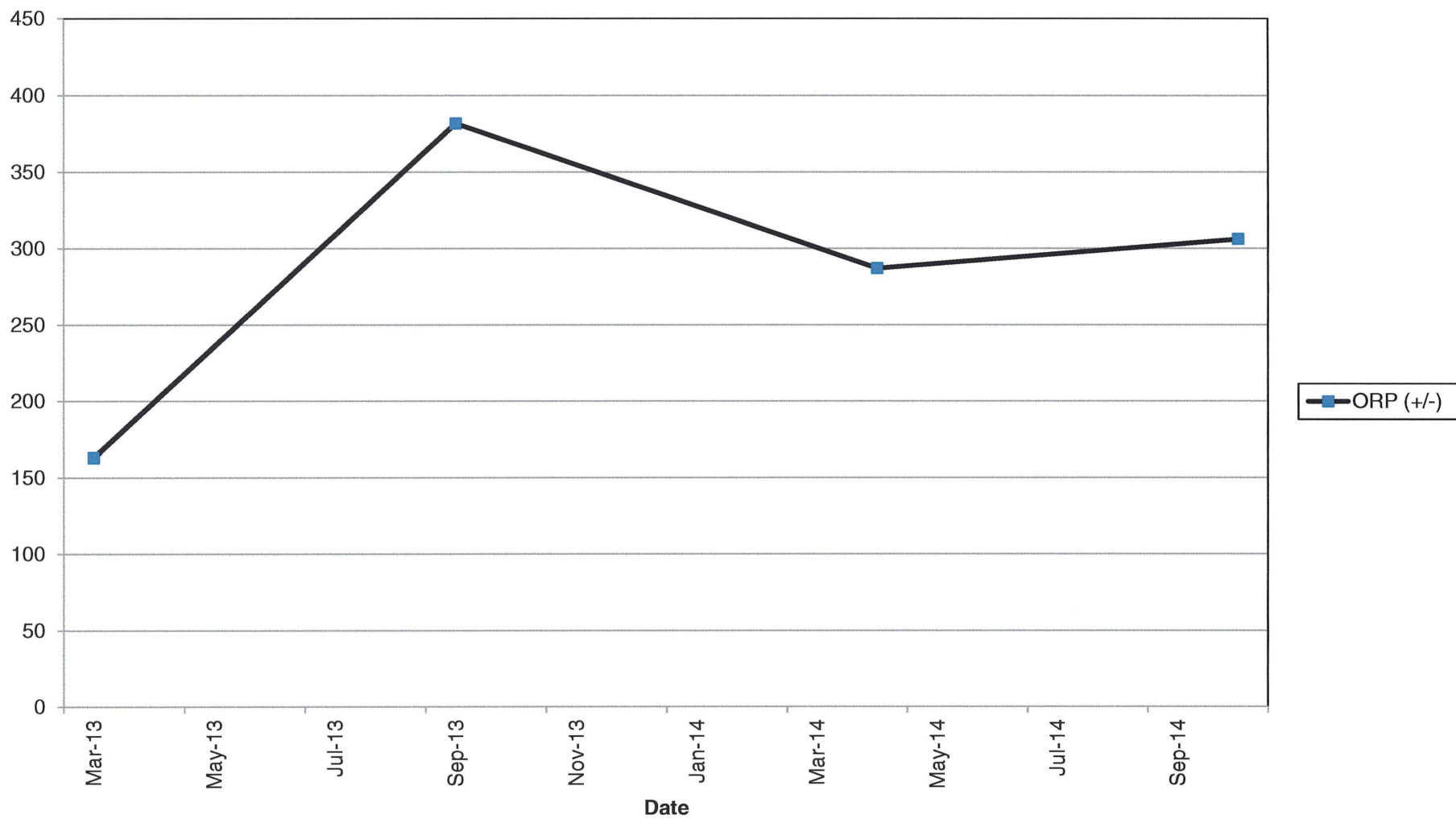
GE-6S Field Parameters (Part 1)



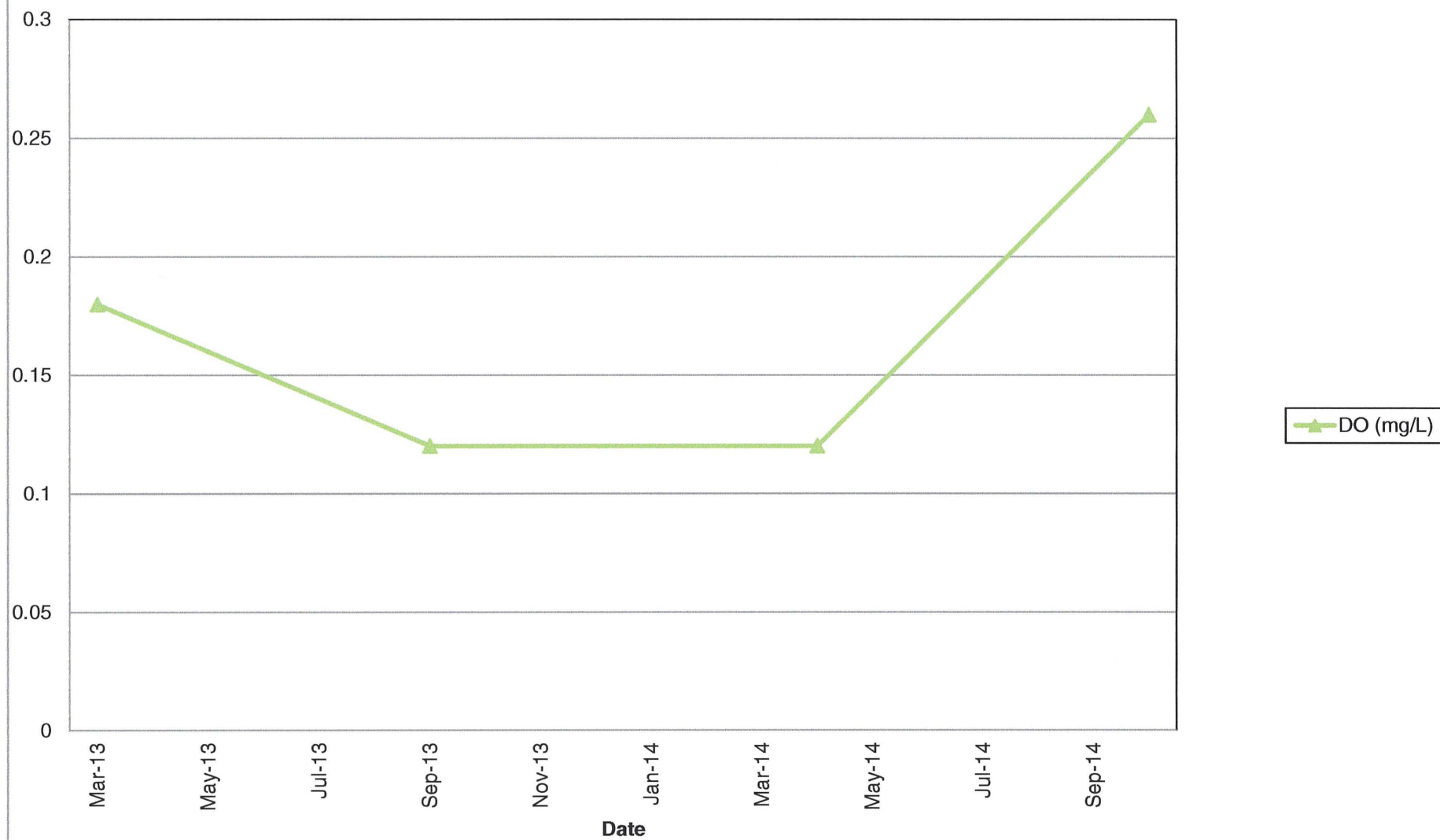
GE-6S Field Parameters (Part 2)



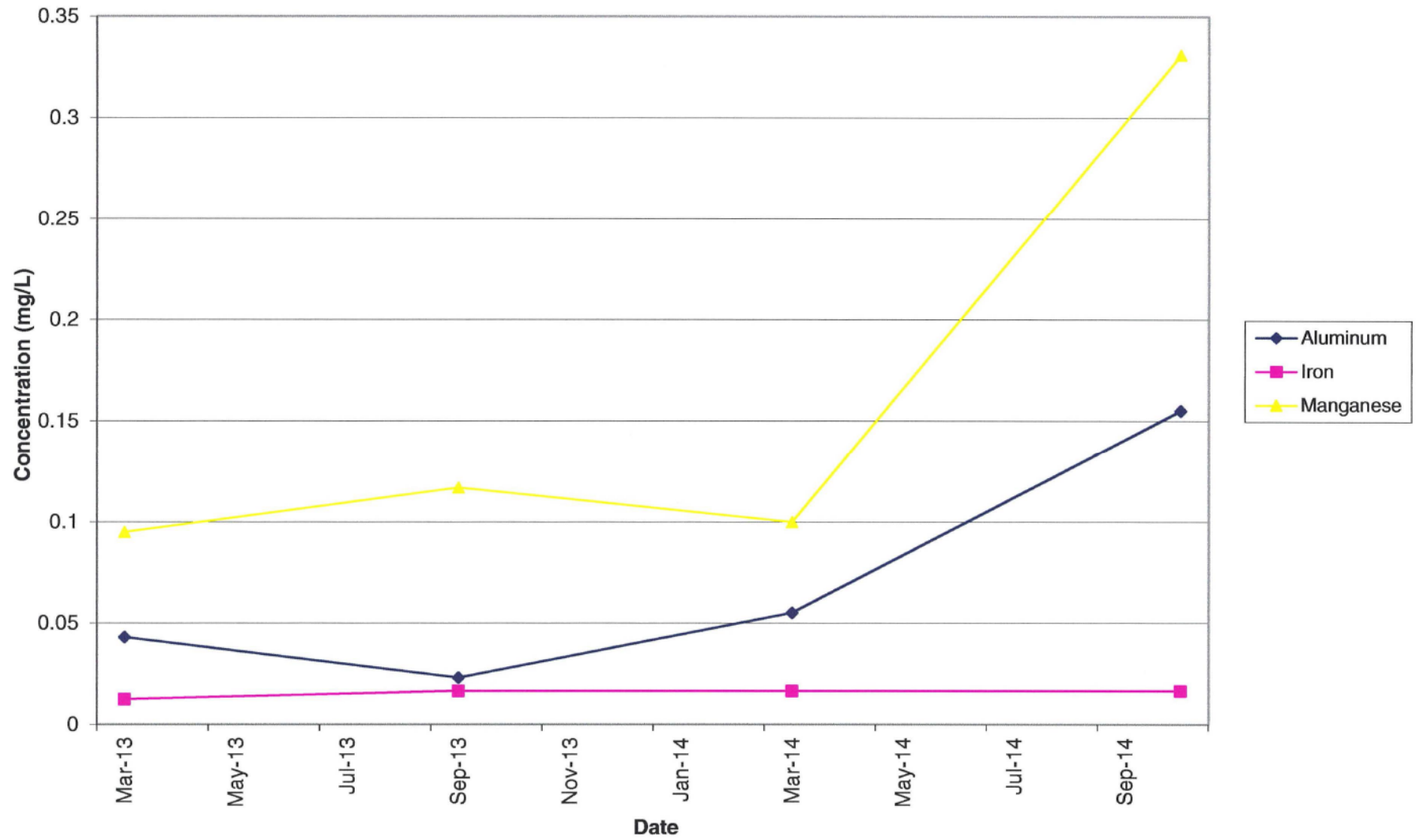
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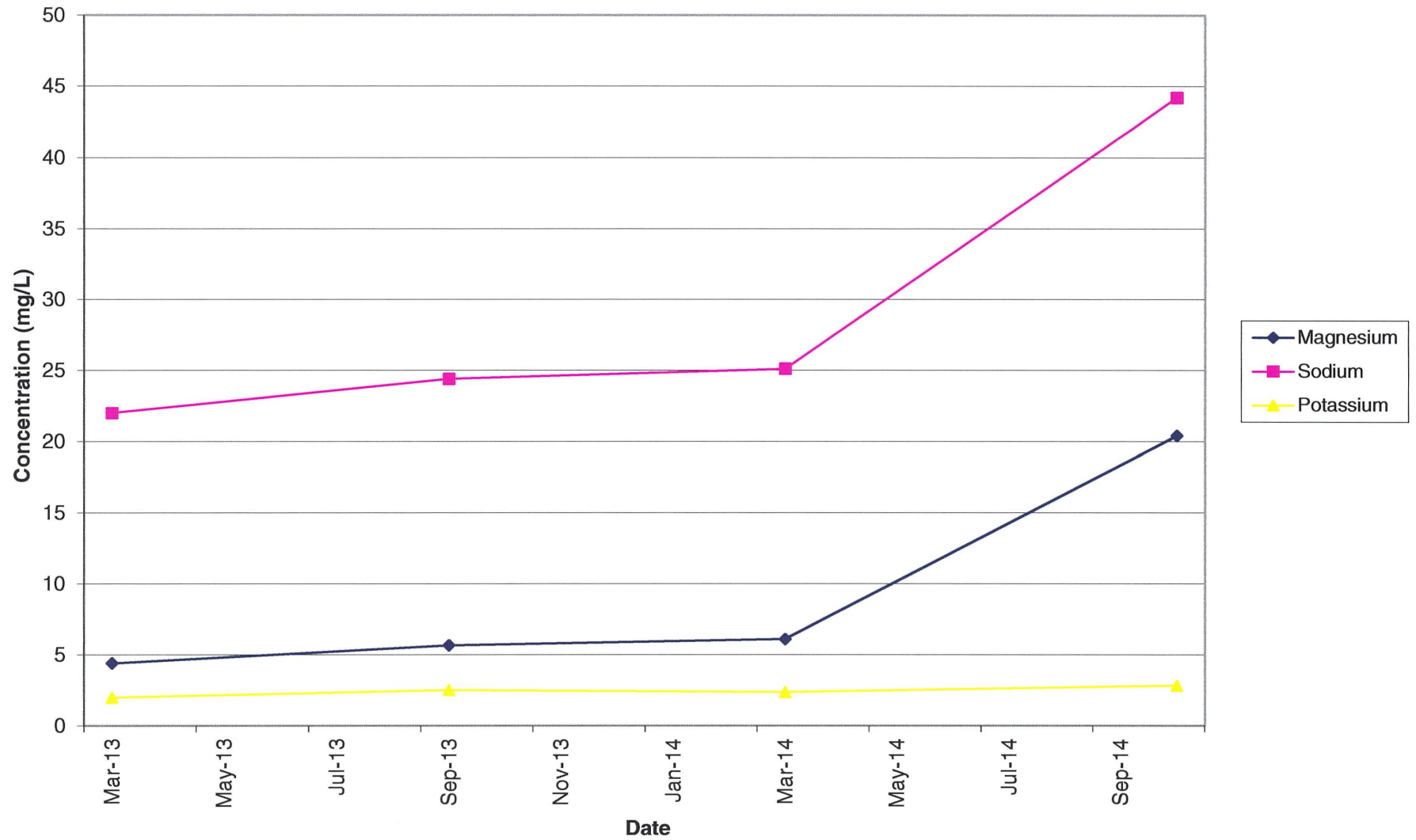
GE-6S Field Parameters (Part 4)



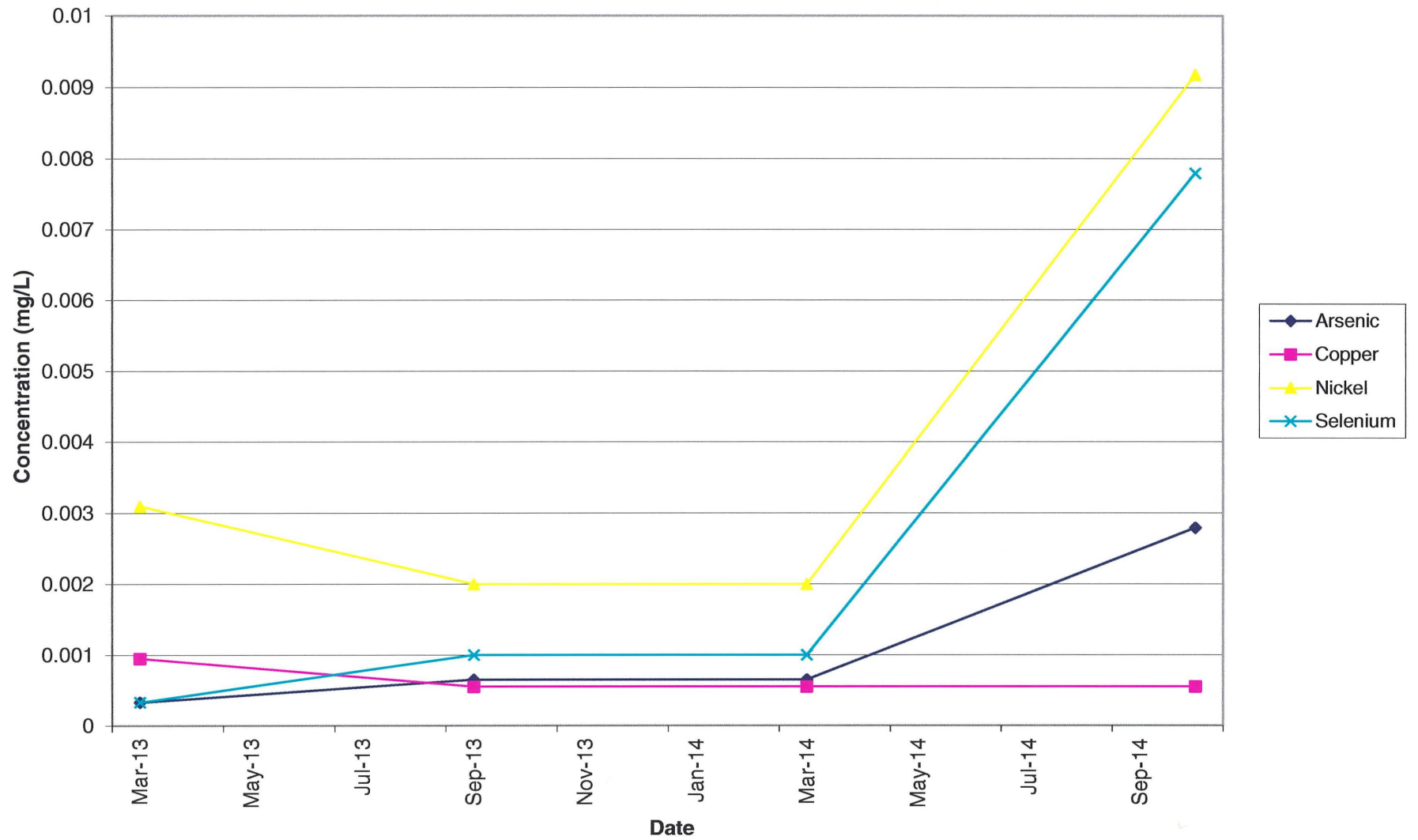
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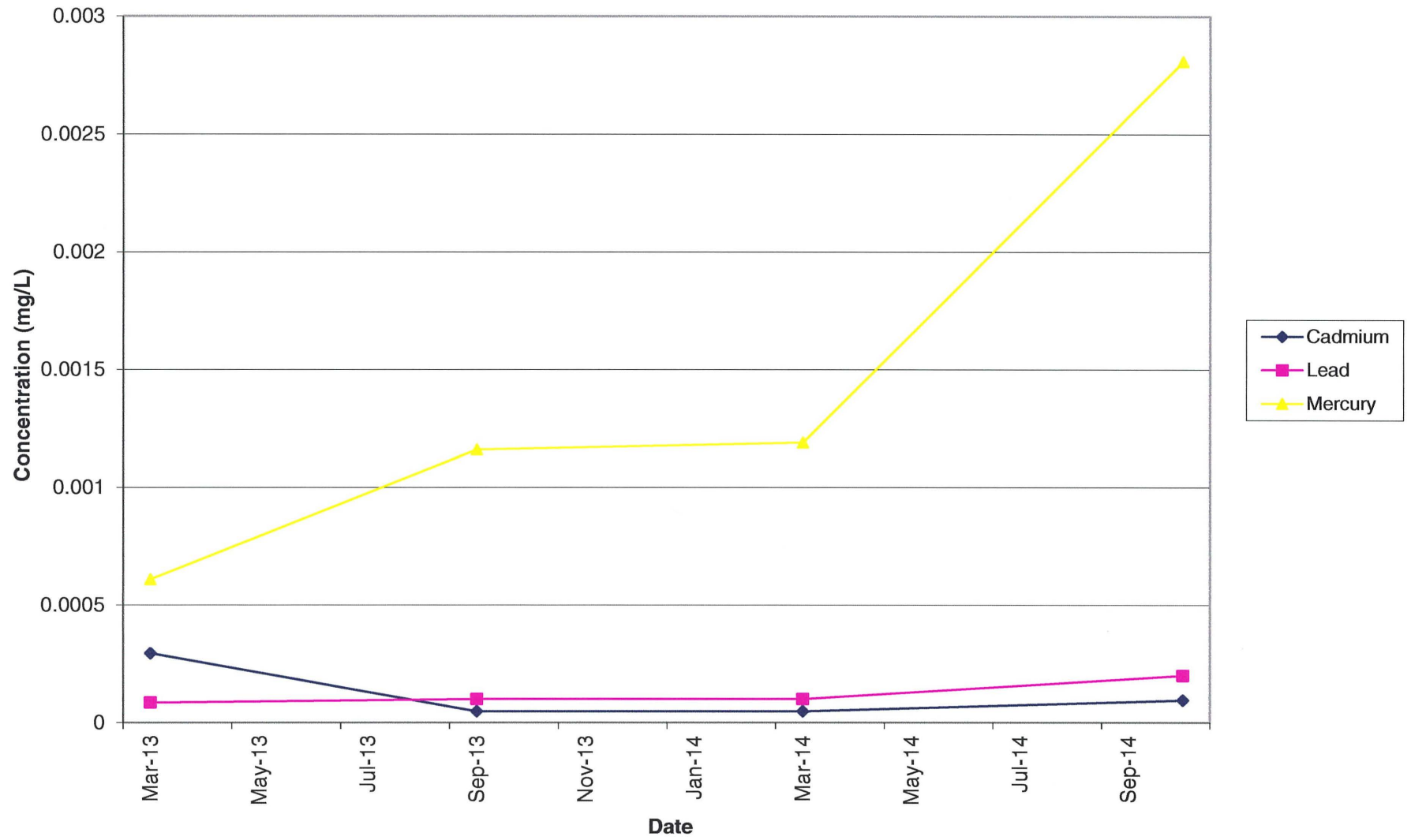
MWI-1 Metals (Part 2)



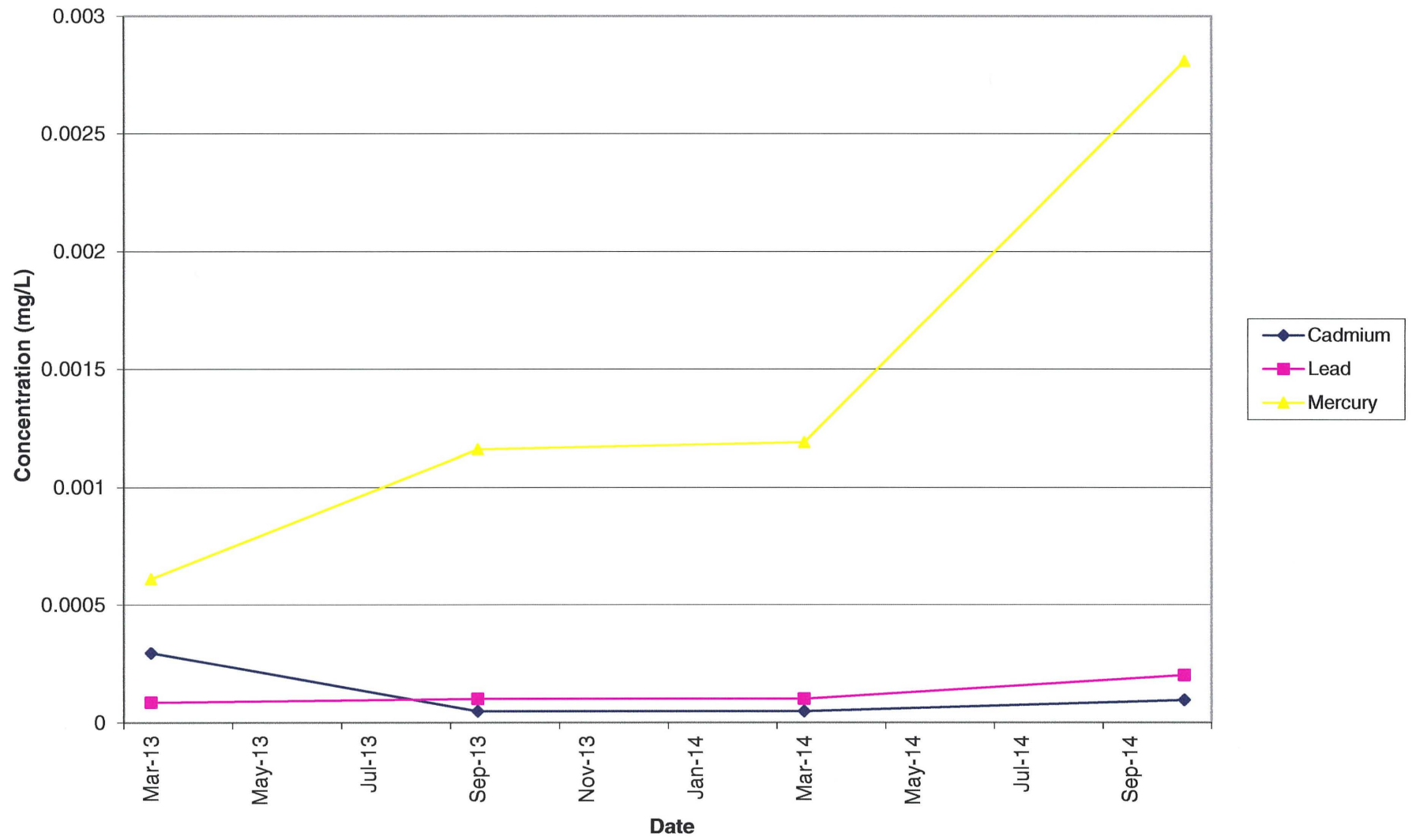
MWI-1 Metals (Part 3)



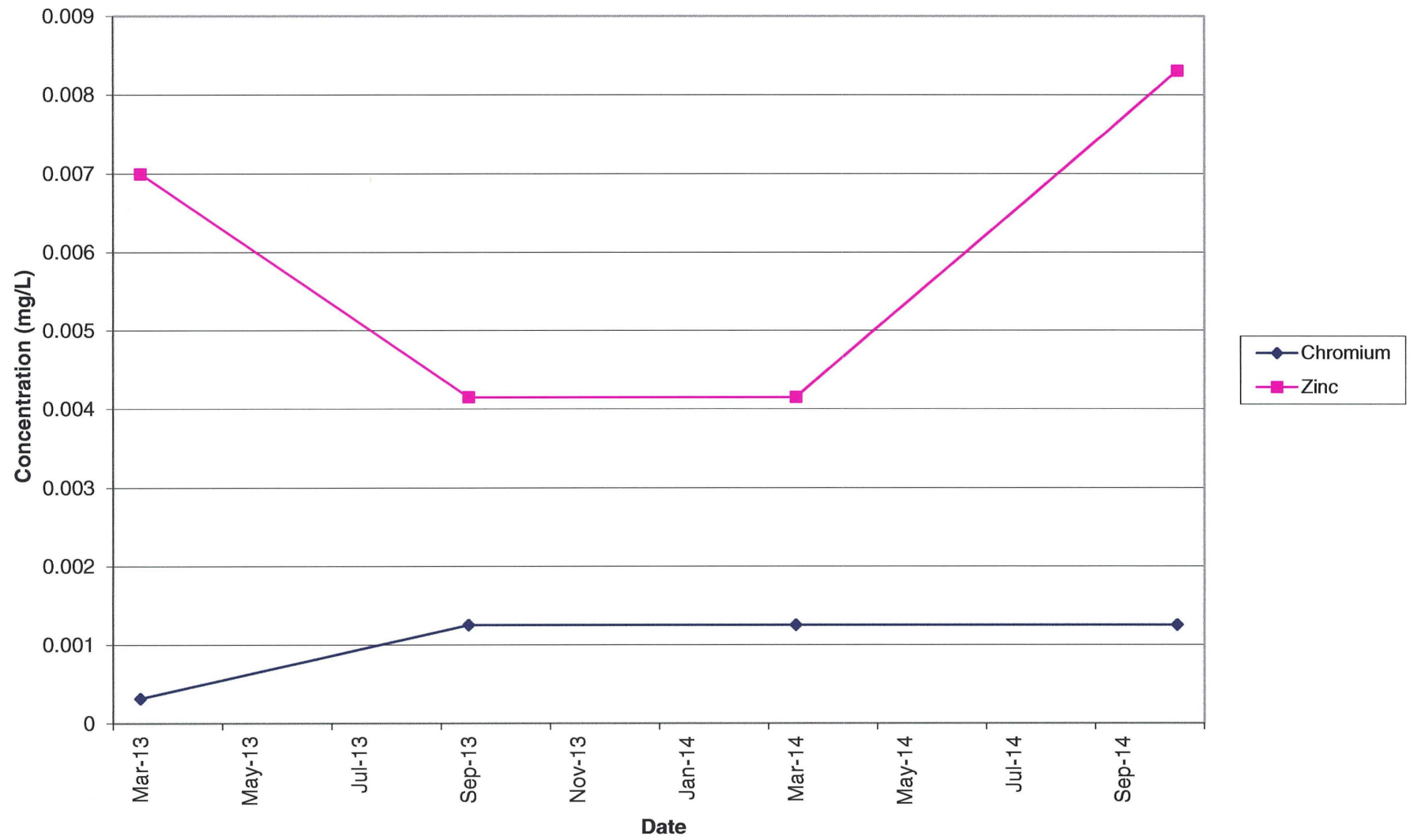
MWI-1 Metals (Part 4)



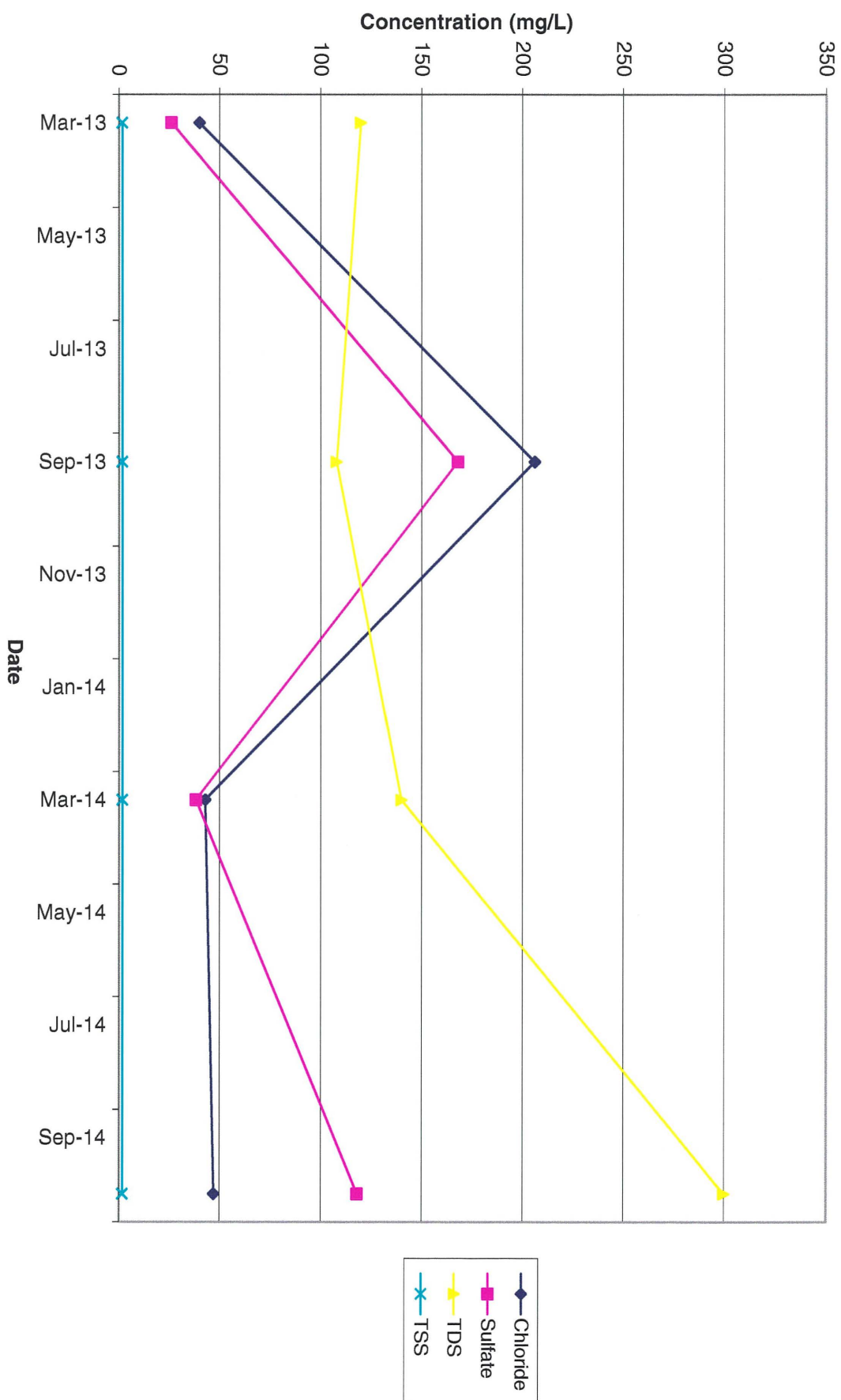
MWI-1 Metals (Part 4)



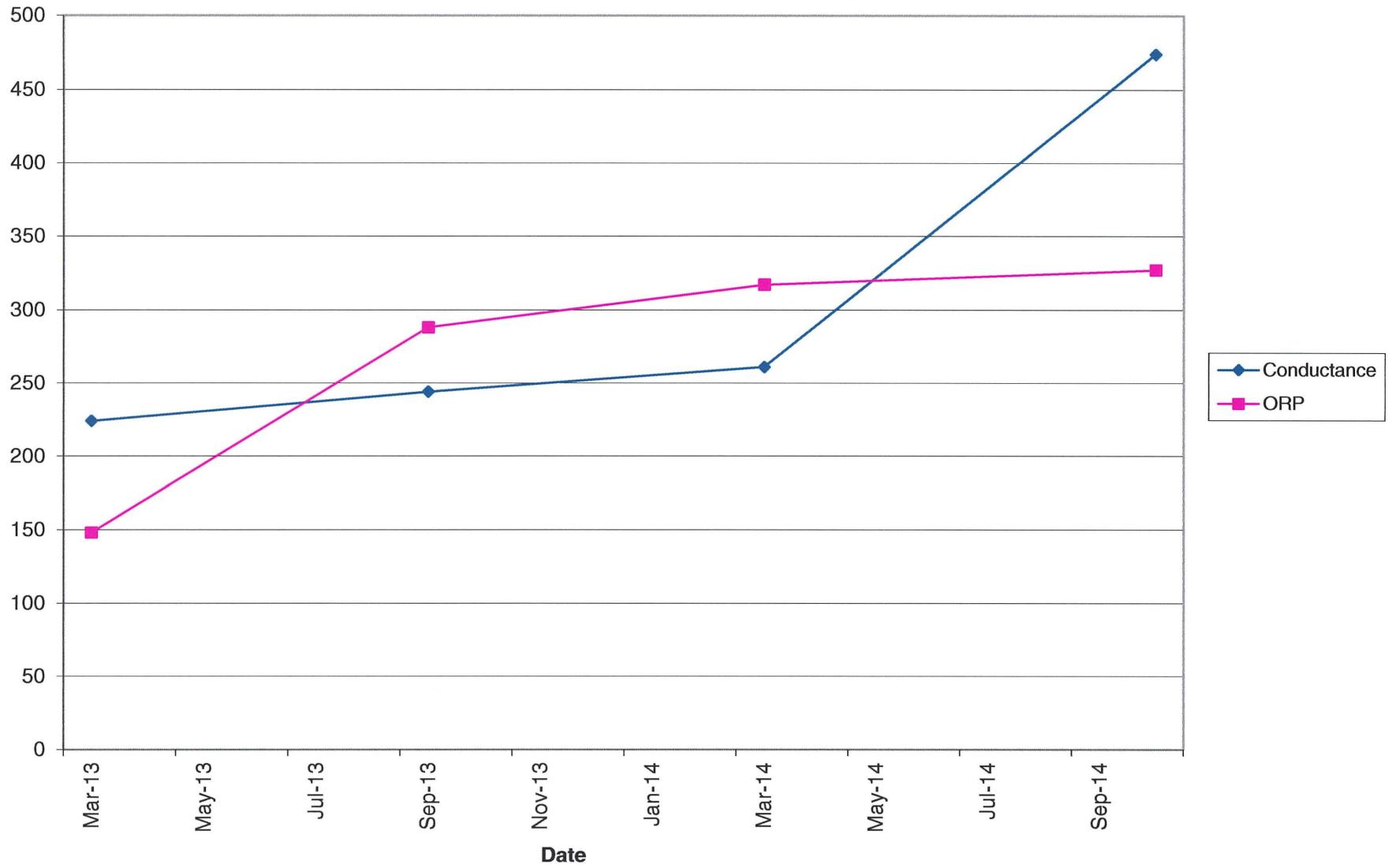
MWI-1 Metals (Part 5)



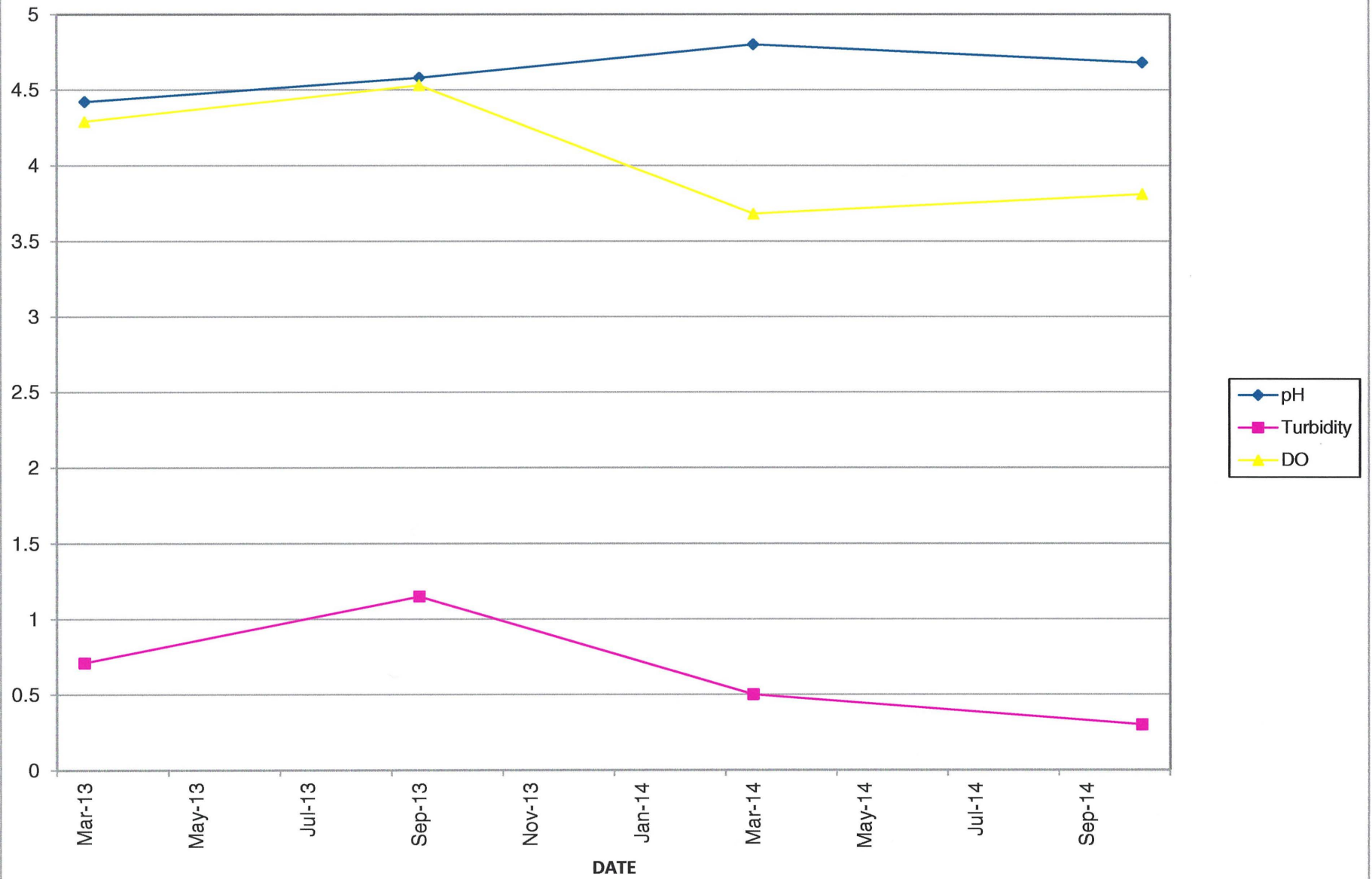
MWI-1 General Chemistry



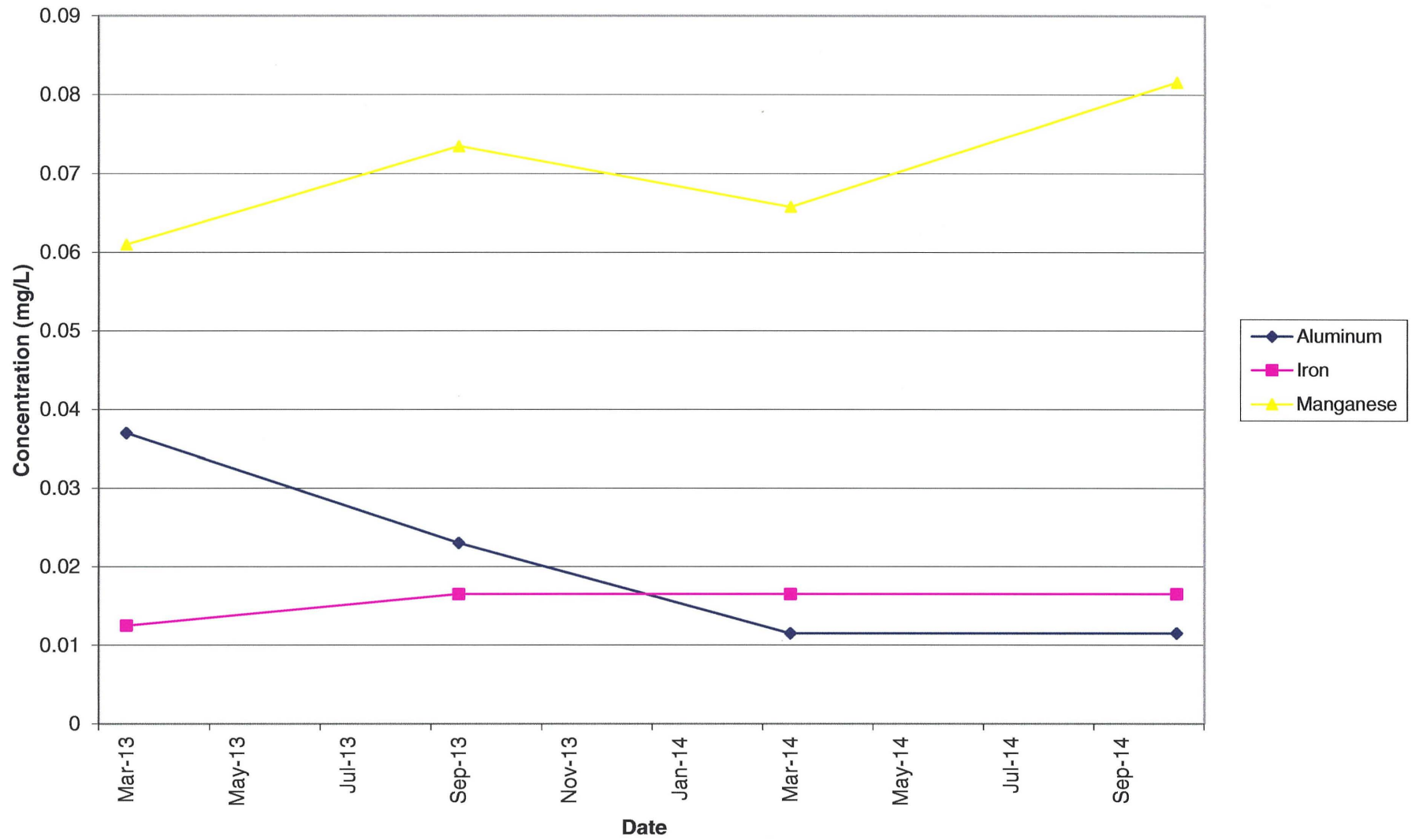
MWI-1 Field Parameters (Part 1)



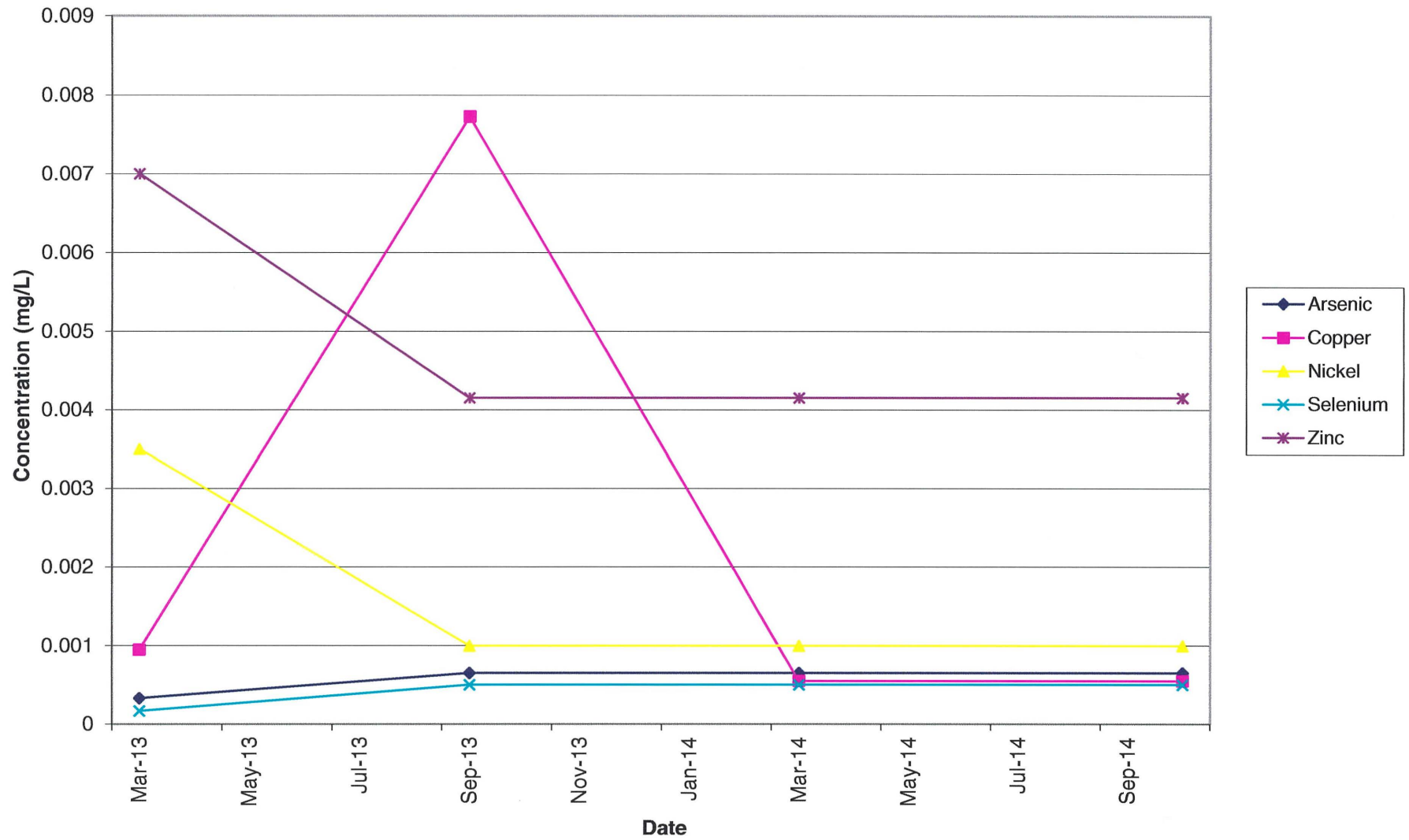
MWI-1 Field Parameters (Part 2)



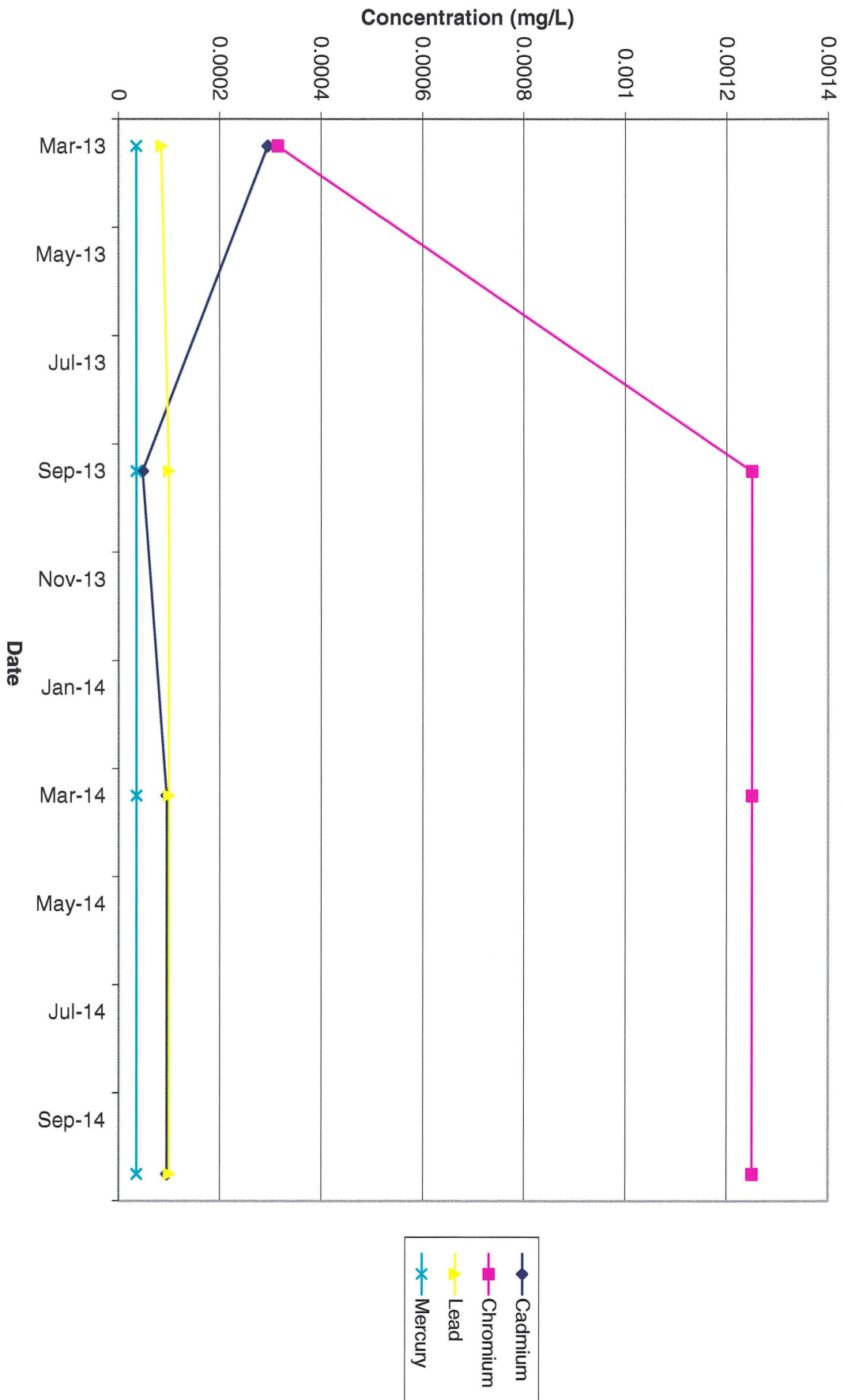
MWI-2 Metals (Part 1)



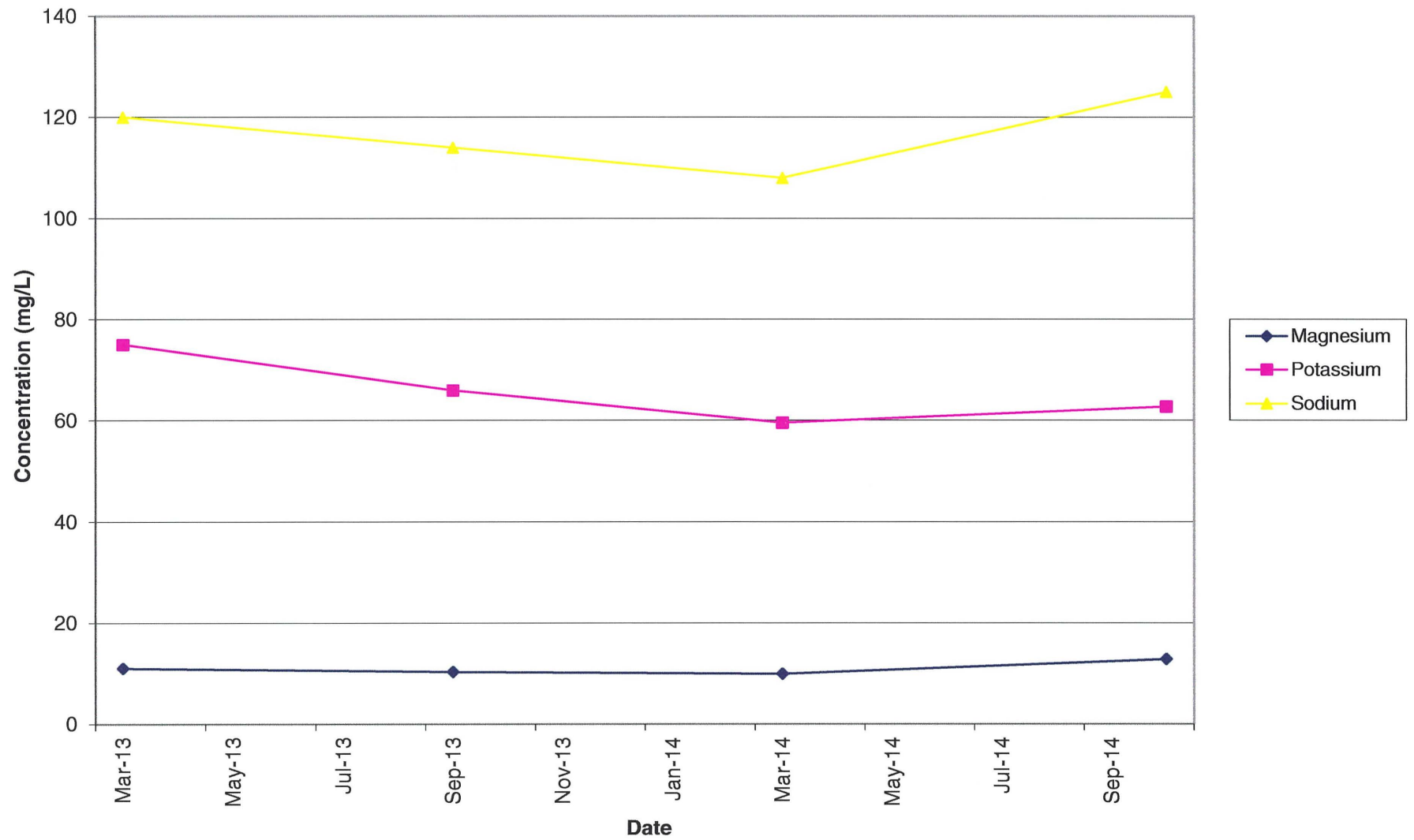
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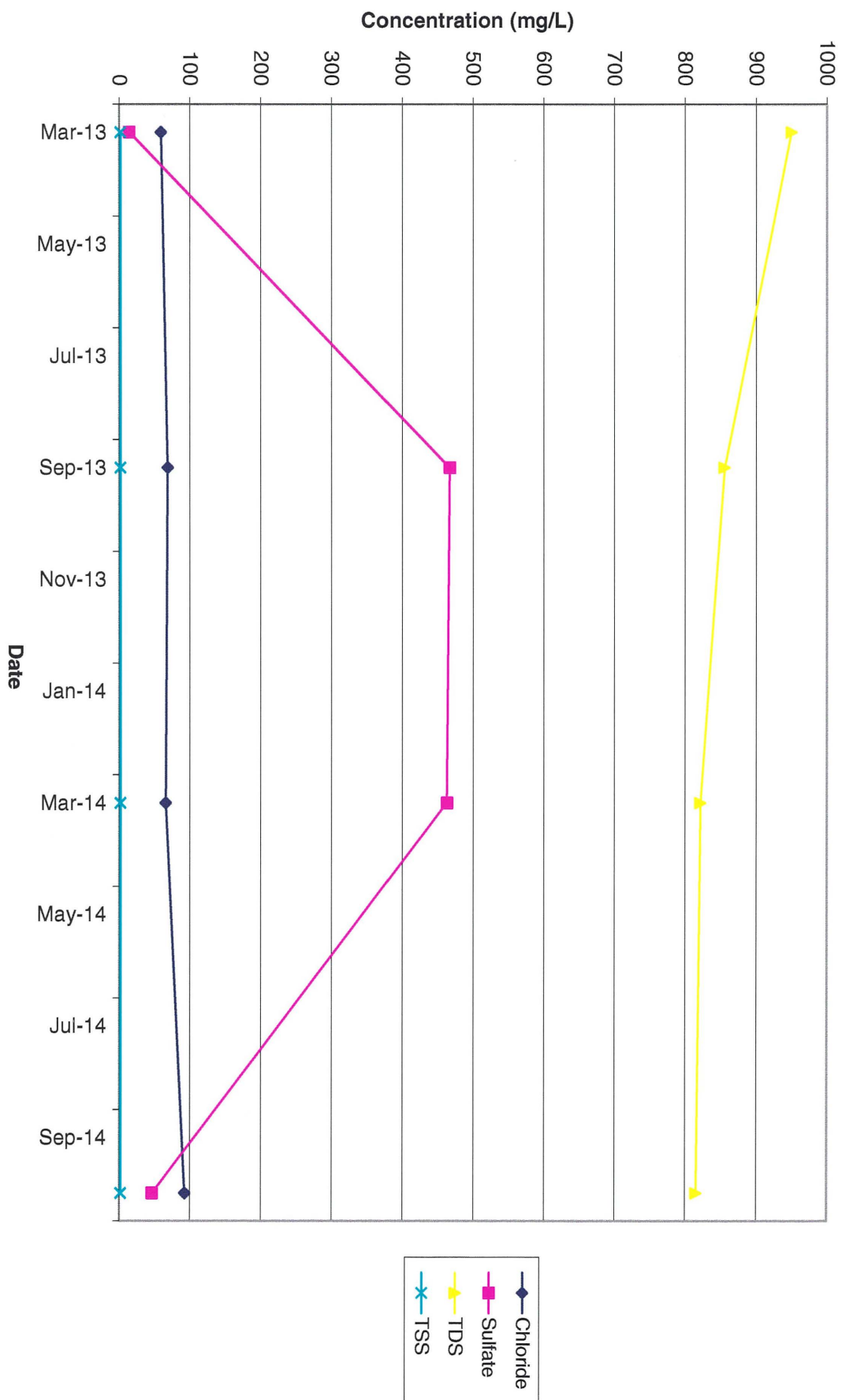
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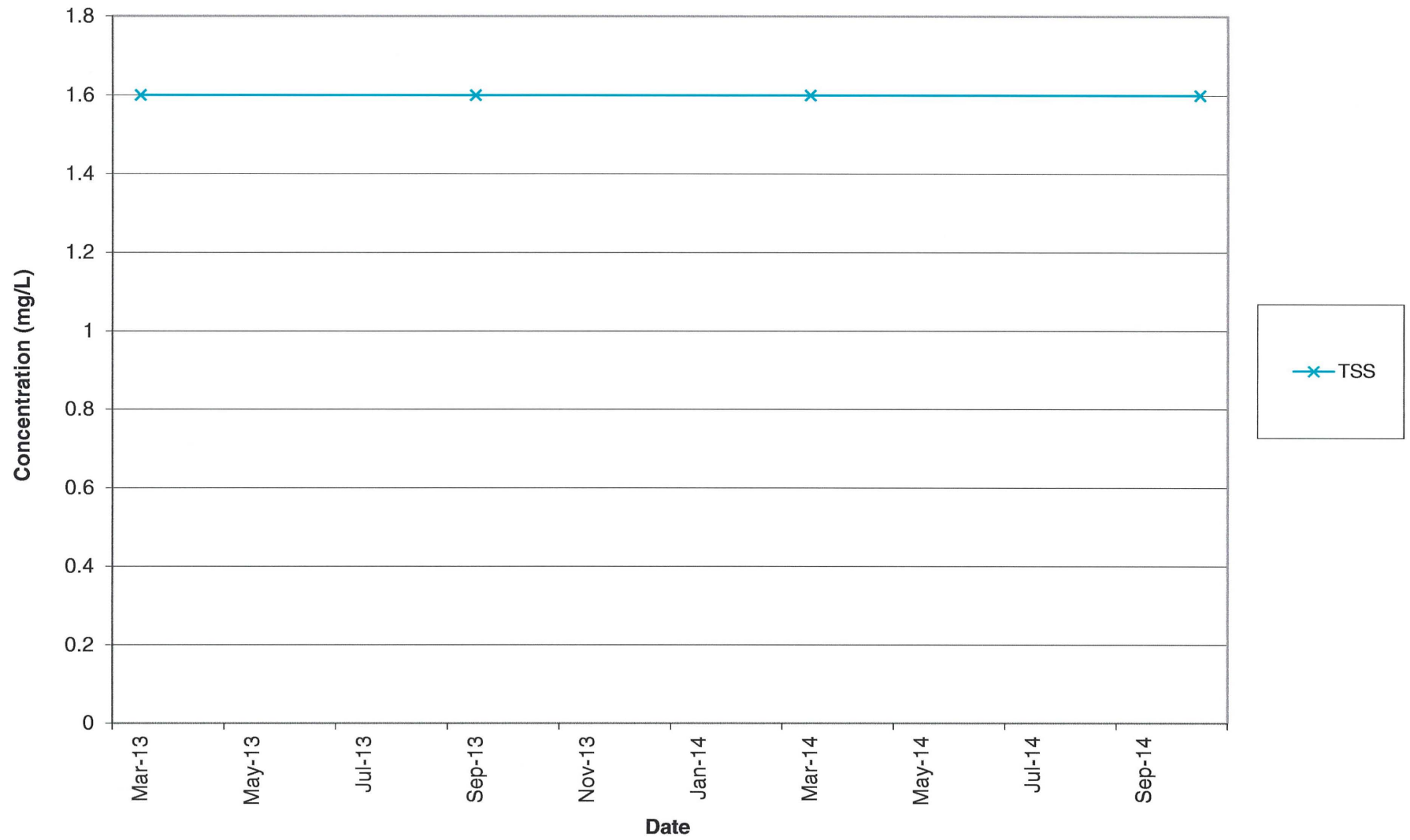
MWI-2 Metals (Part 4)



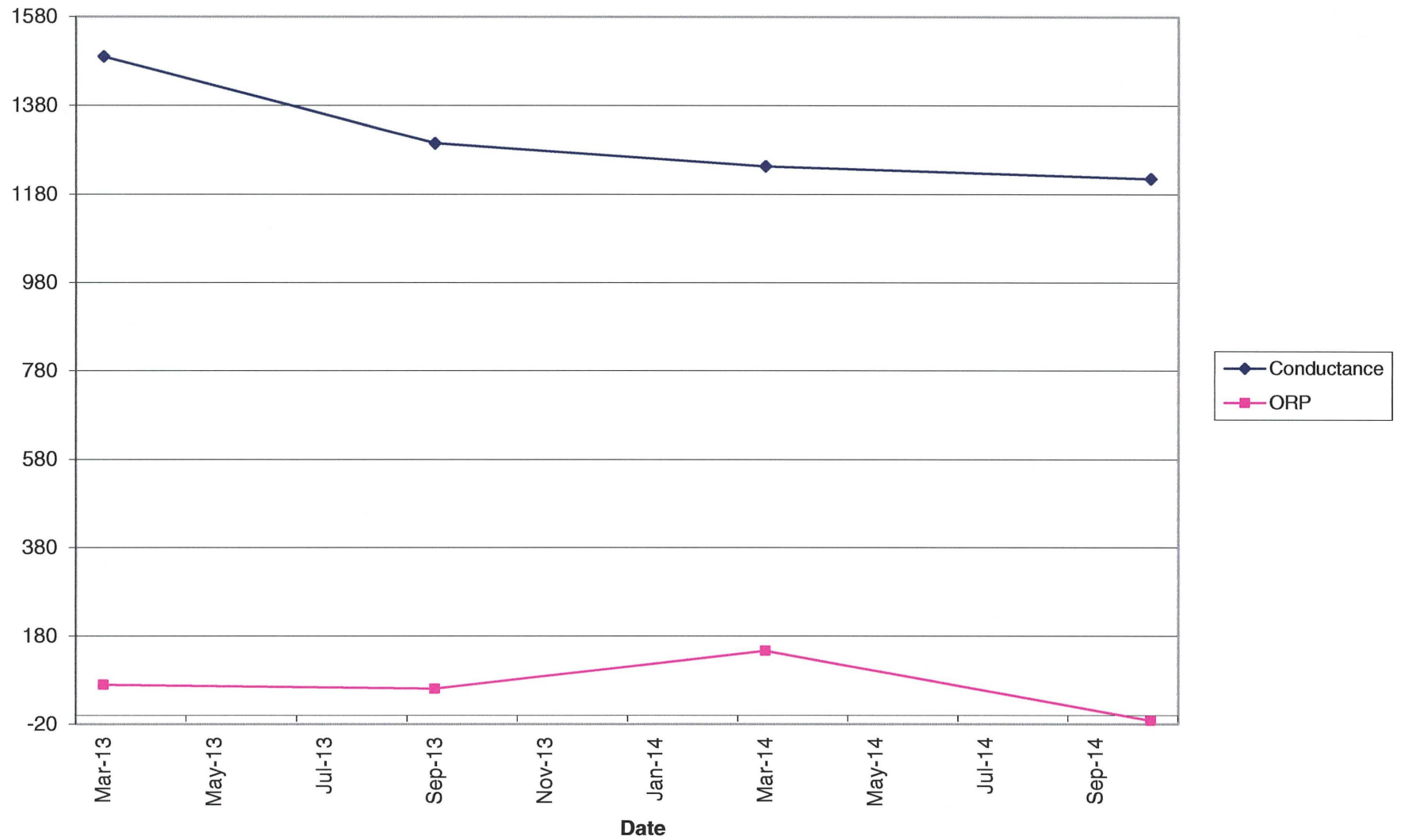
MWI-2 General Chemistry



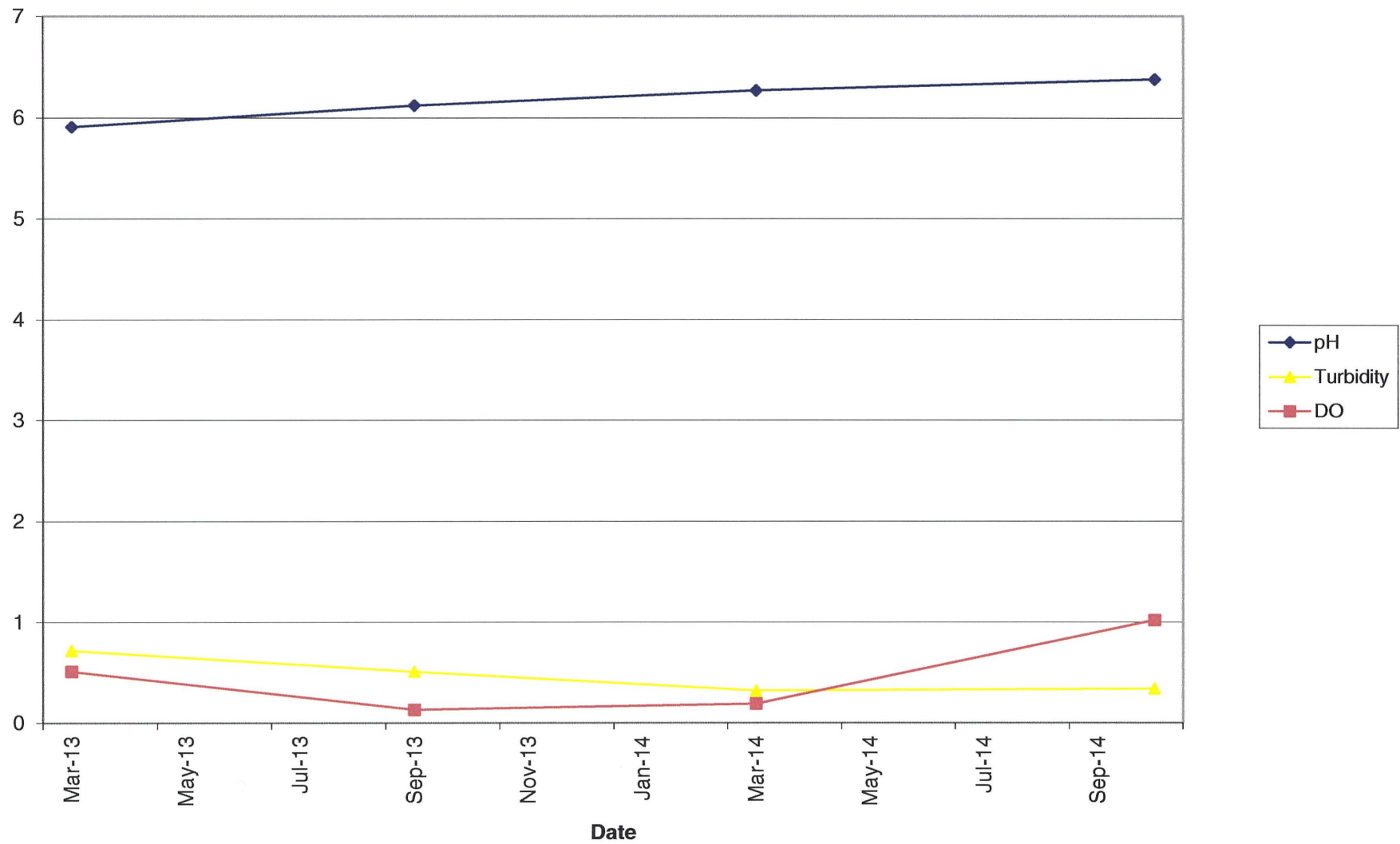
MWI-2 General Chemistry



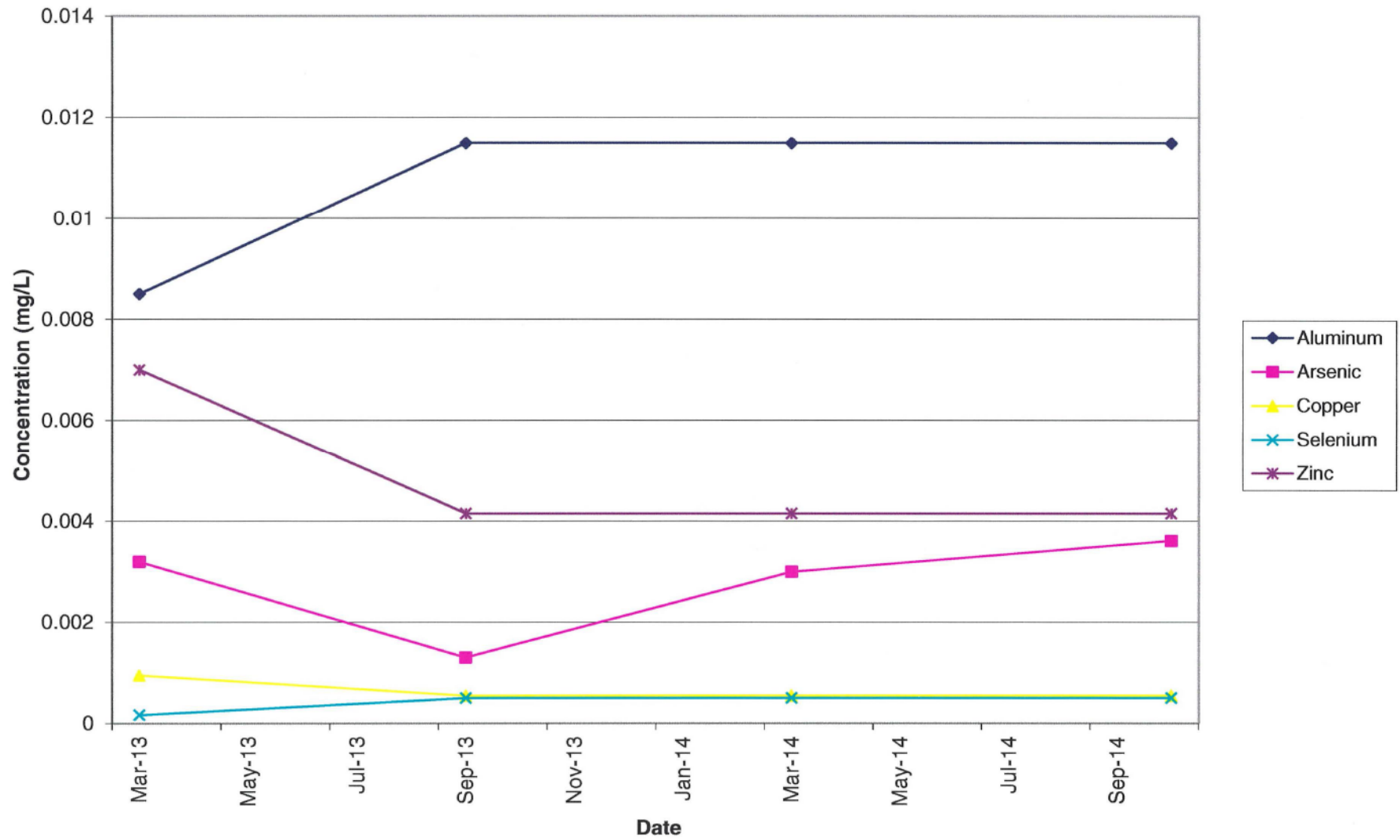
MWI-2 Field Parameters (Part 1)



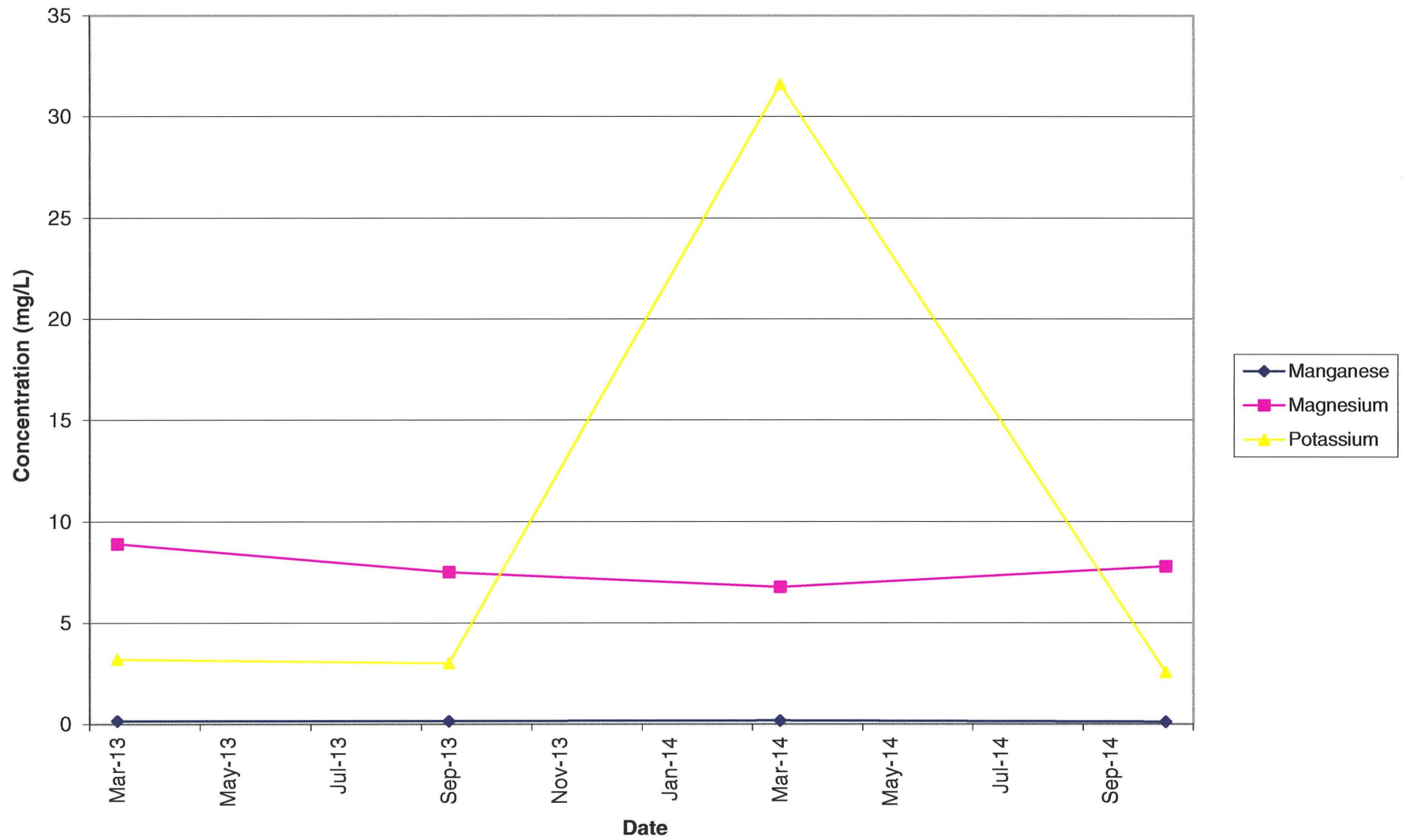
MWI-2 Field Parameters (Part 1)



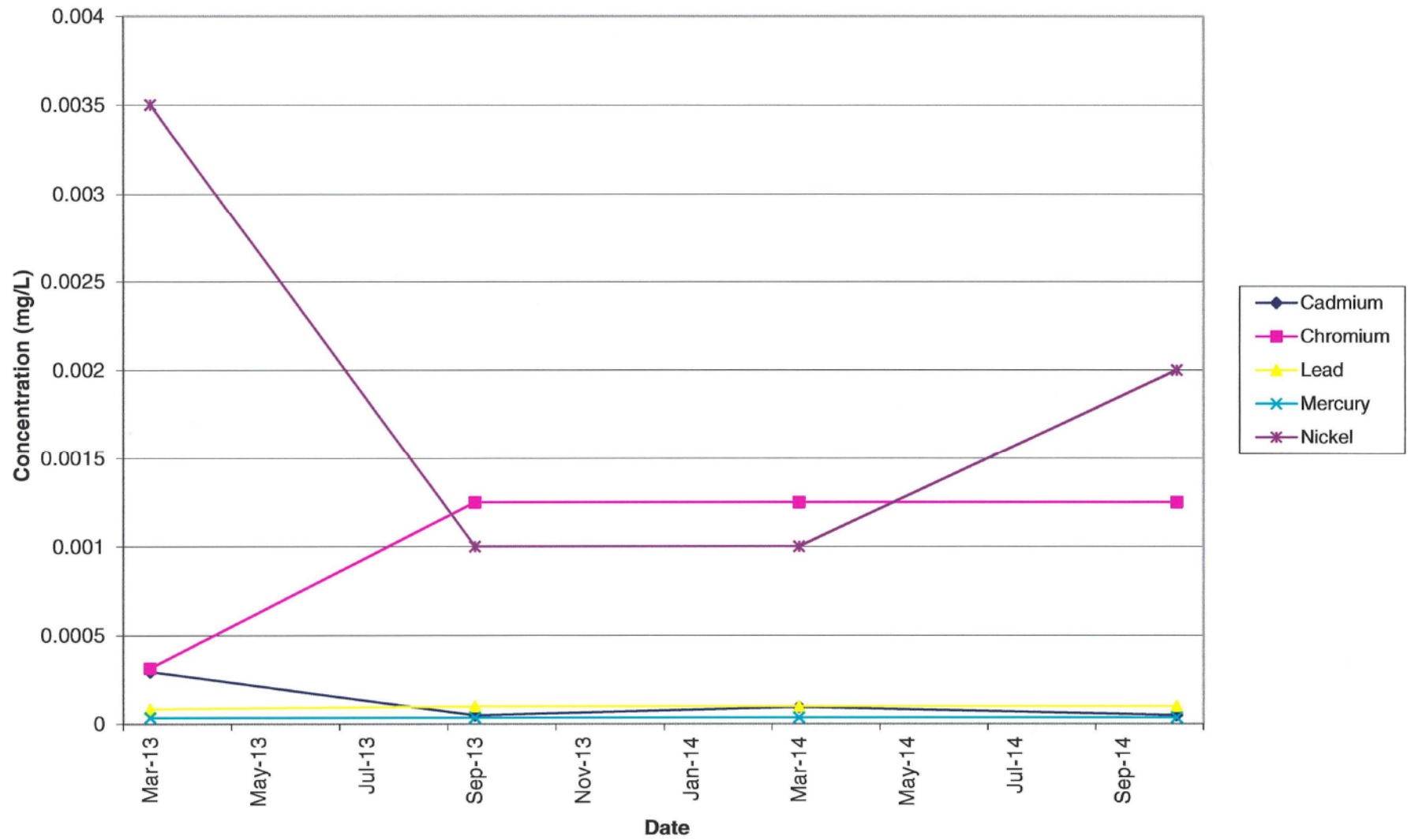
GE-5S Metals (Part 1)



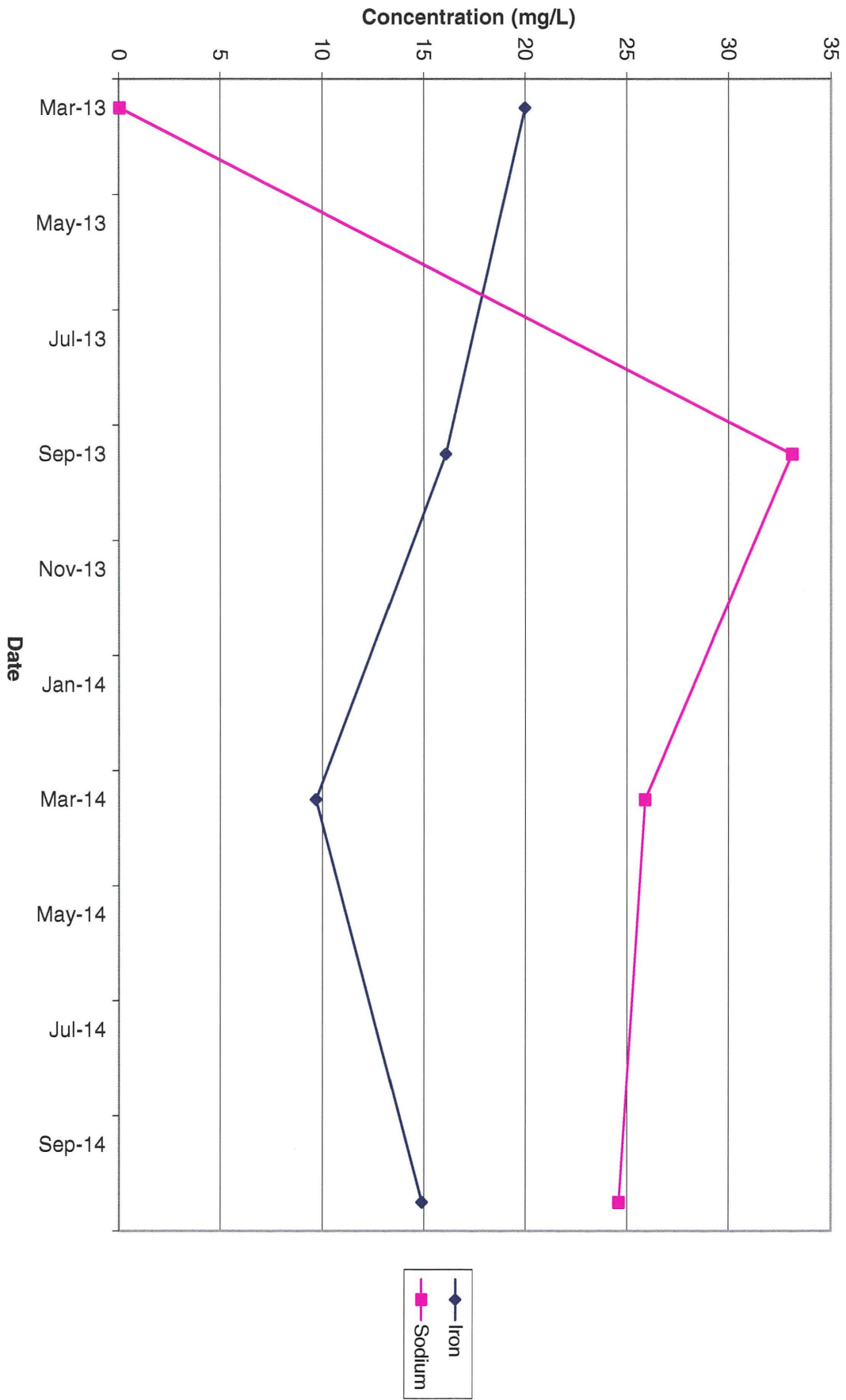
GE-5S Metals (Part 2)



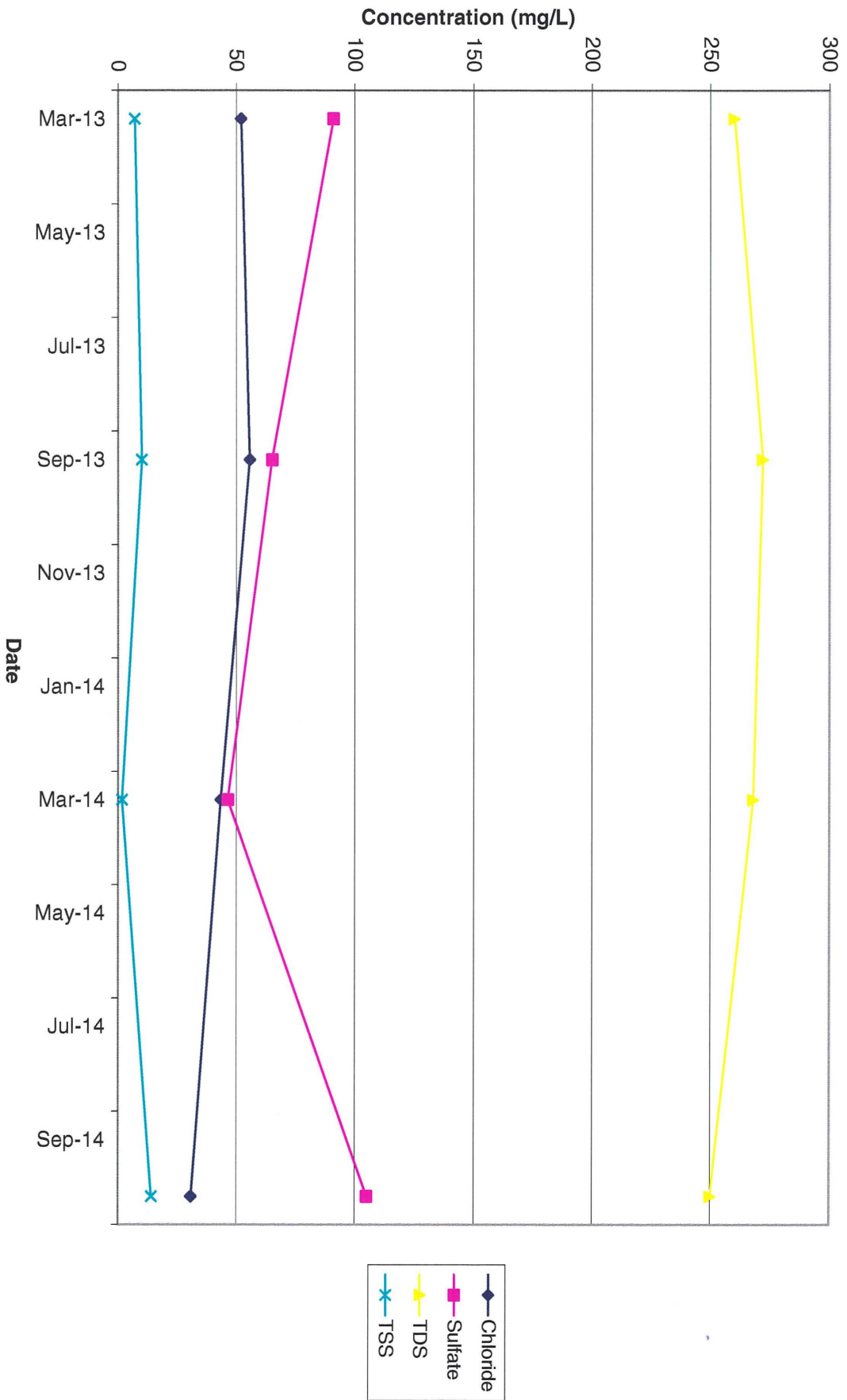
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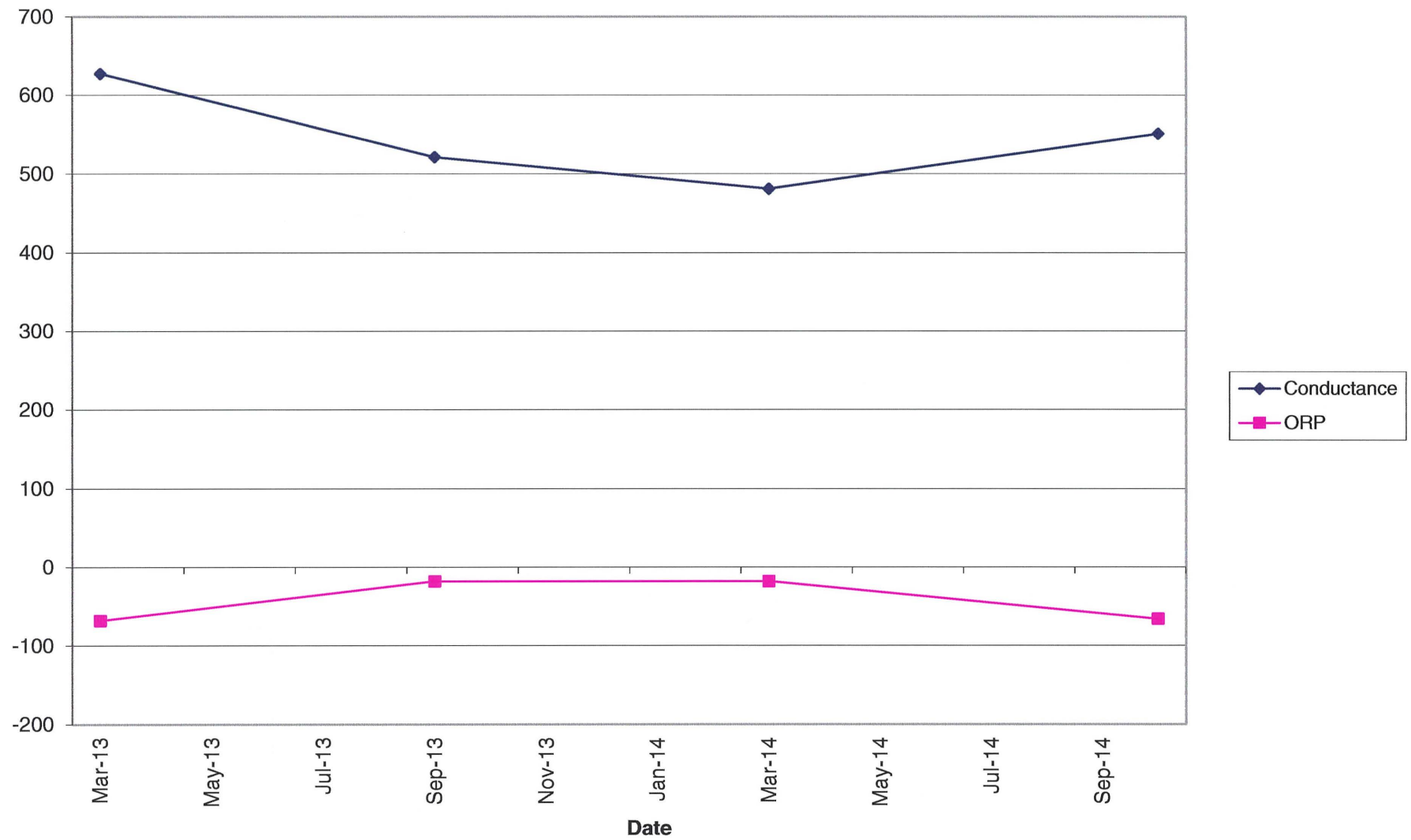
GE-5S Metals (Part 4)



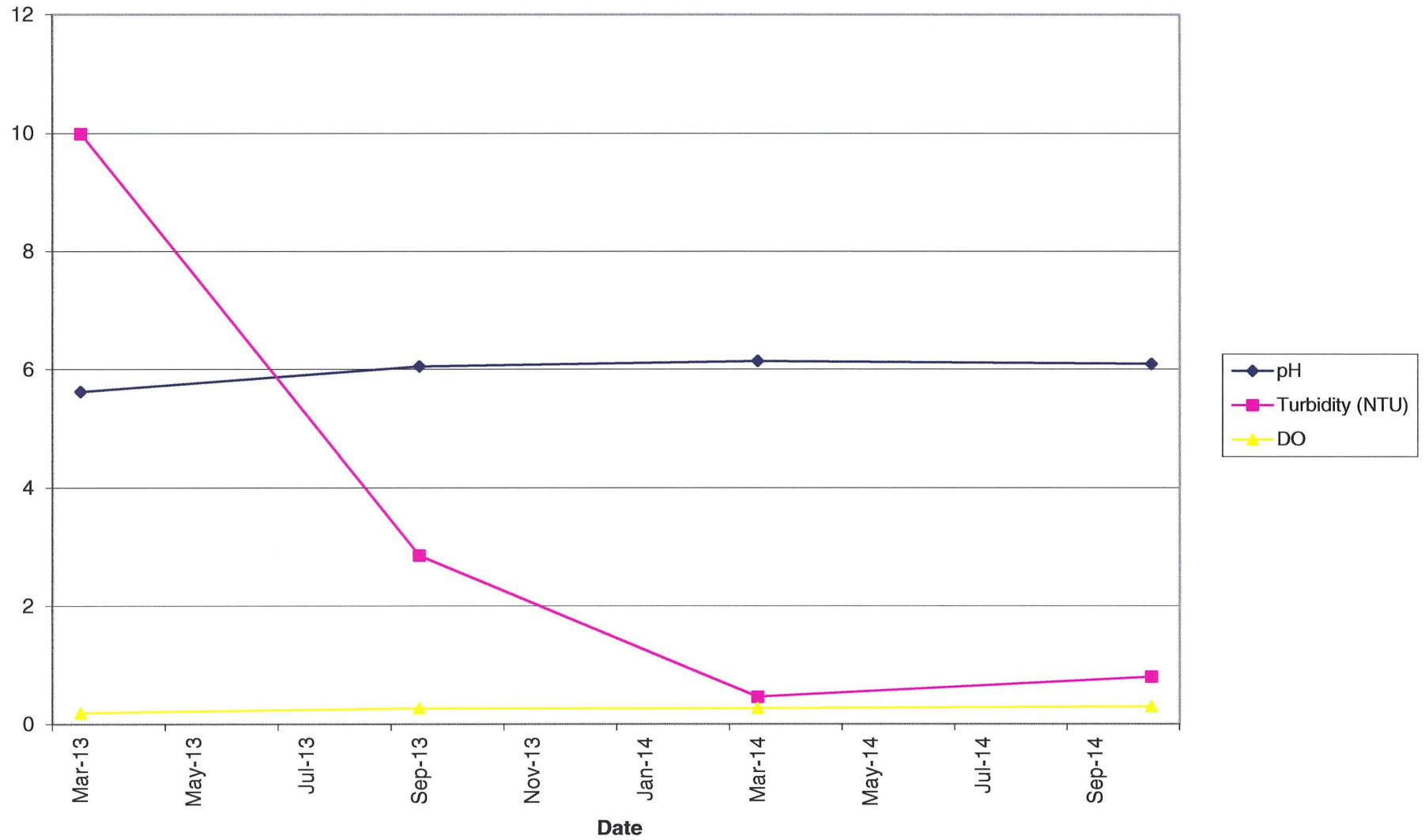
GE-5S General Chemistry



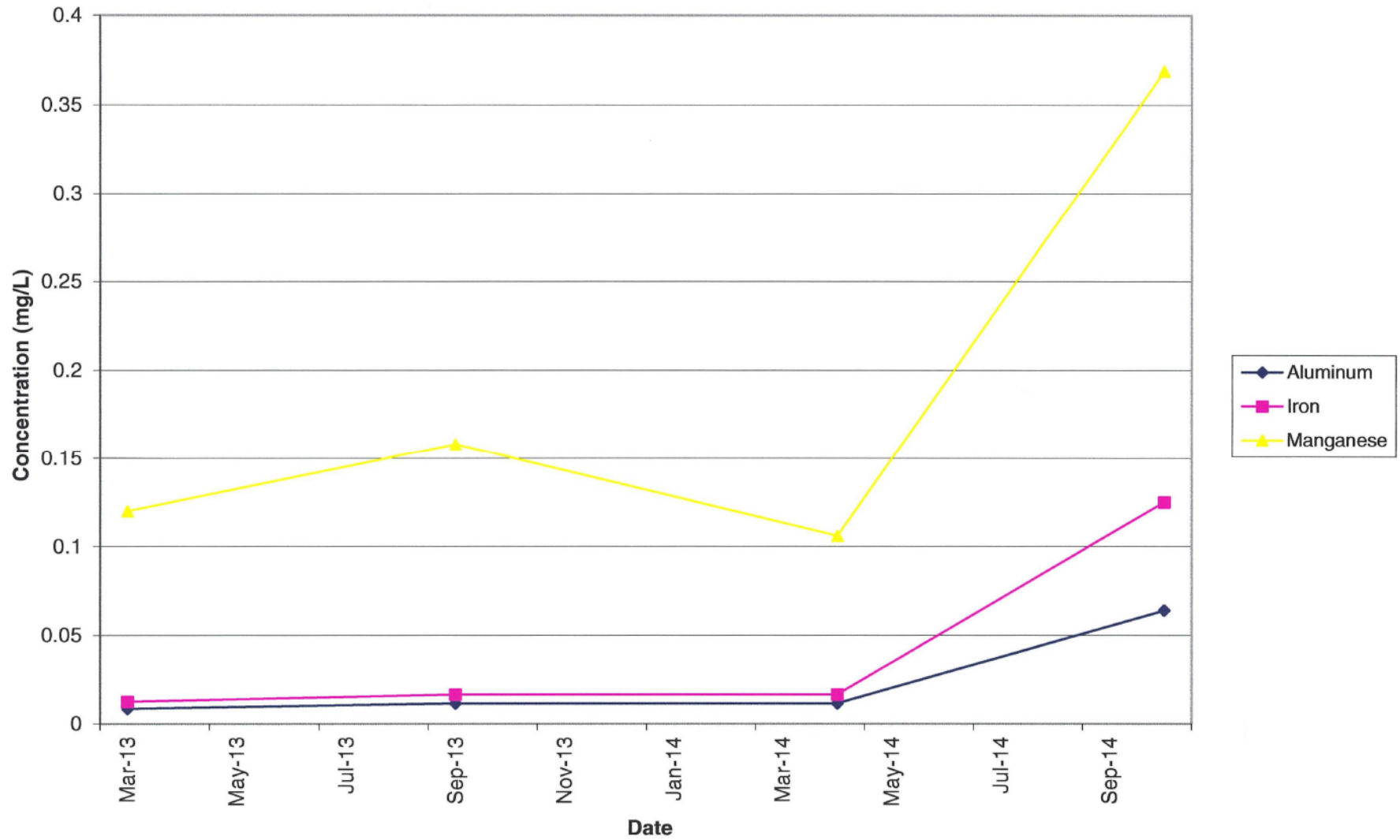
GE-5S Field Parameters (Part 1)



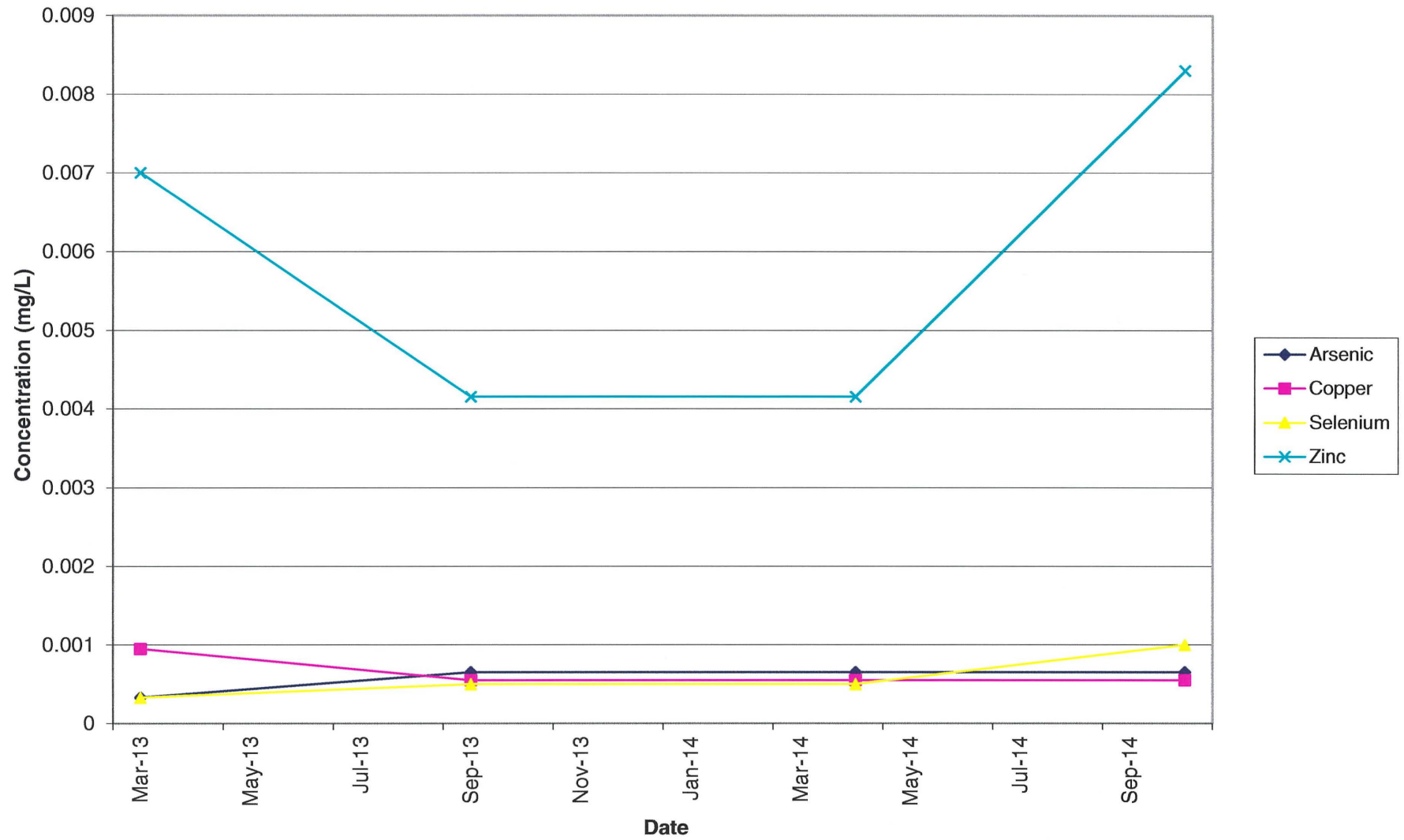
GE-5S Field Parameters (Part 2)



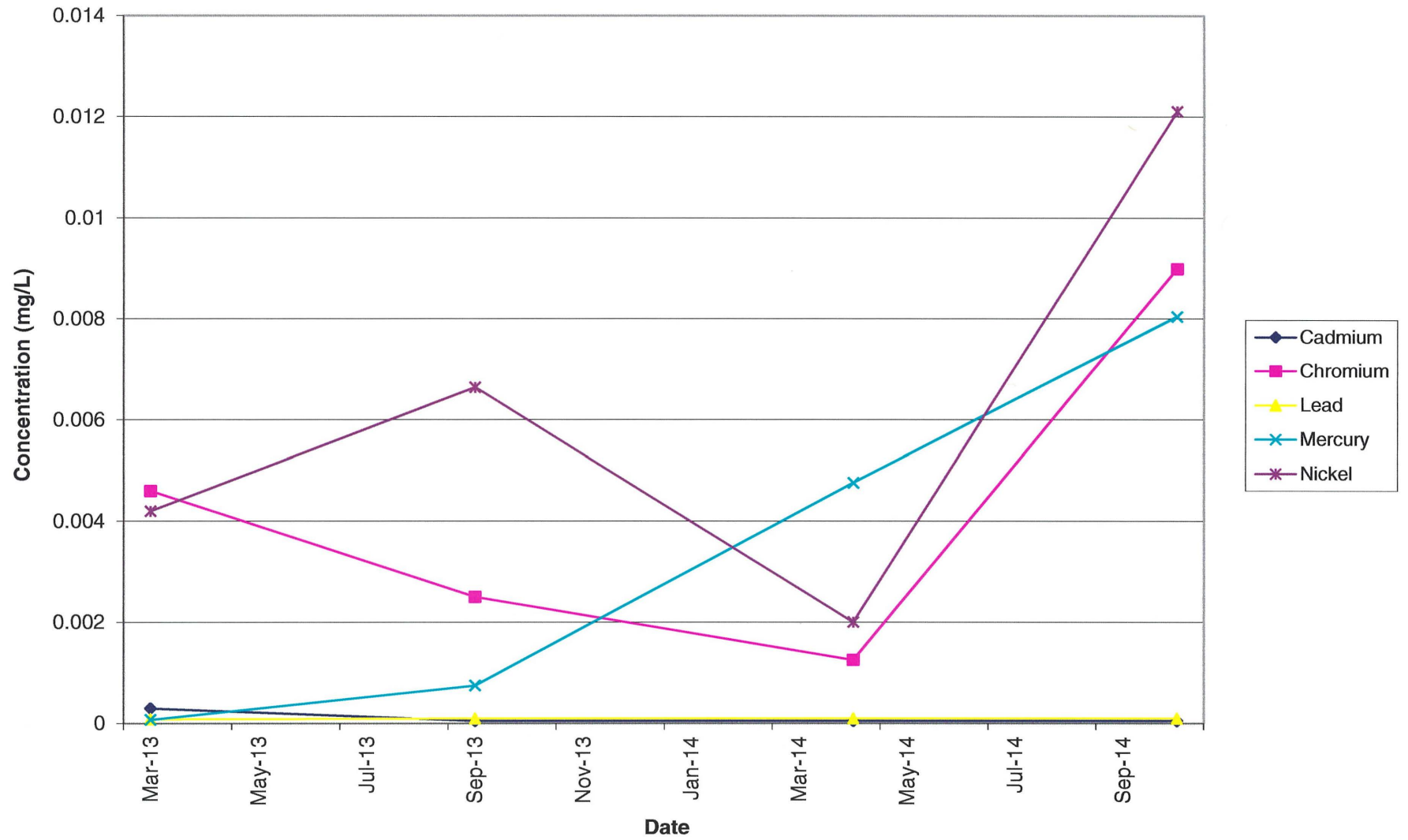
MWC-10 Metals (Part 1)



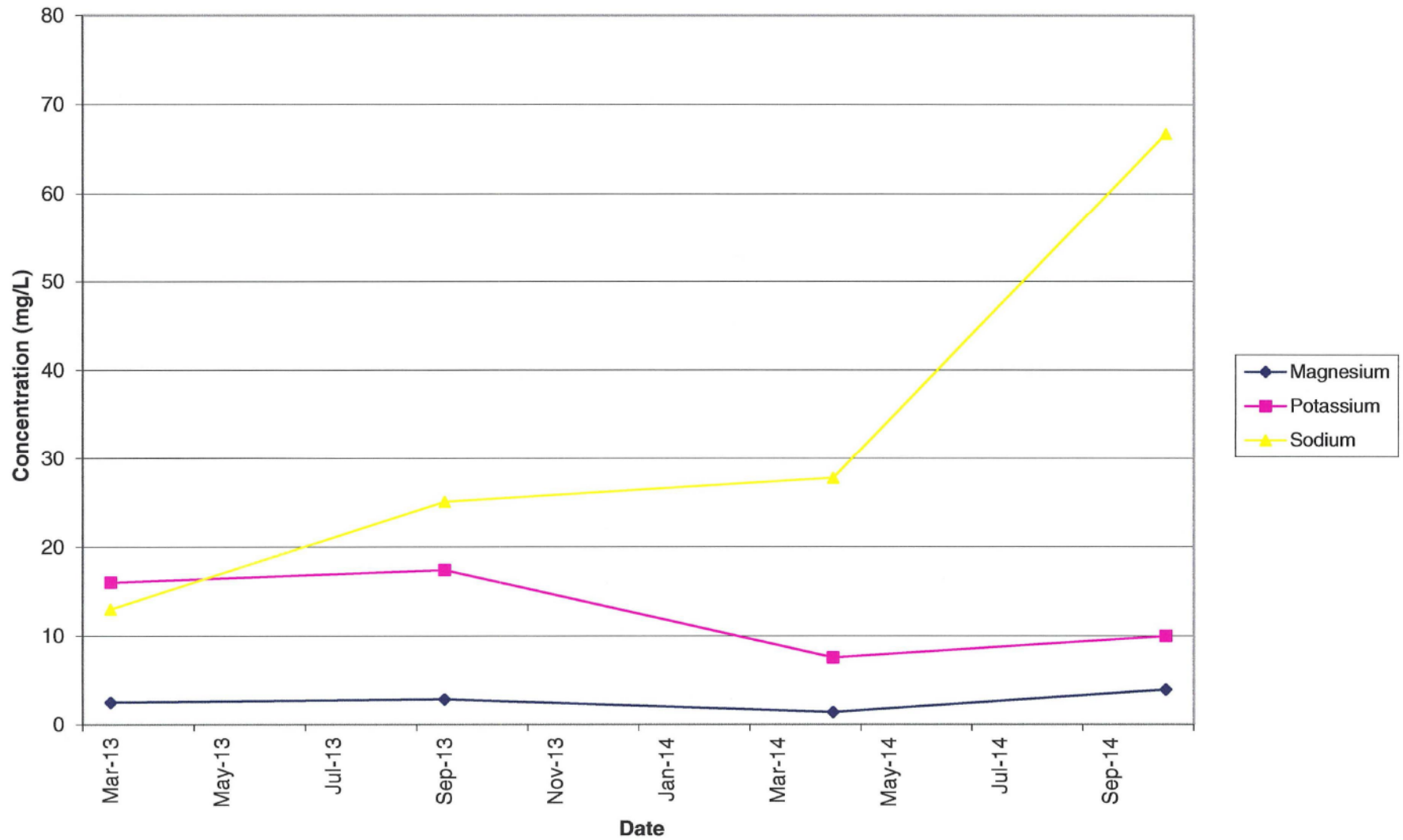
MWC-10 Metals (Part 2)



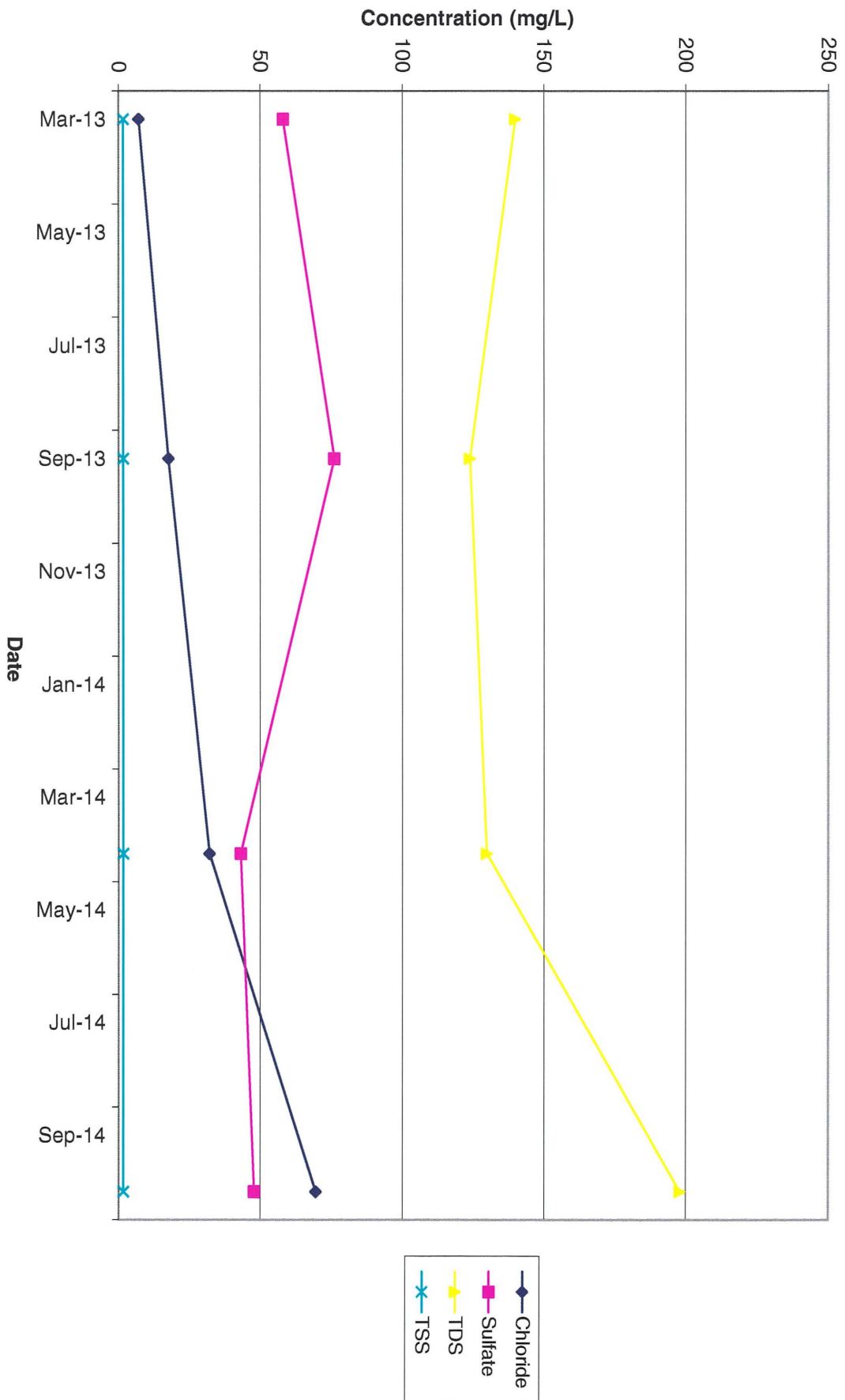
MWC-10 Metals (Part 3)



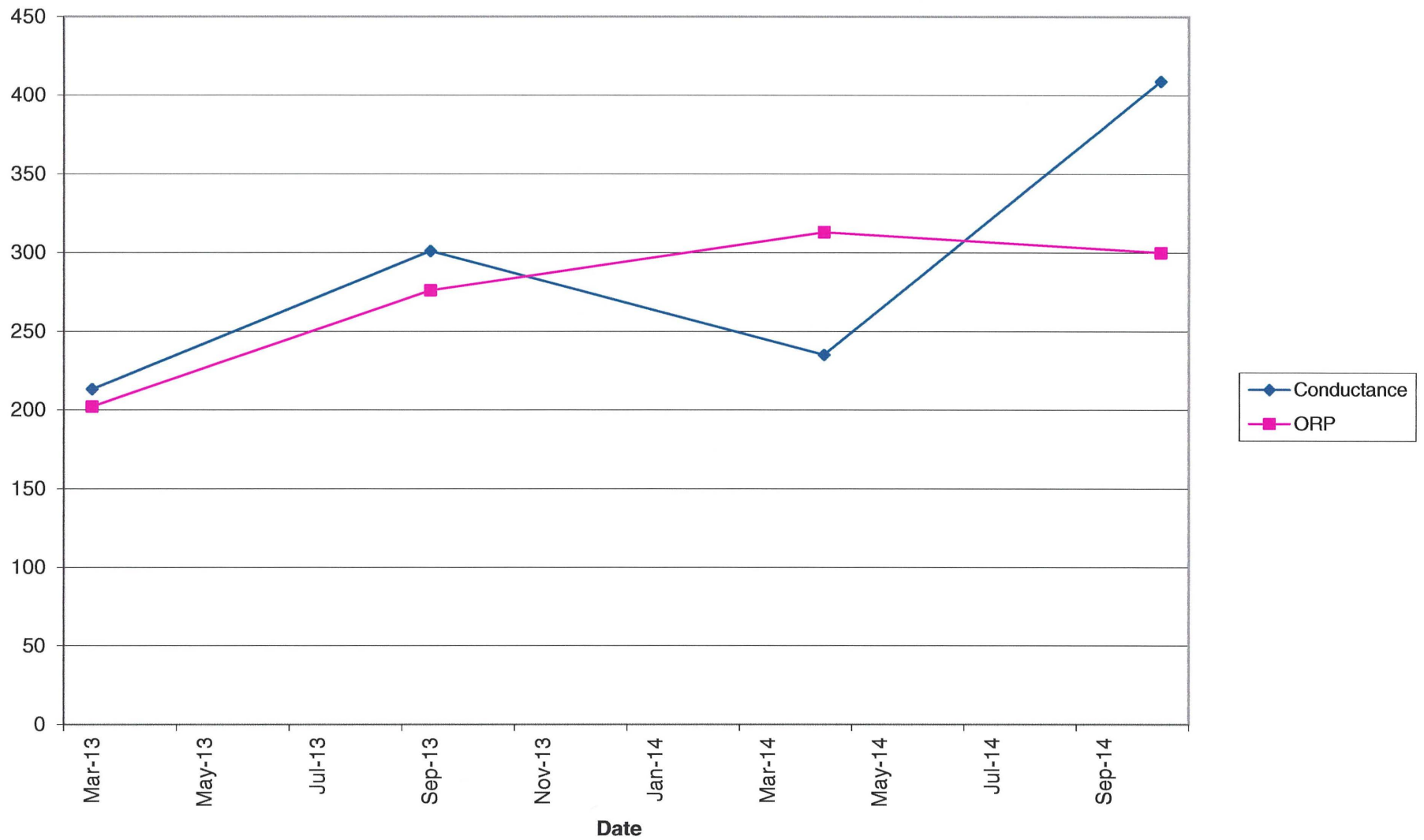
MWC-10 Metals (Part 4)



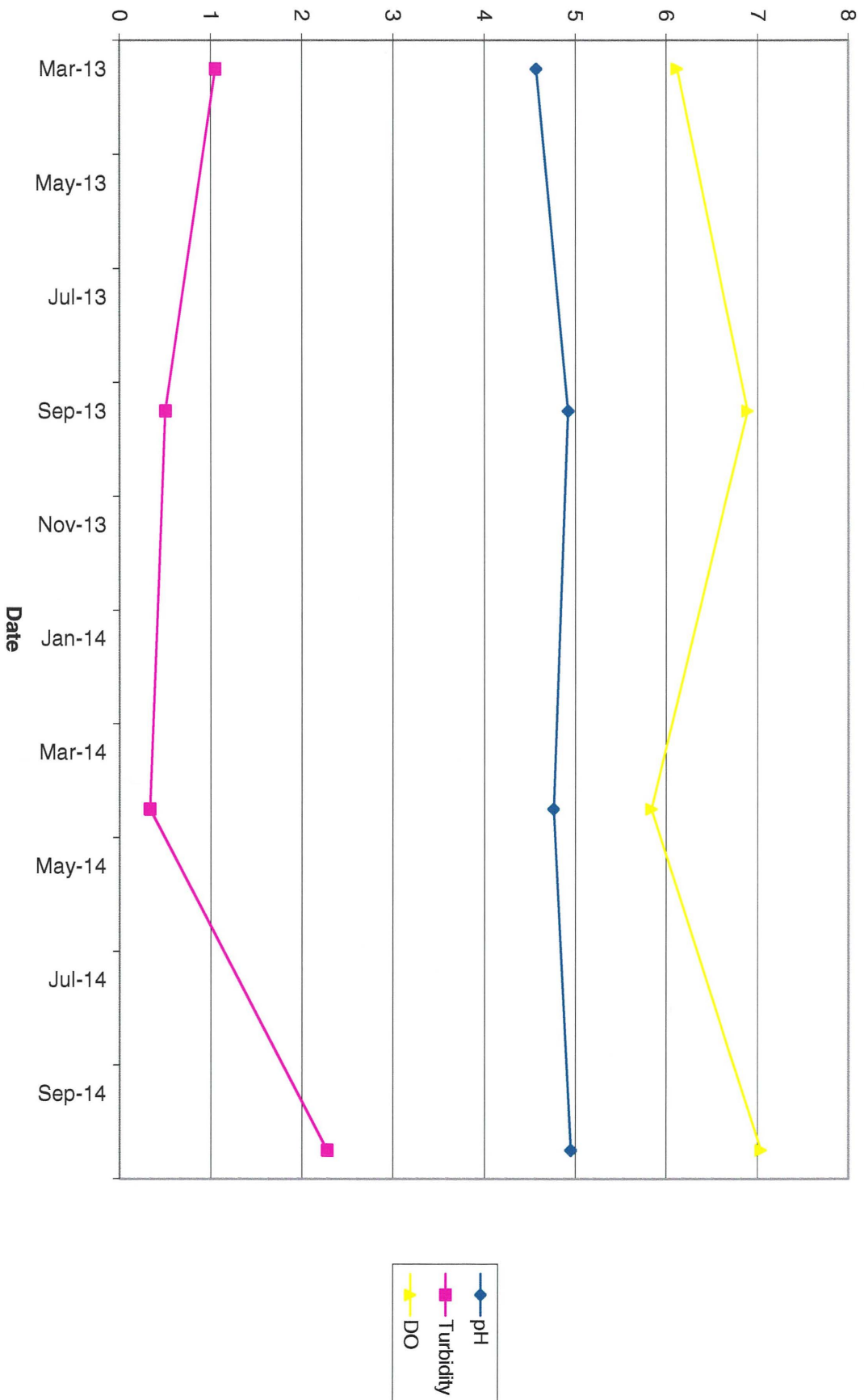
MWC-10 General Chemistry



MWC-10 Field Parameters (Part 1)



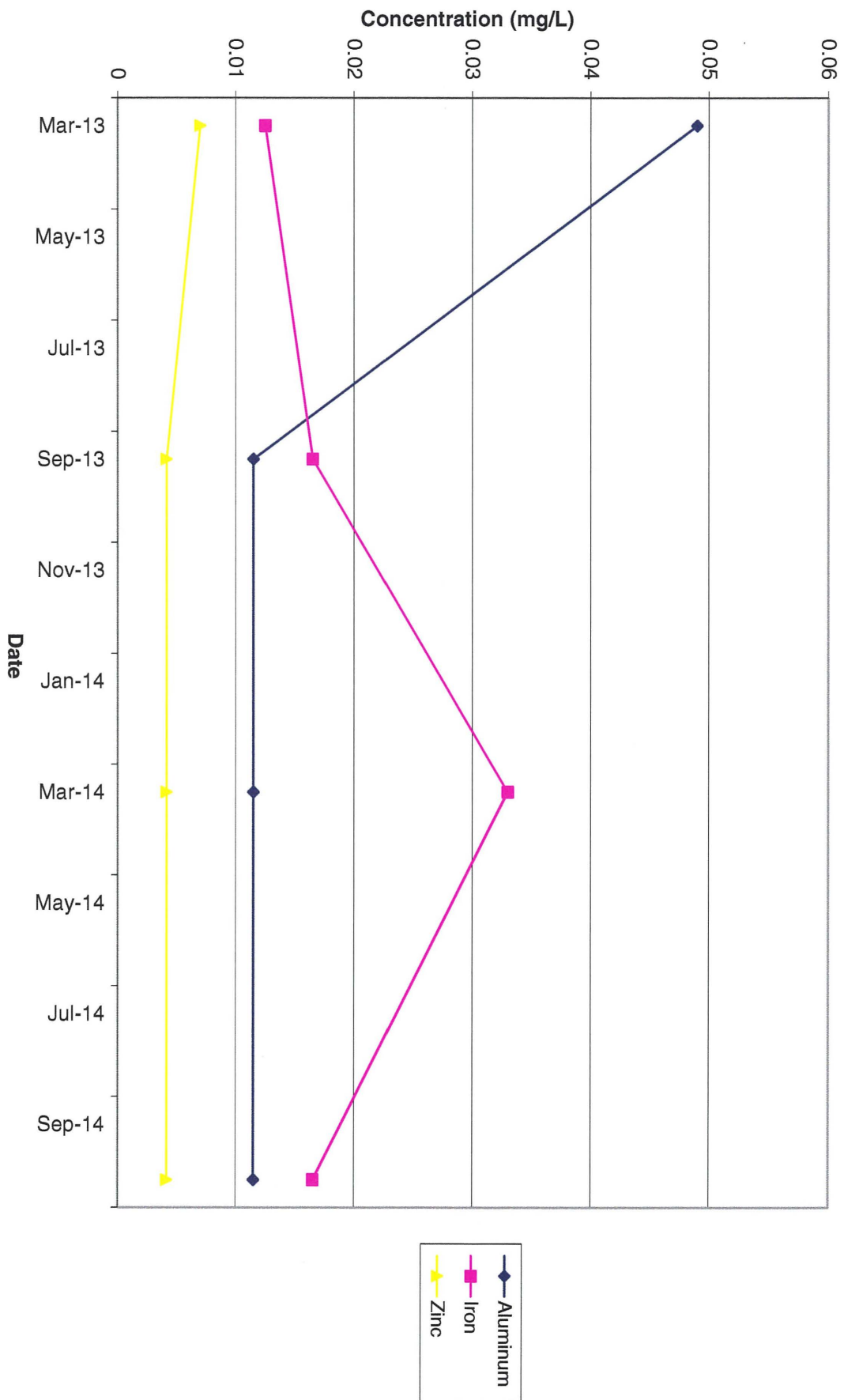
MWC-10 Field Parameters (Part 2)



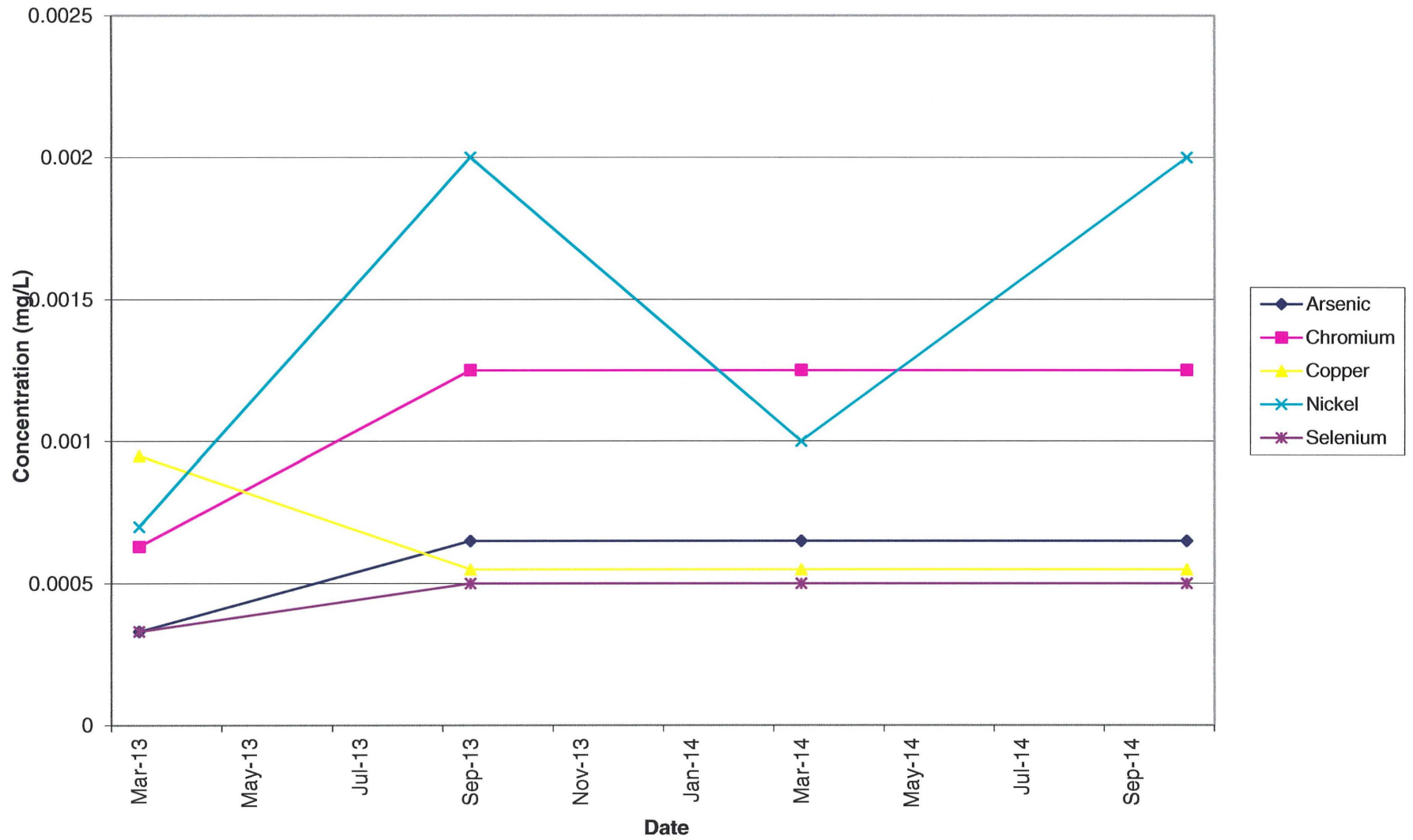
Appendix E

Unit 5 Water Quality Graphs

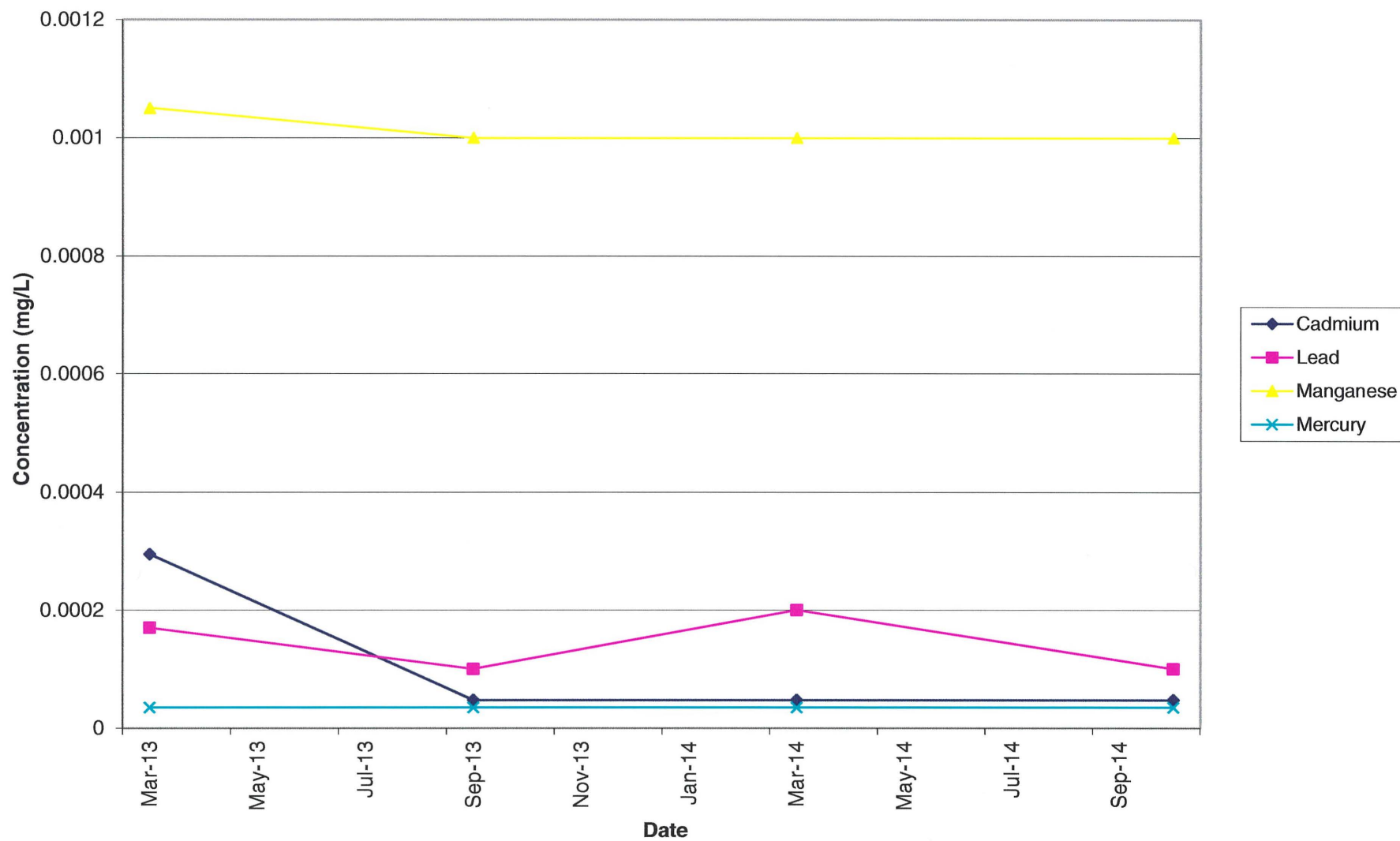
MWB-1 Metals (Part 1)



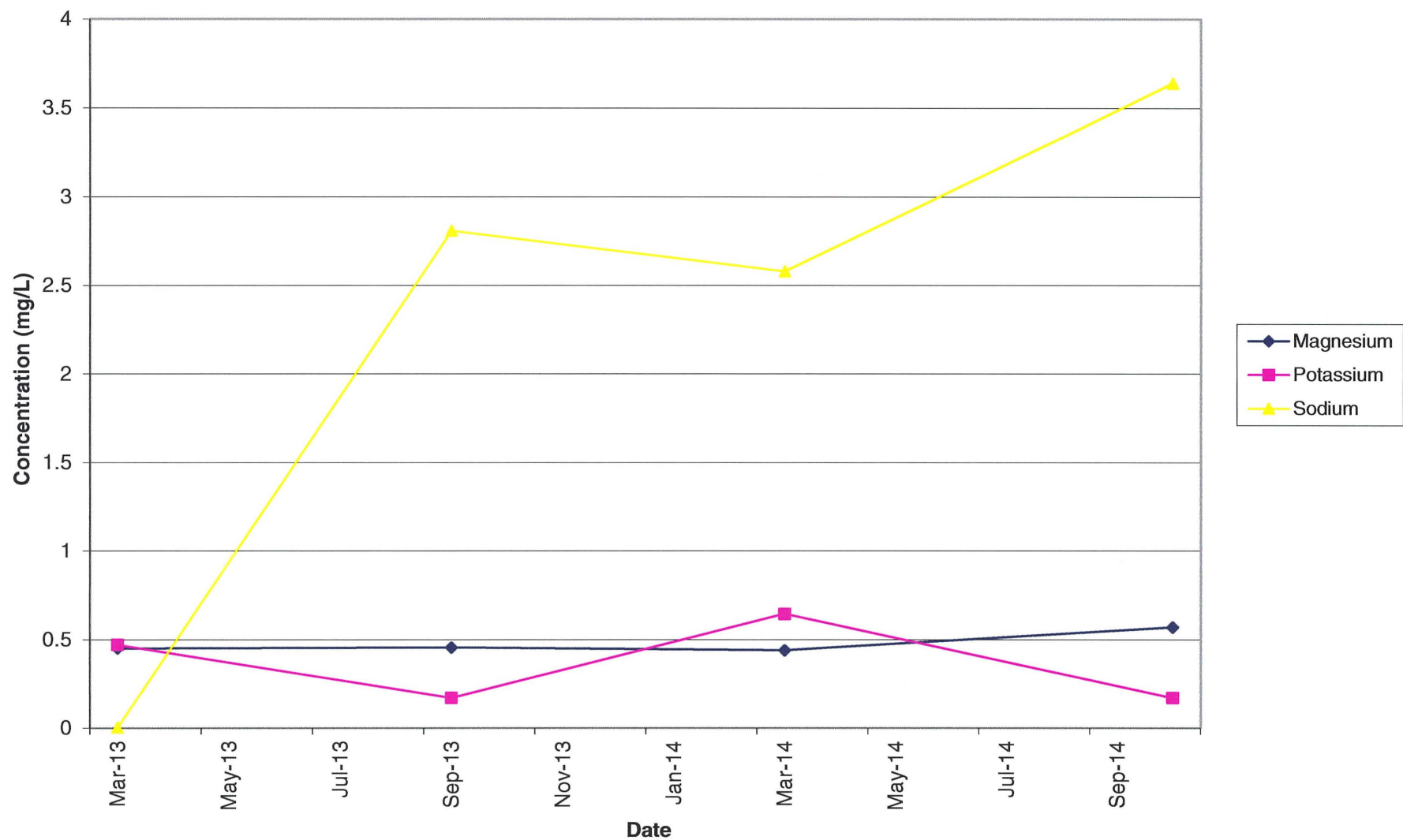
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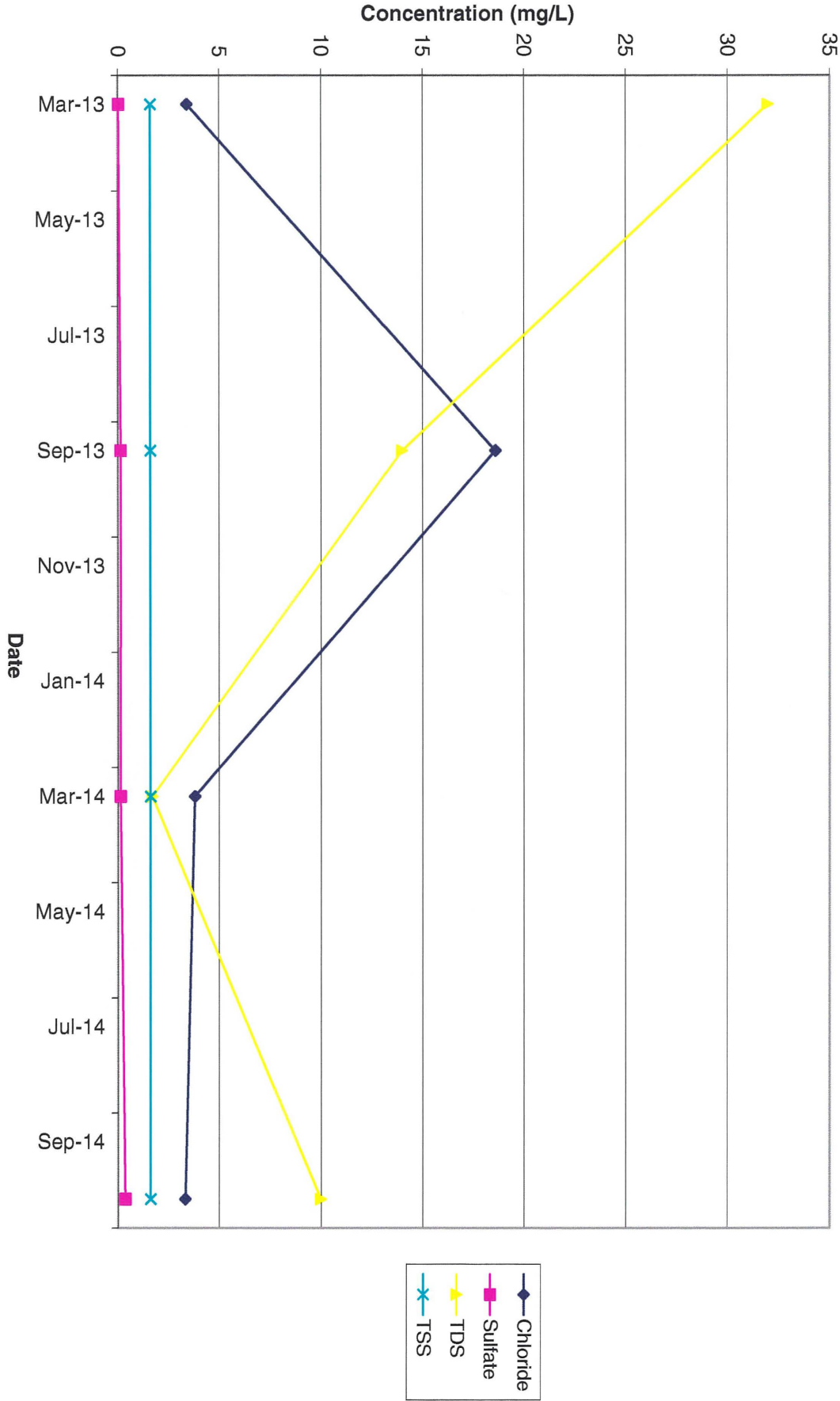
MWB-1 Metals (Part 3)



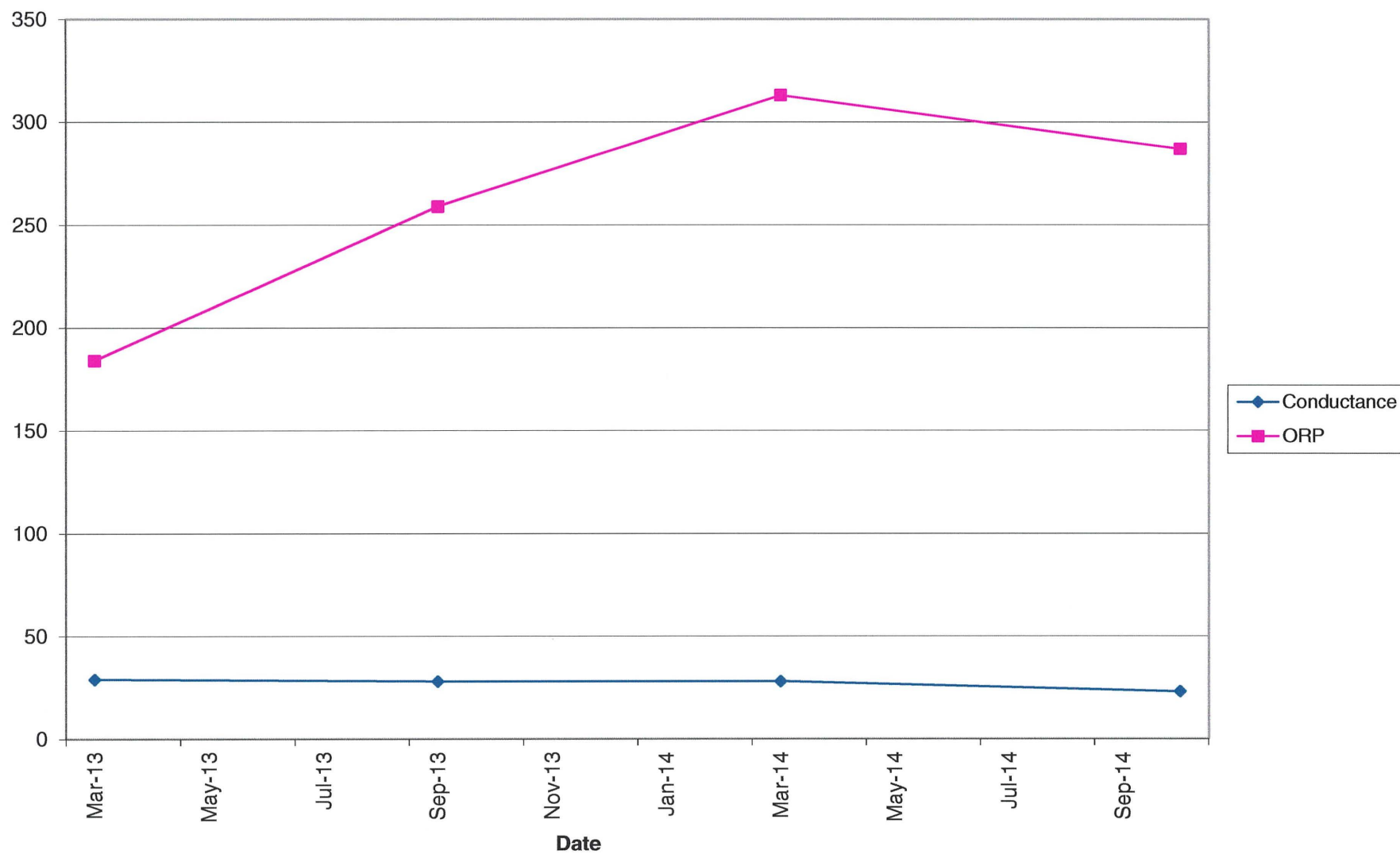
MWB-1 Metals (Part 4)



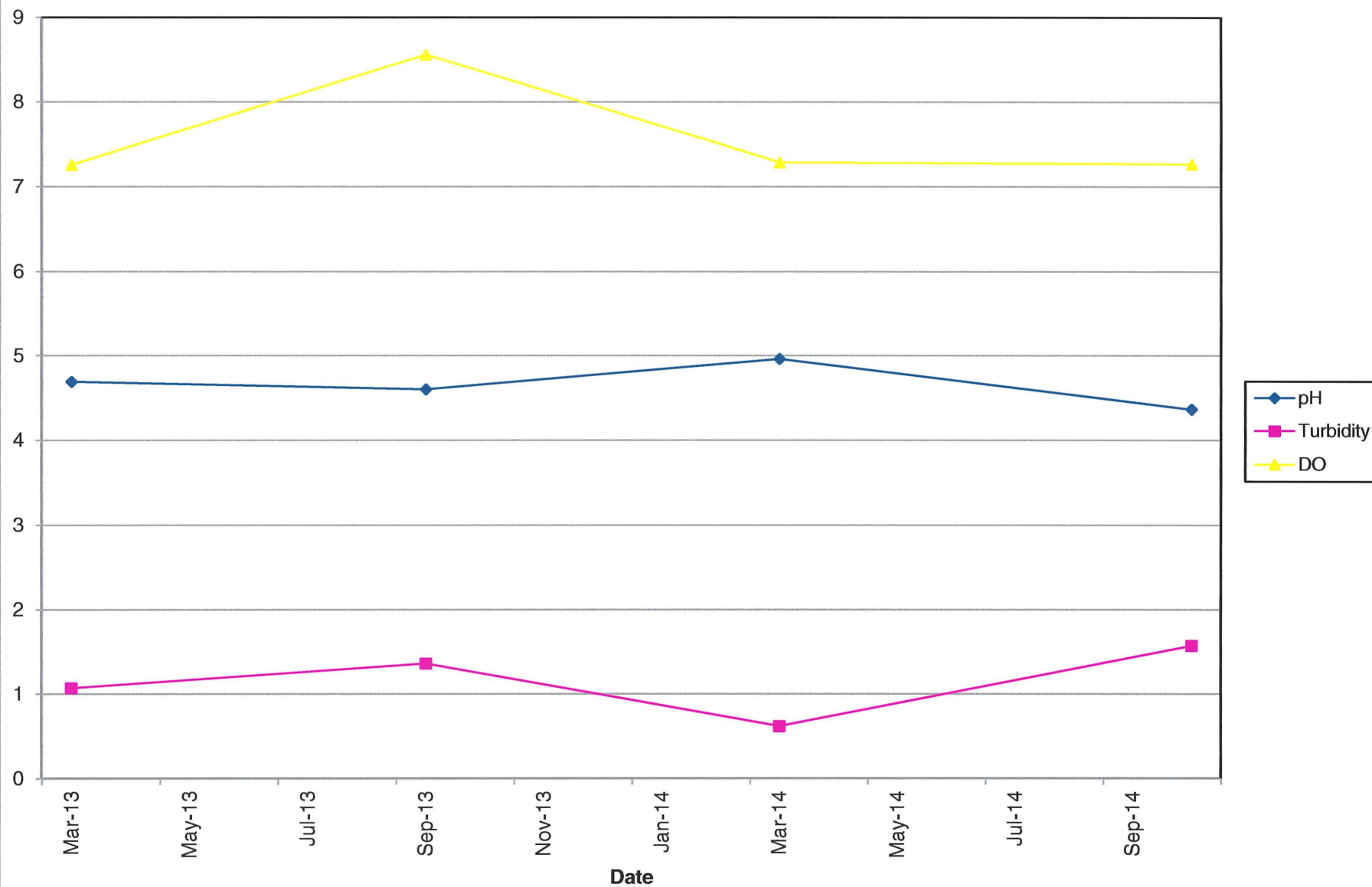
MWB-1 General Chemistry



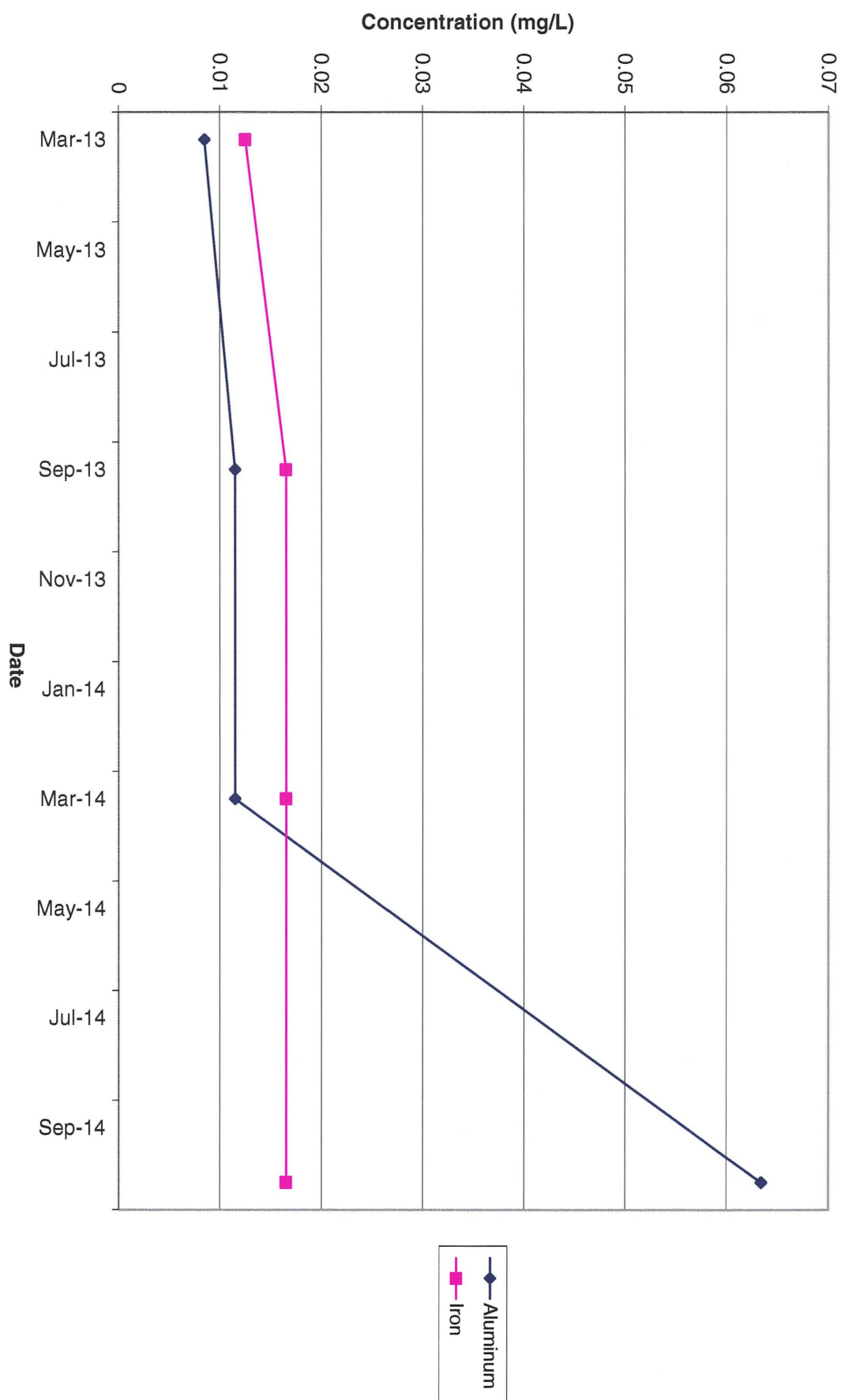
MWB-1 Field Parameters (Part 1)



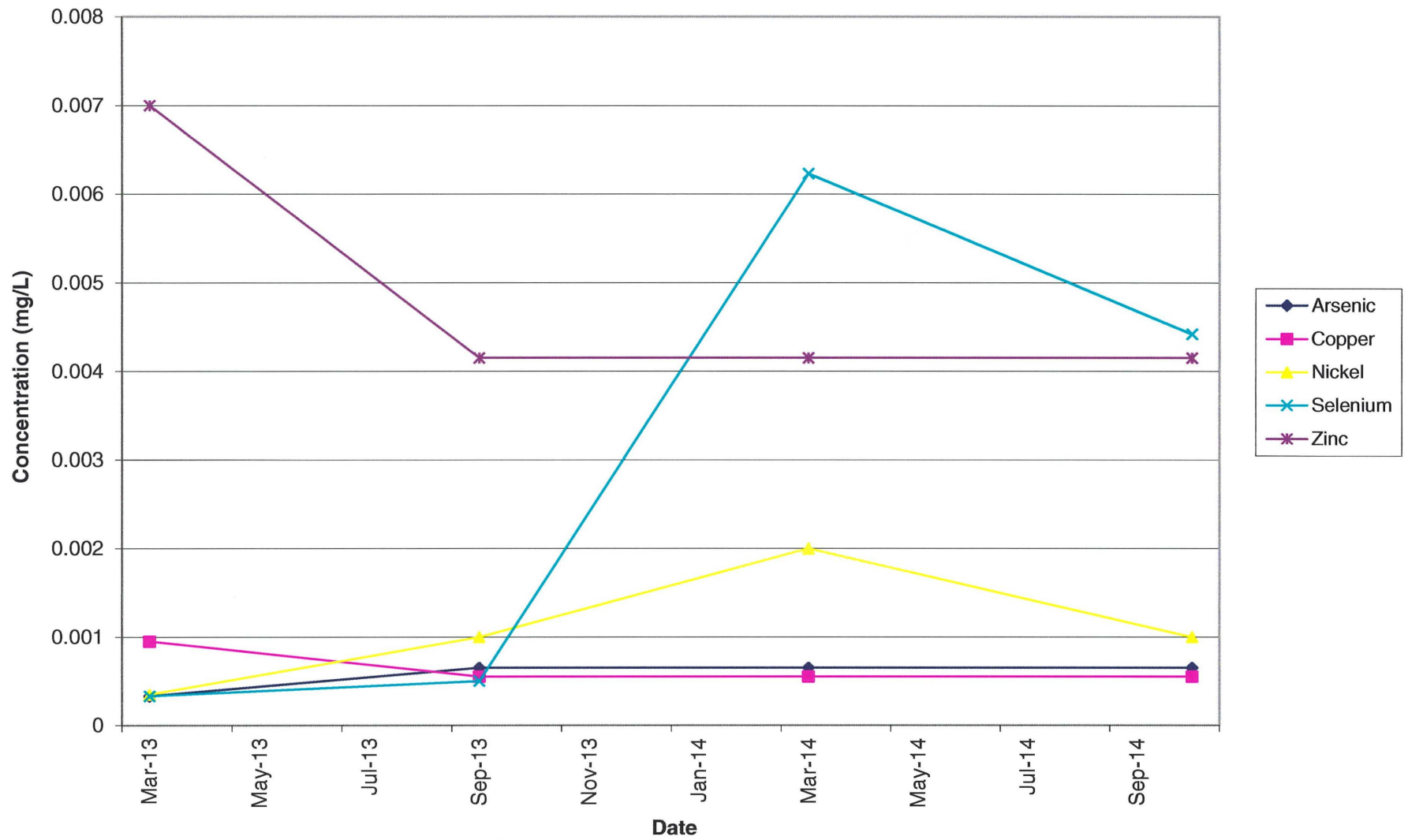
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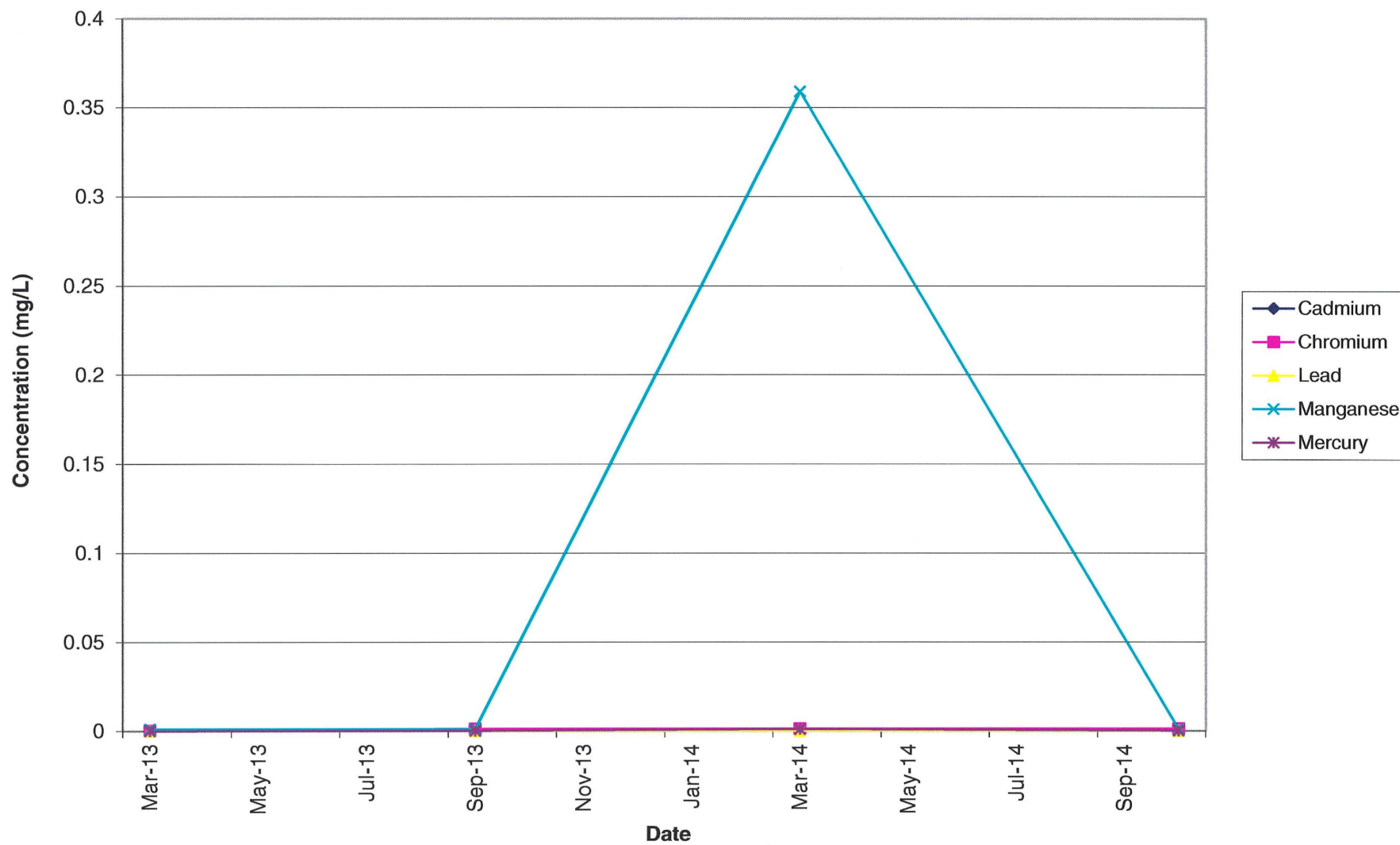
MWC-3 Metals (Part 1)



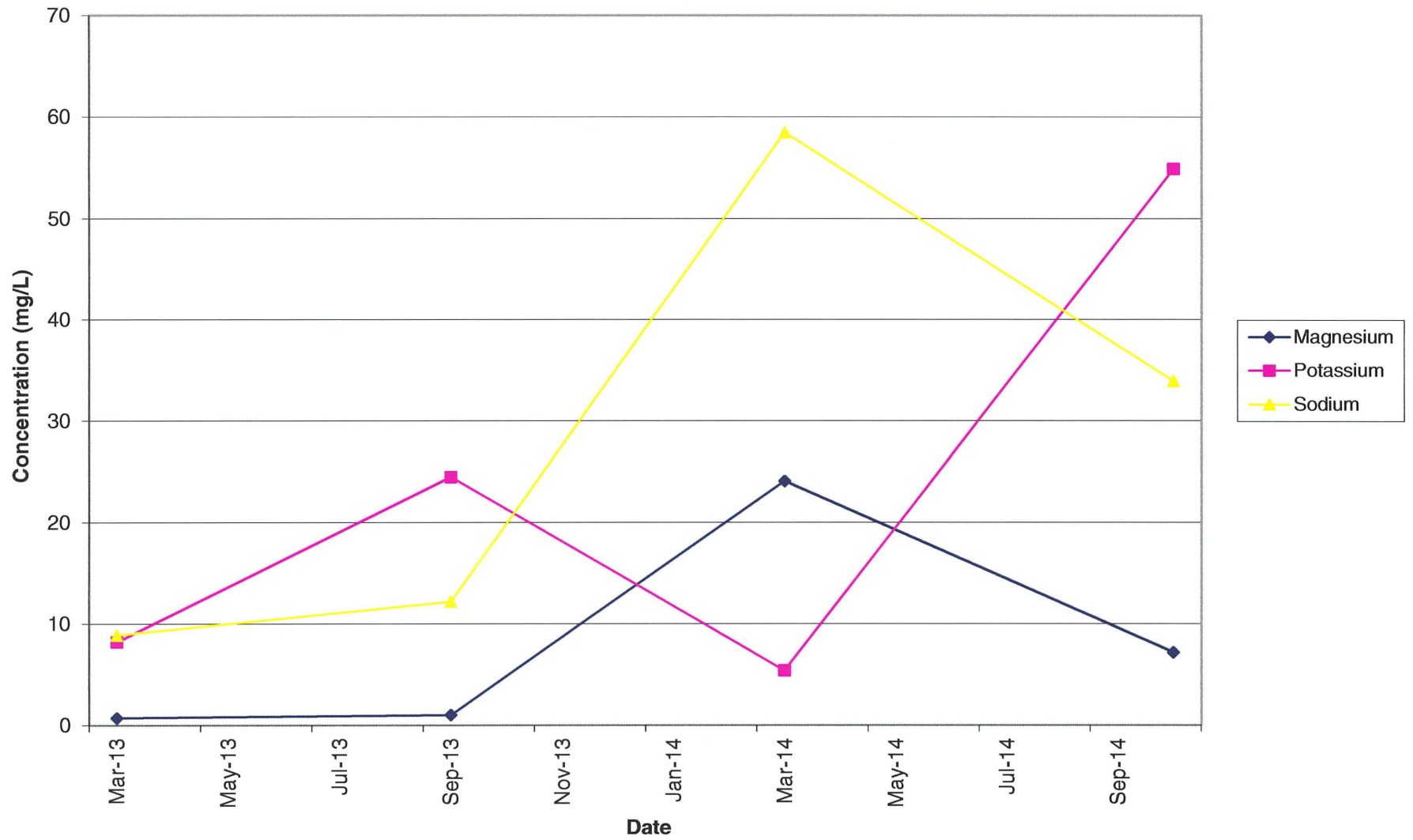
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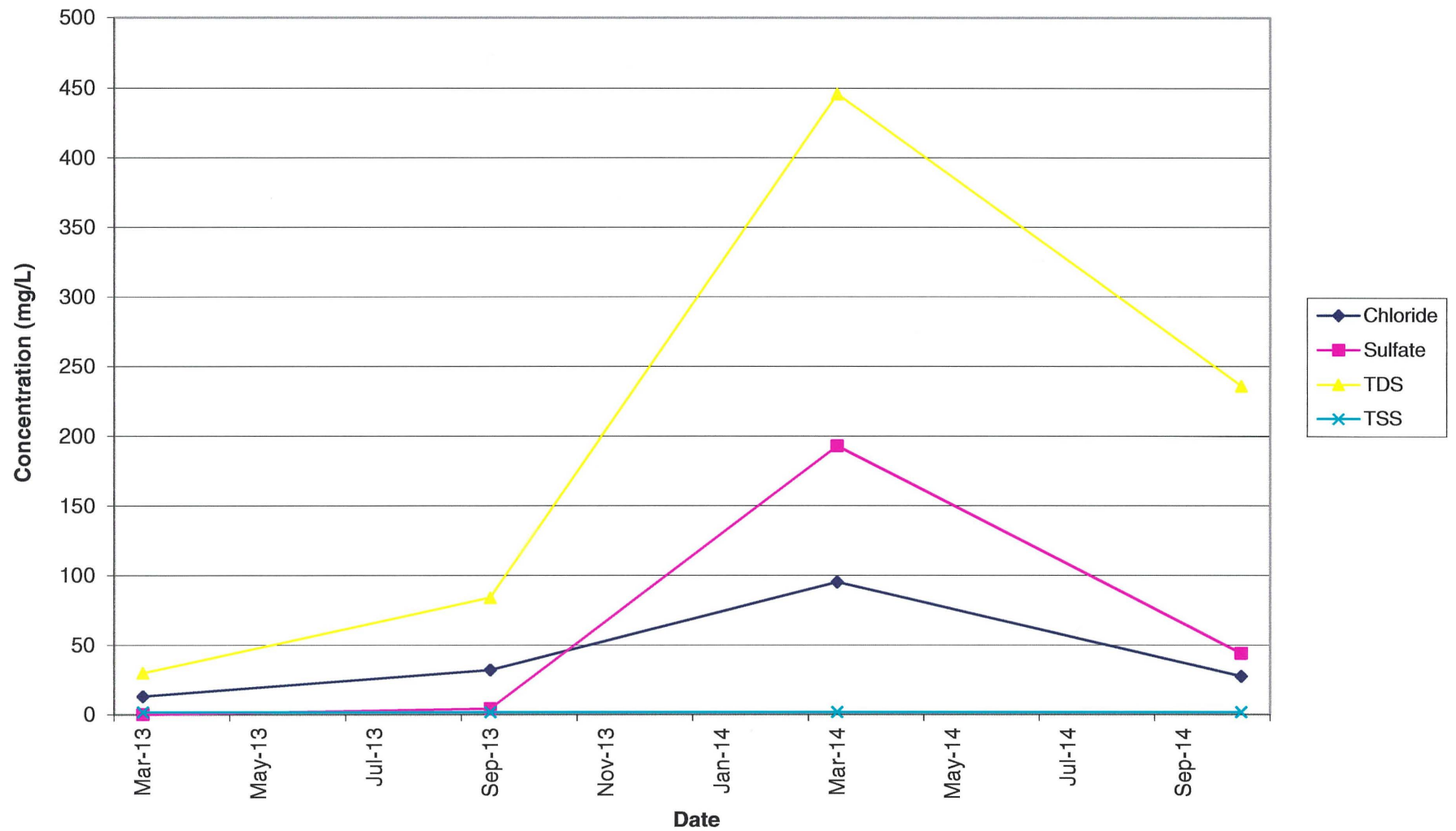
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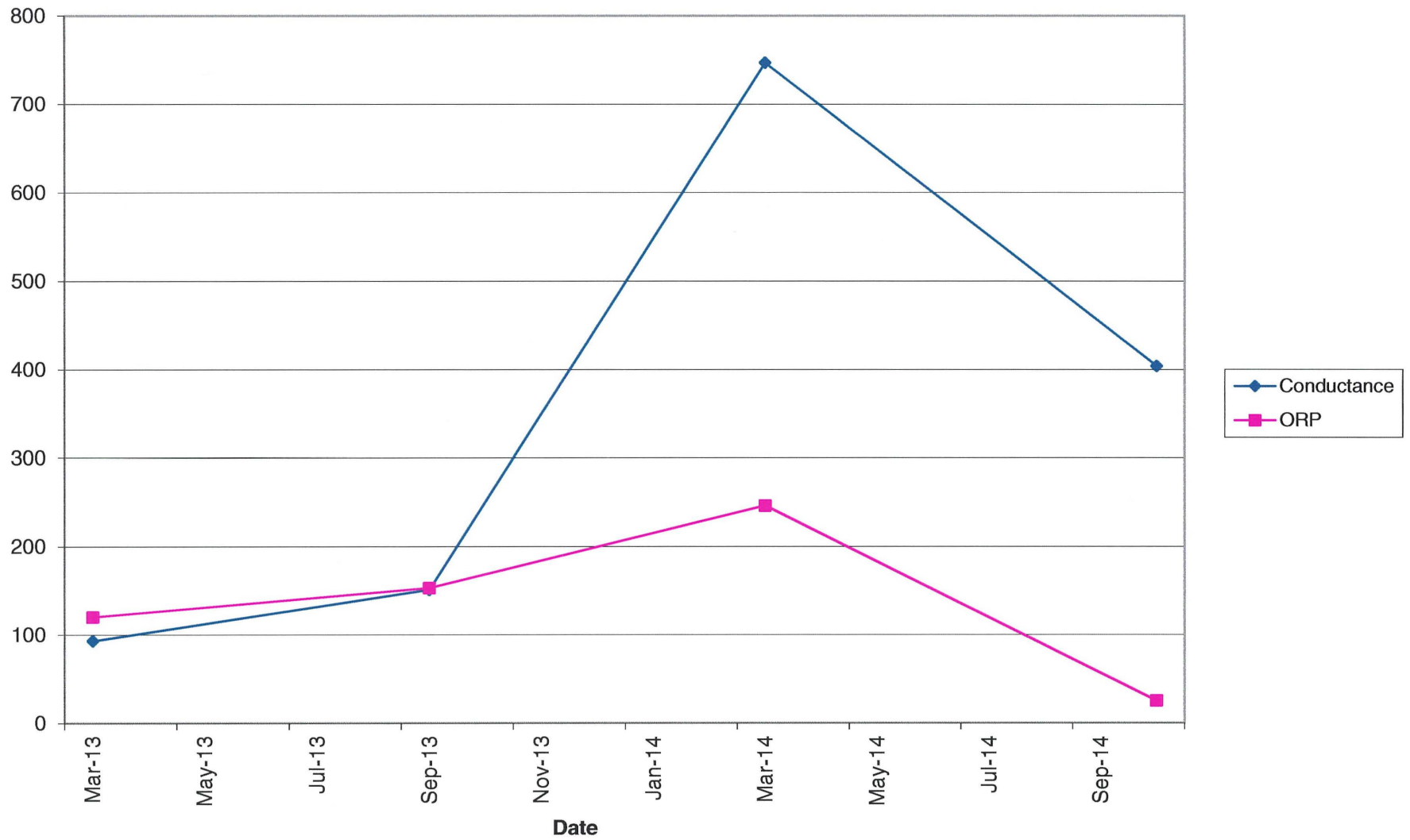
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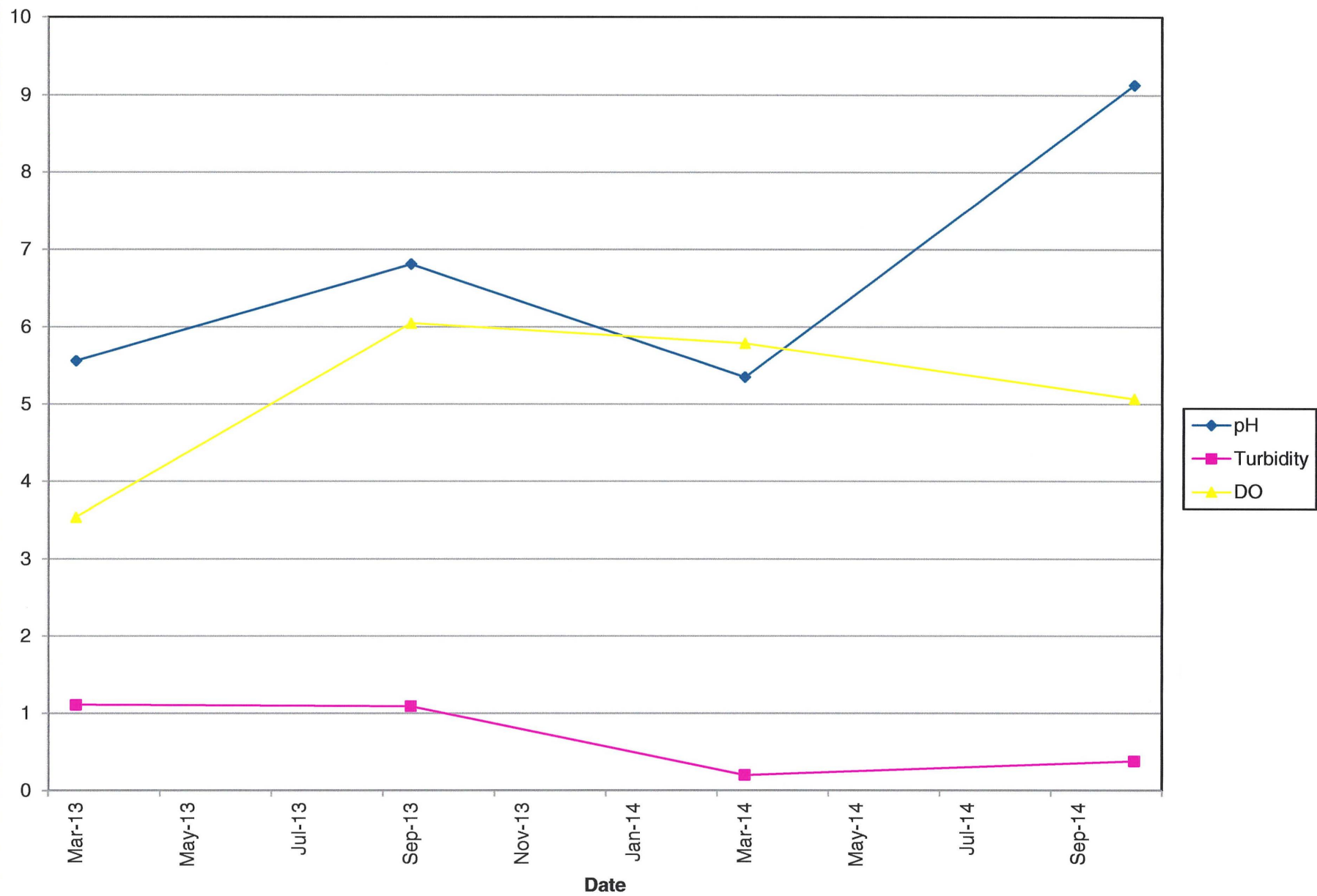
MWC-3 General Chemistry



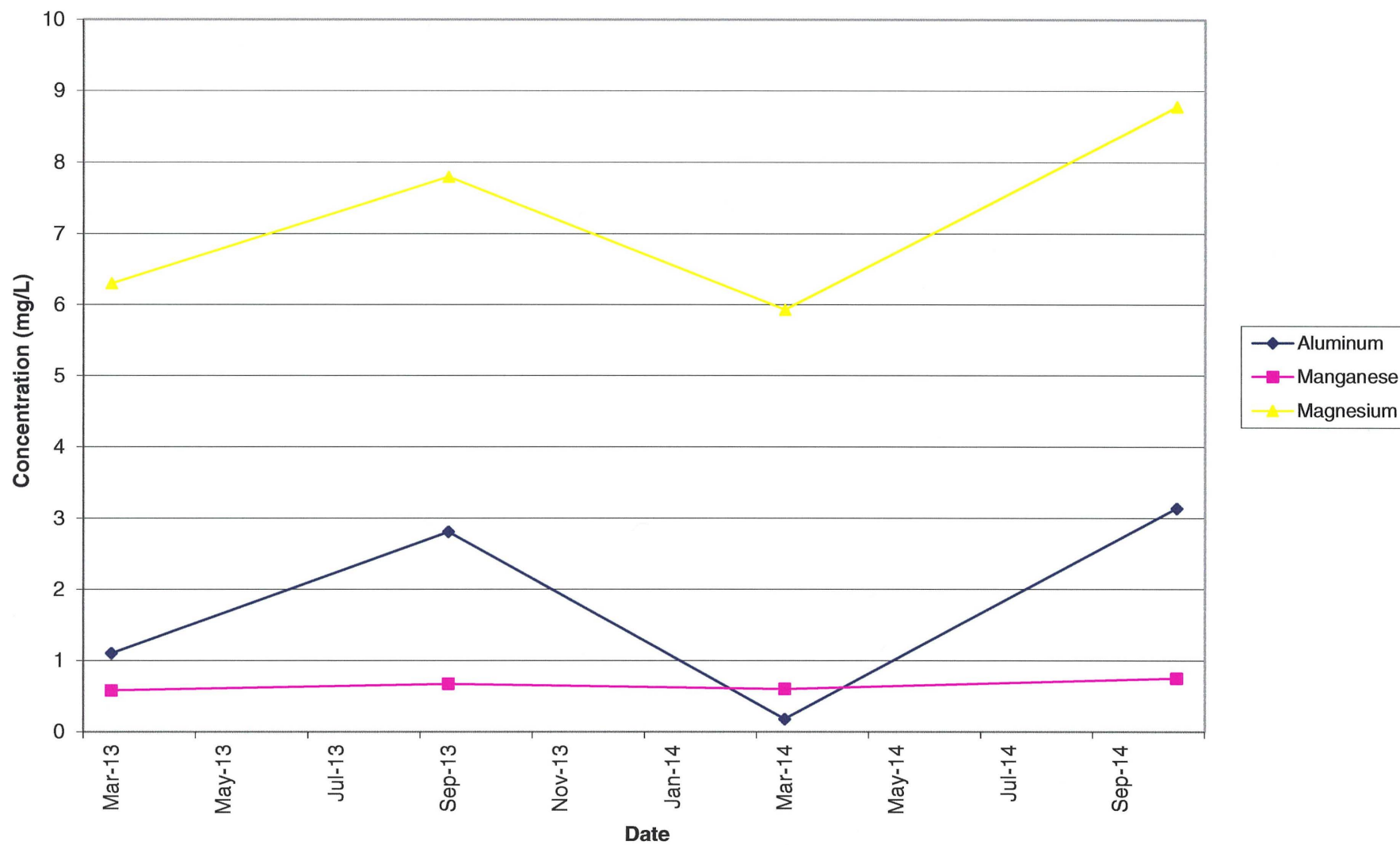
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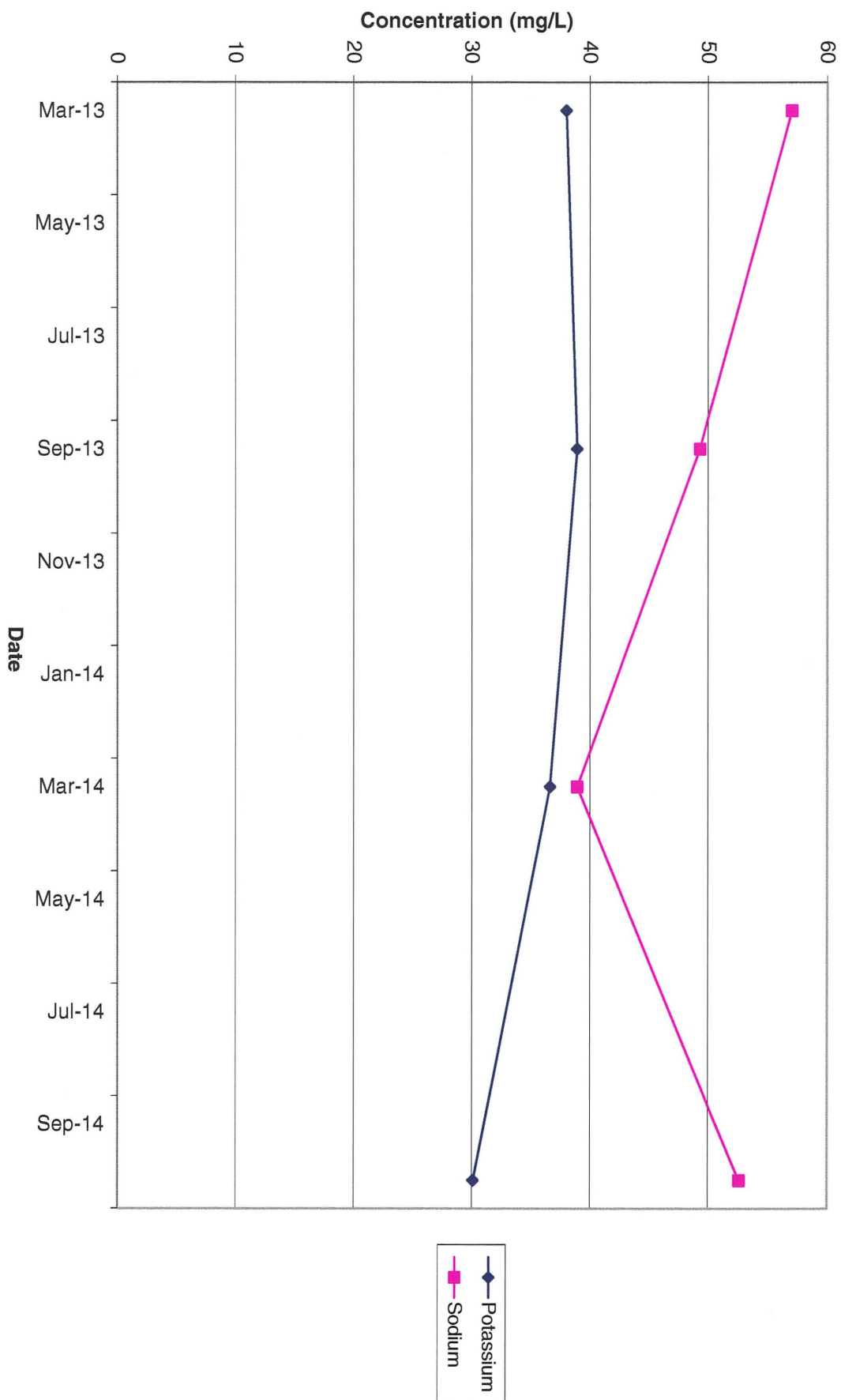
MWC-3 Field Parameters (Part 2)



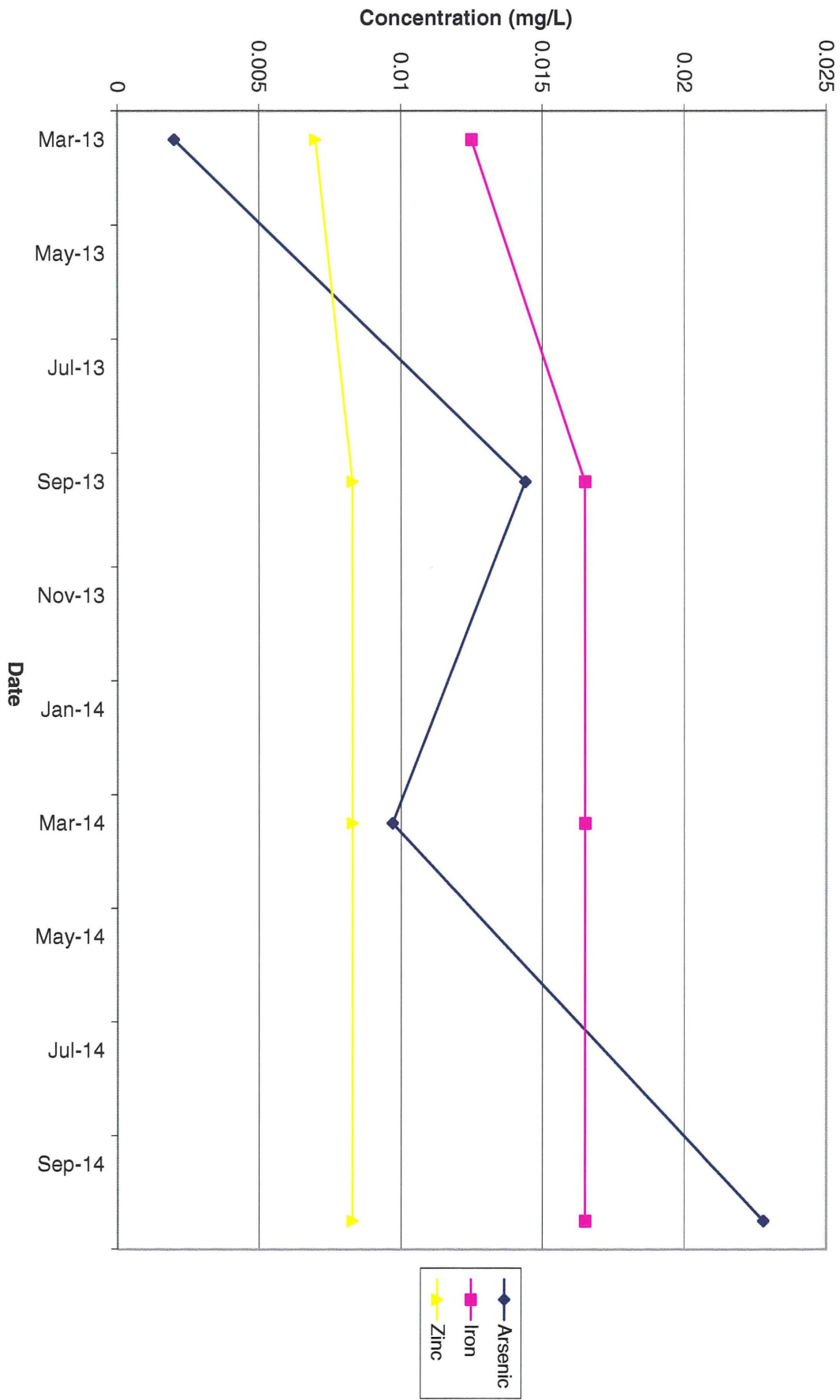
MWC-4 Metals (Part 1)



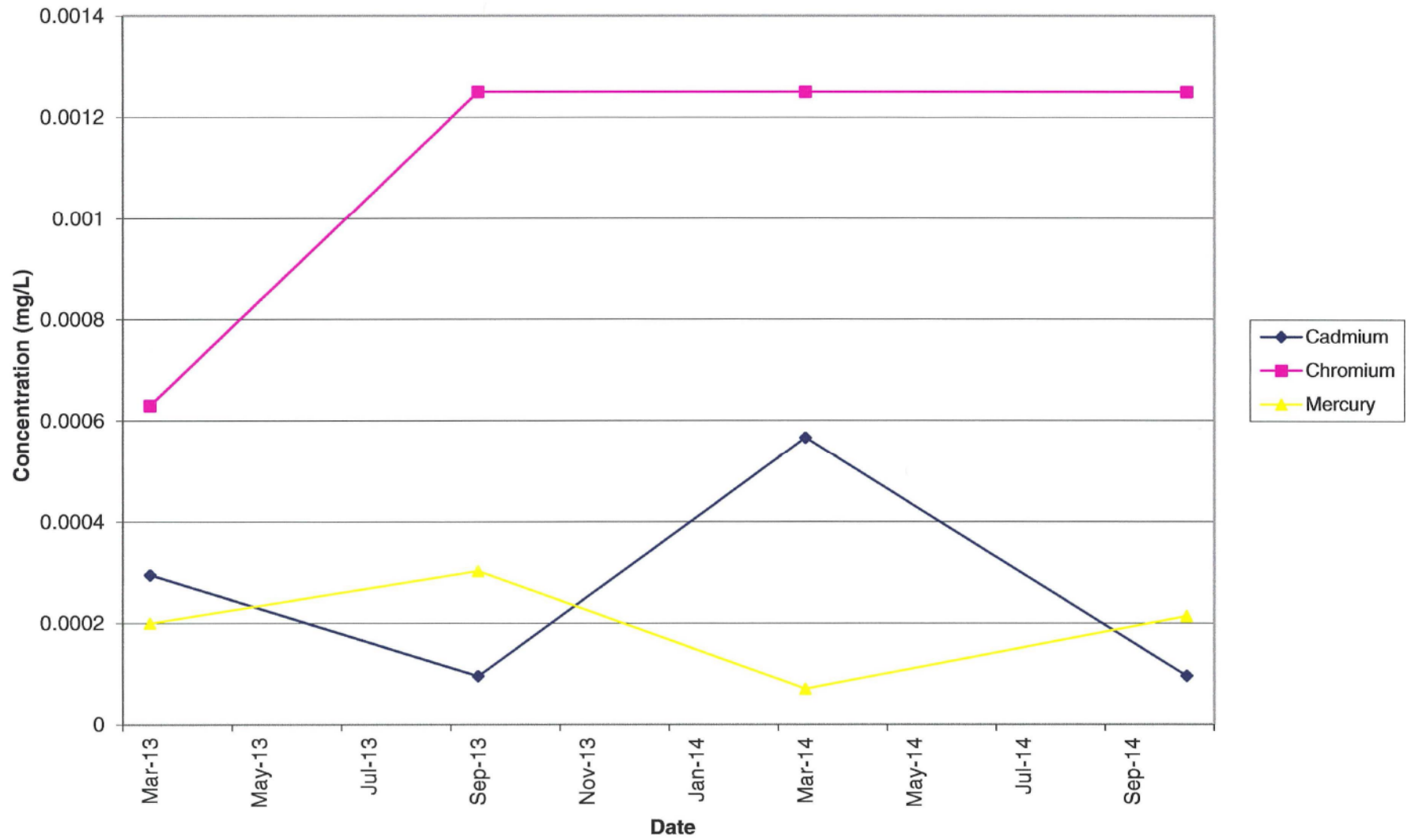
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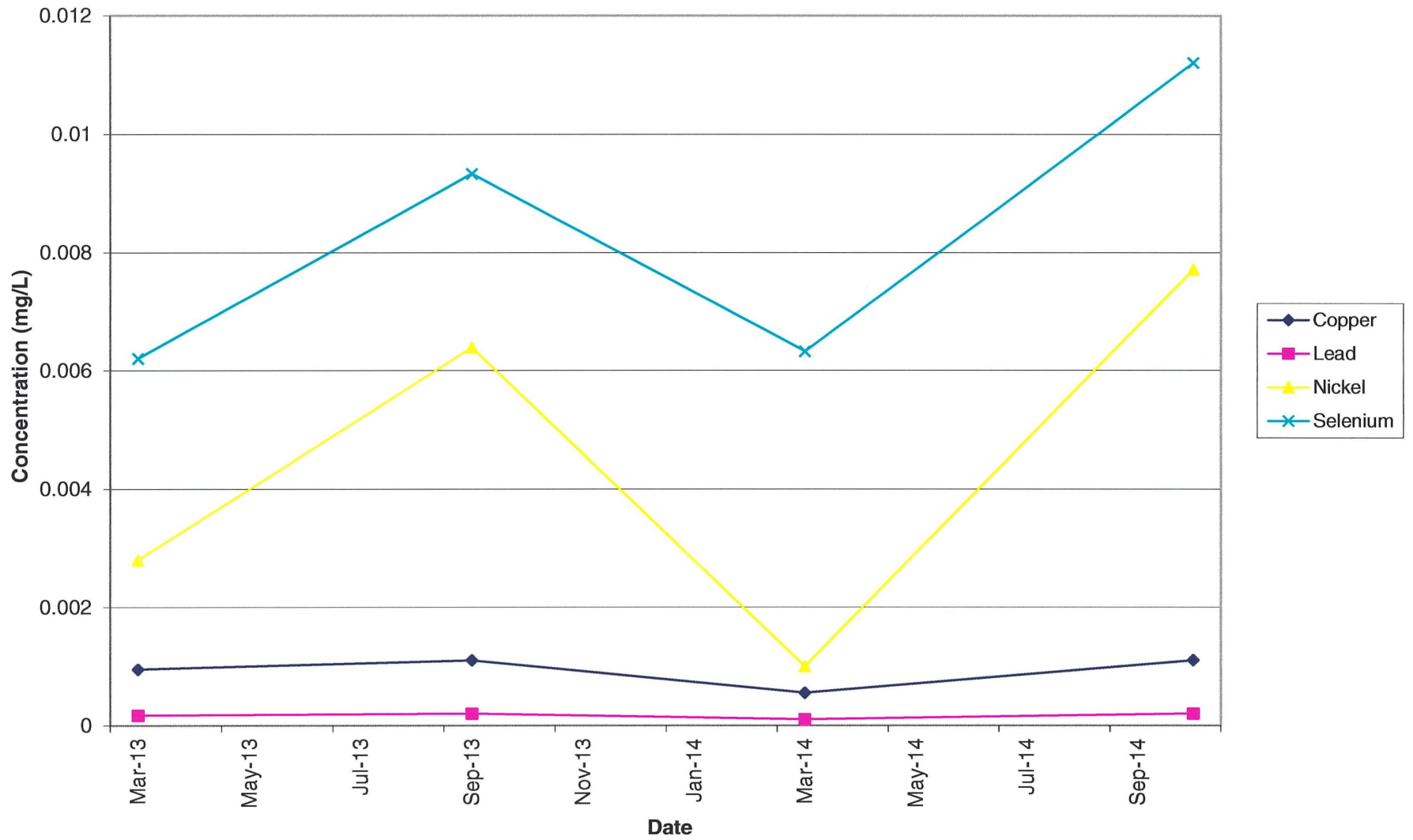
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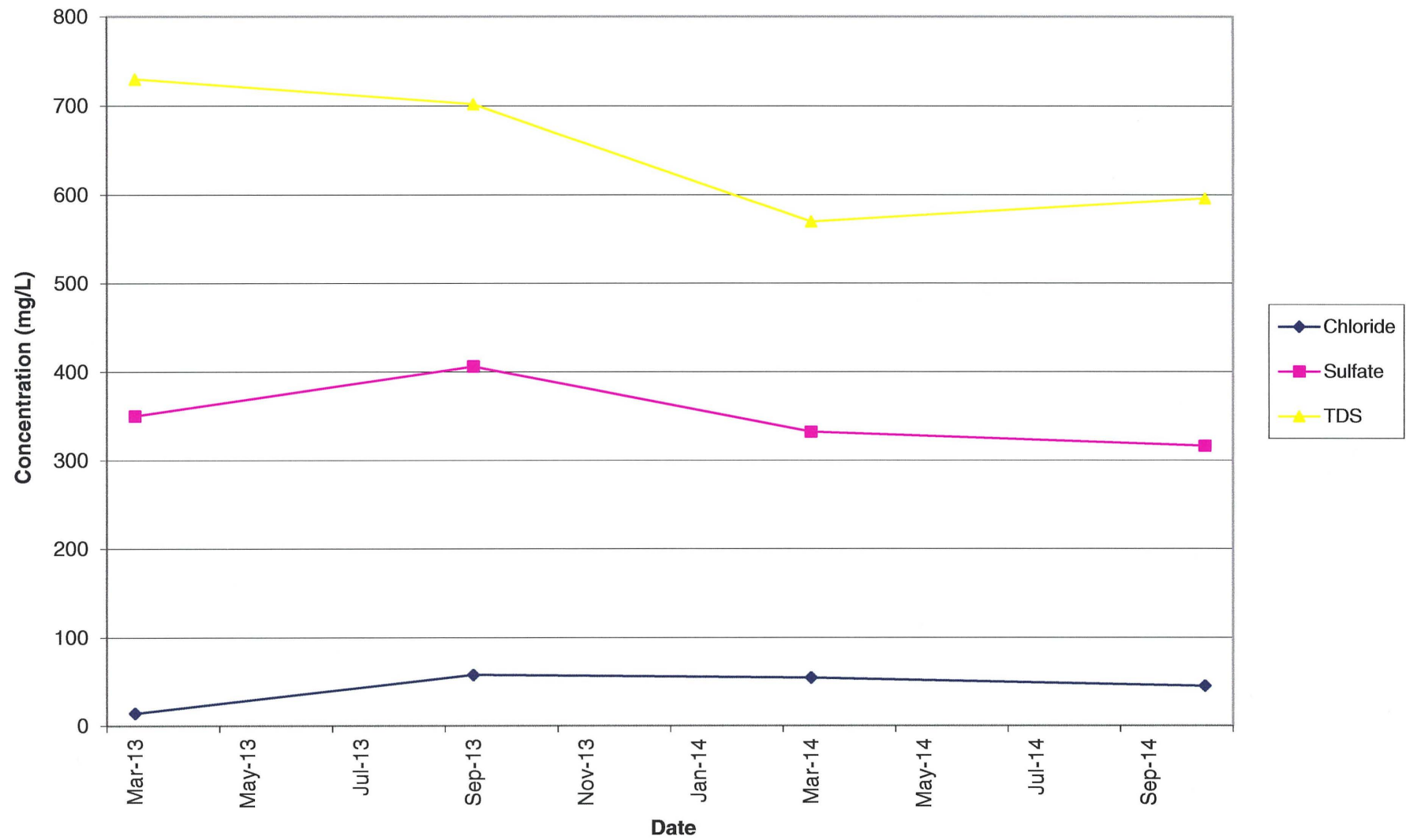
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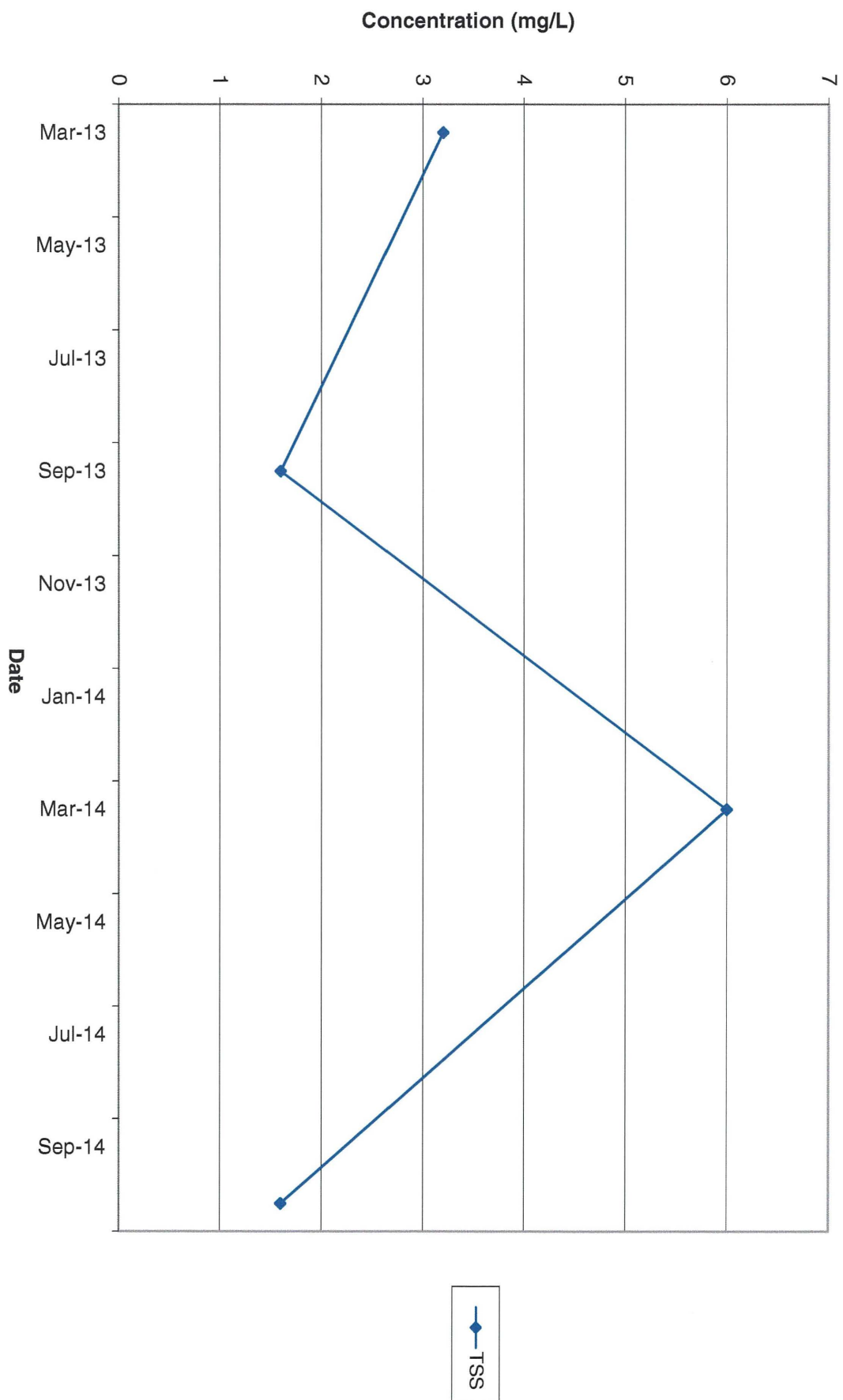
MWC-4 Metals (Part 5)



MWC-4 General Chemistry (Part 2)



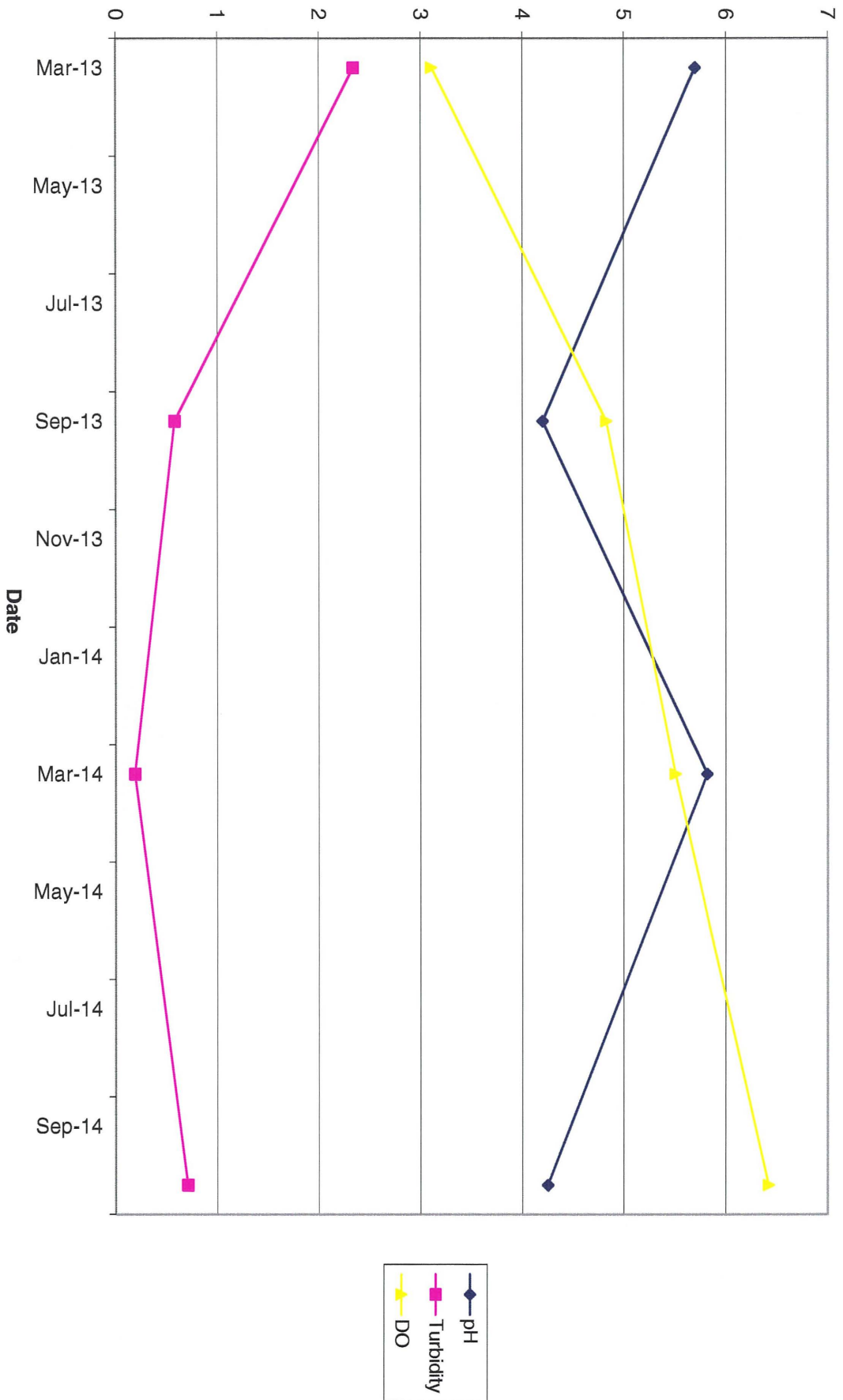
MWC-4 General Chemistry (Part 2)



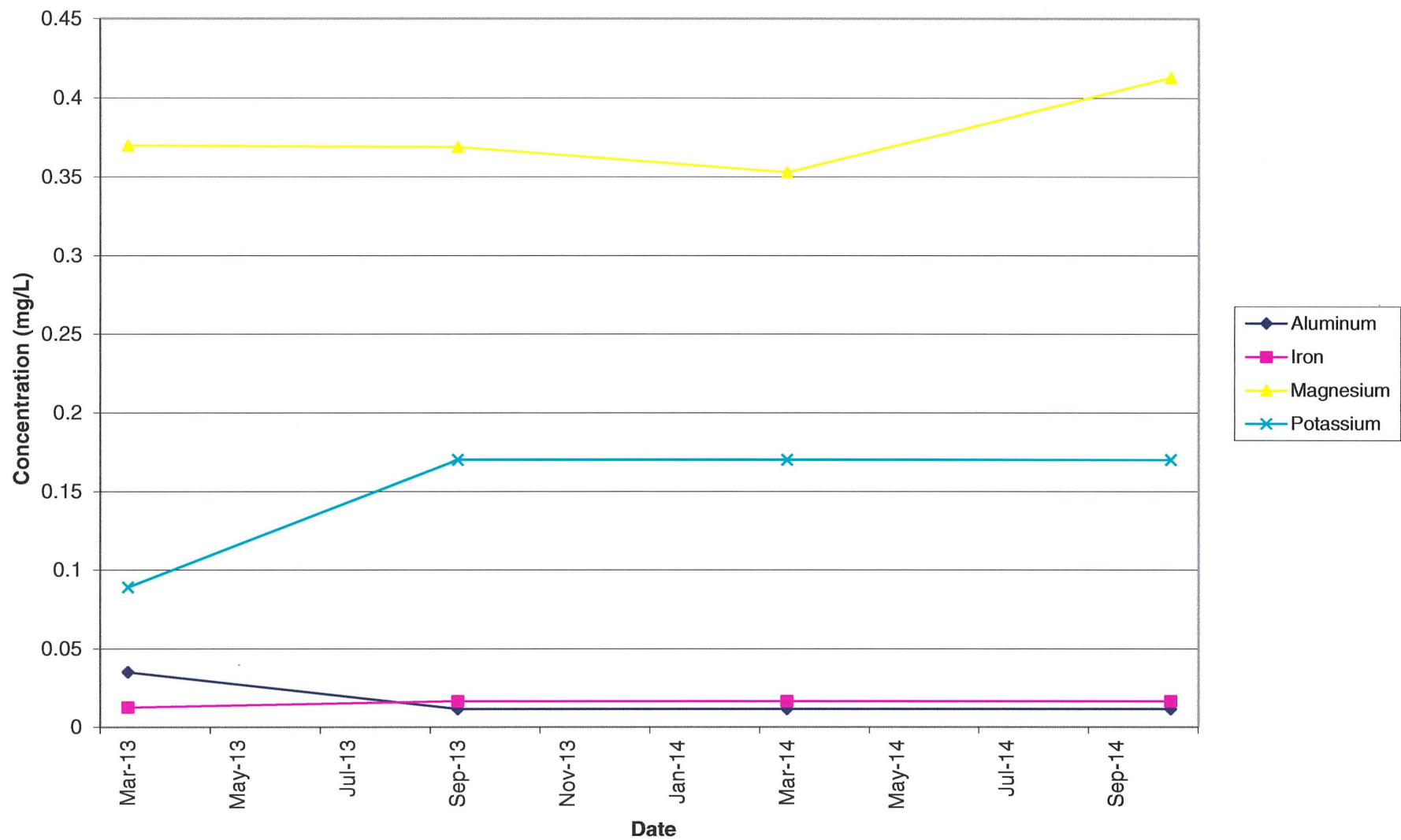
MWC-4 Field Parameters (Part 1)



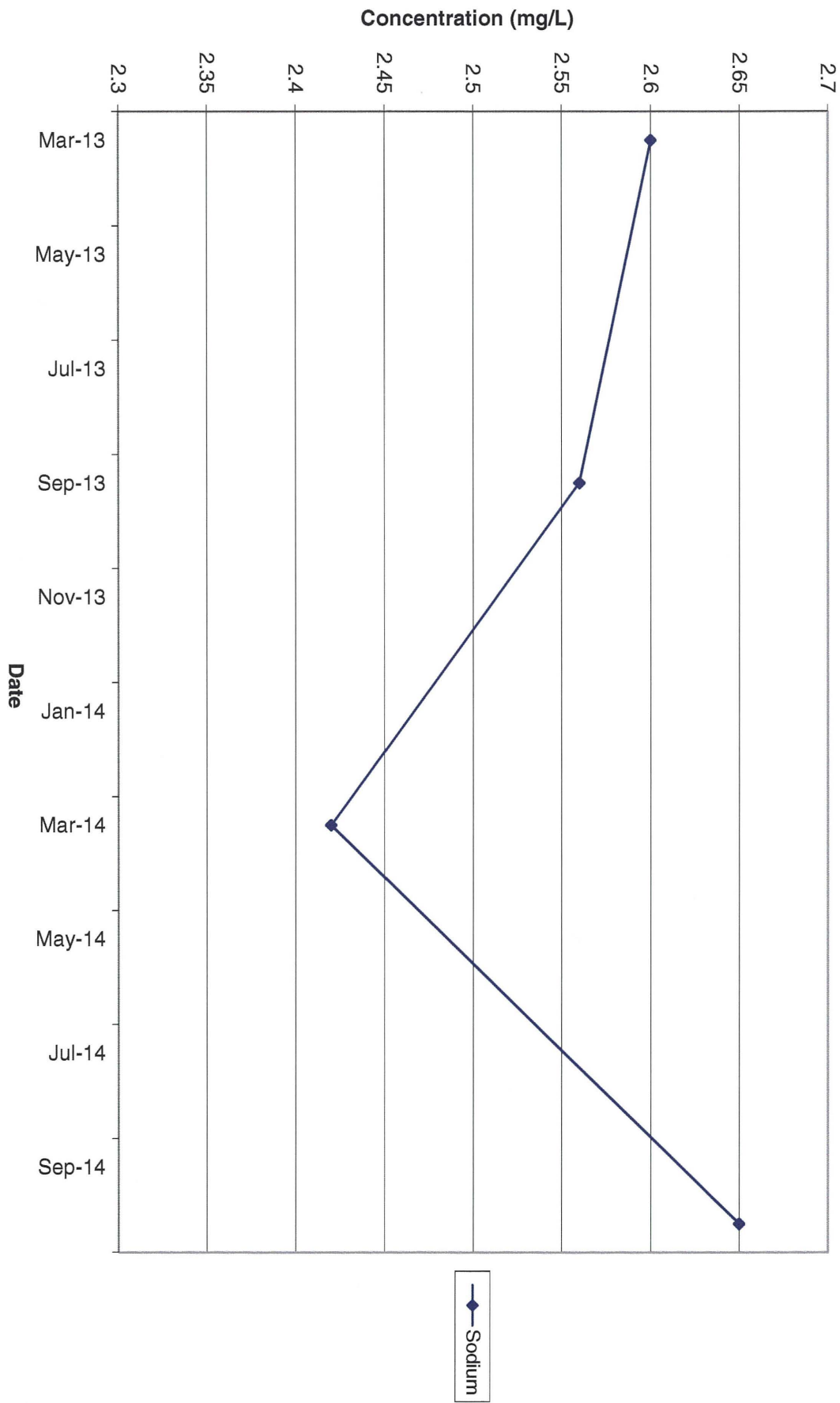
MWC-4 Field Parameters (Part 2)



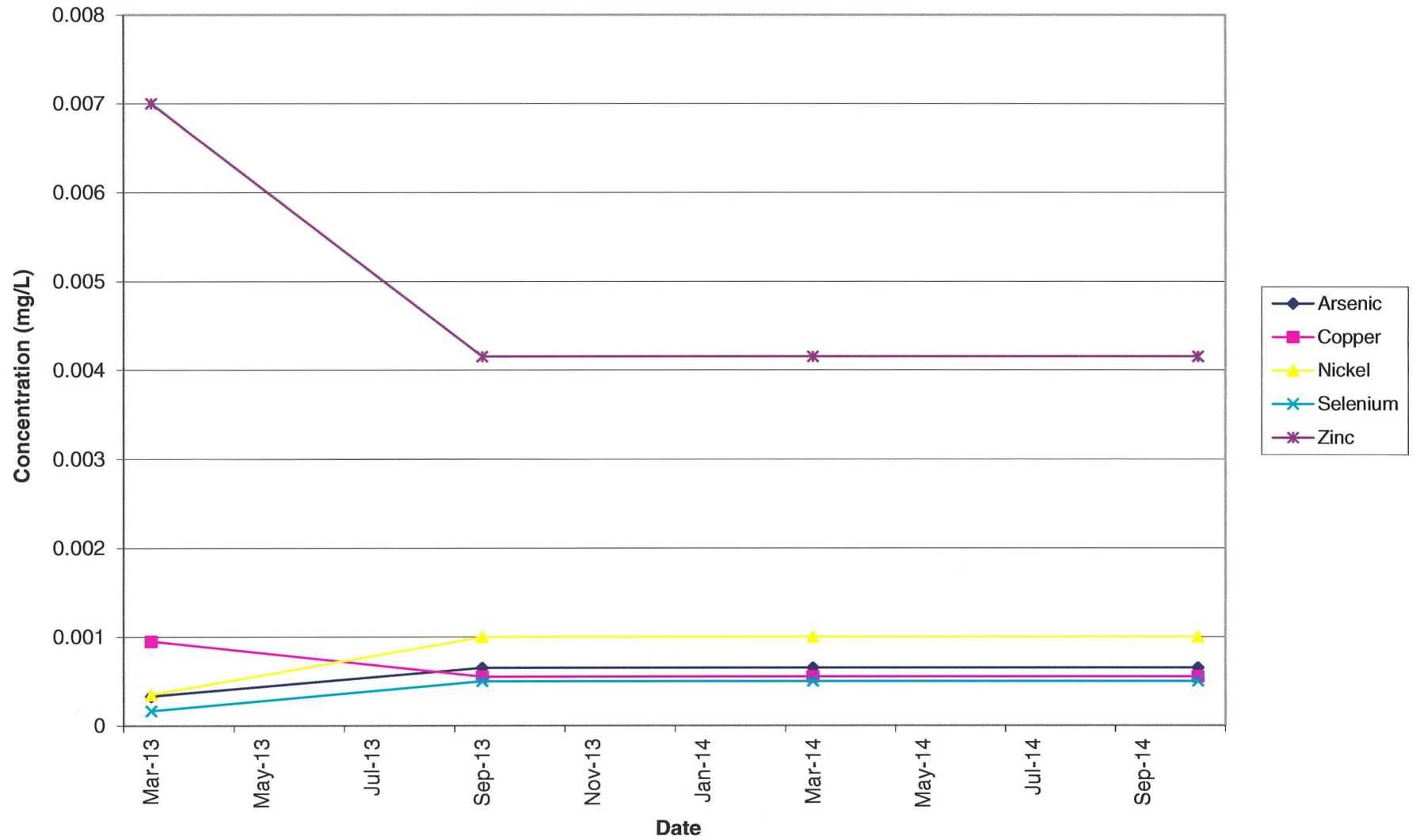
GE-5D Metals (Part 1)



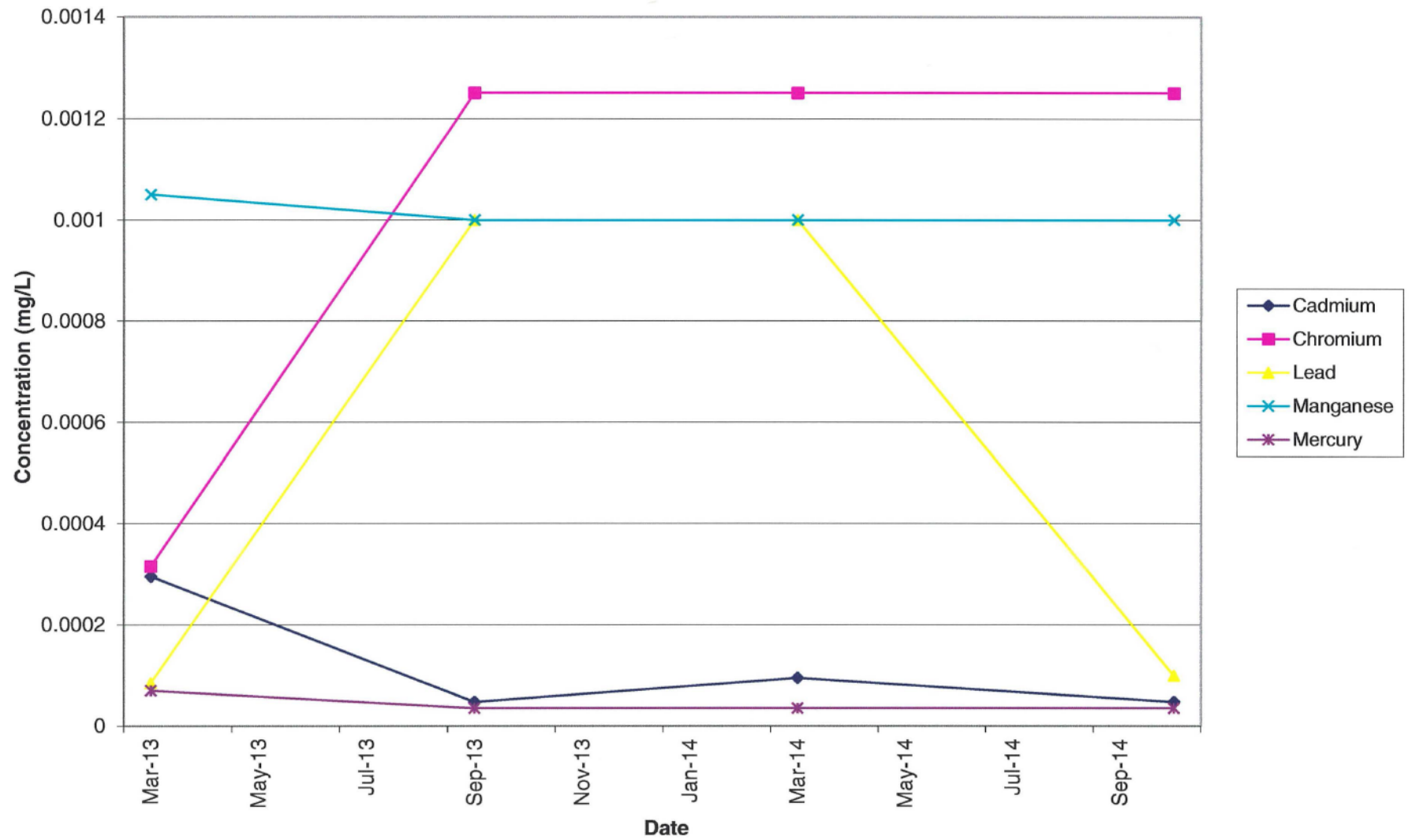
GE-5D Metals (Part 2)



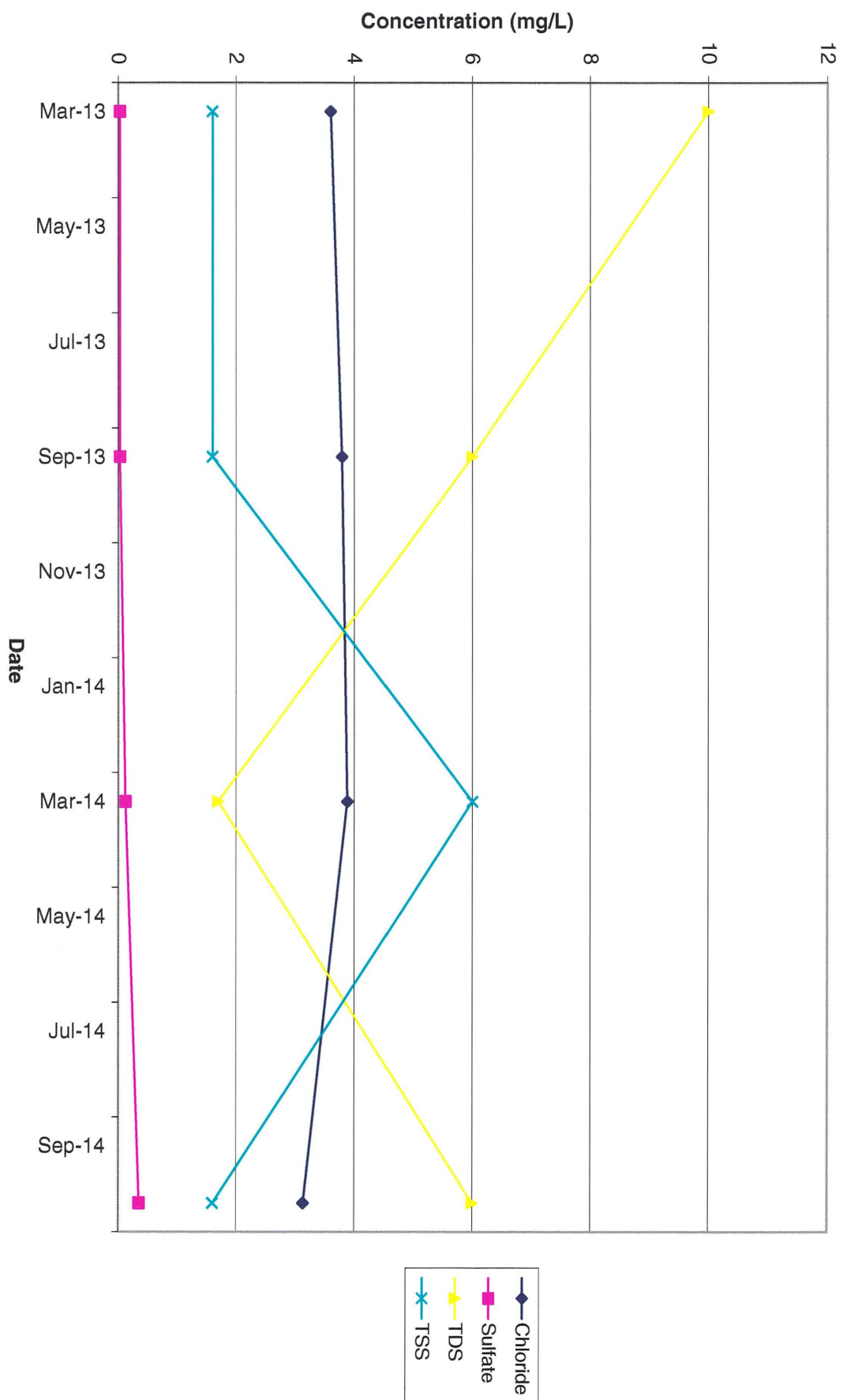
GE-5D Metals (Part 3)



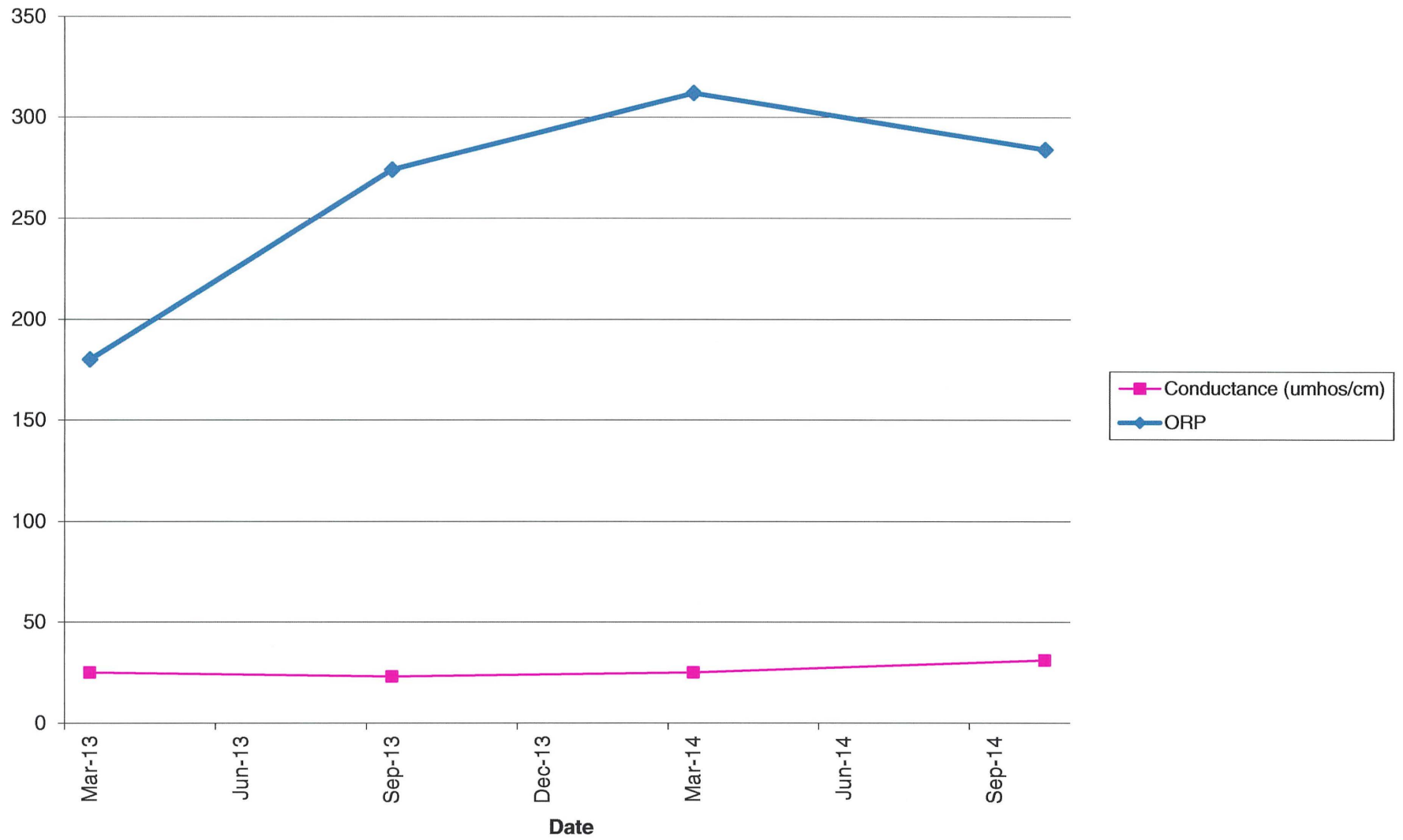
GE-5D Metals (Part 4)



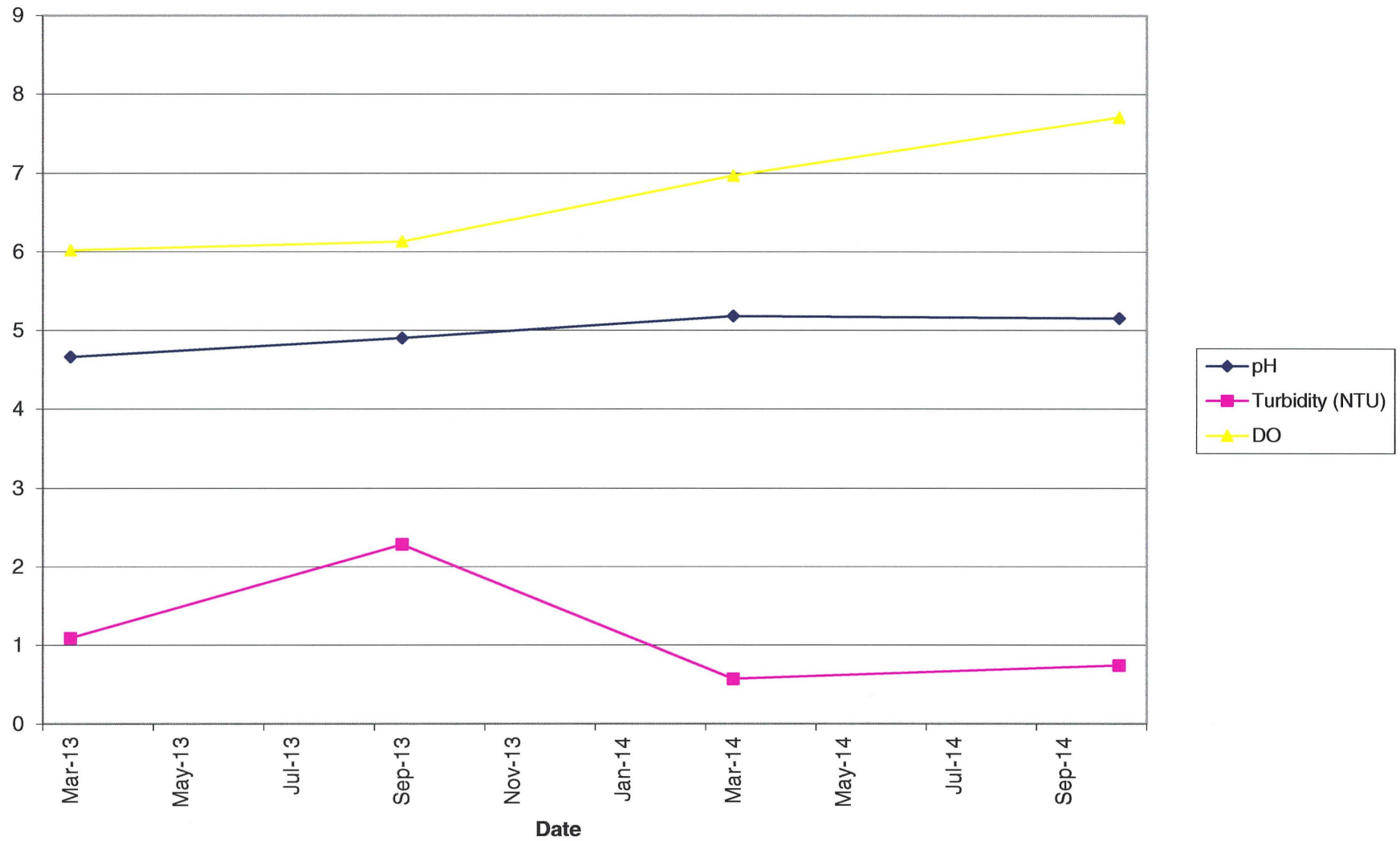
GE-5D General Chemistry



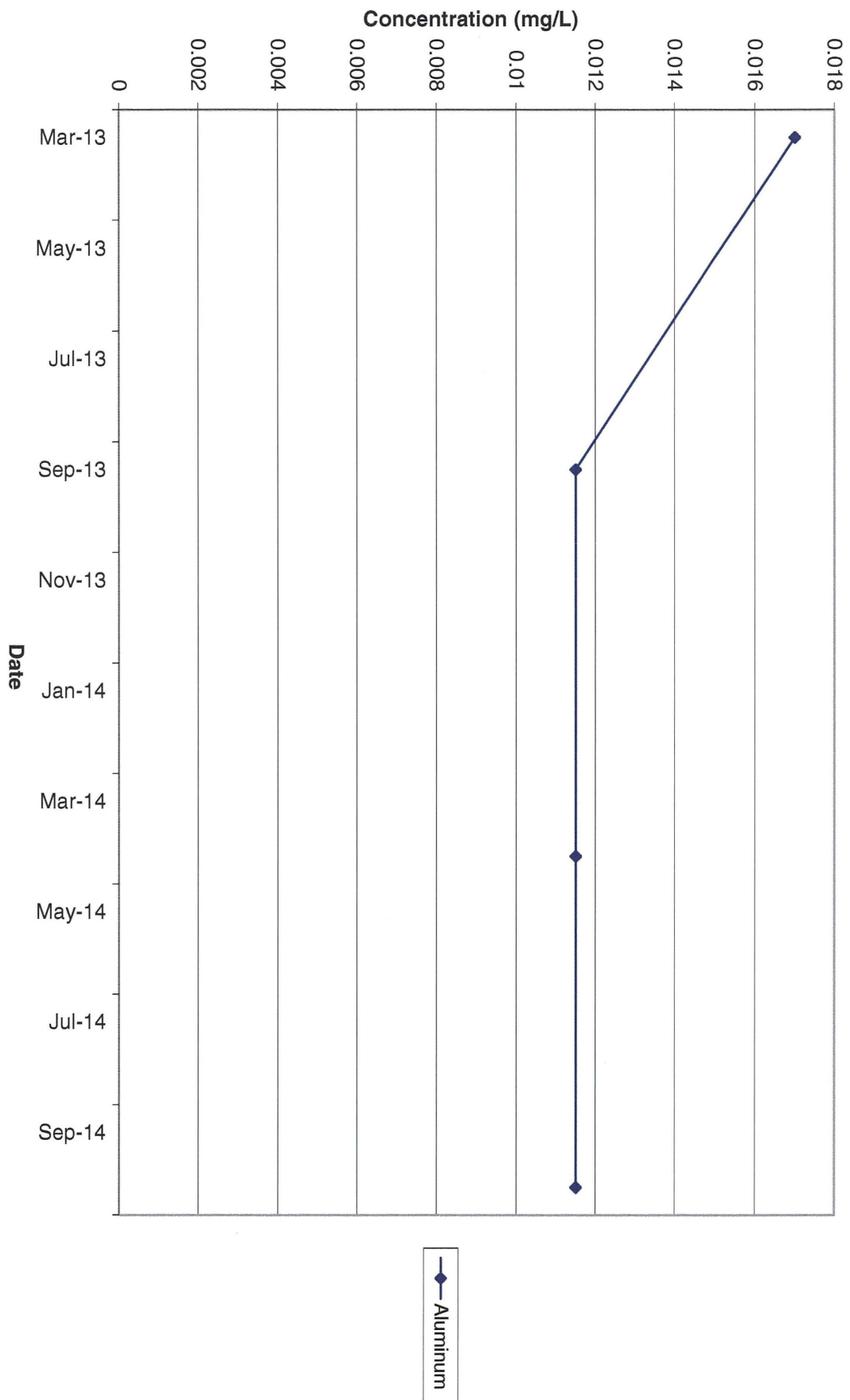
GE-5D Field Parameters (Part 1)



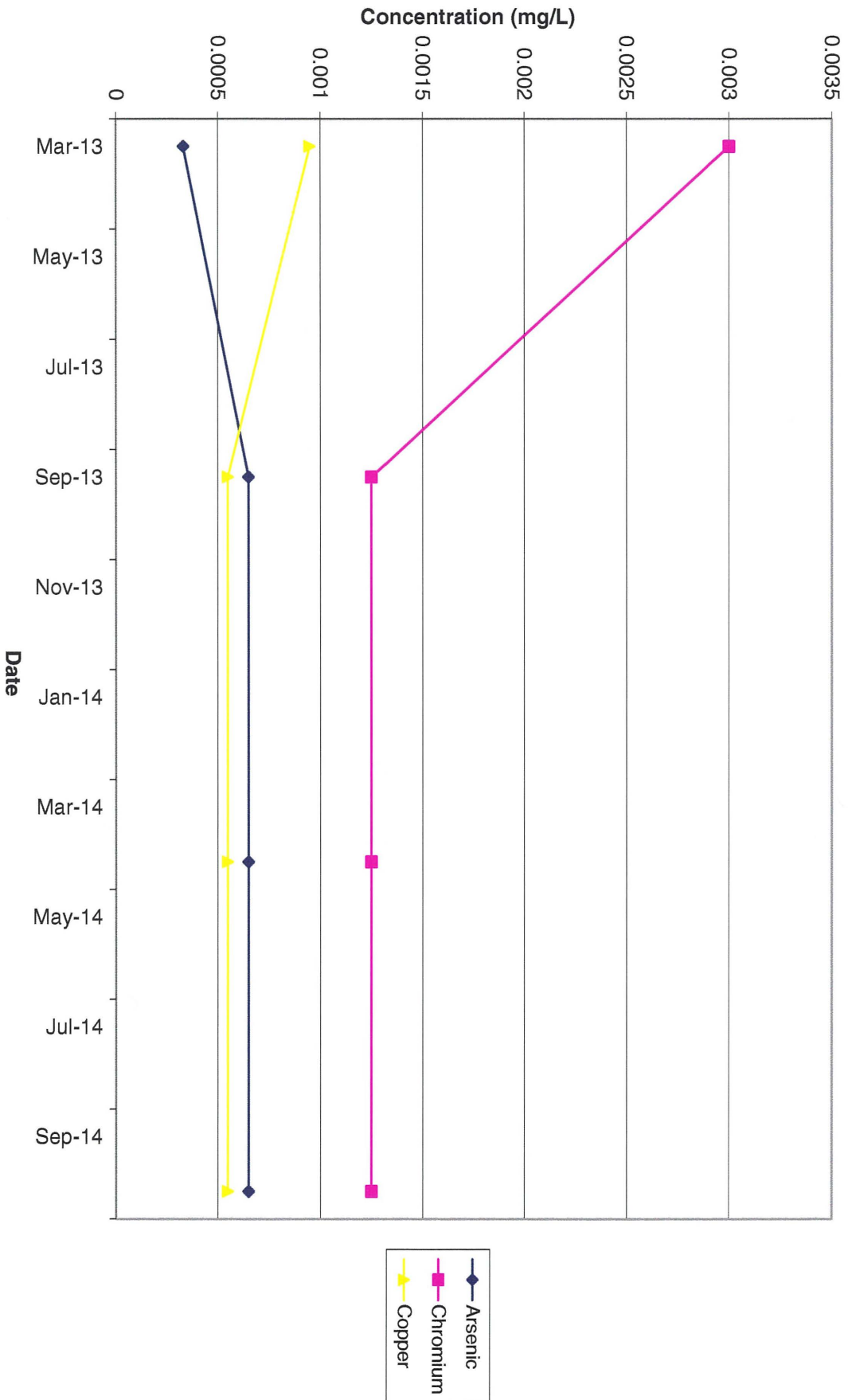
GE-5D Field Parameters (Part 2)



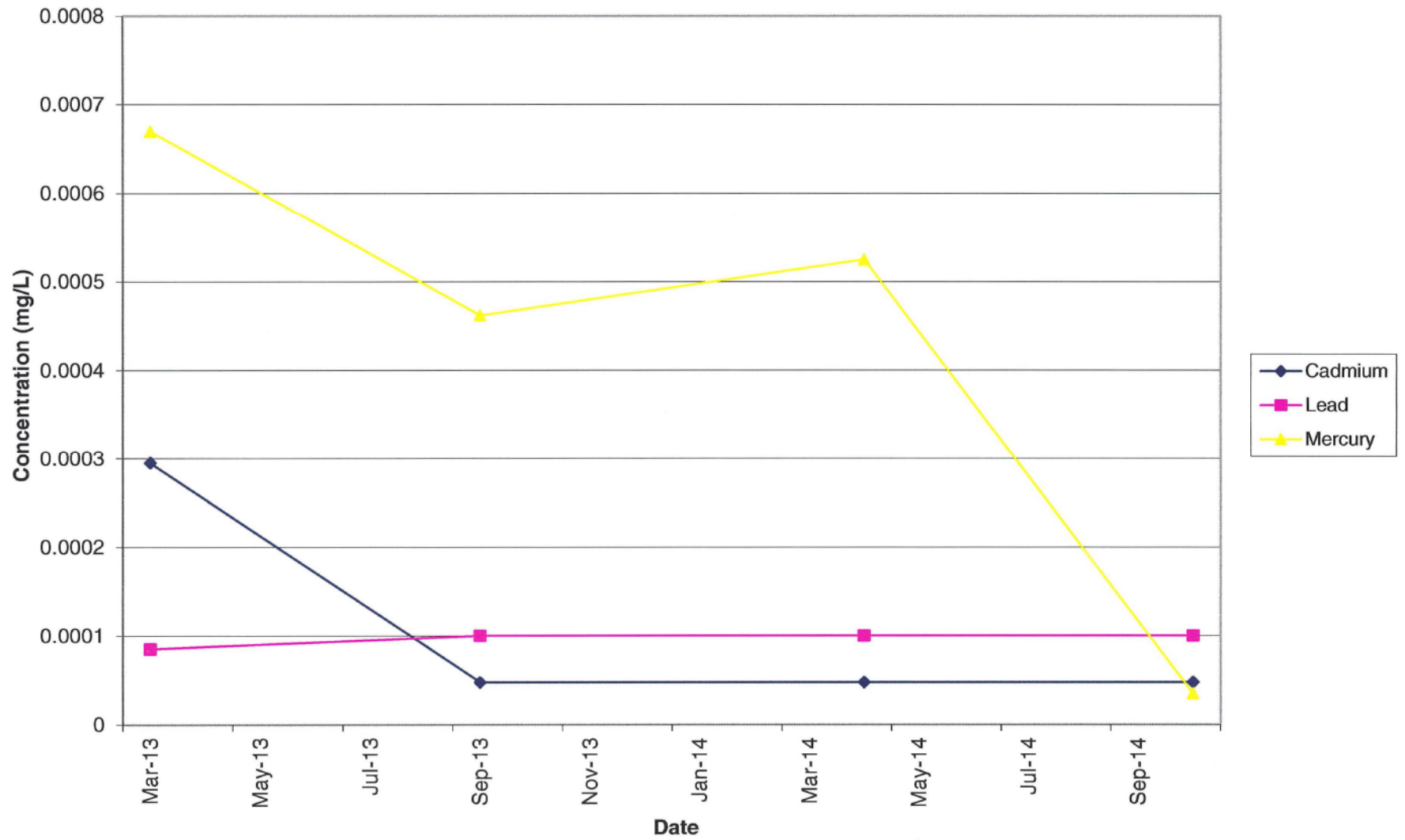
MWC-8 Metals (Part 1)



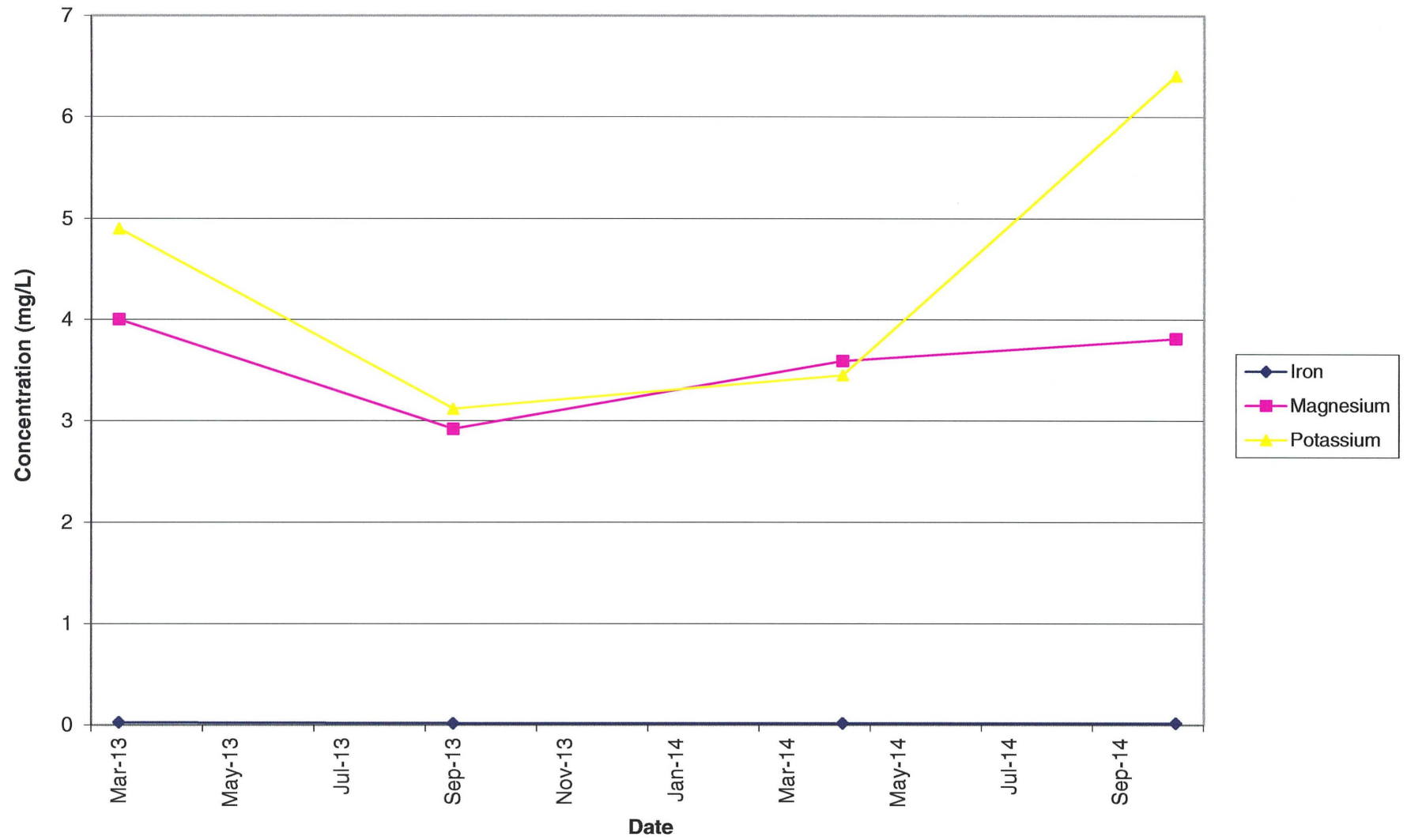
MWC-8 Metals (Part 2)



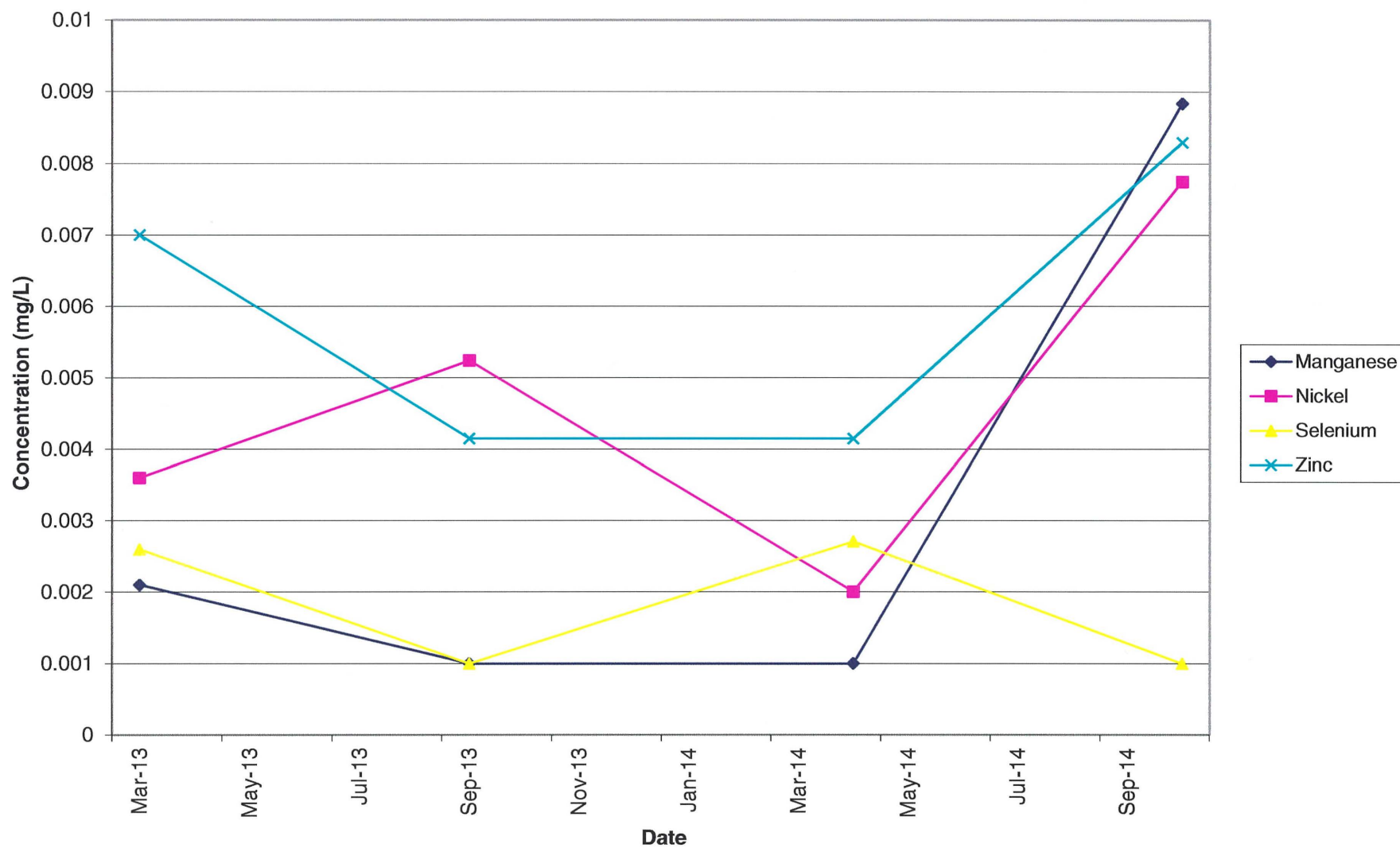
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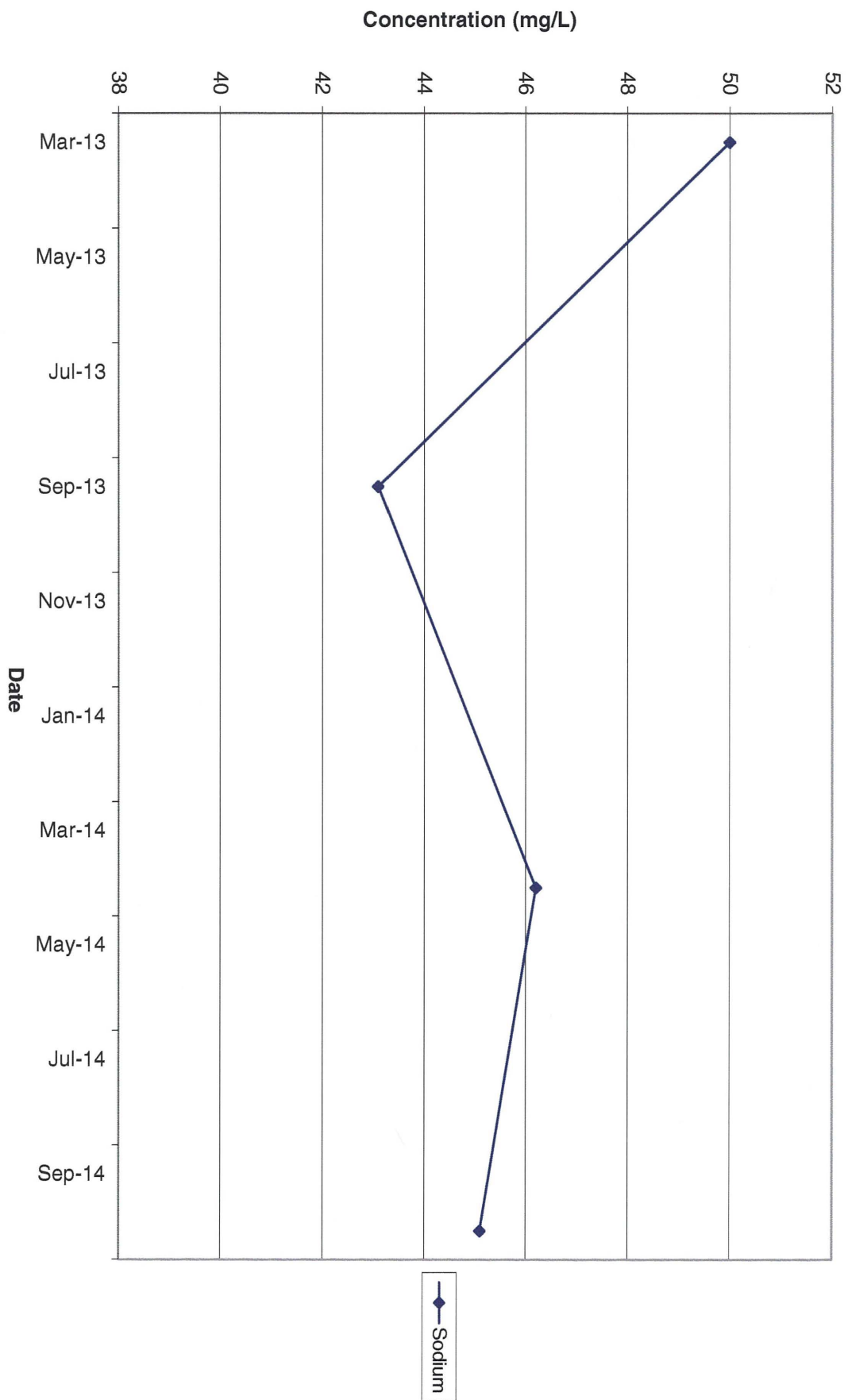
MWC-8 Metals (Part 4)



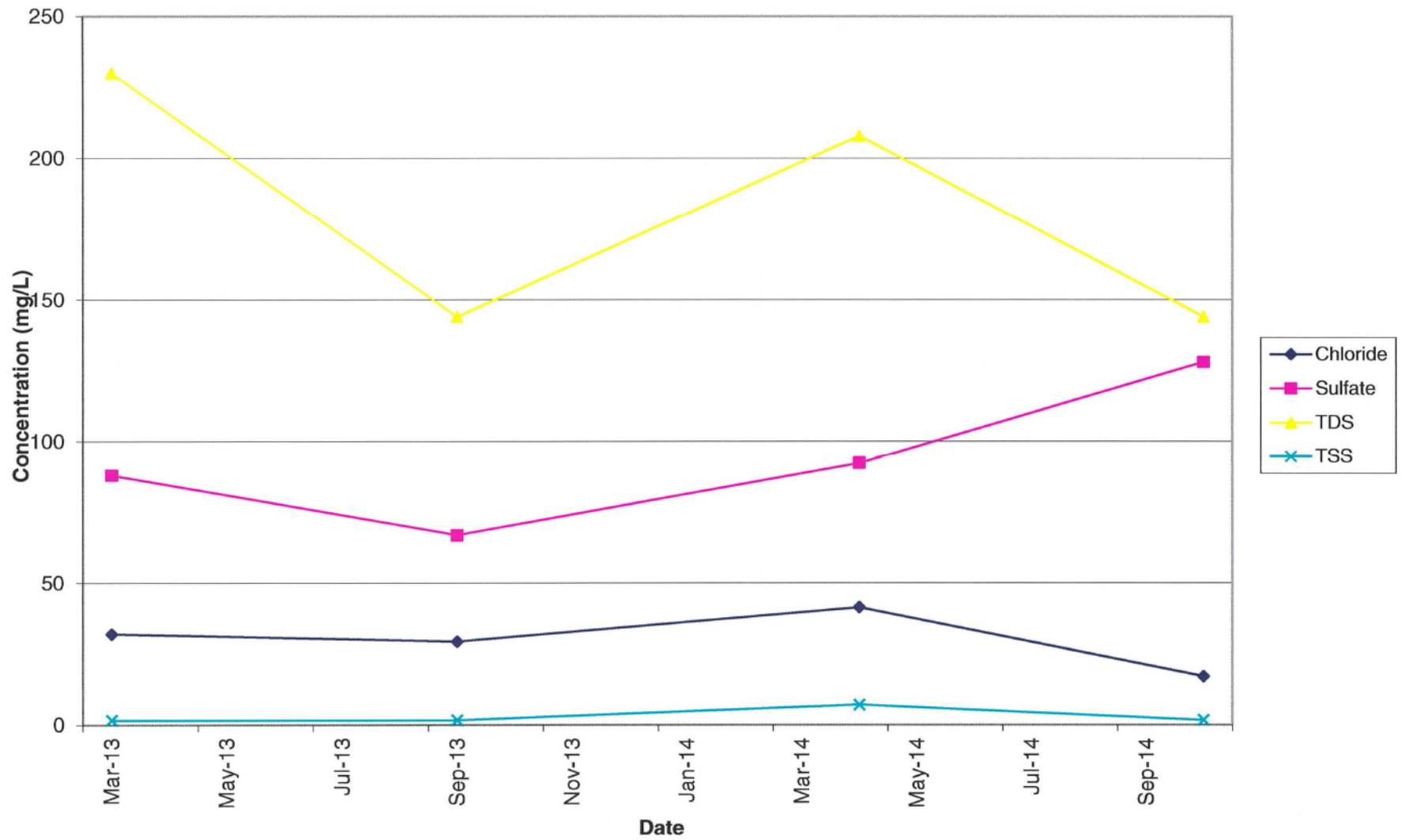
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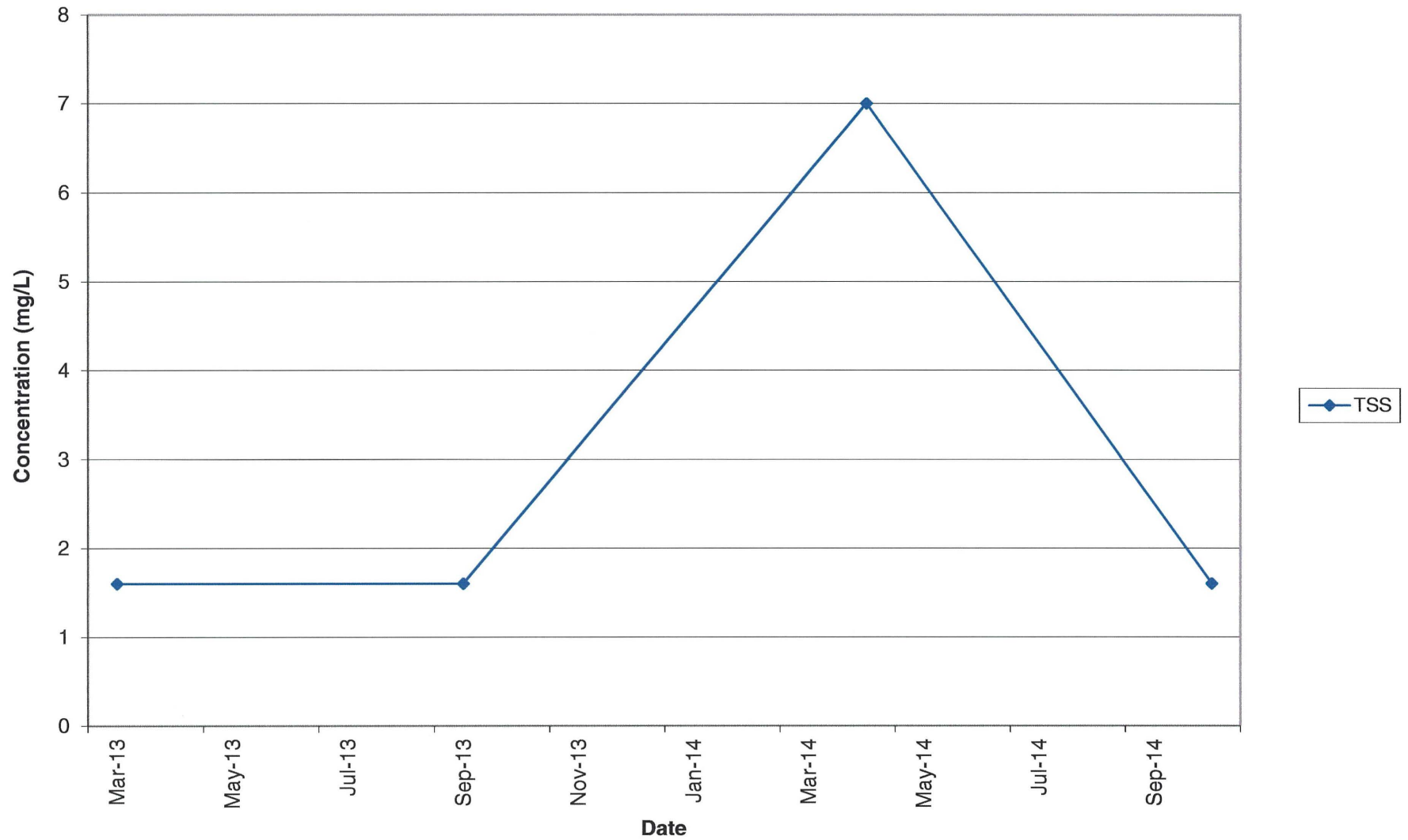
MWC-8 Metals (Part 6)



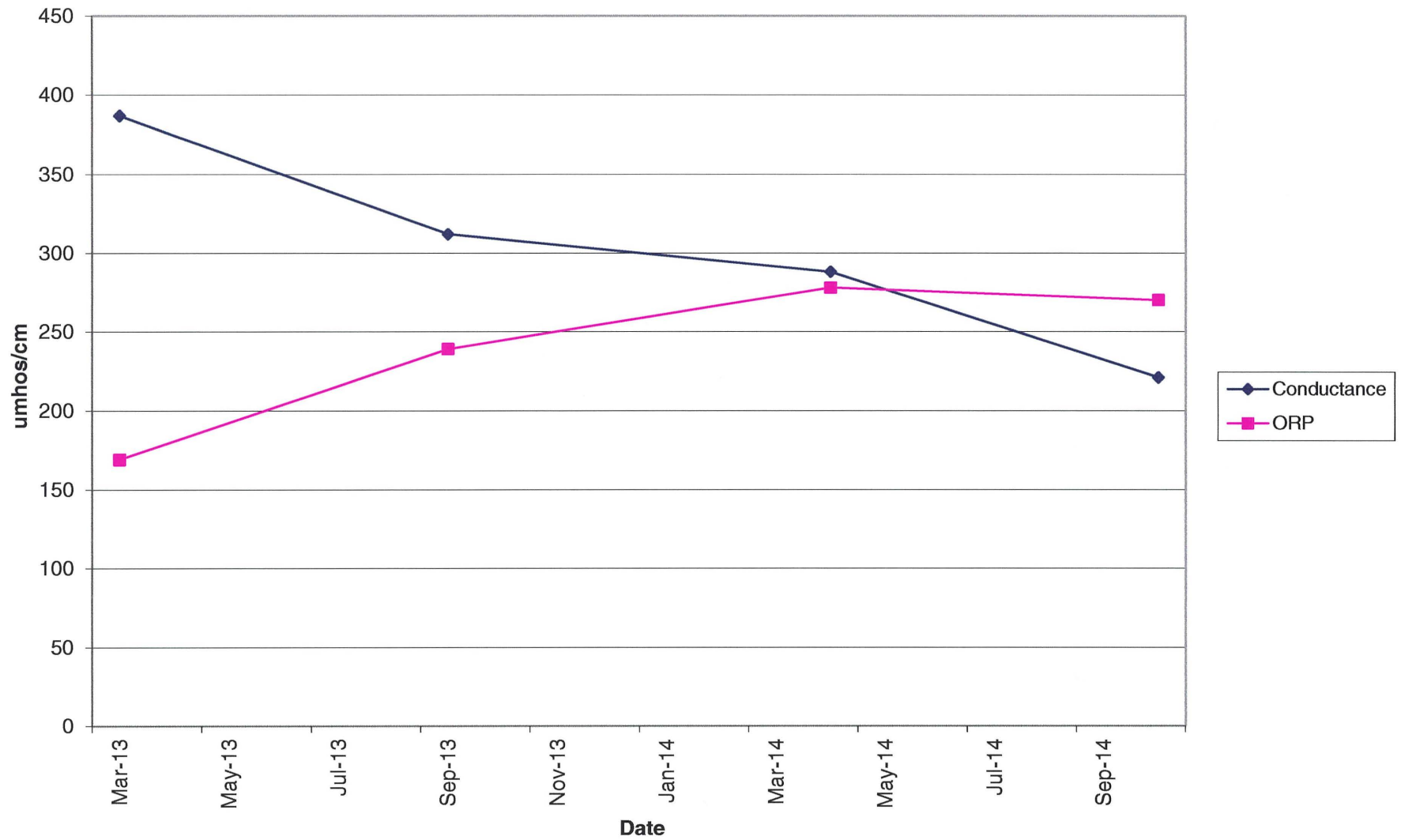
MWC-8 General Chemistry (Part 2)



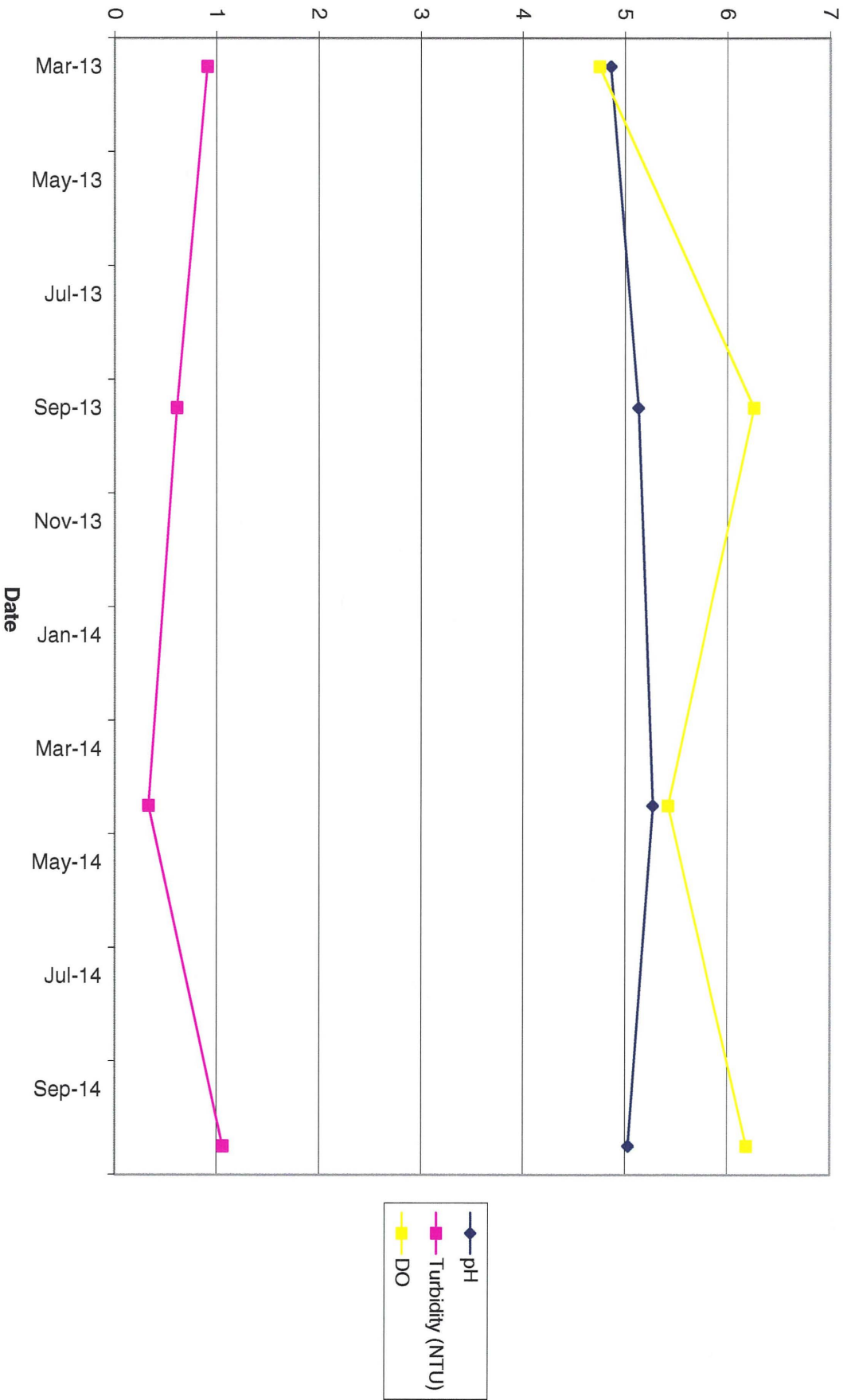
MWC-8 General Chemistry (Part 1)



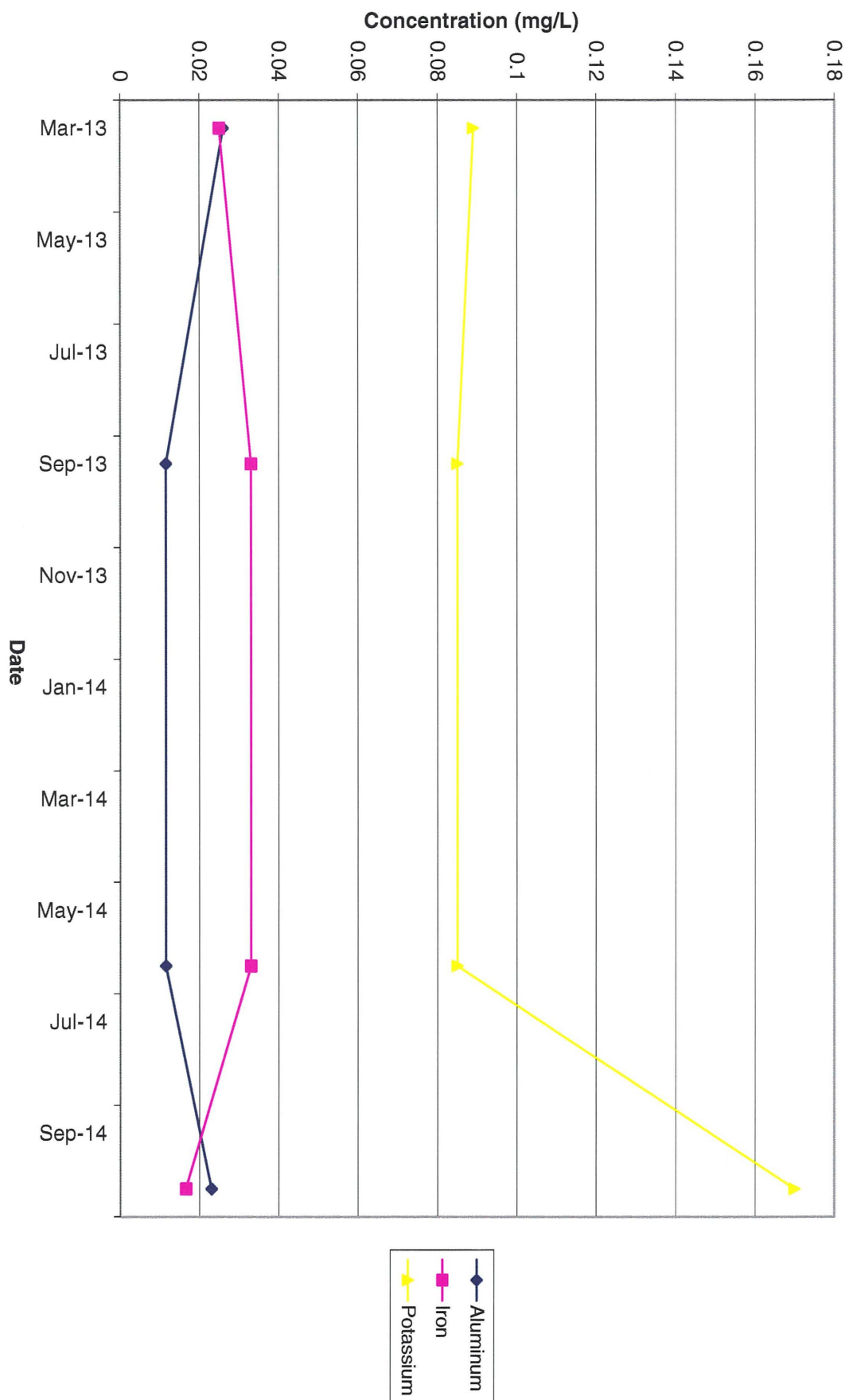
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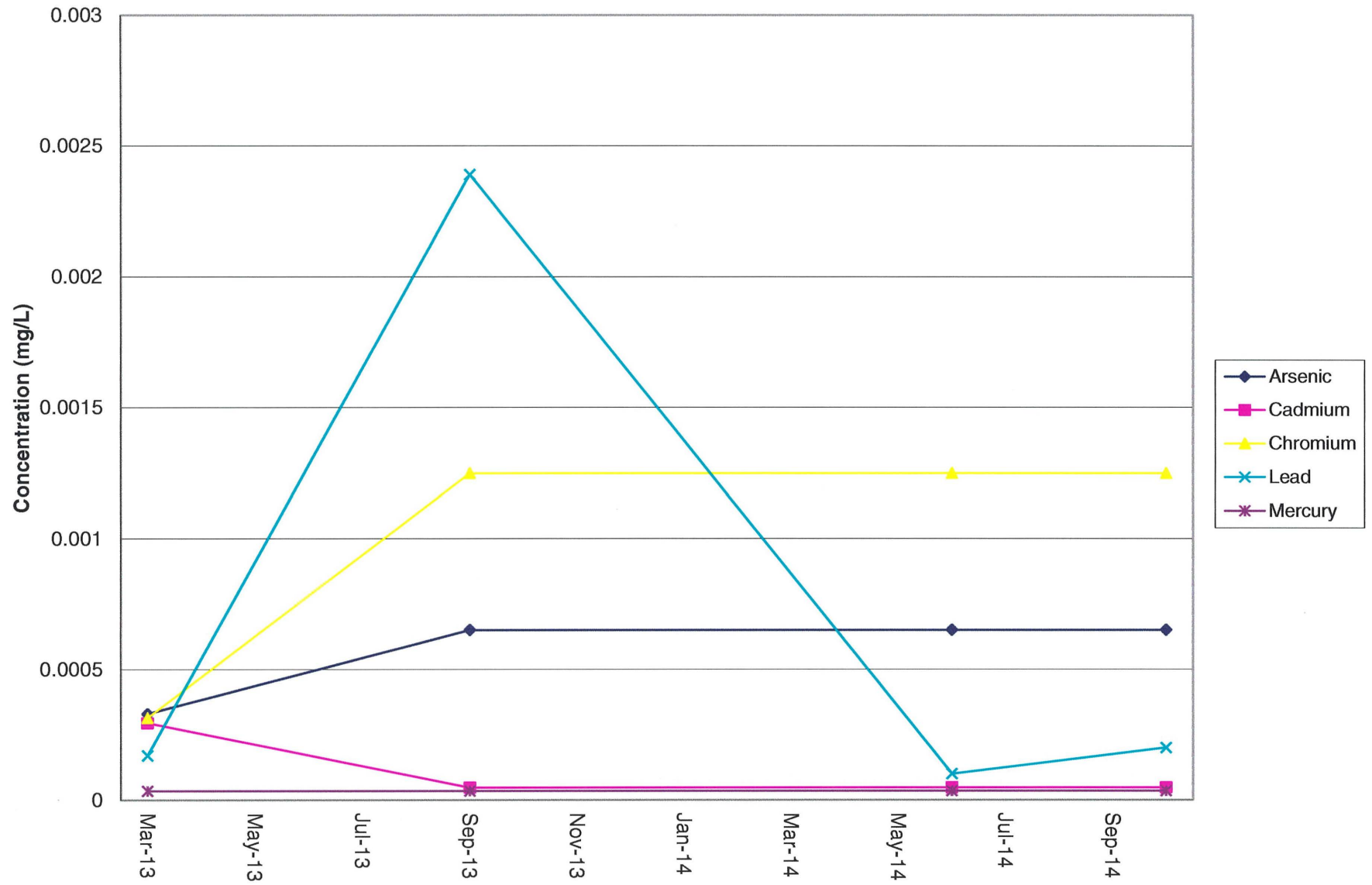
MWC-8 Field Parameters (Part 2)



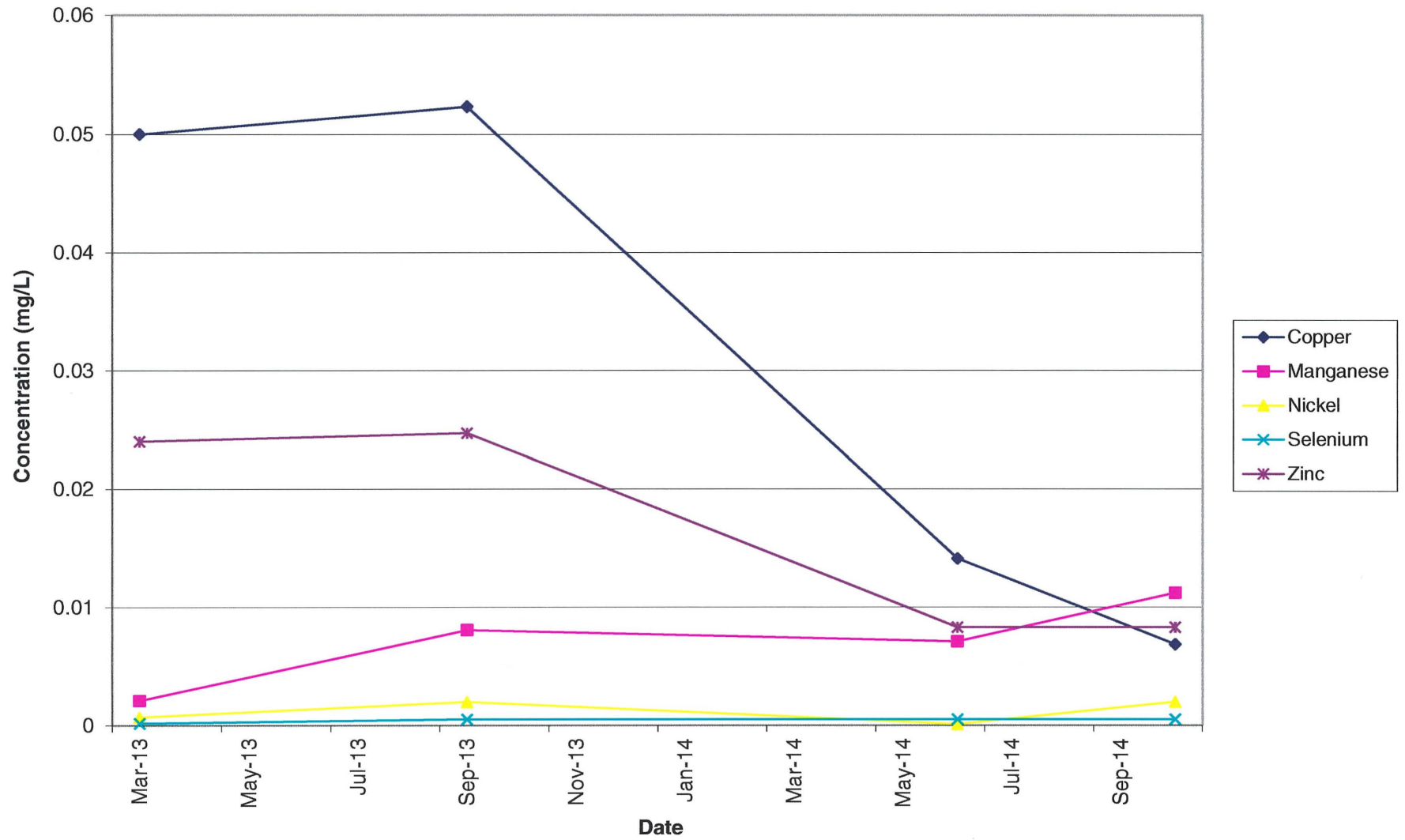
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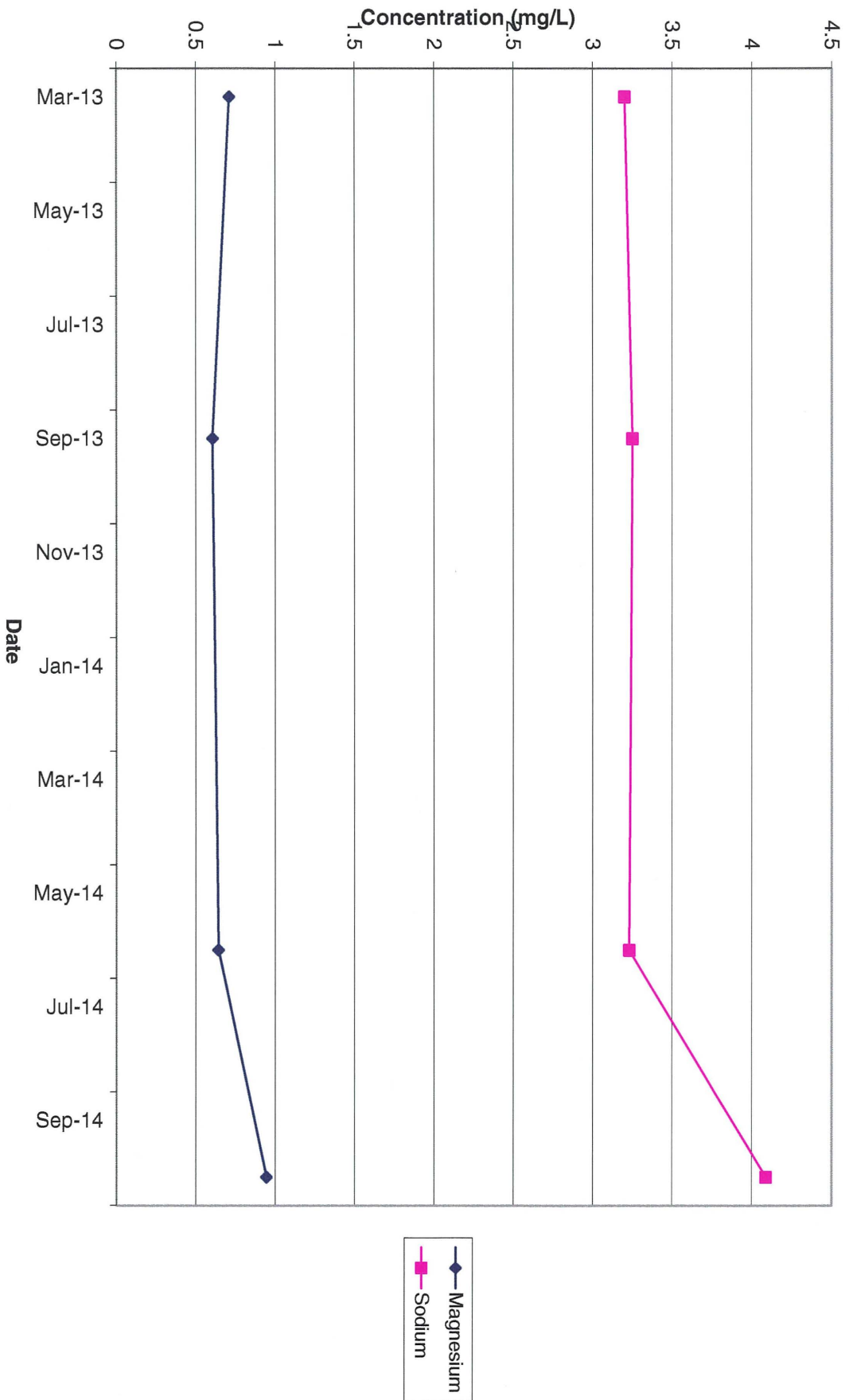
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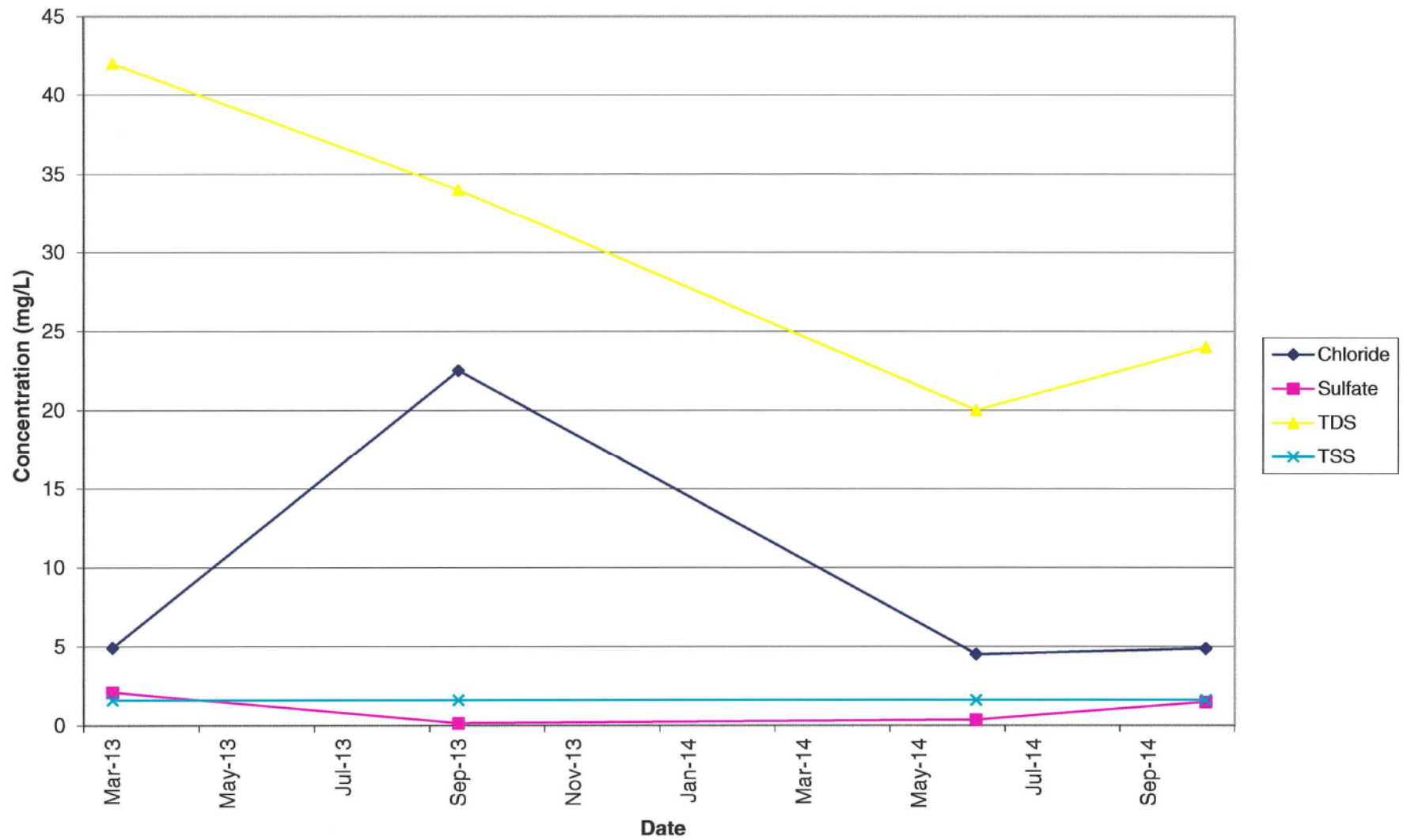
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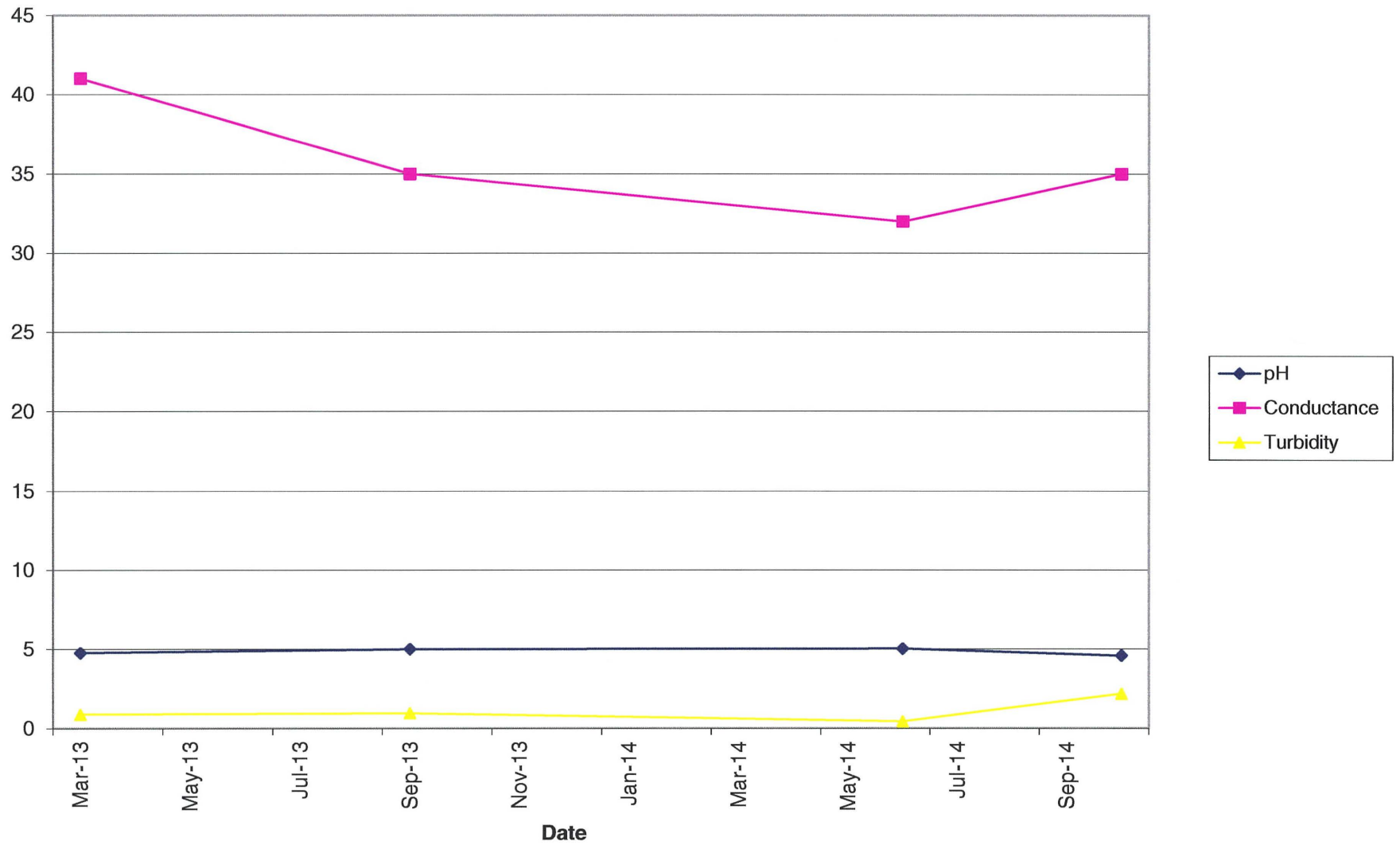
MWC-9 Metals (Part 4)



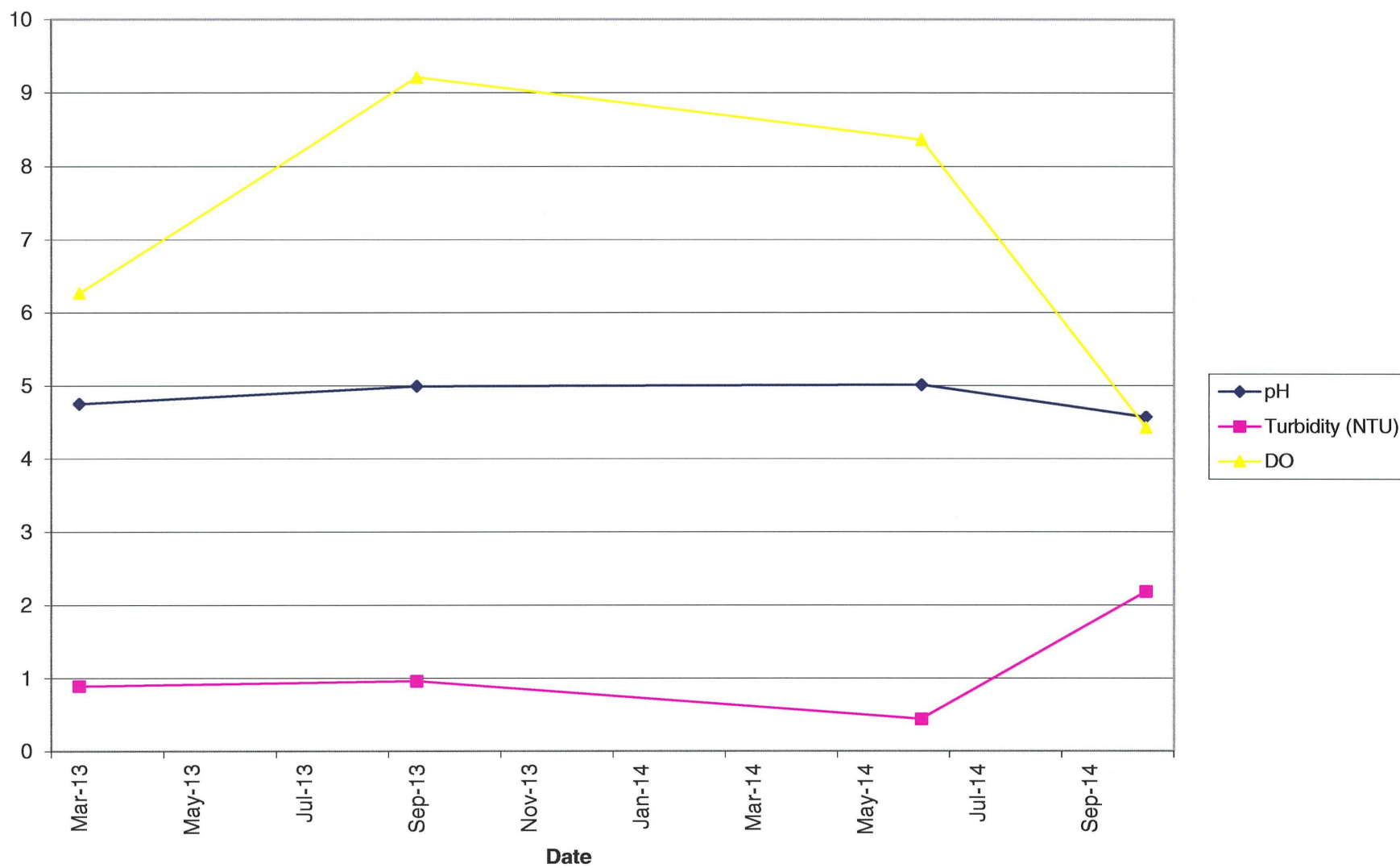
MWC-9 General Chemistry



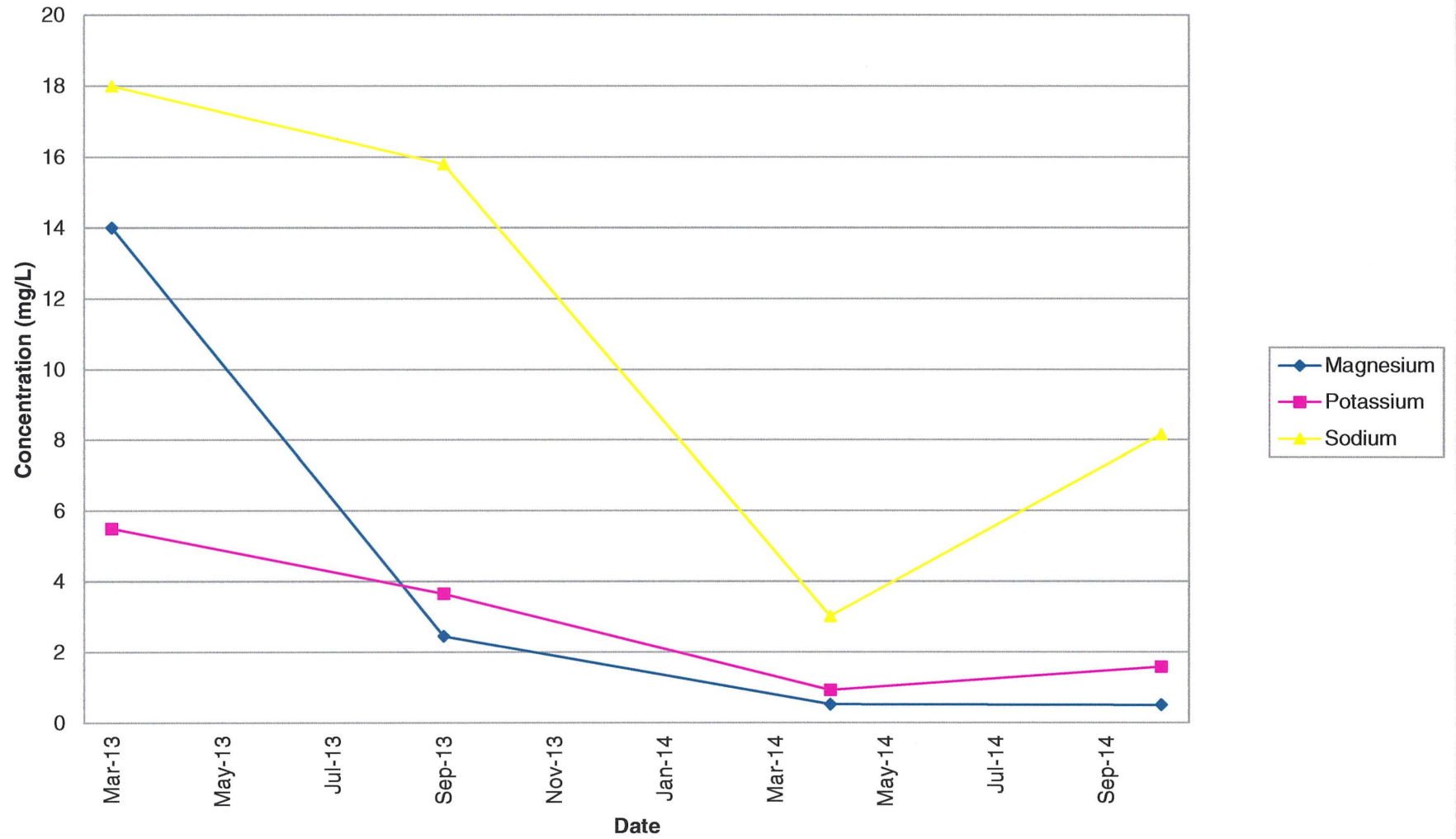
MWC-9 Field Parameters (Part 1)



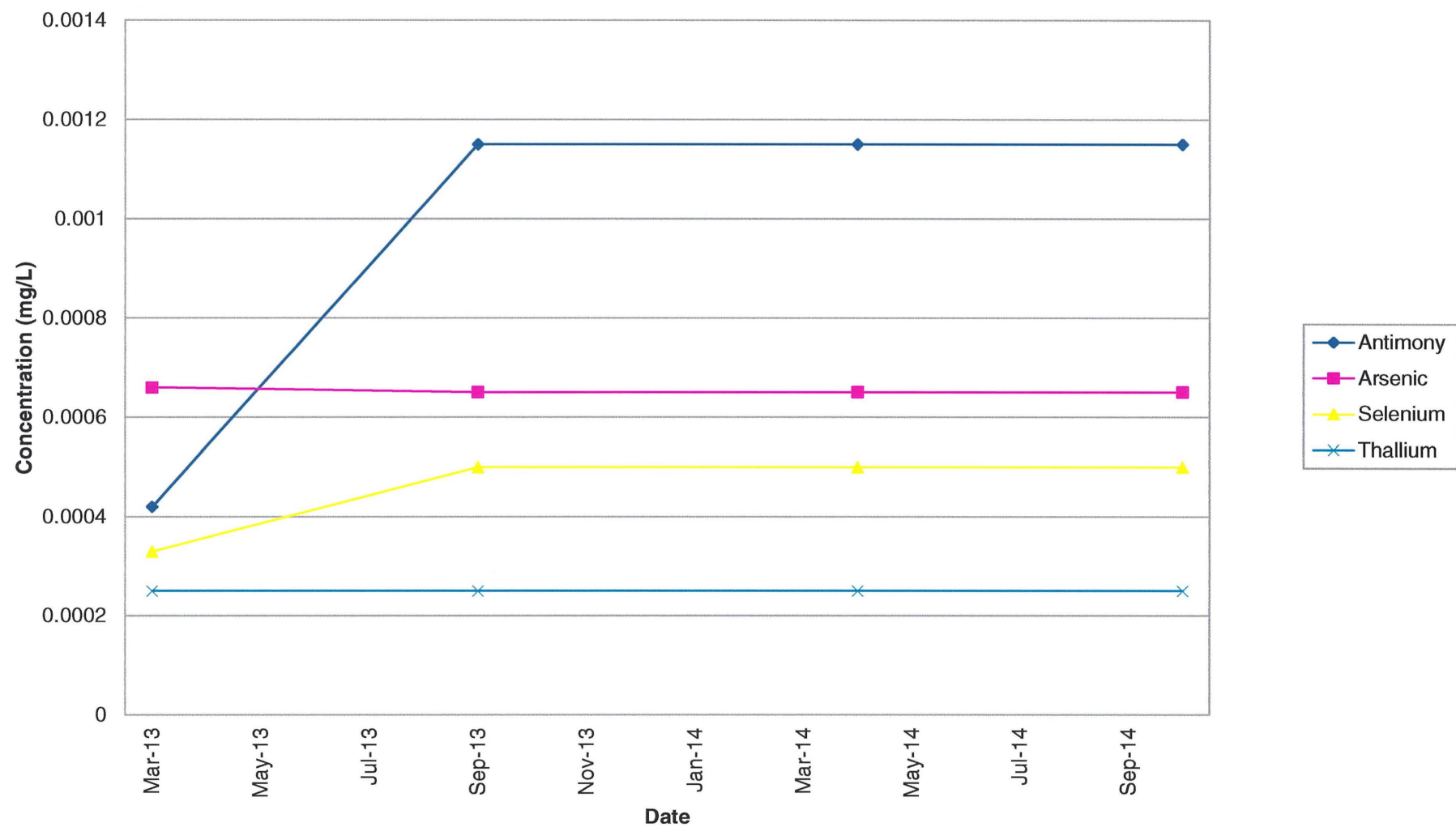
MWC-9 Field Parameters (Part 2)



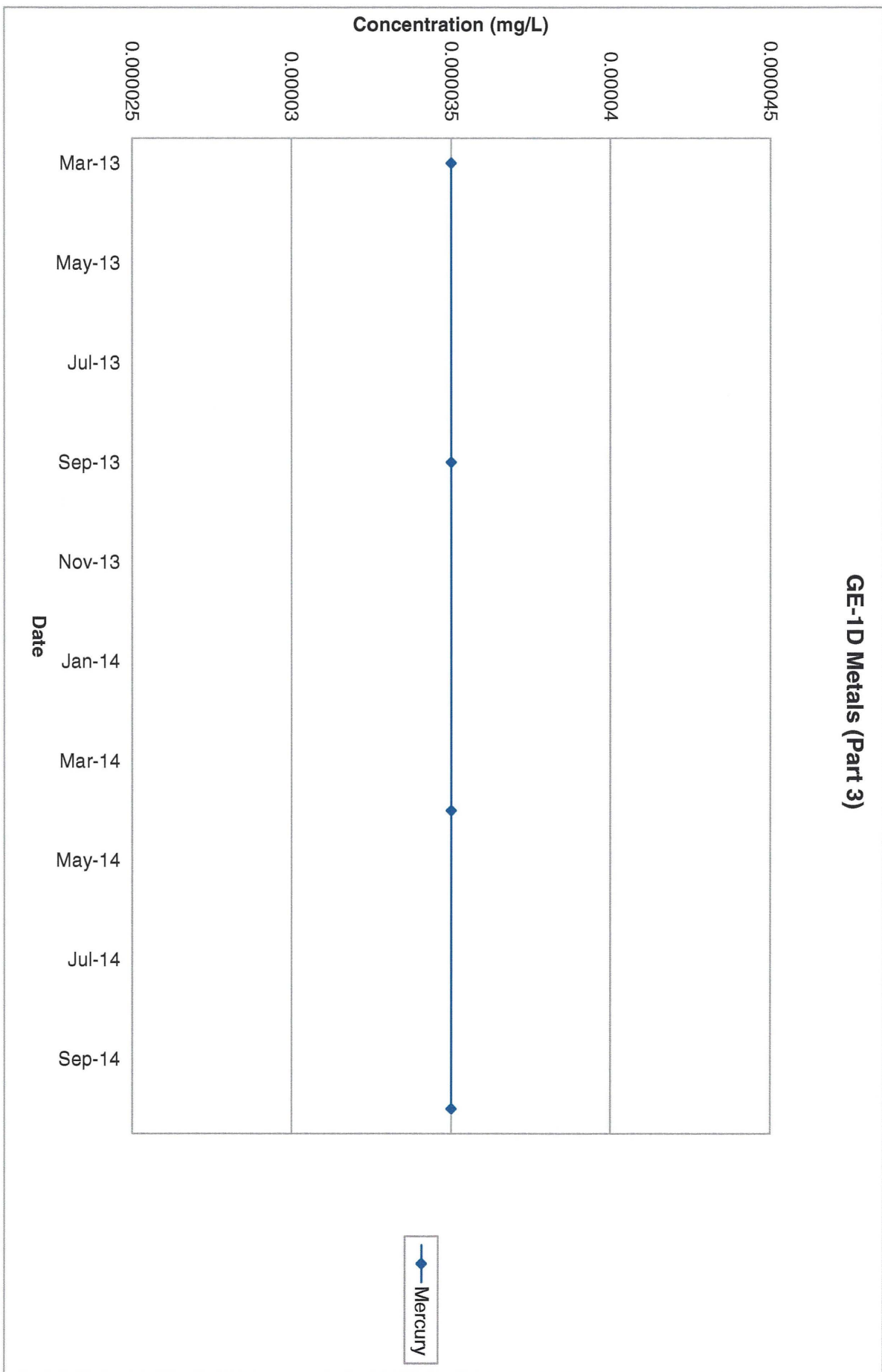
GE-1D Metals (Part 1)



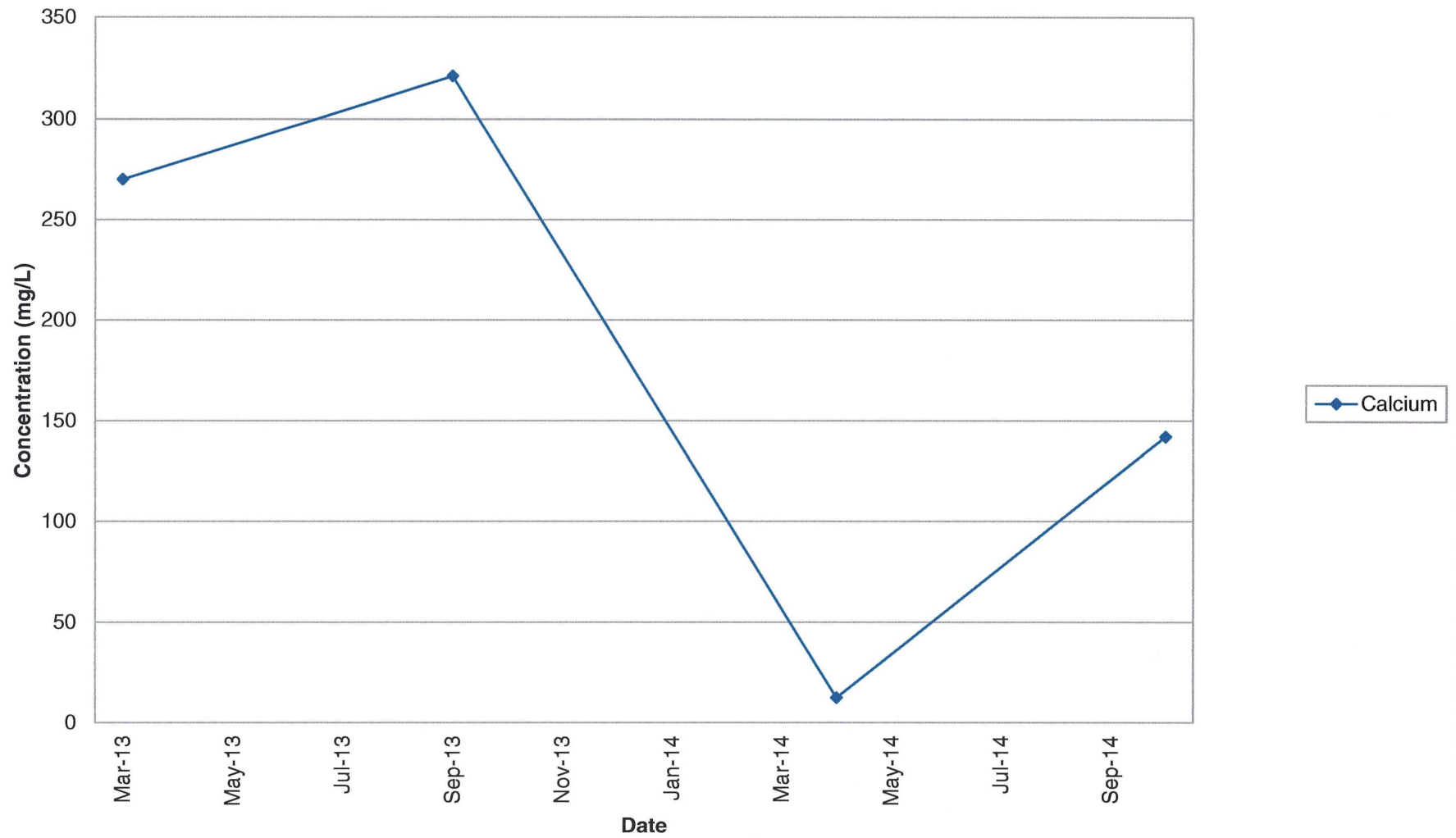
GE-1D Metals (Part 2)



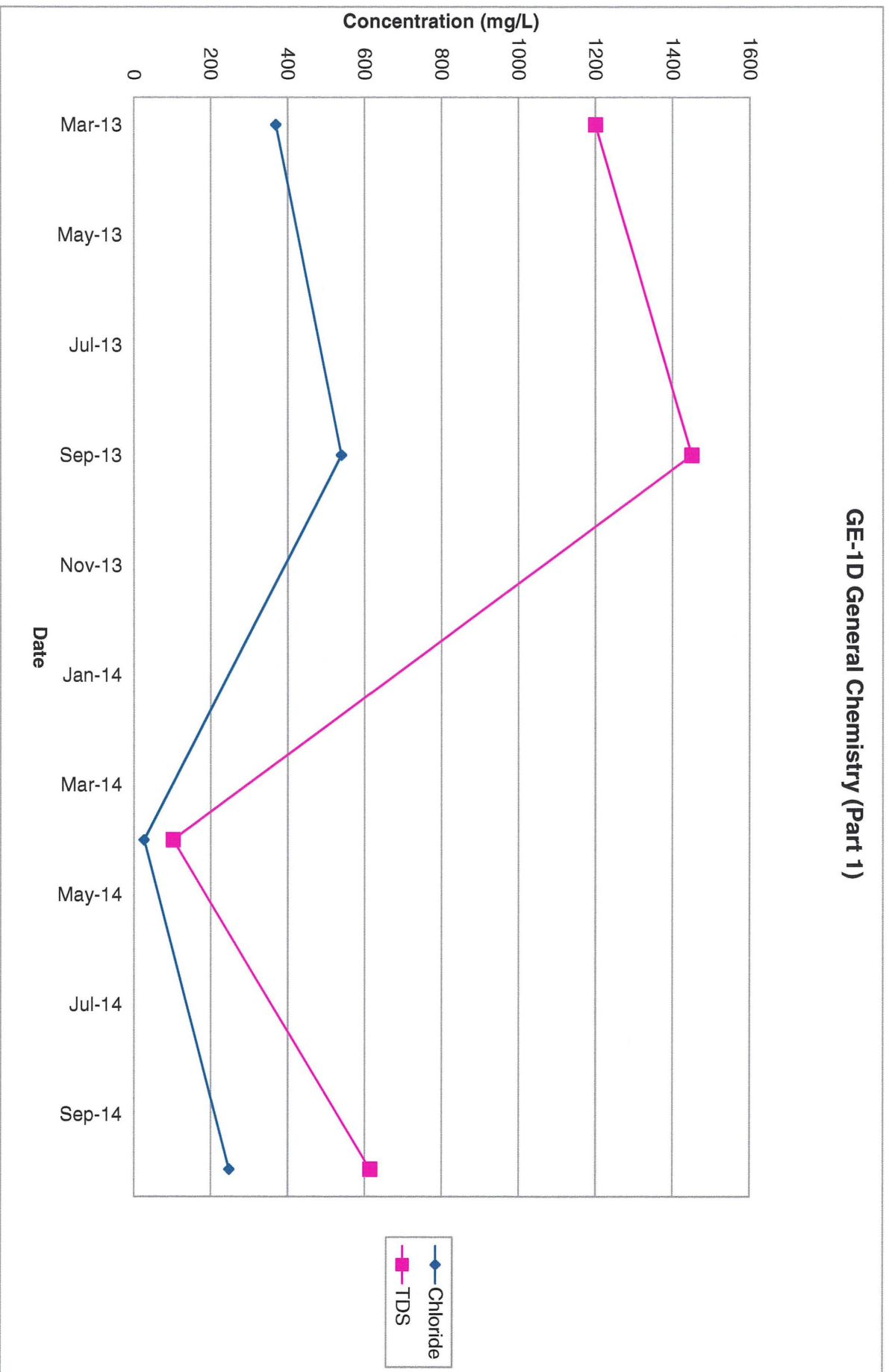
GE-1D Metals (Part 3)



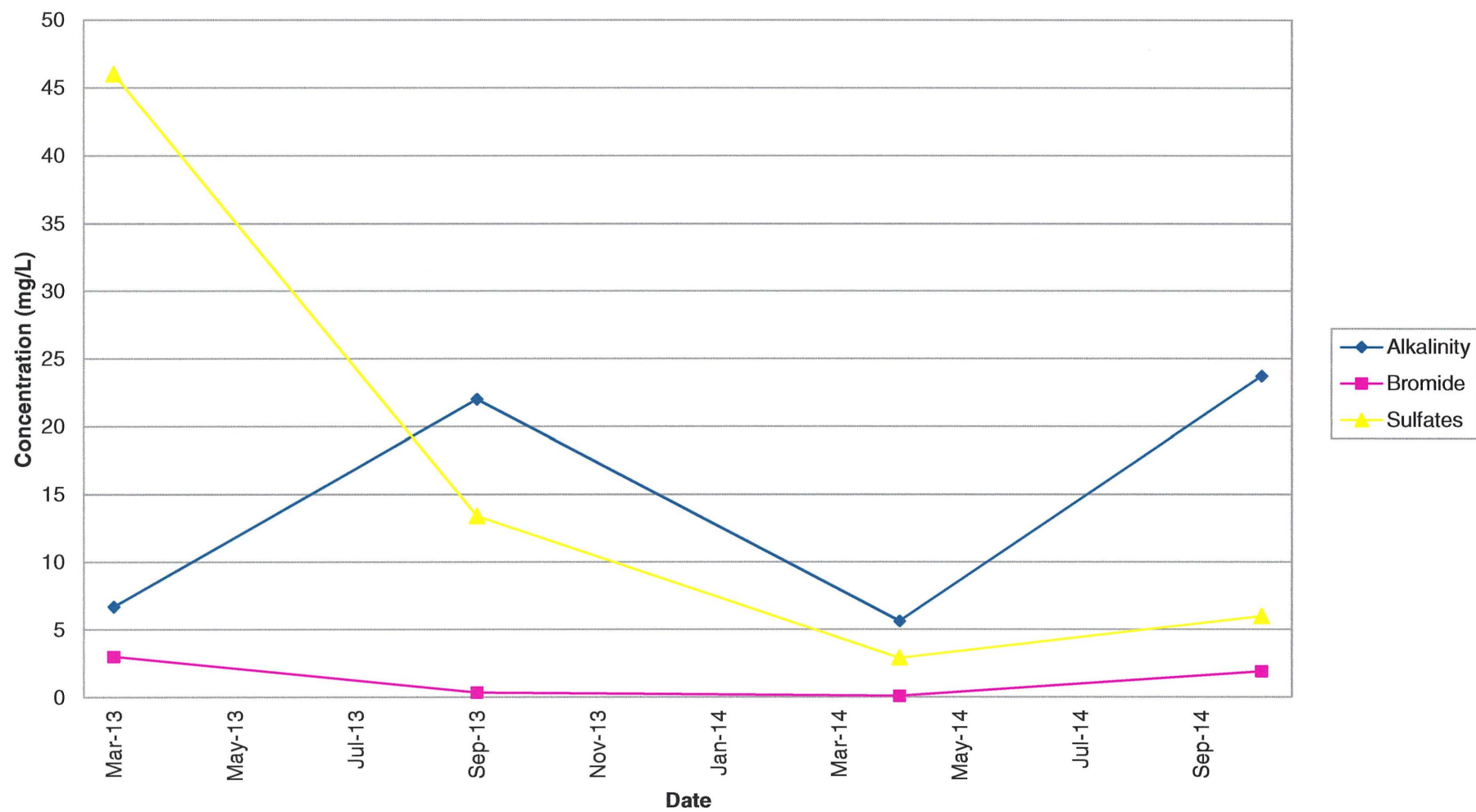
GE-1D Metals (Part 4)



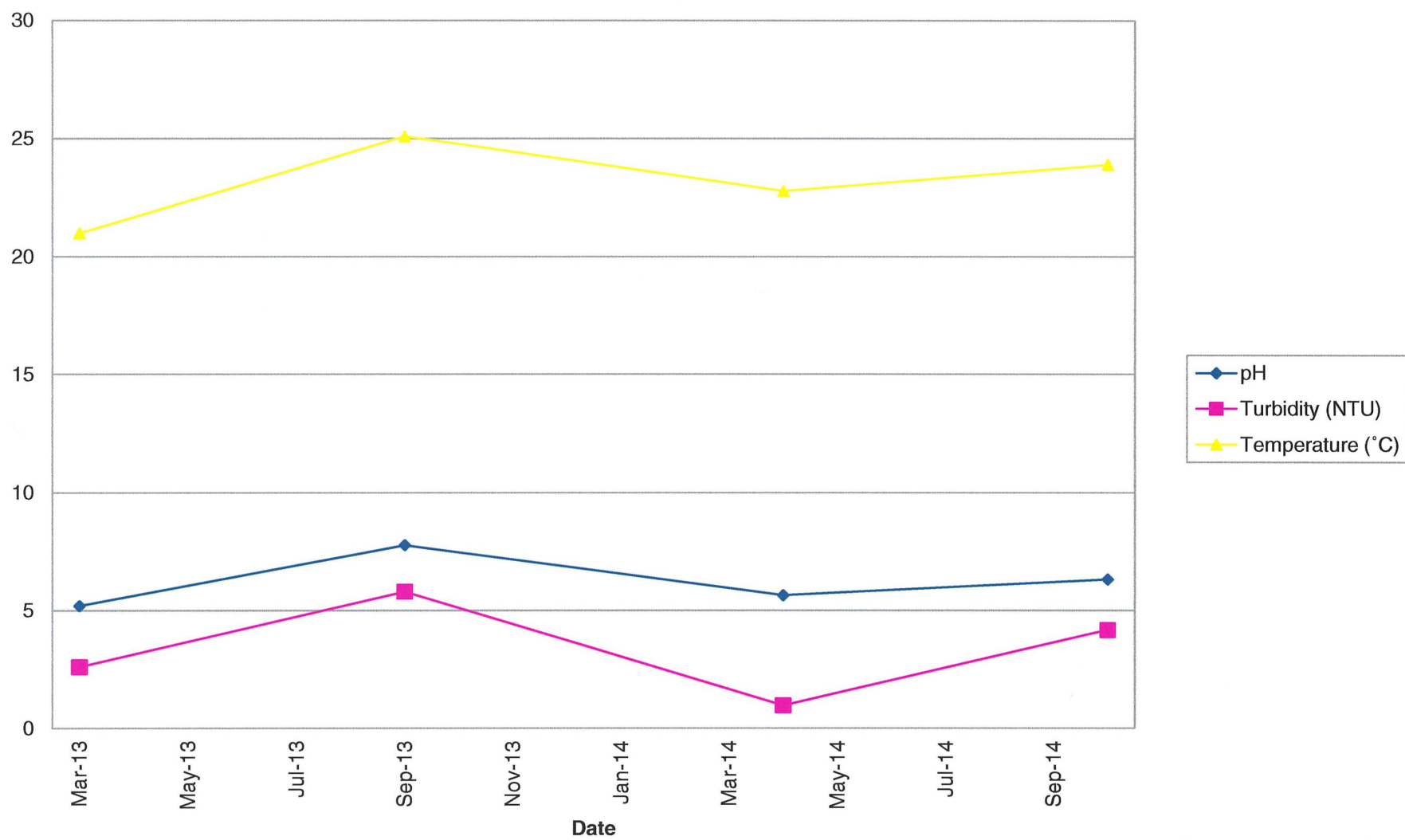
GE-1D General Chemistry (Part 1)



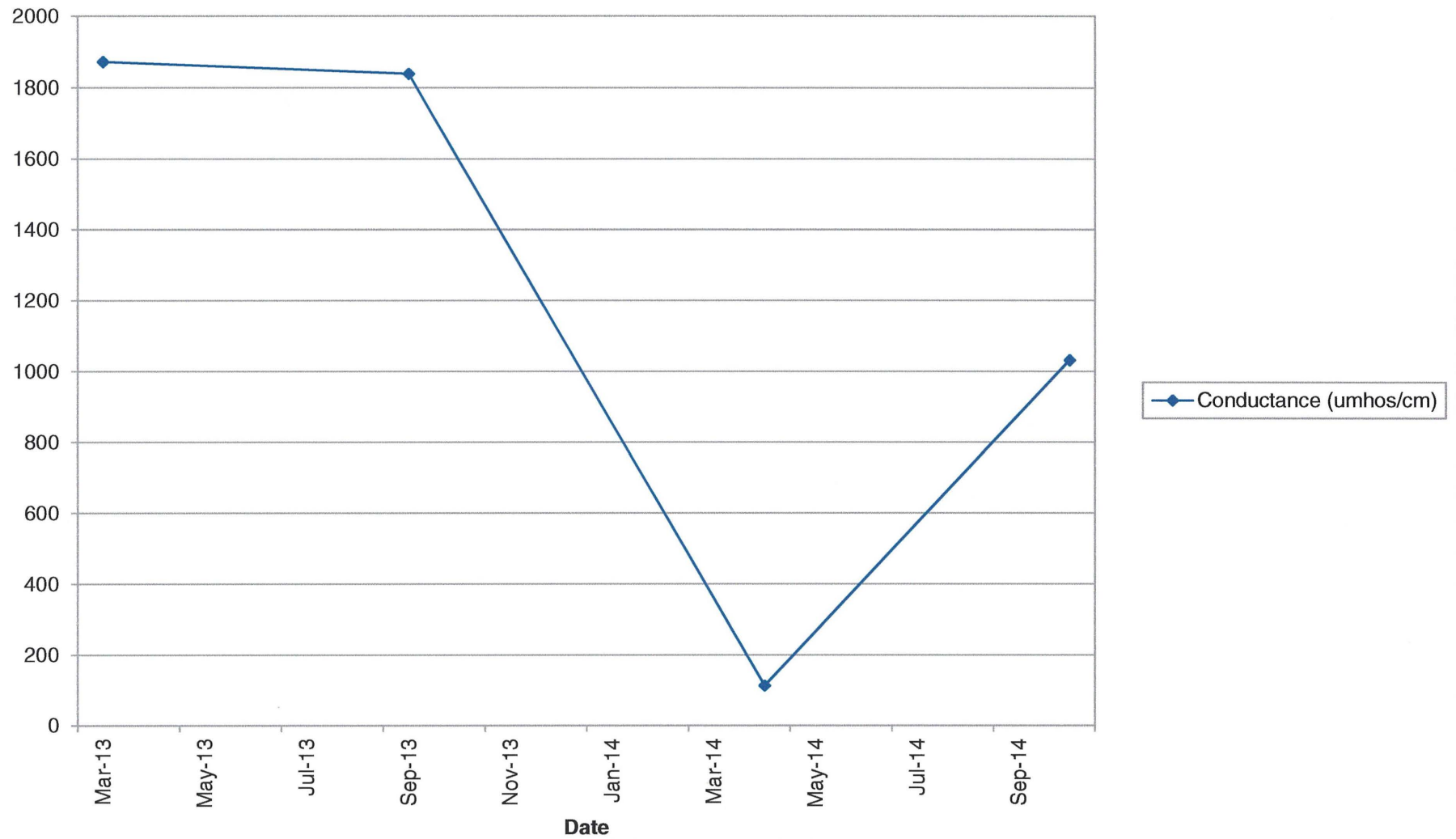
GE-1D General Chemistry (Part 2)



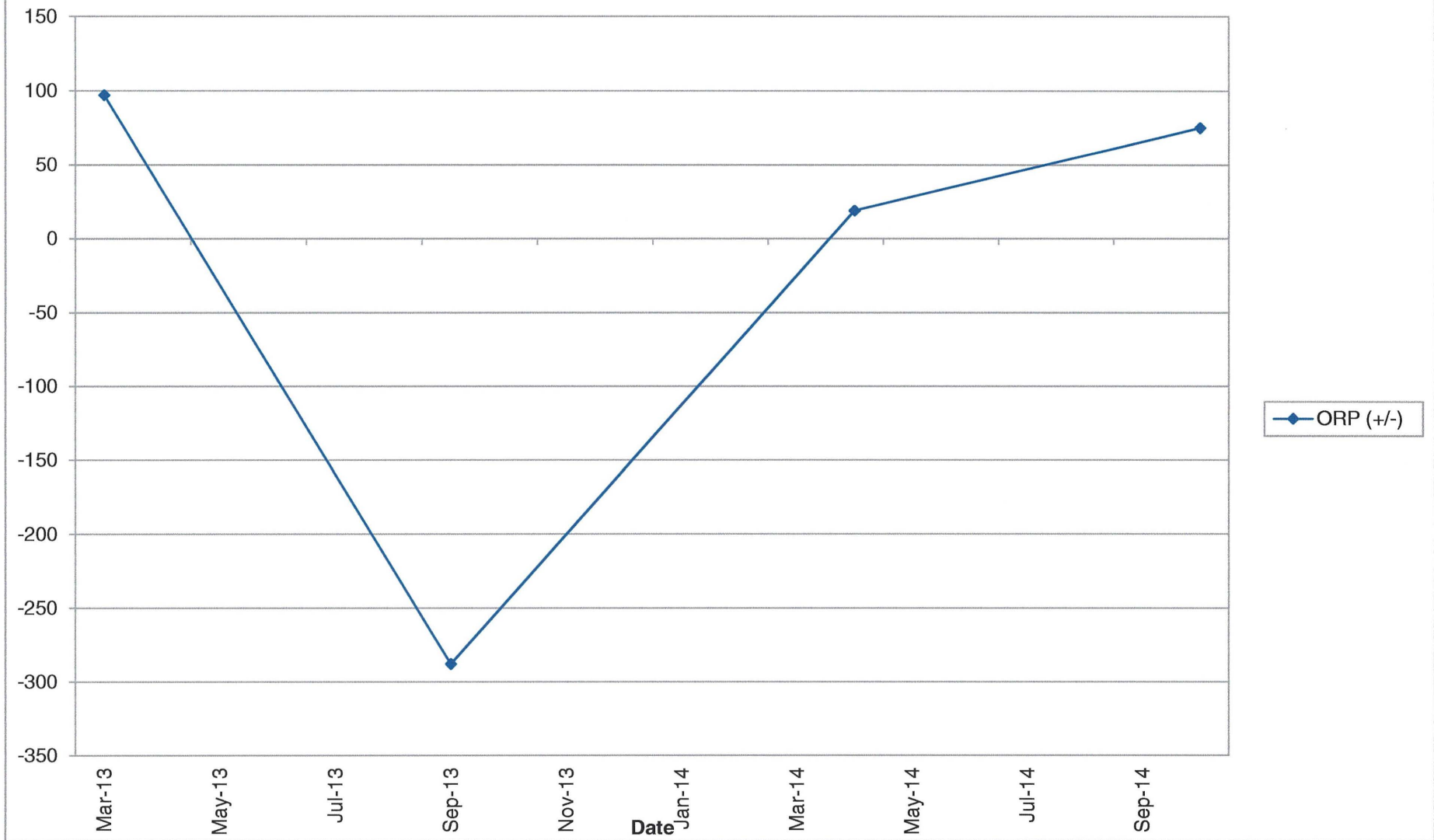
GE-1D Field Parameters (Part 1)



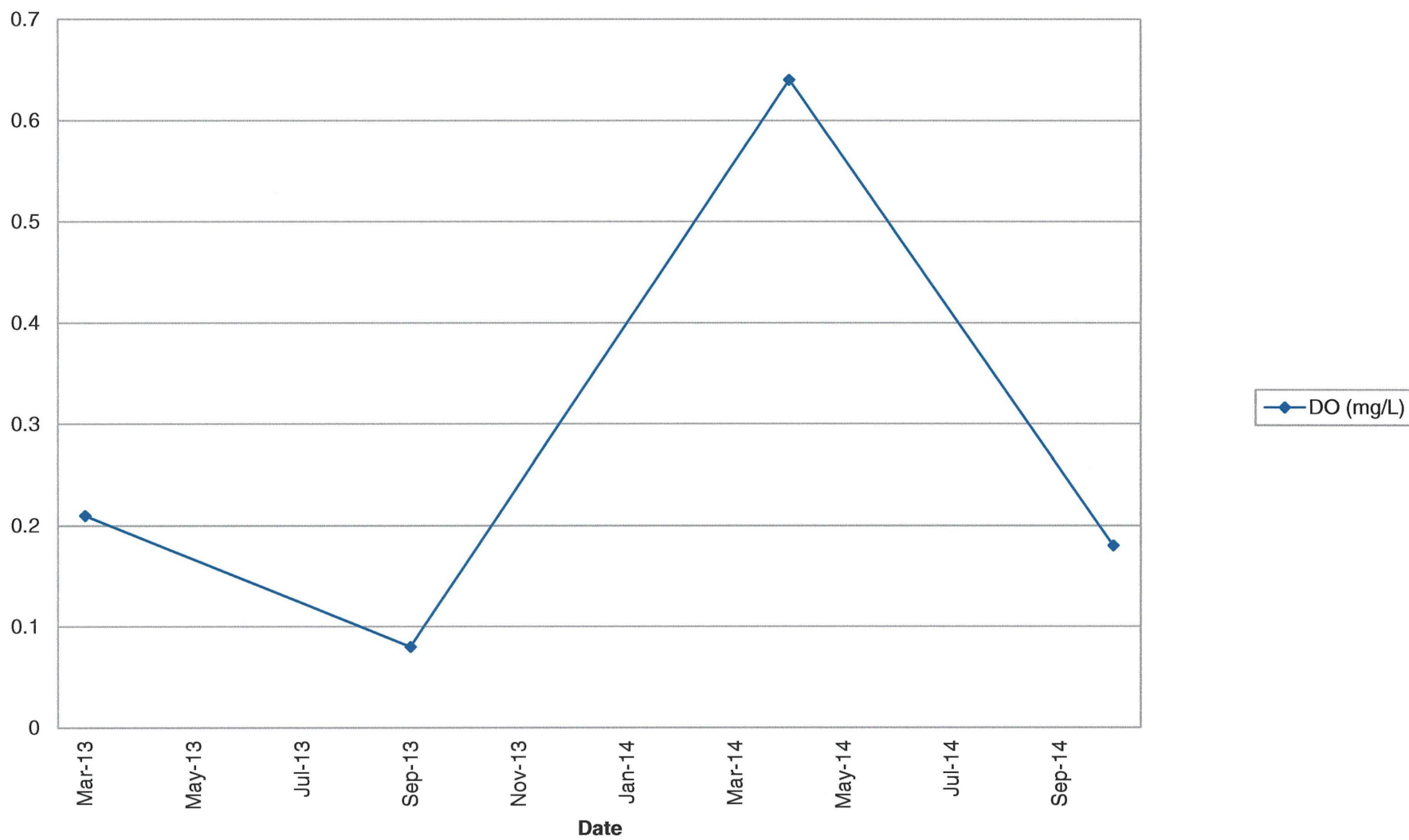
GE-1D Field Paramaters (Part 2)



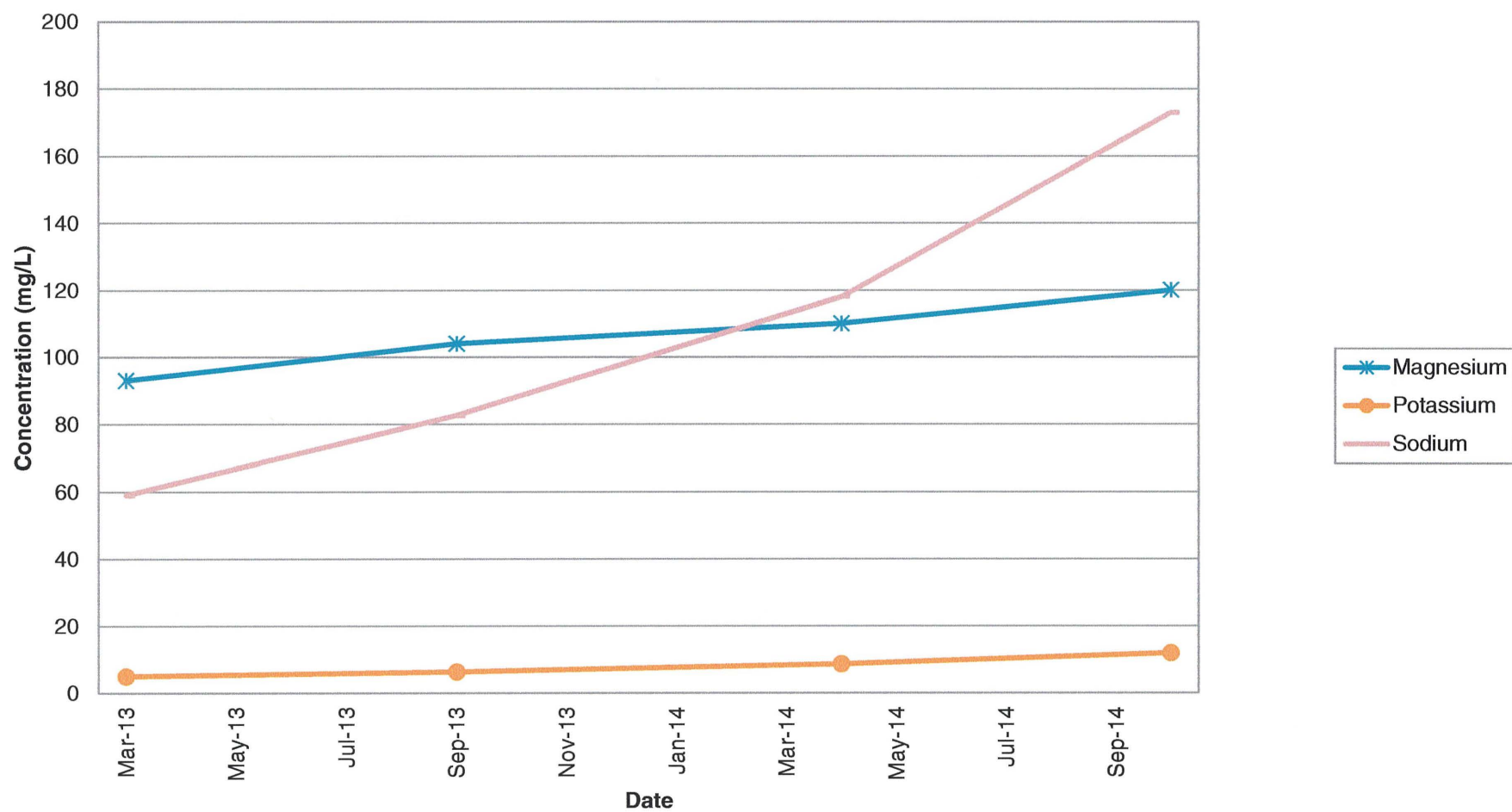
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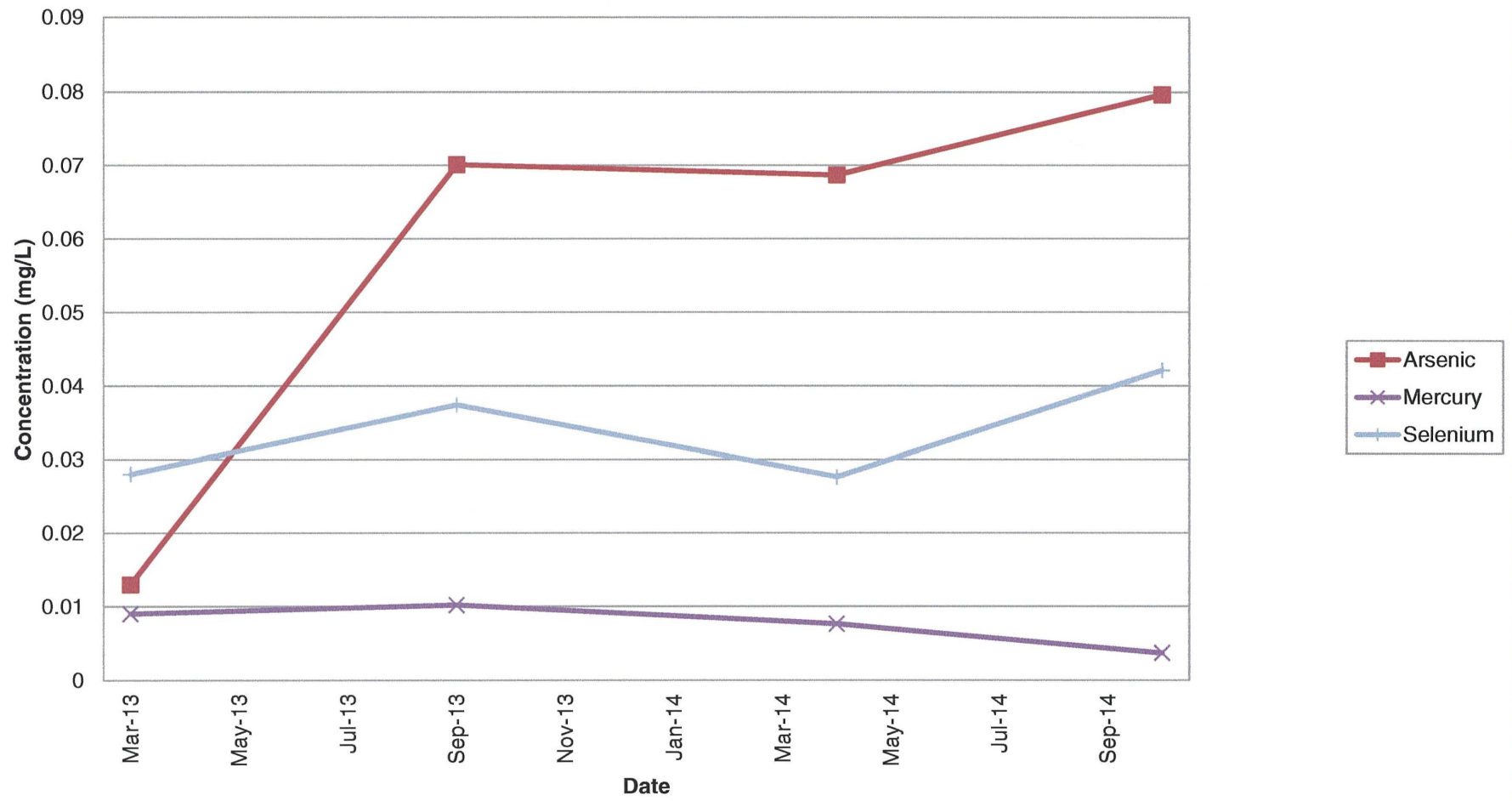
GE-1D Field Parameters (Part 4)



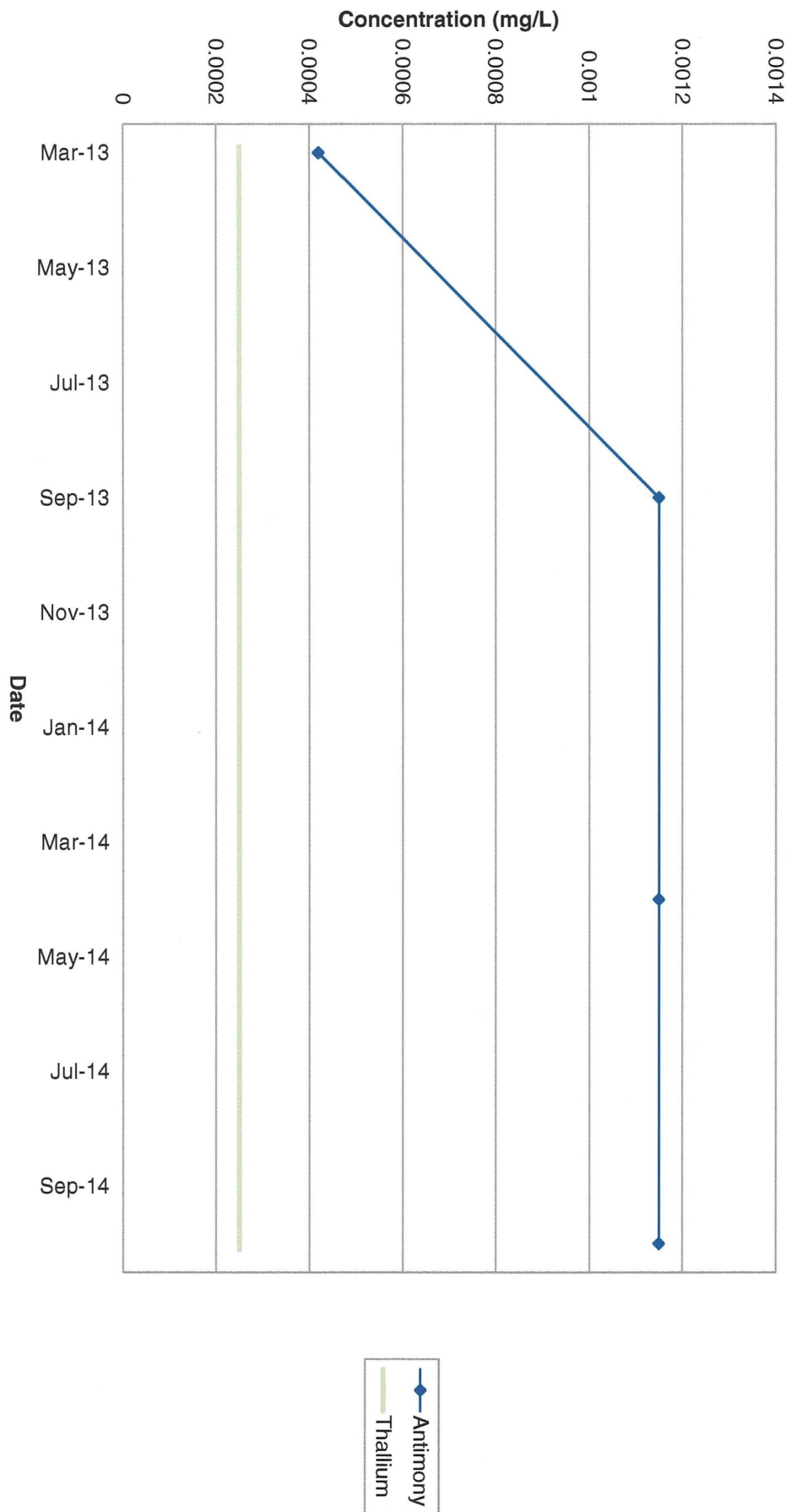
GE-2D Metals (Part 1)



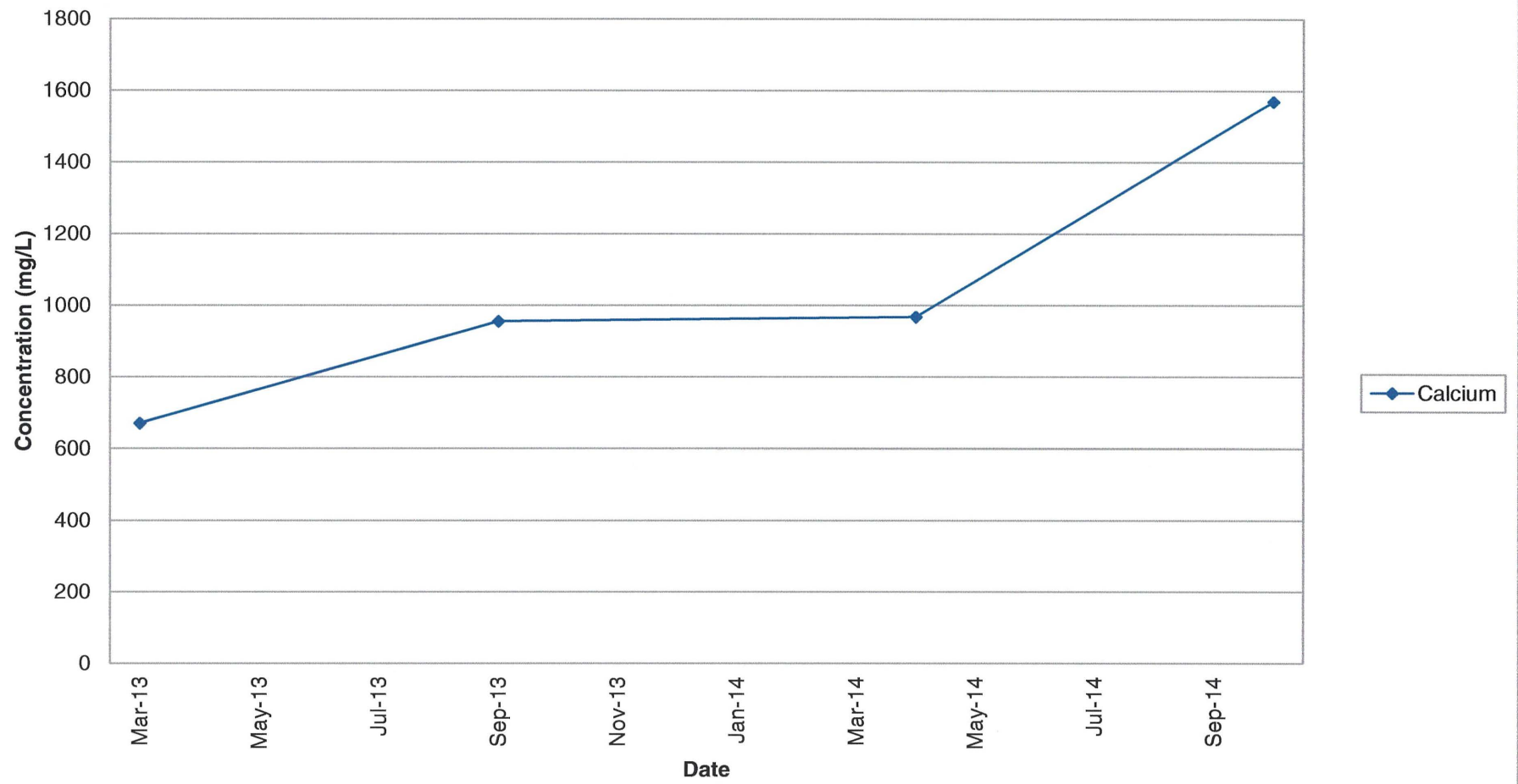
GE-2D Metals (Part 2)



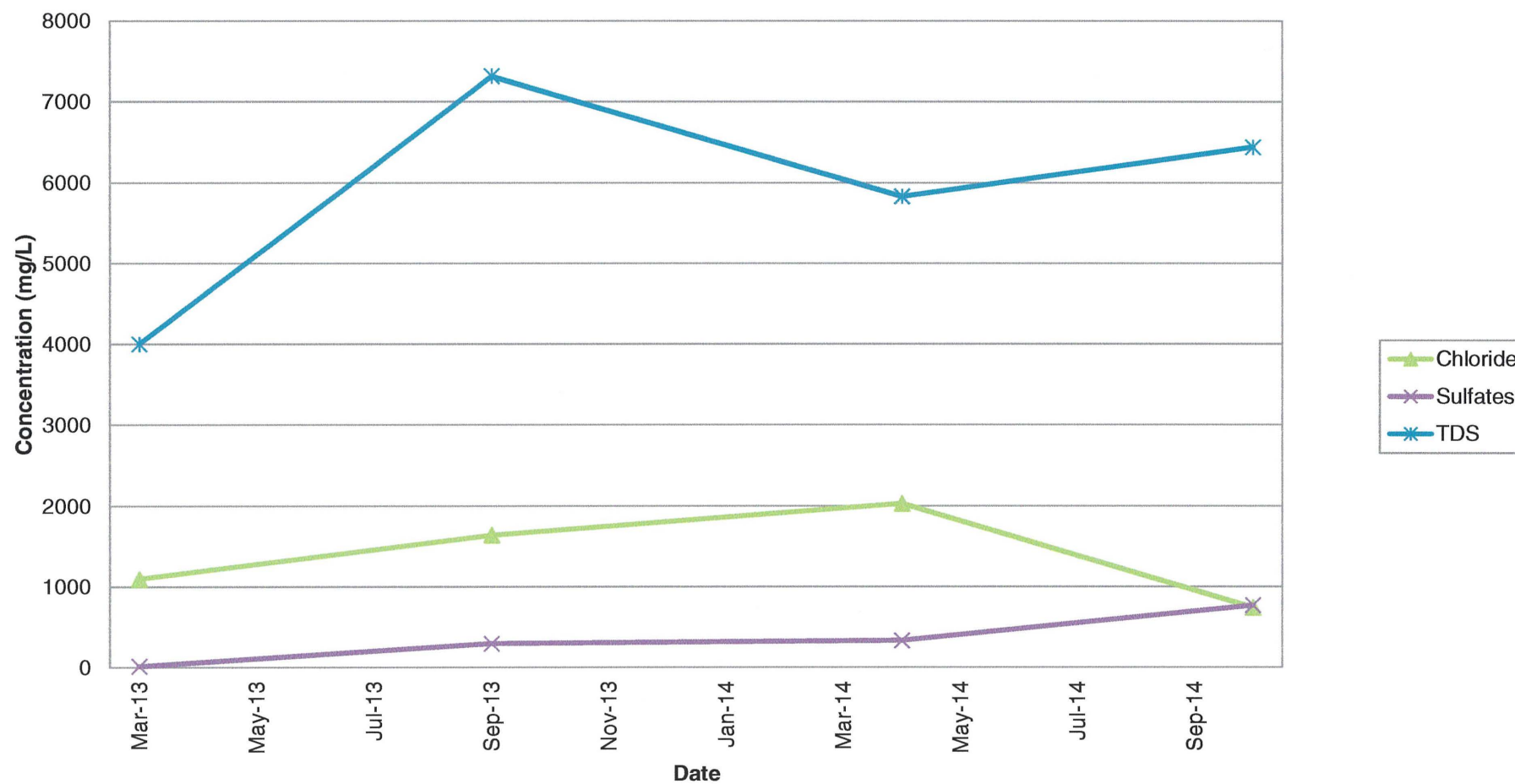
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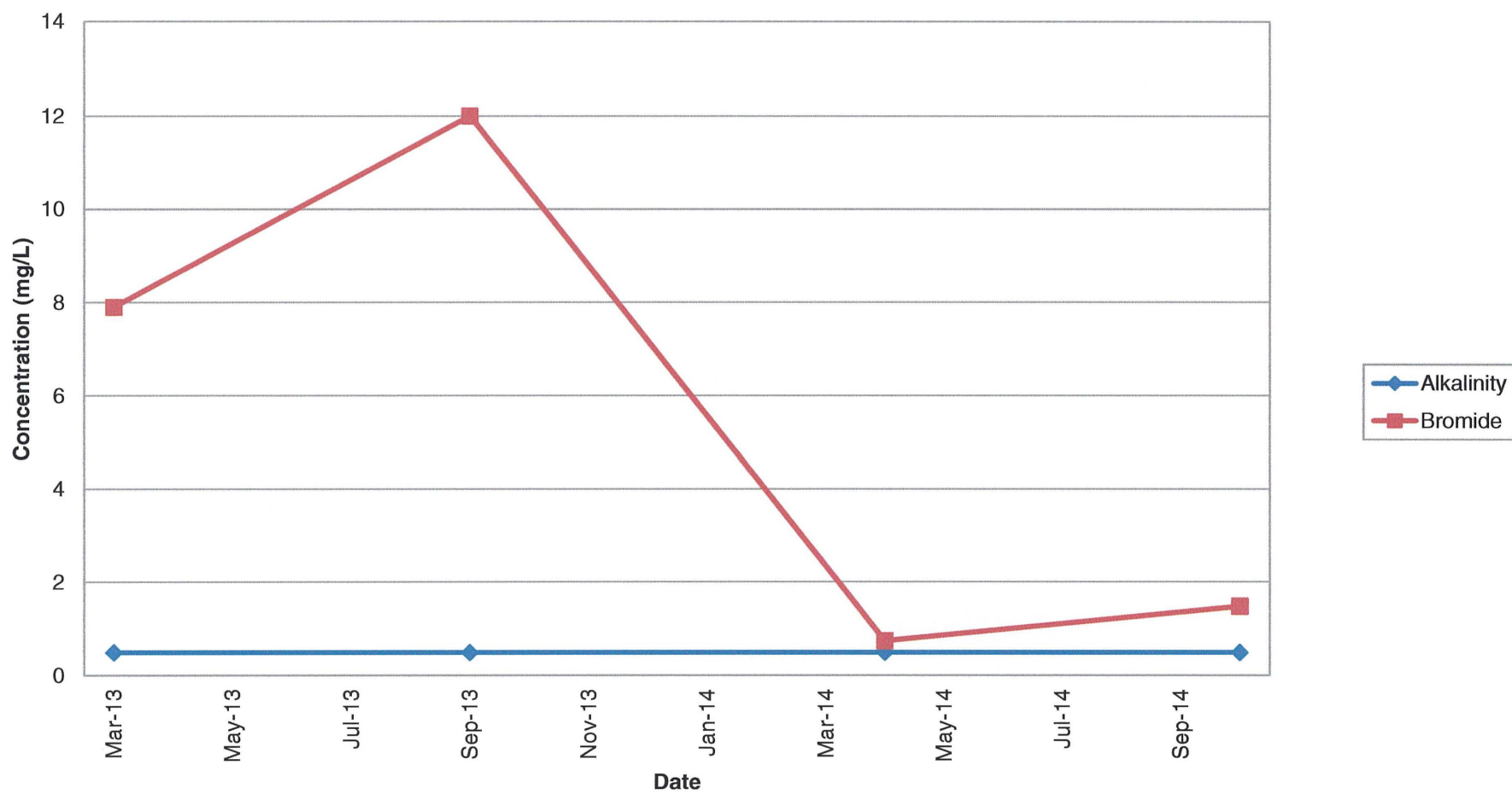
GE-2D Metals (Part 4)



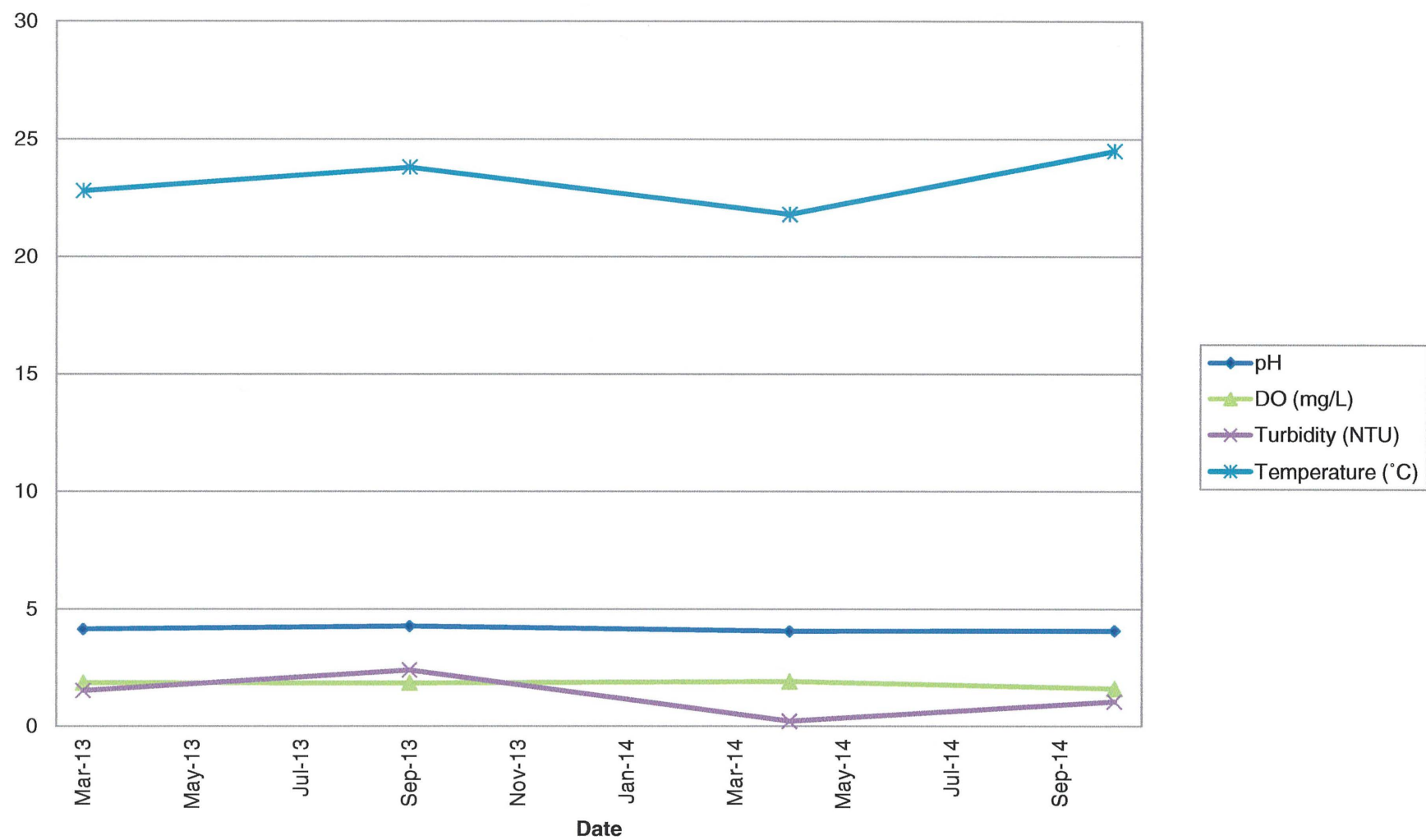
GE-2D General Chemistry (Part 1)



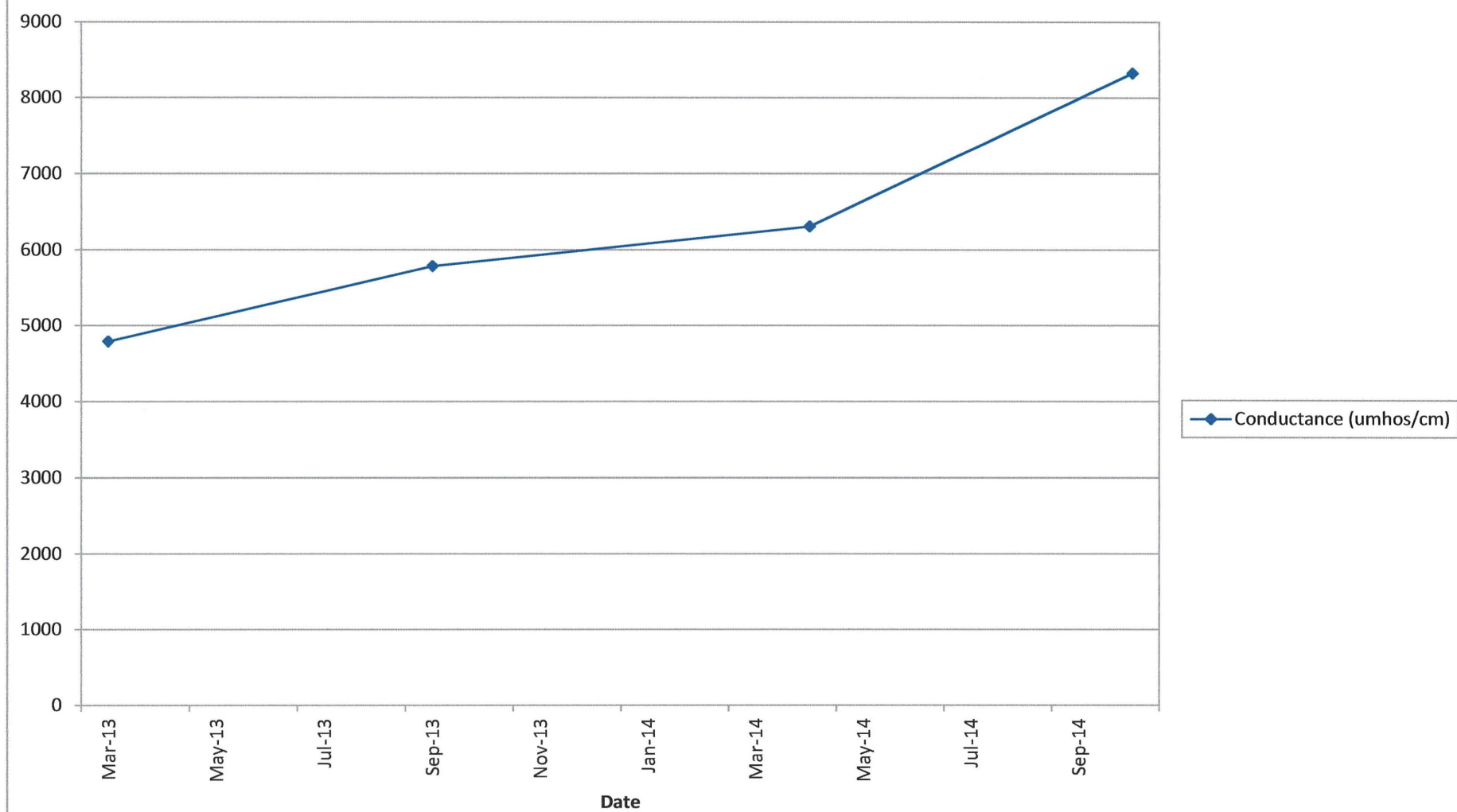
GE-2D General Chemistry (Part 2)



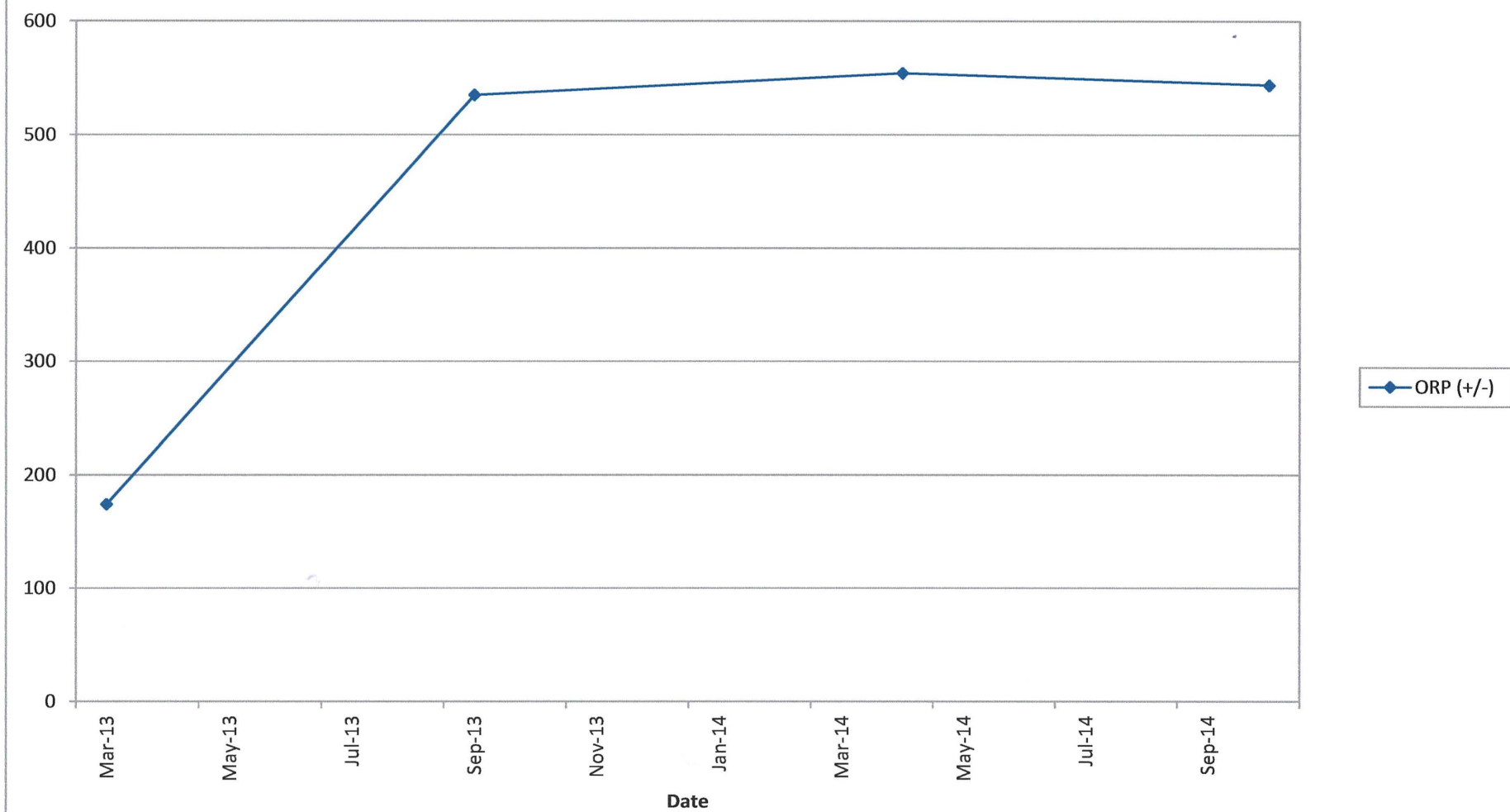
GE-2D Field Parameters (Part 1)



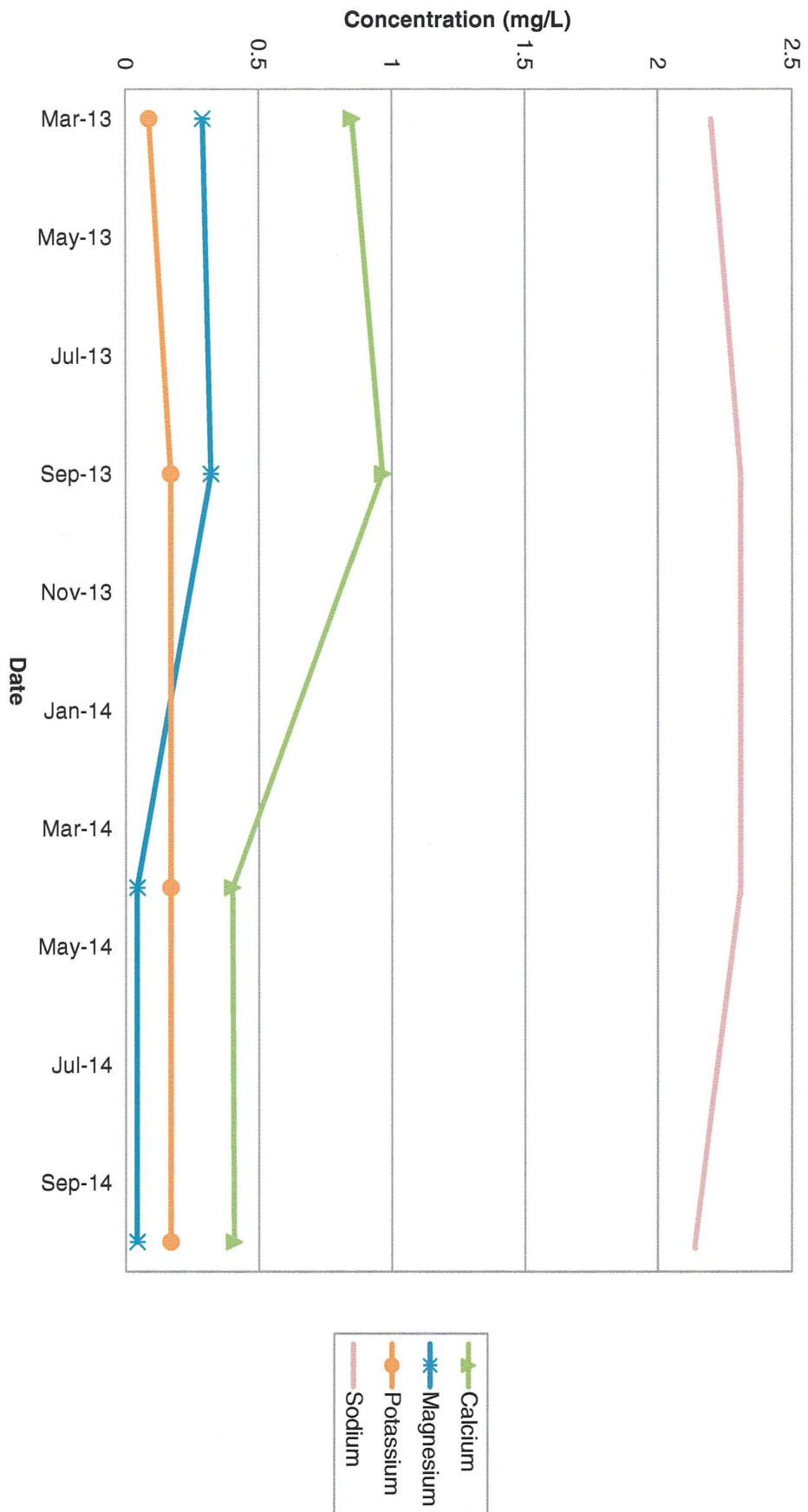
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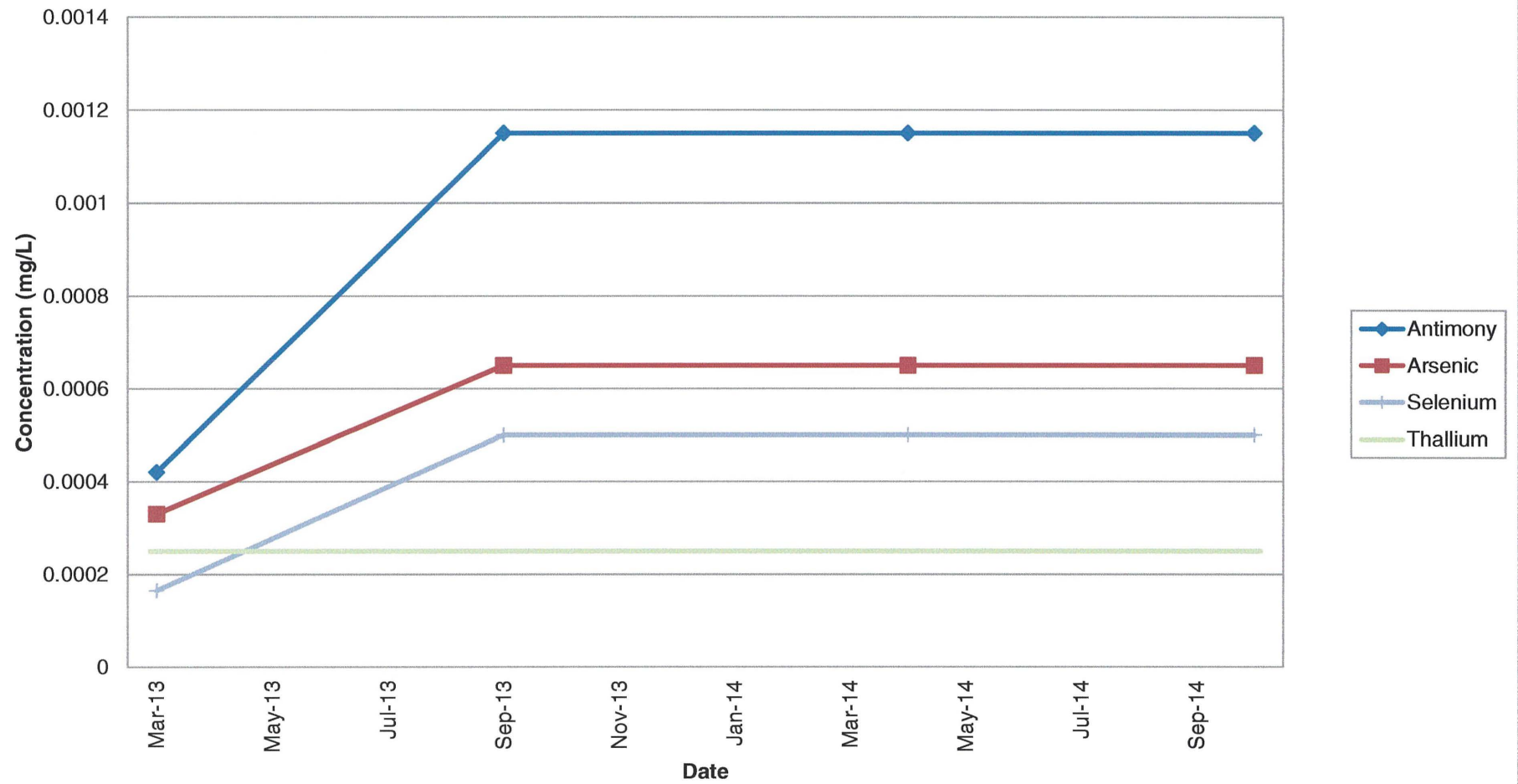
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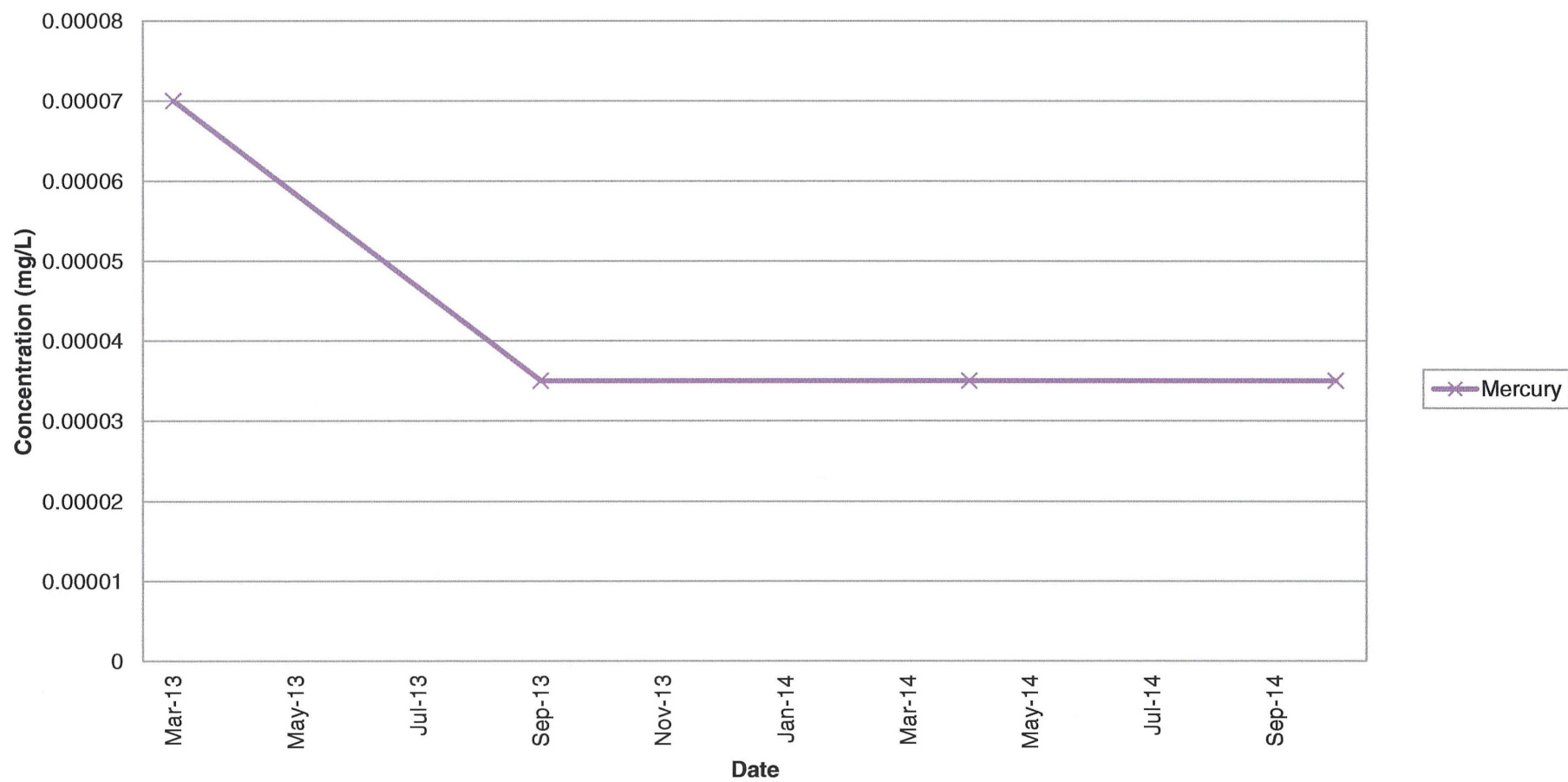
GE-3D Metals (Part 1)



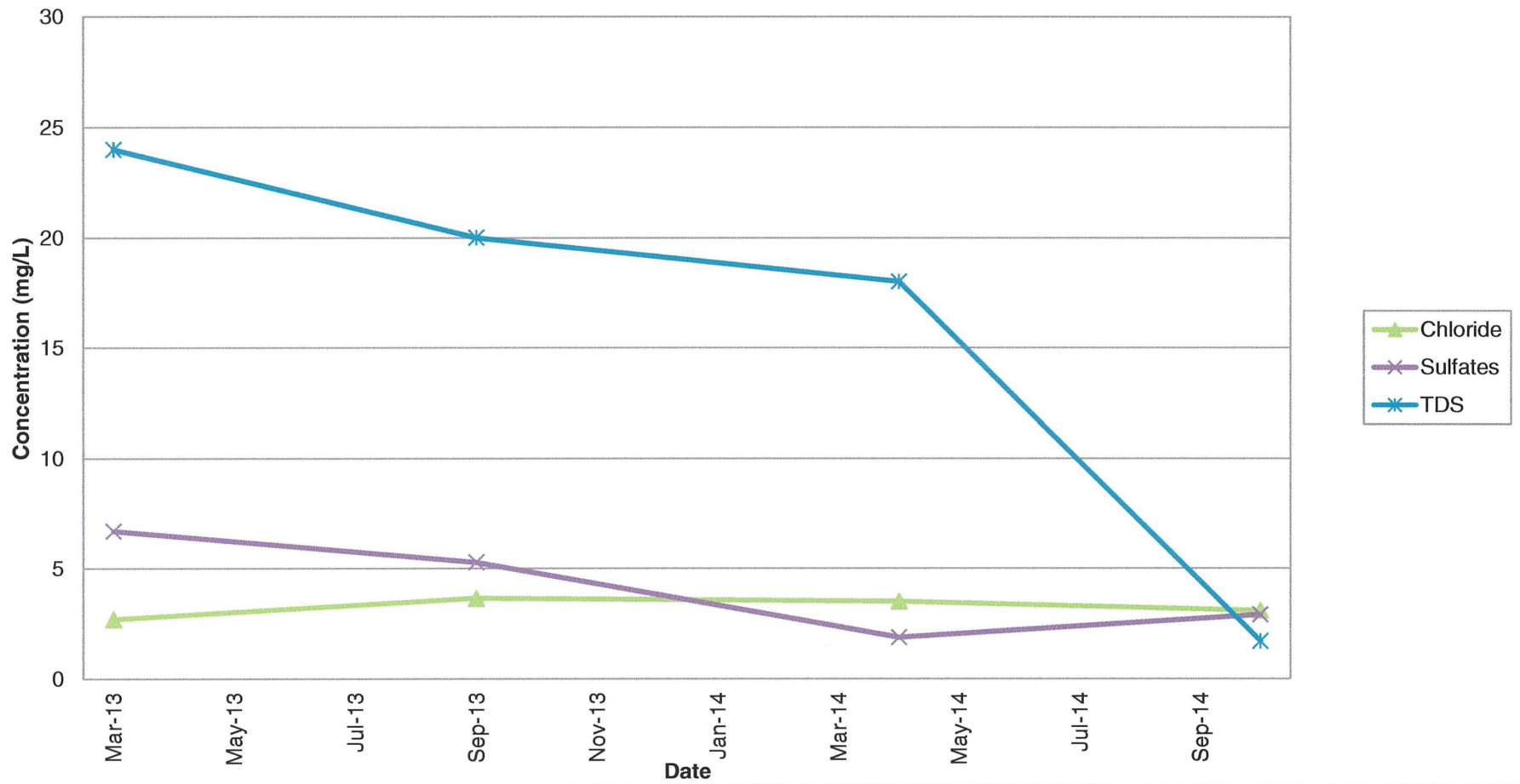
GE-3D Metals (Part 2)



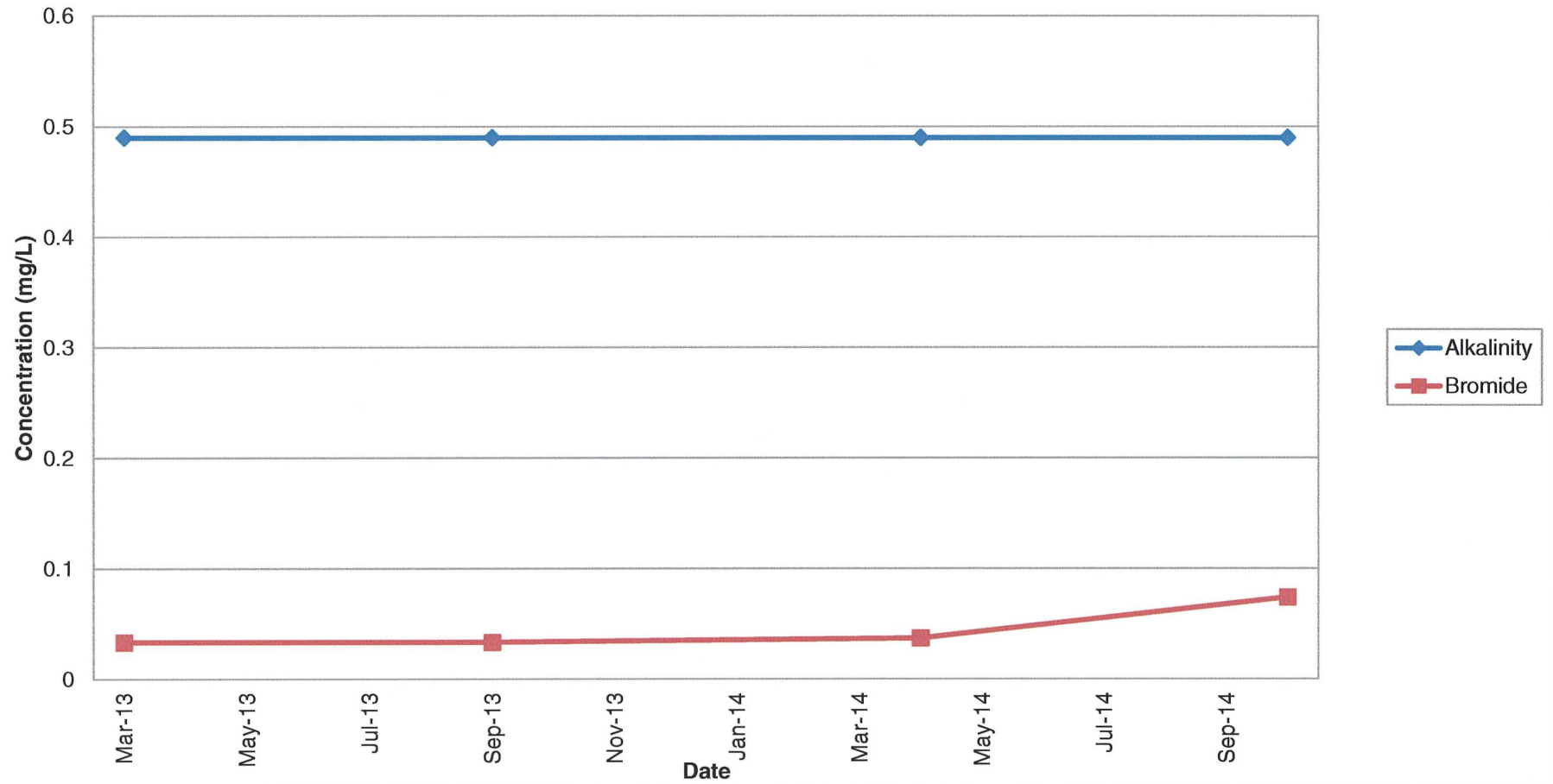
GE-3D Metals (Part 3)



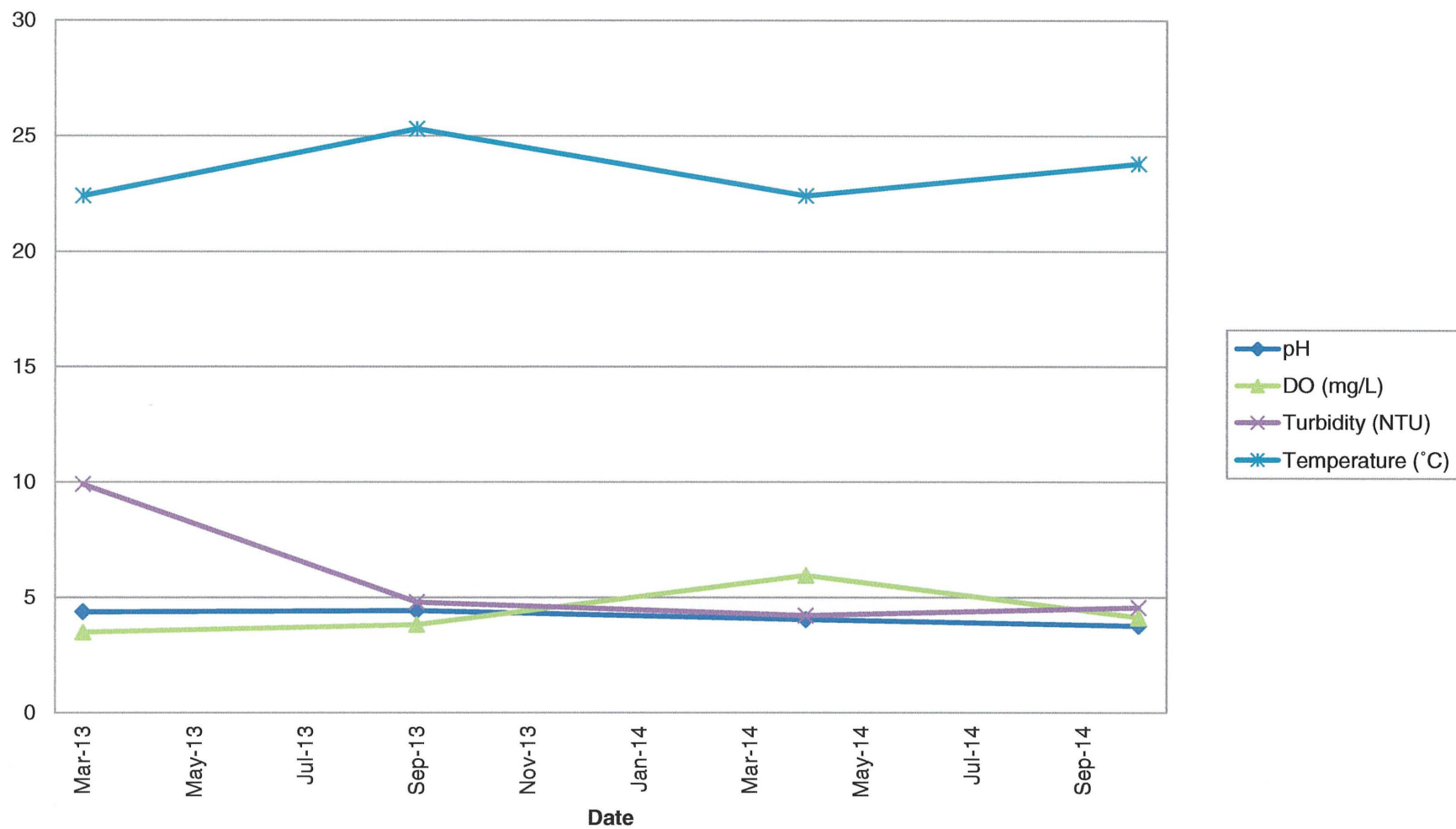
GE-3D General Chemsitry (Part 1)



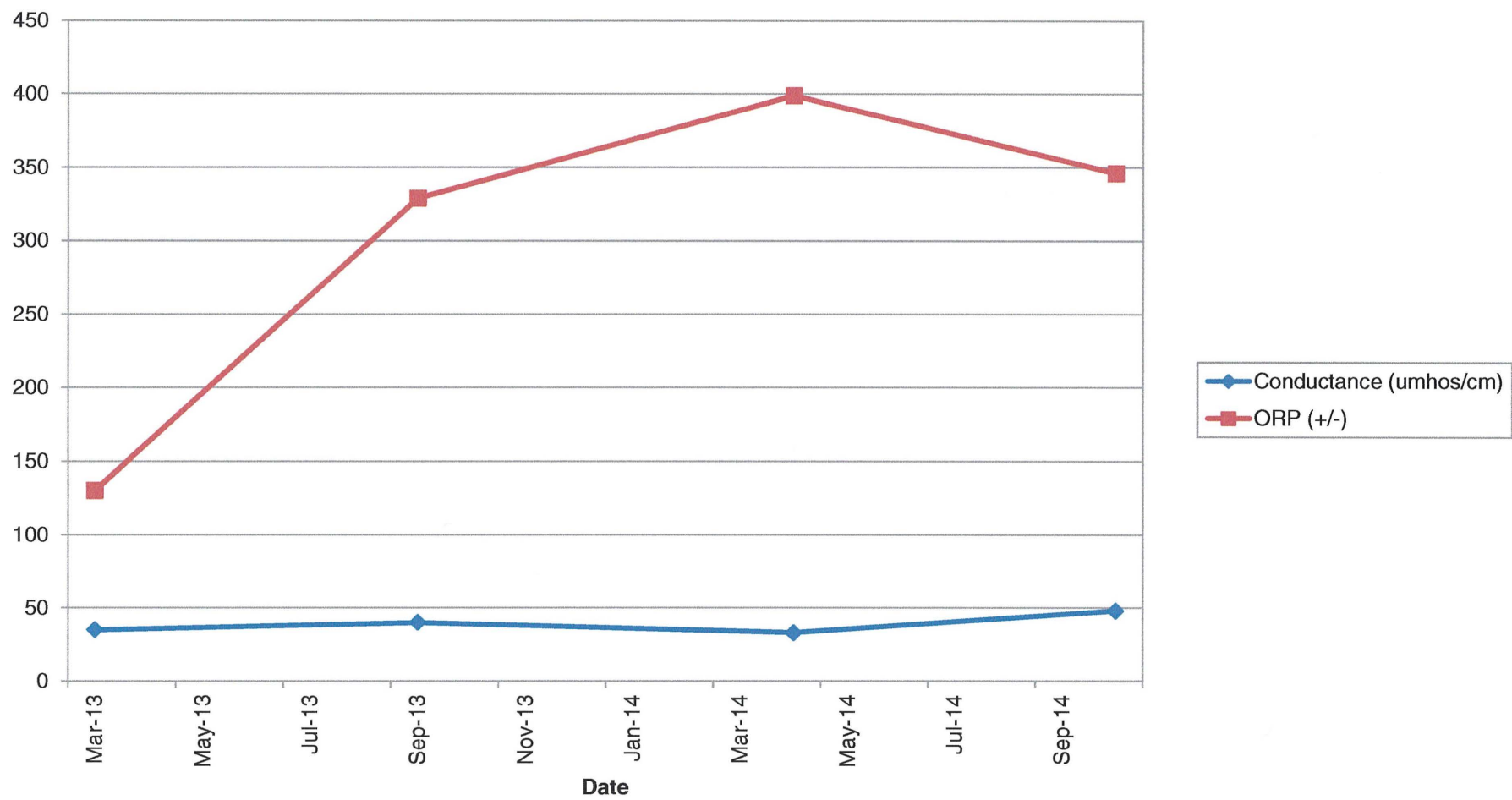
GE-3D General Chemsitry (Part 2)



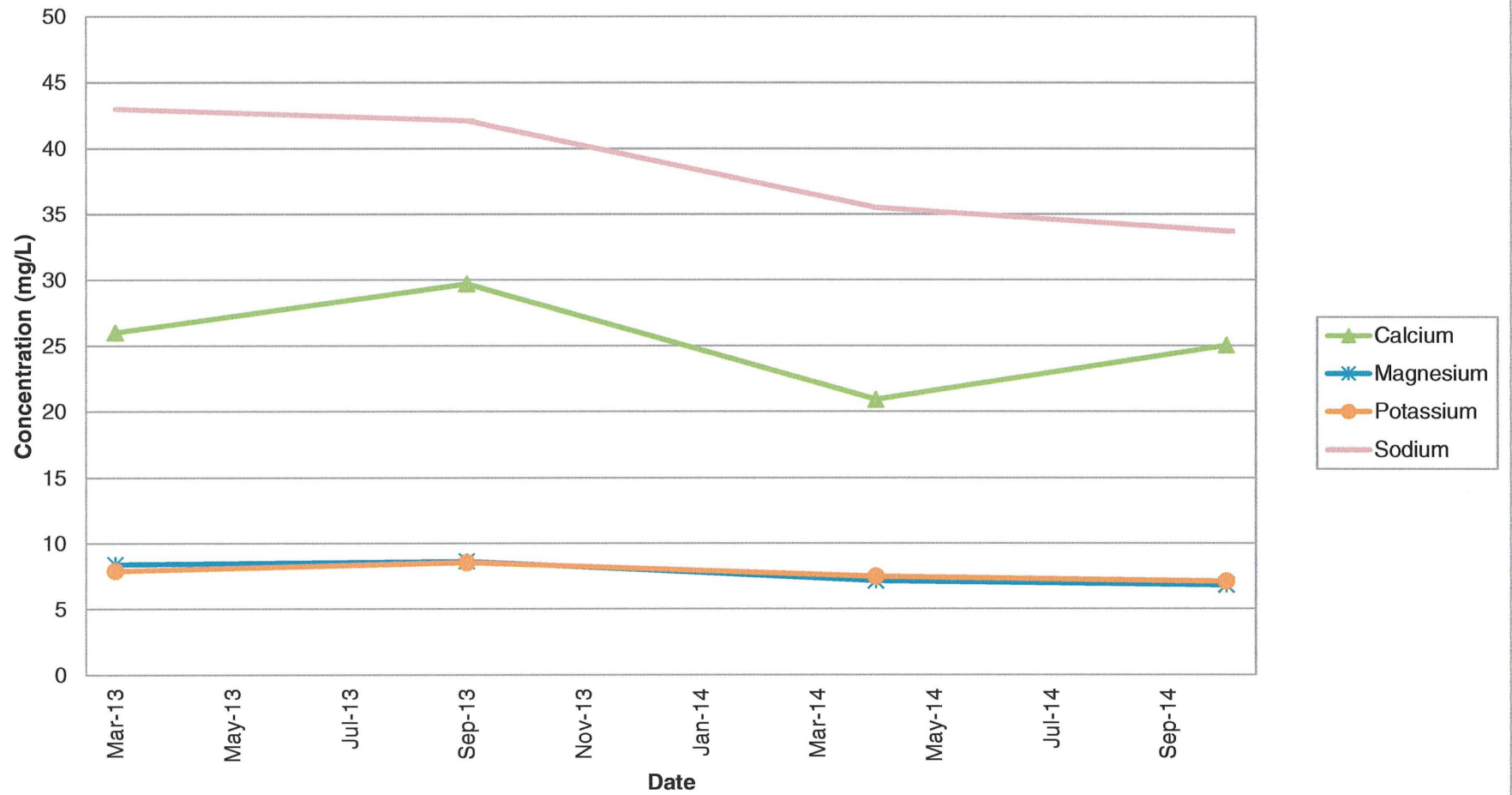
GE-3D Field Parameters (Part 1)



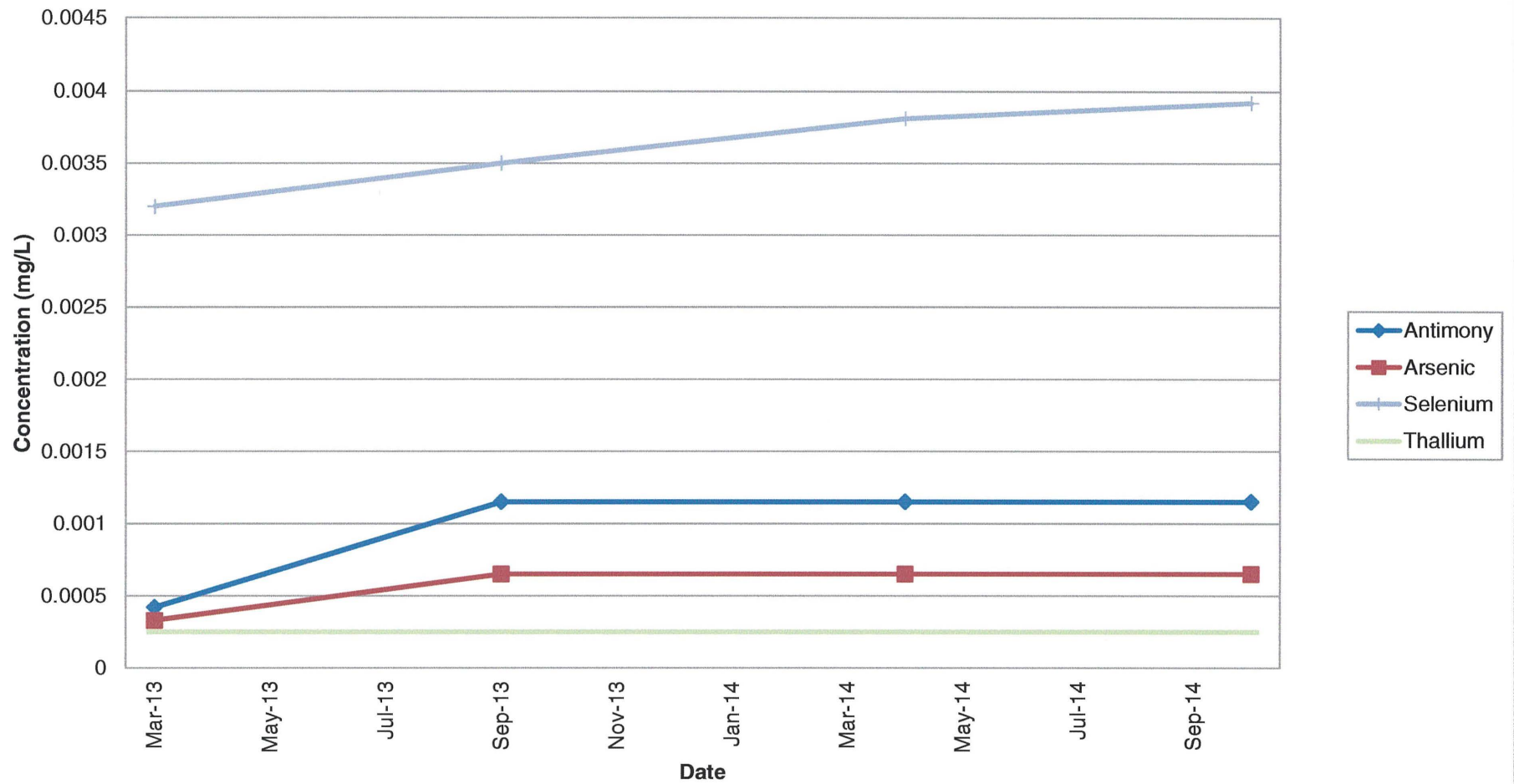
GE-3D Field Parameters (Part 2)



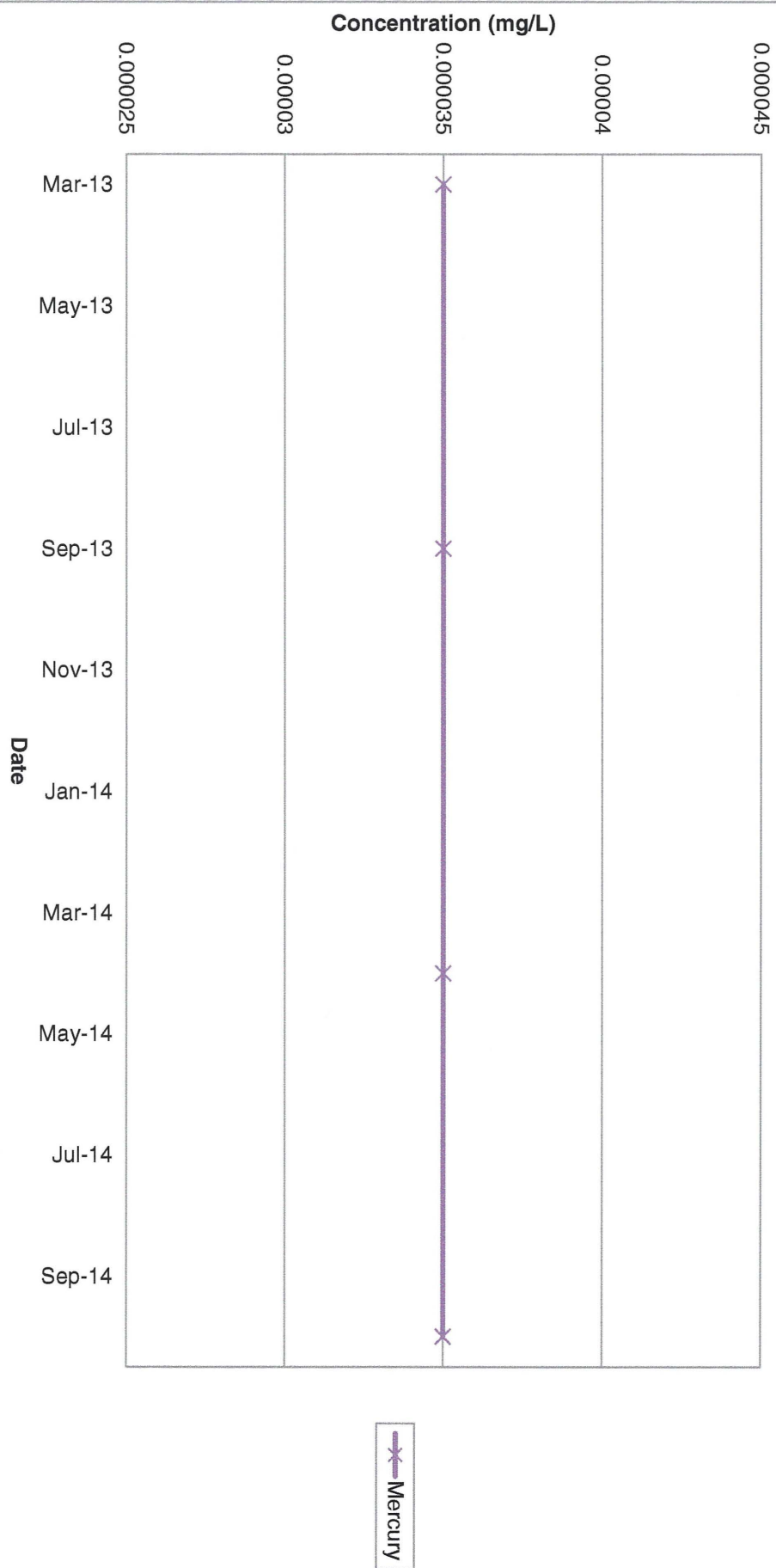
GE-4D Metals (Part 1)



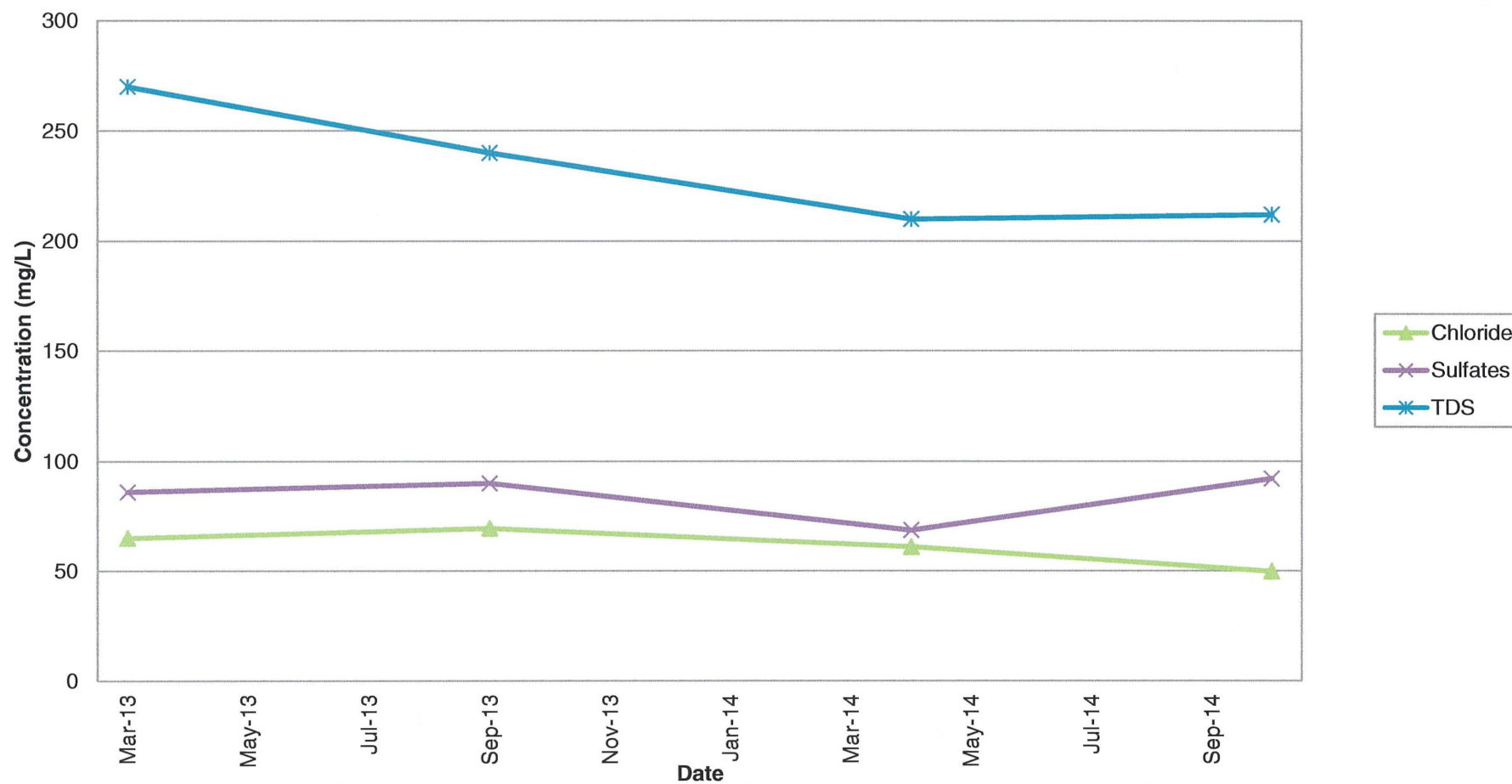
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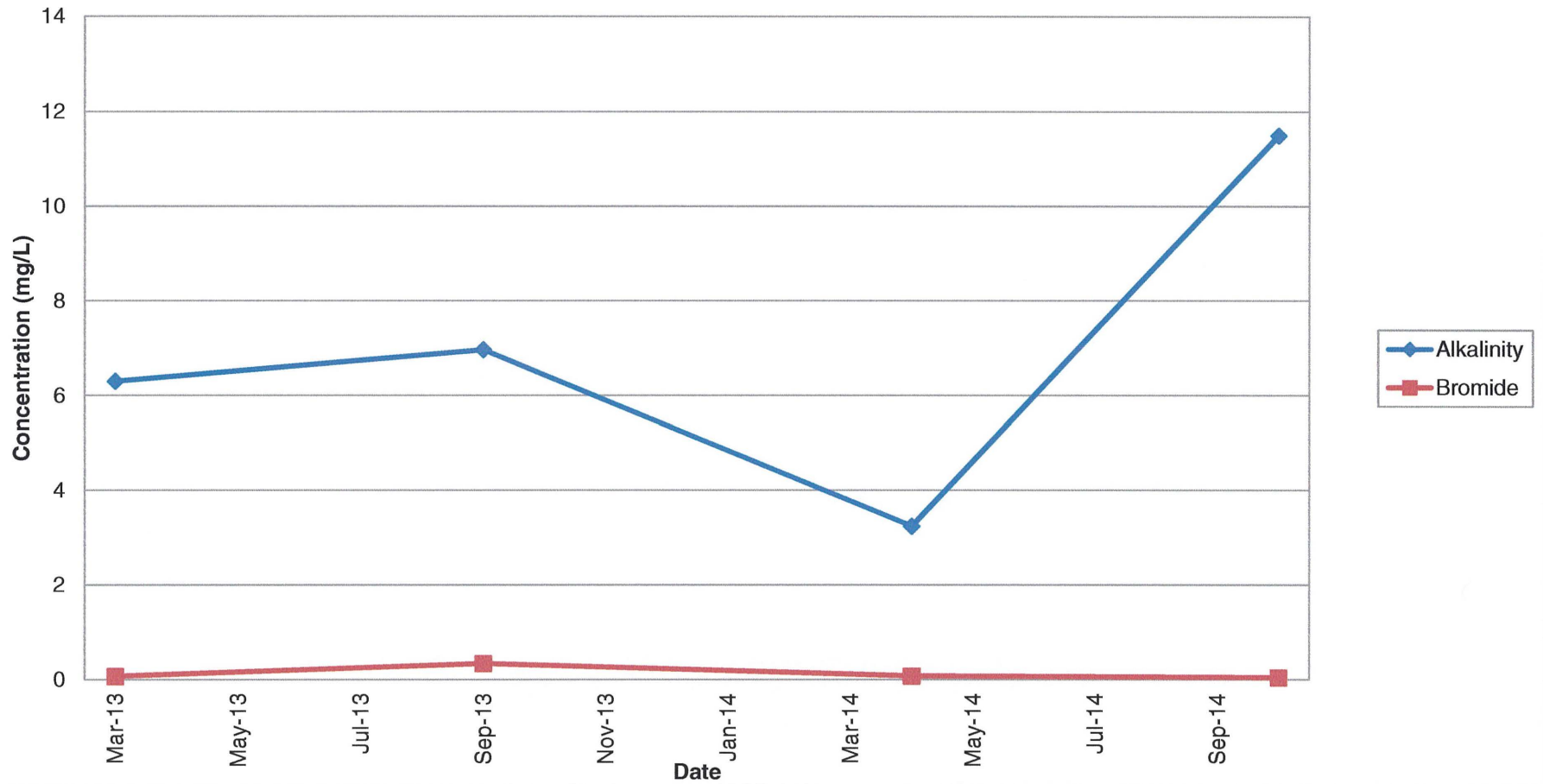
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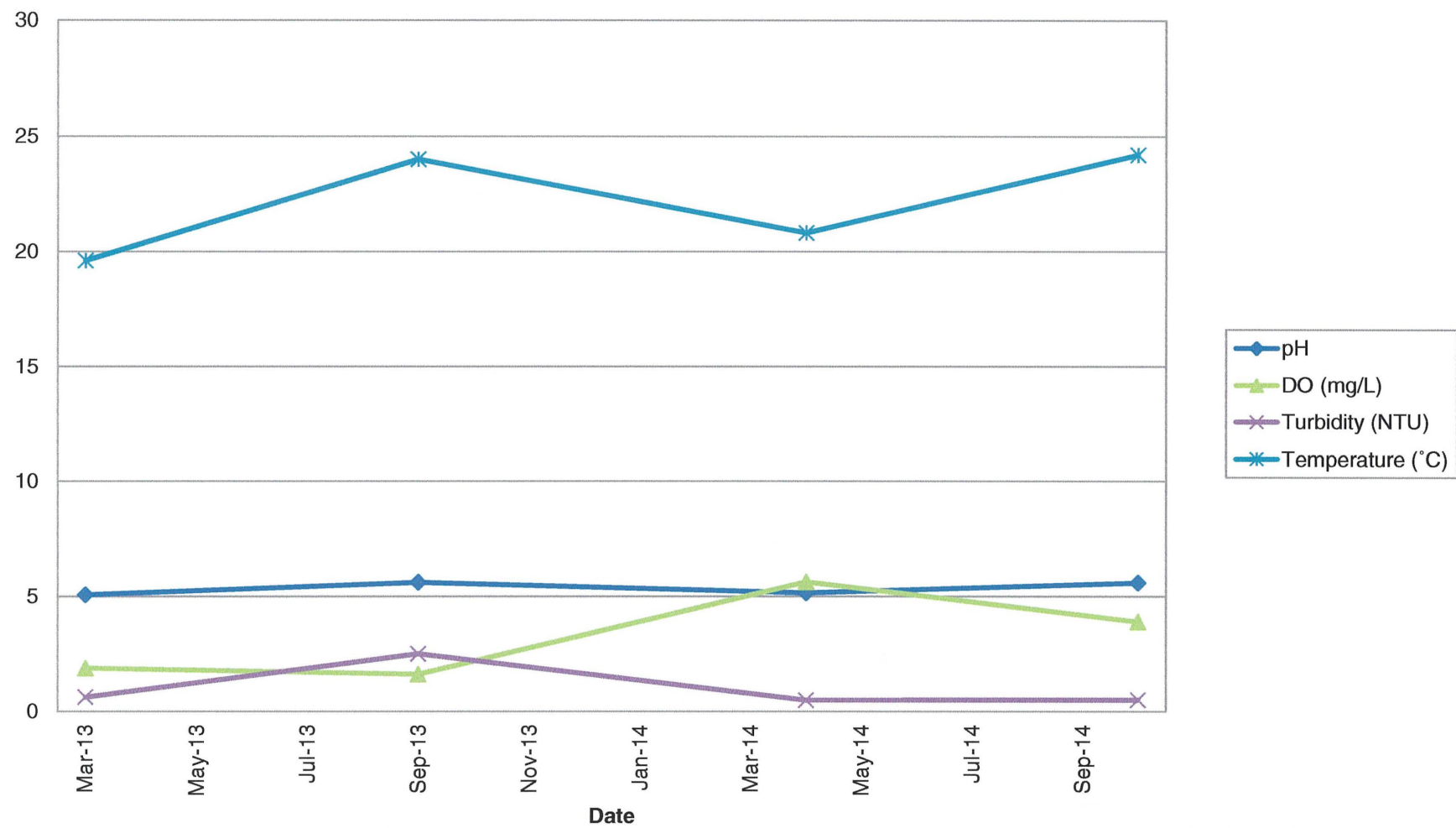
GE-4D General Chemsitry (Part 1)



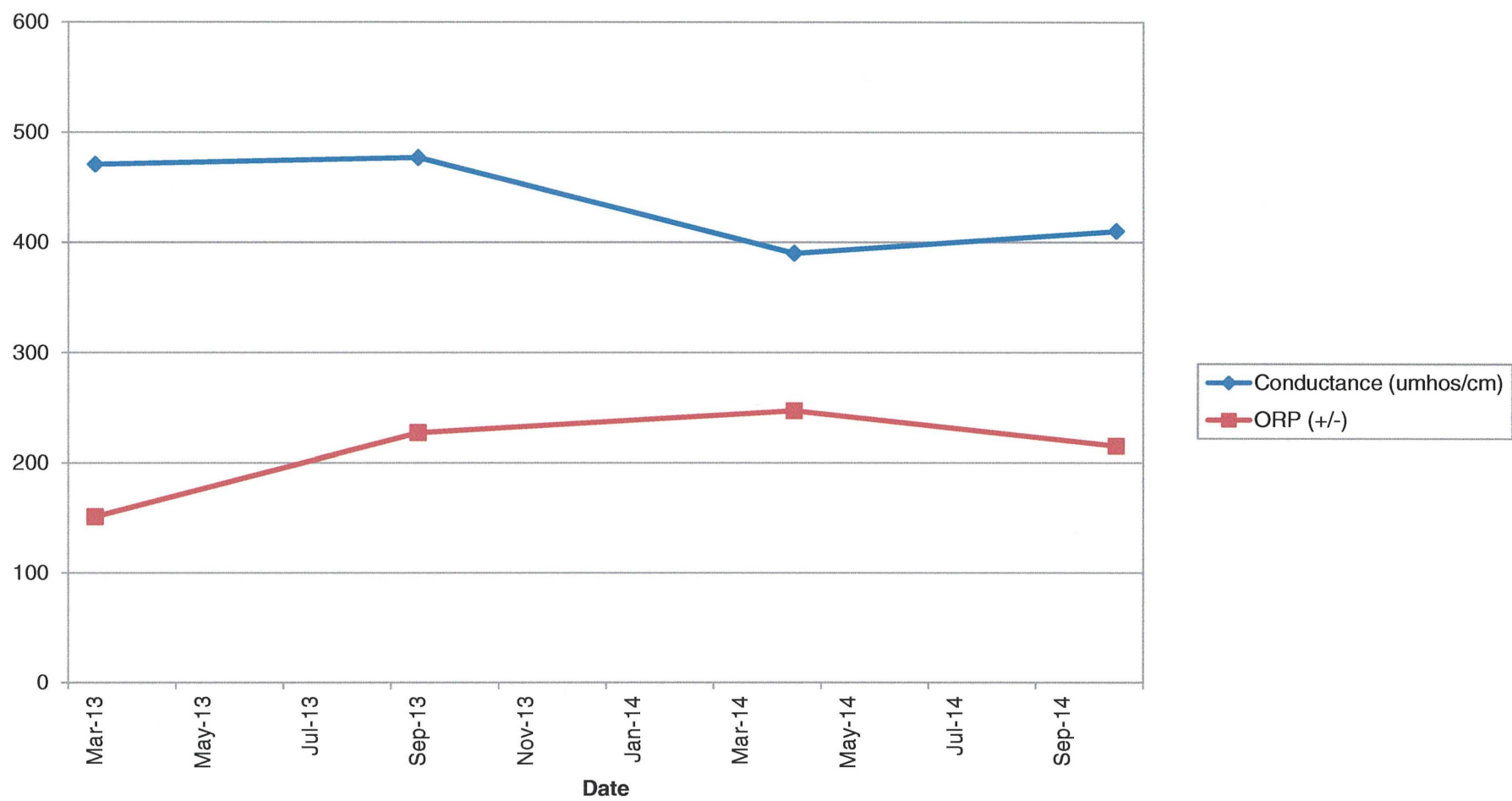
GE-4D General Chemsitry (Part 2)



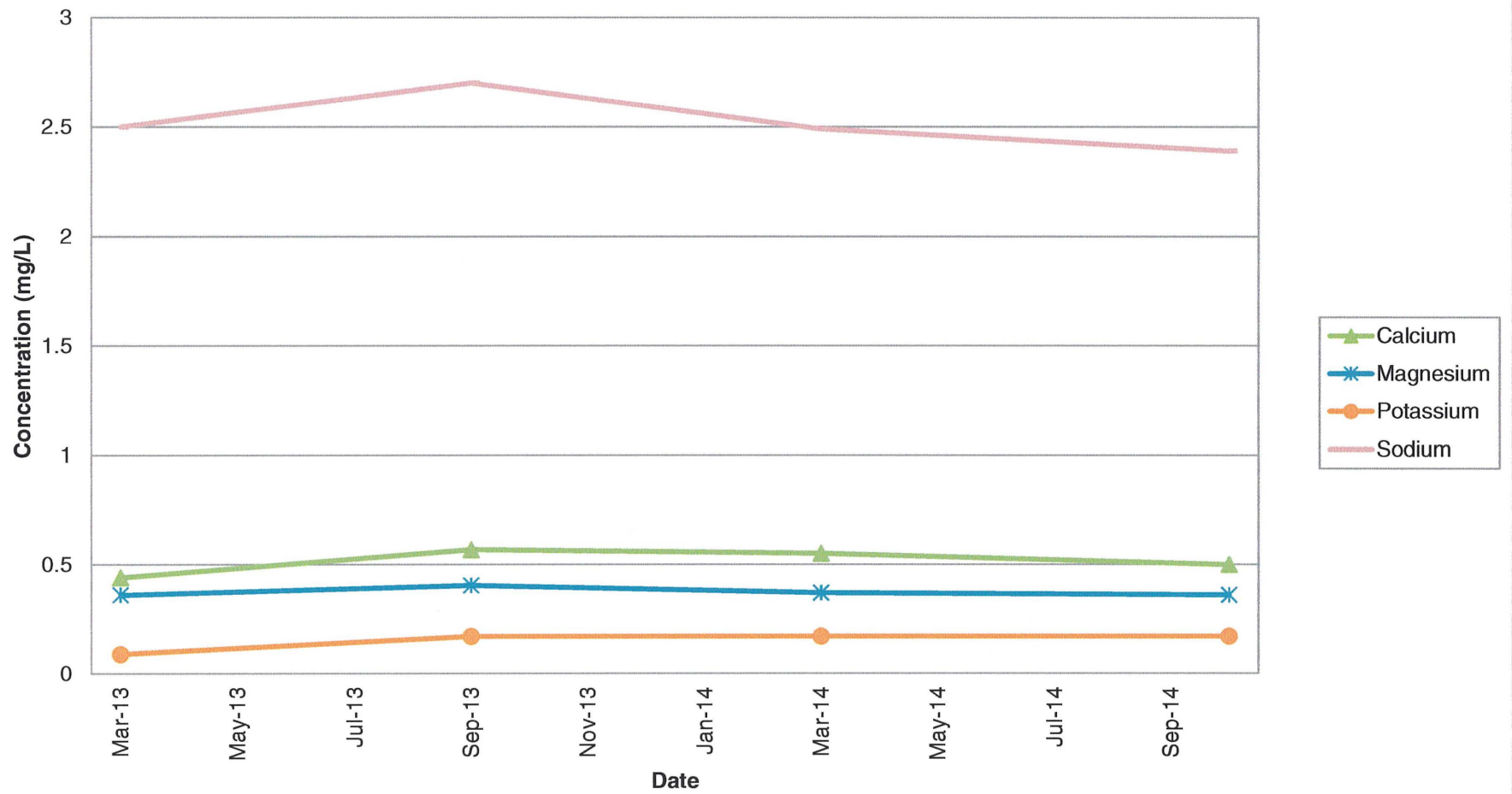
GE-4D Field Parameters (Part 1)



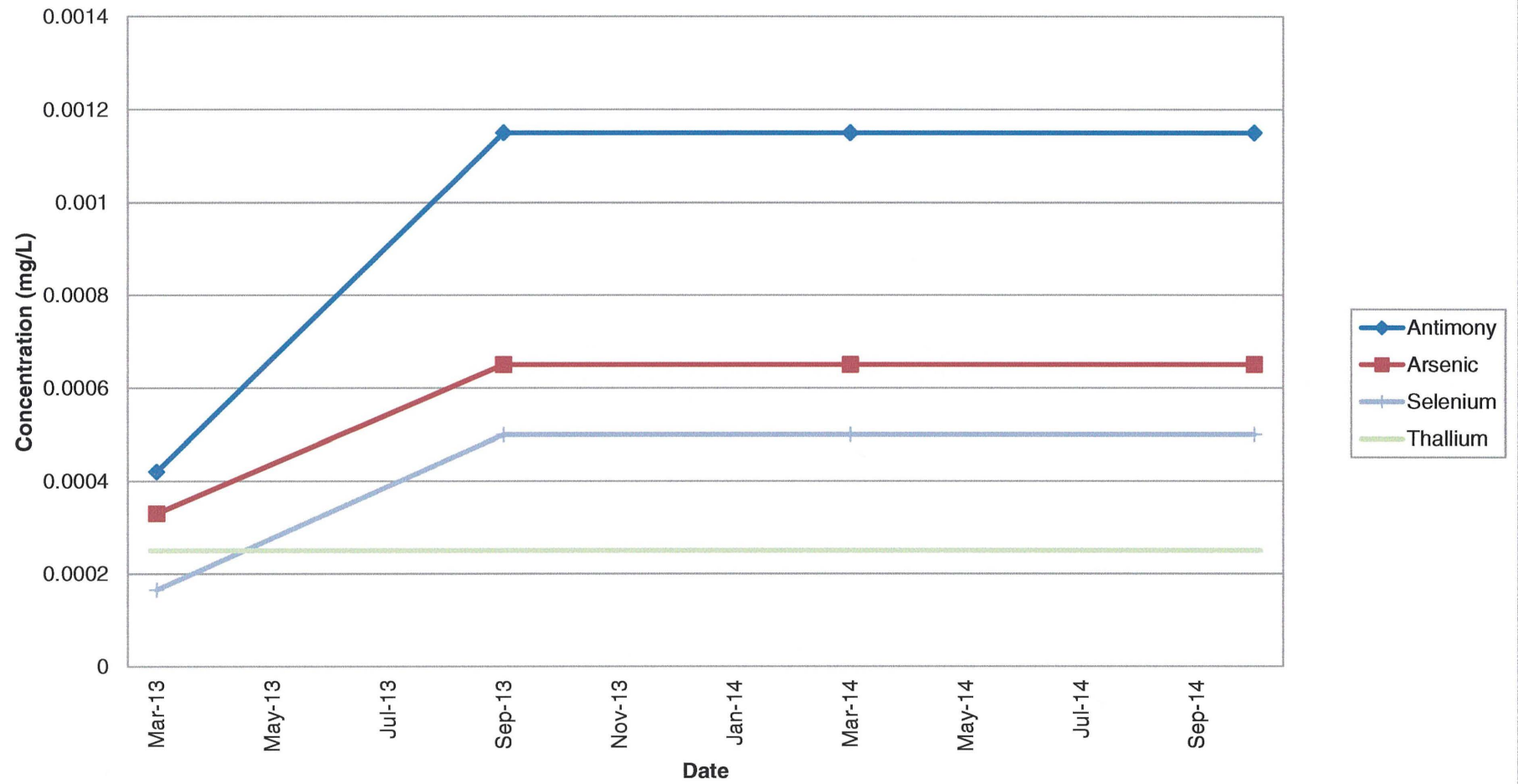
GE-4D Field Parameters (Part 2)



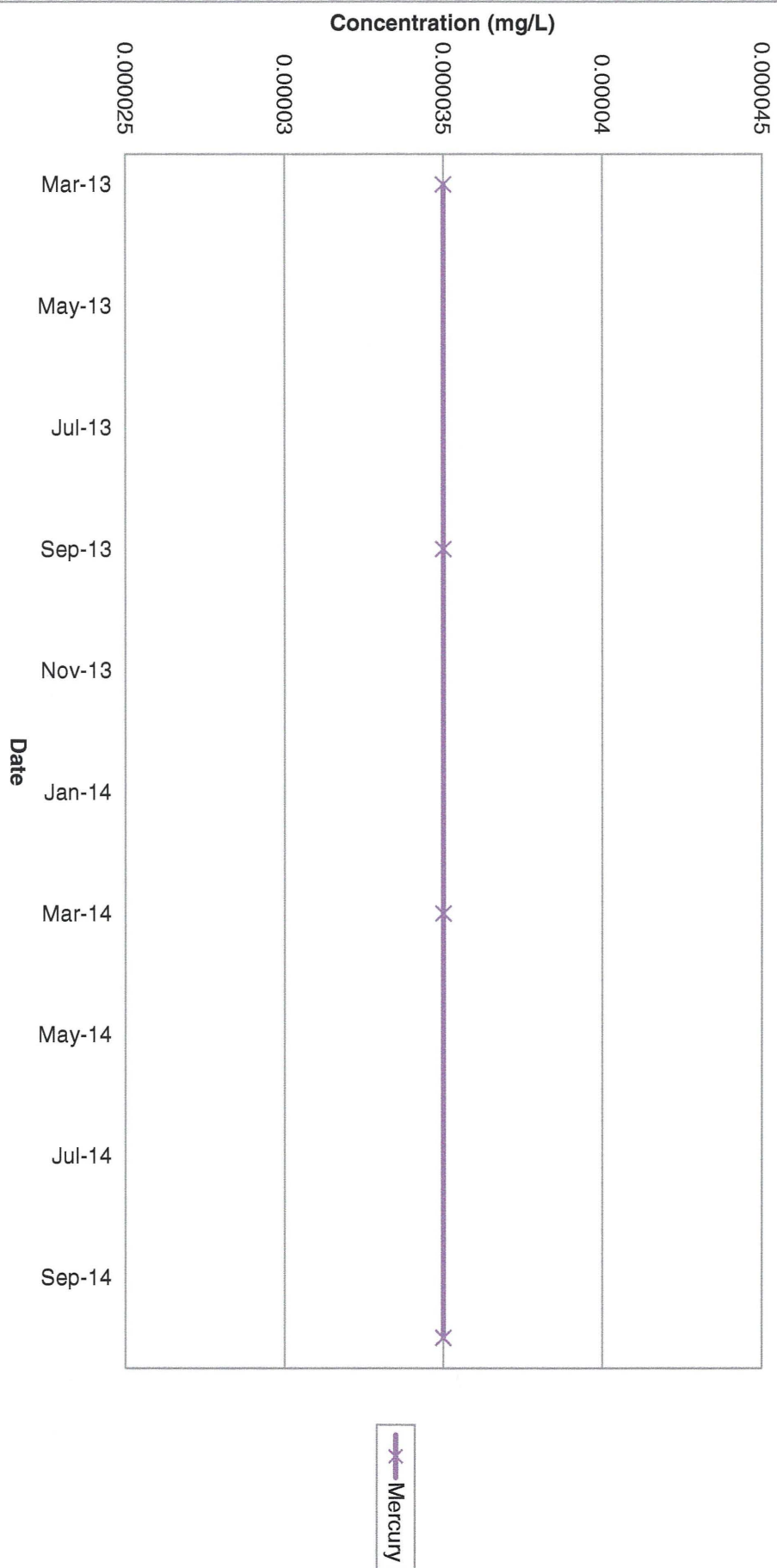
GE-5D Metals (Part 1)



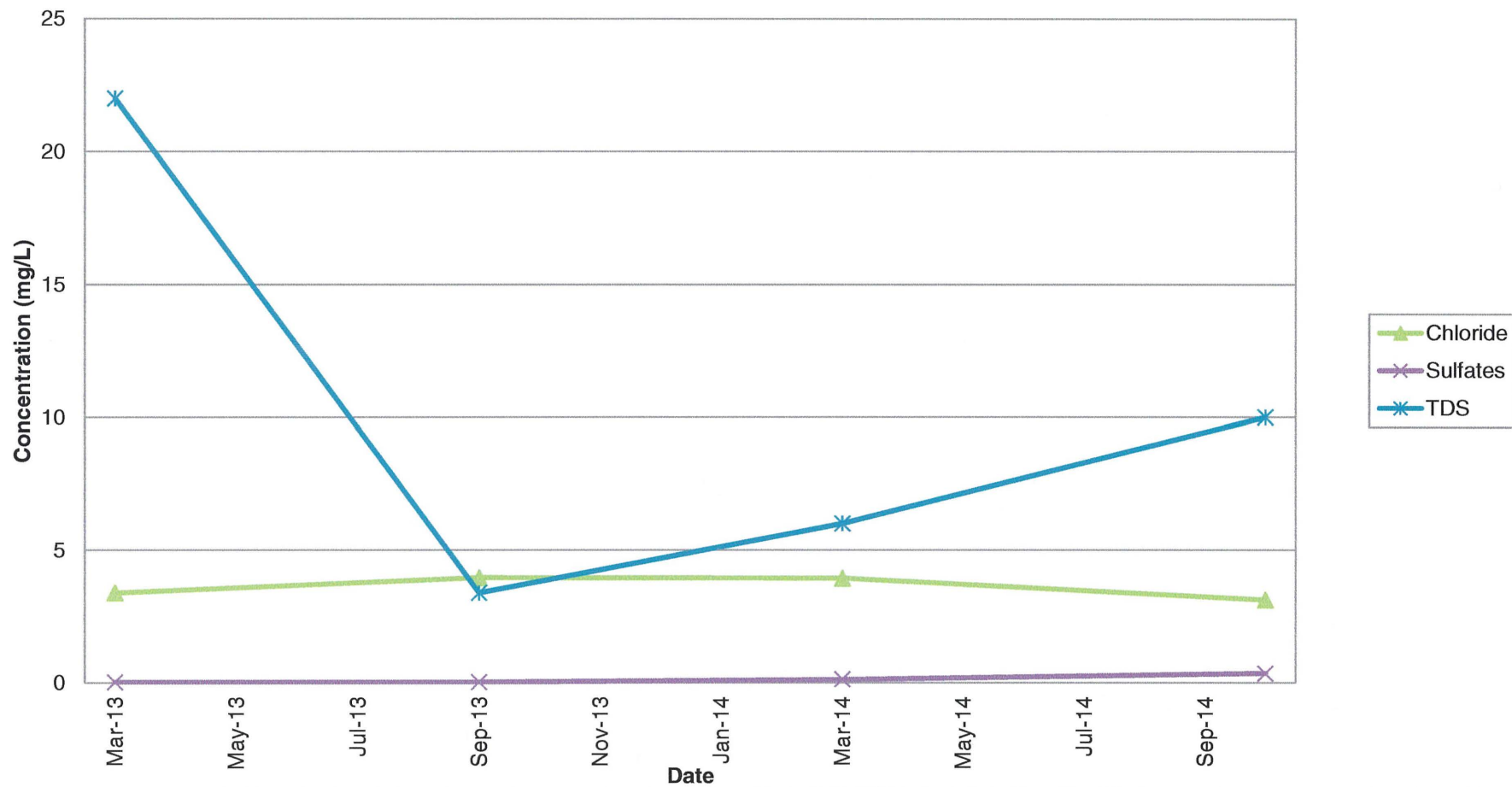
GE-5D Metals (Part 2)



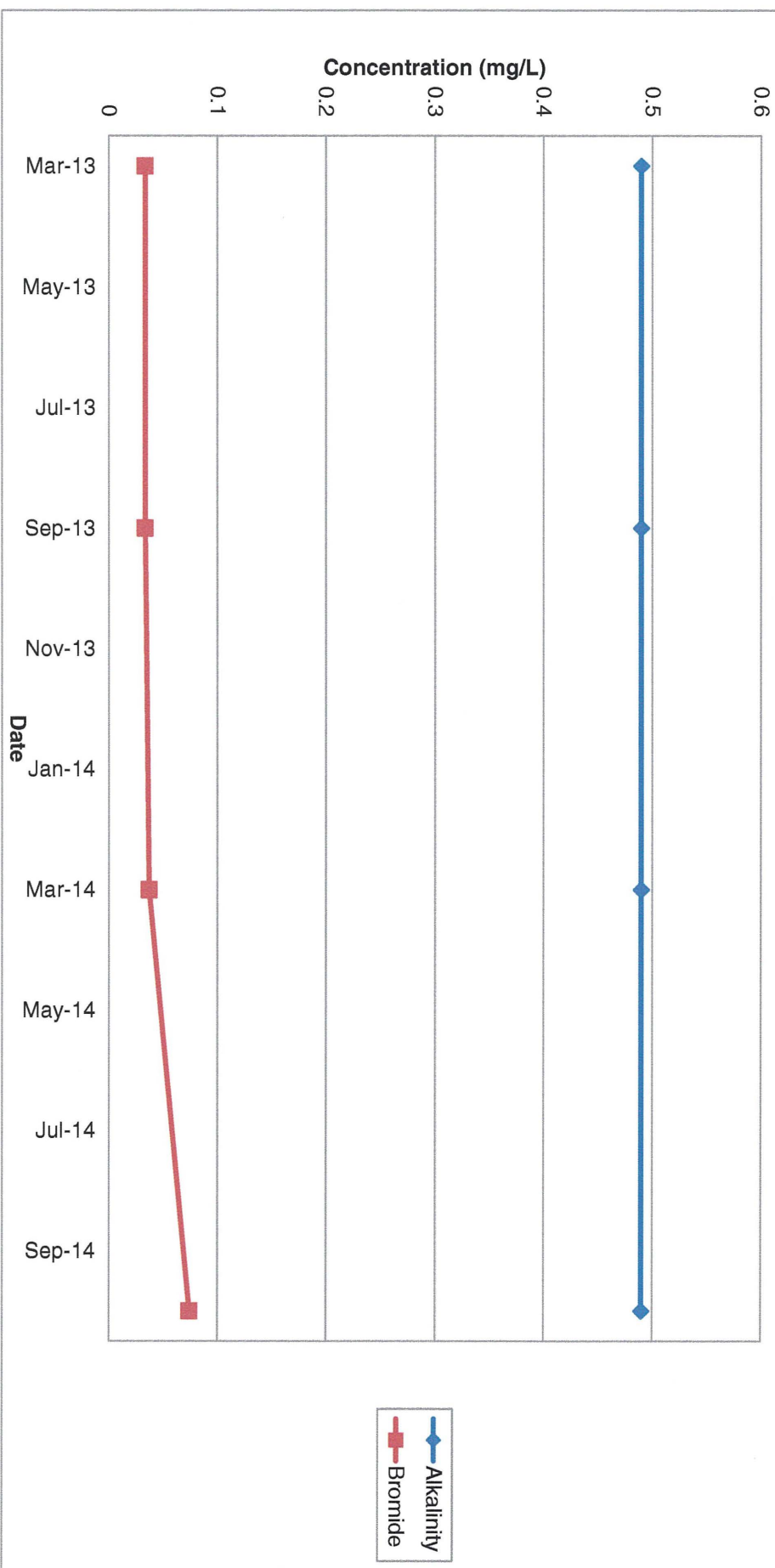
GE-5D Metals (Part 3)



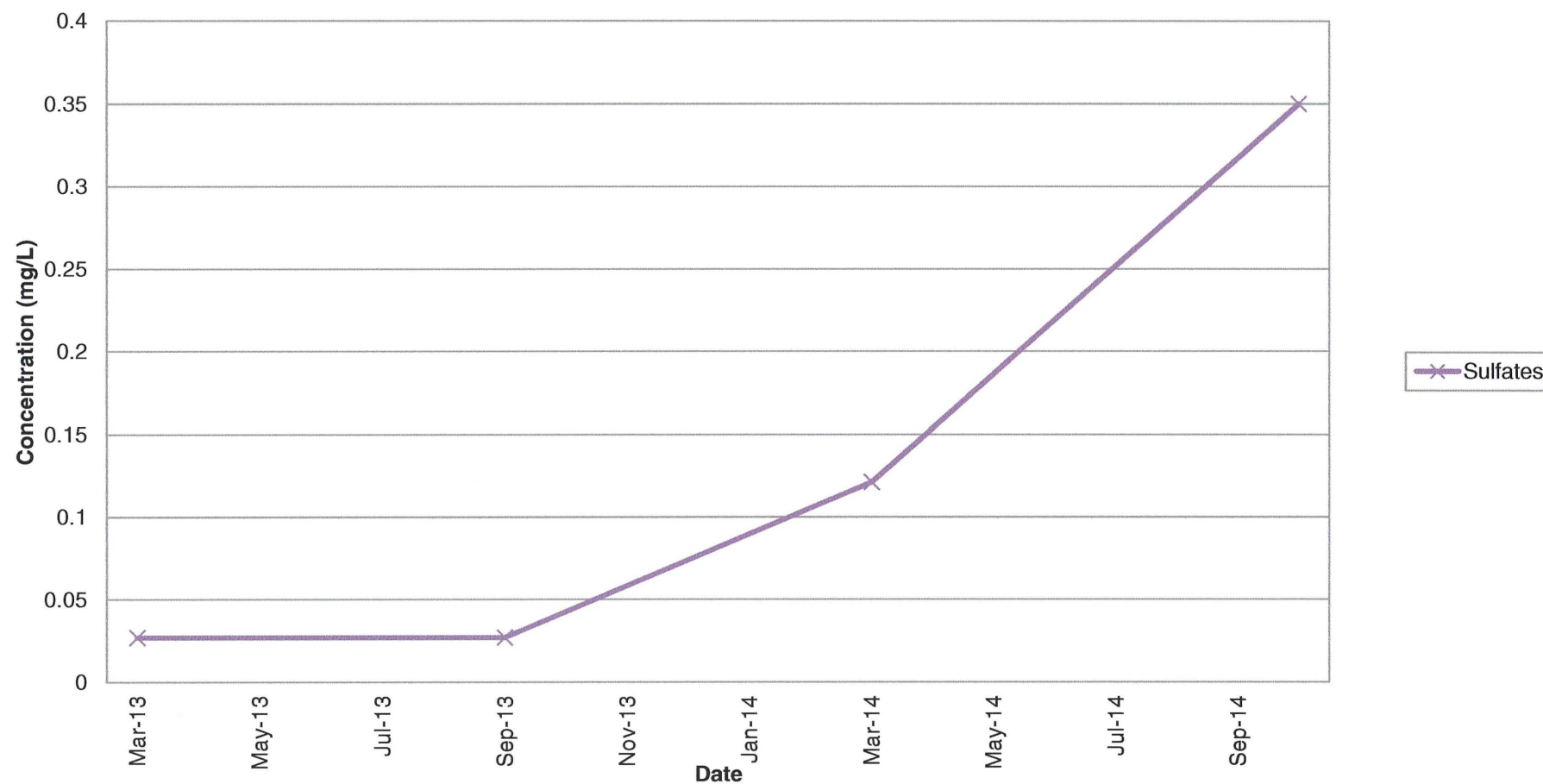
GE-5D General Chemsitry (Part 1)



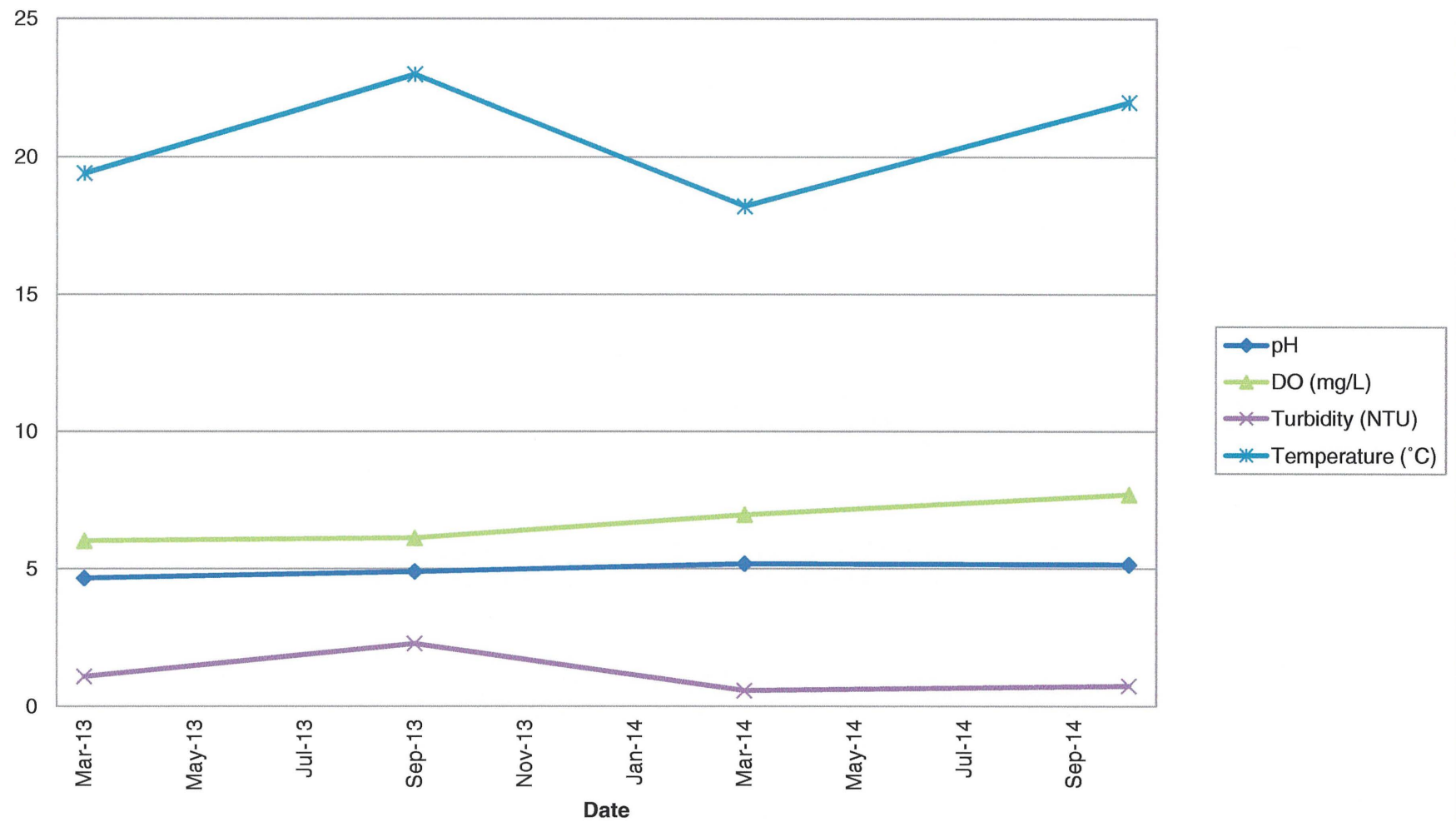
GE-5D General Chemistry (Part 2)



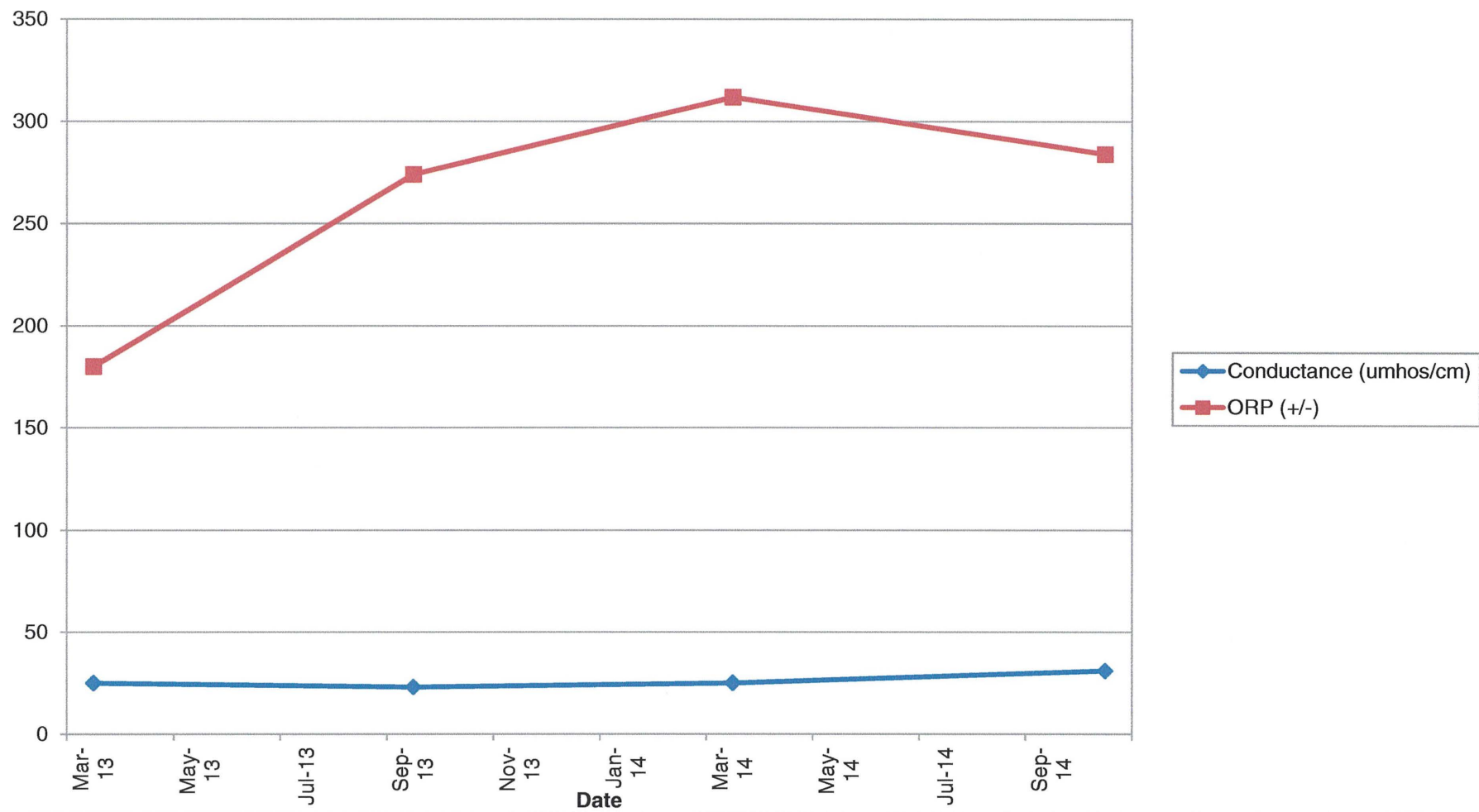
GE-5D General Chemsitry (Part 3)



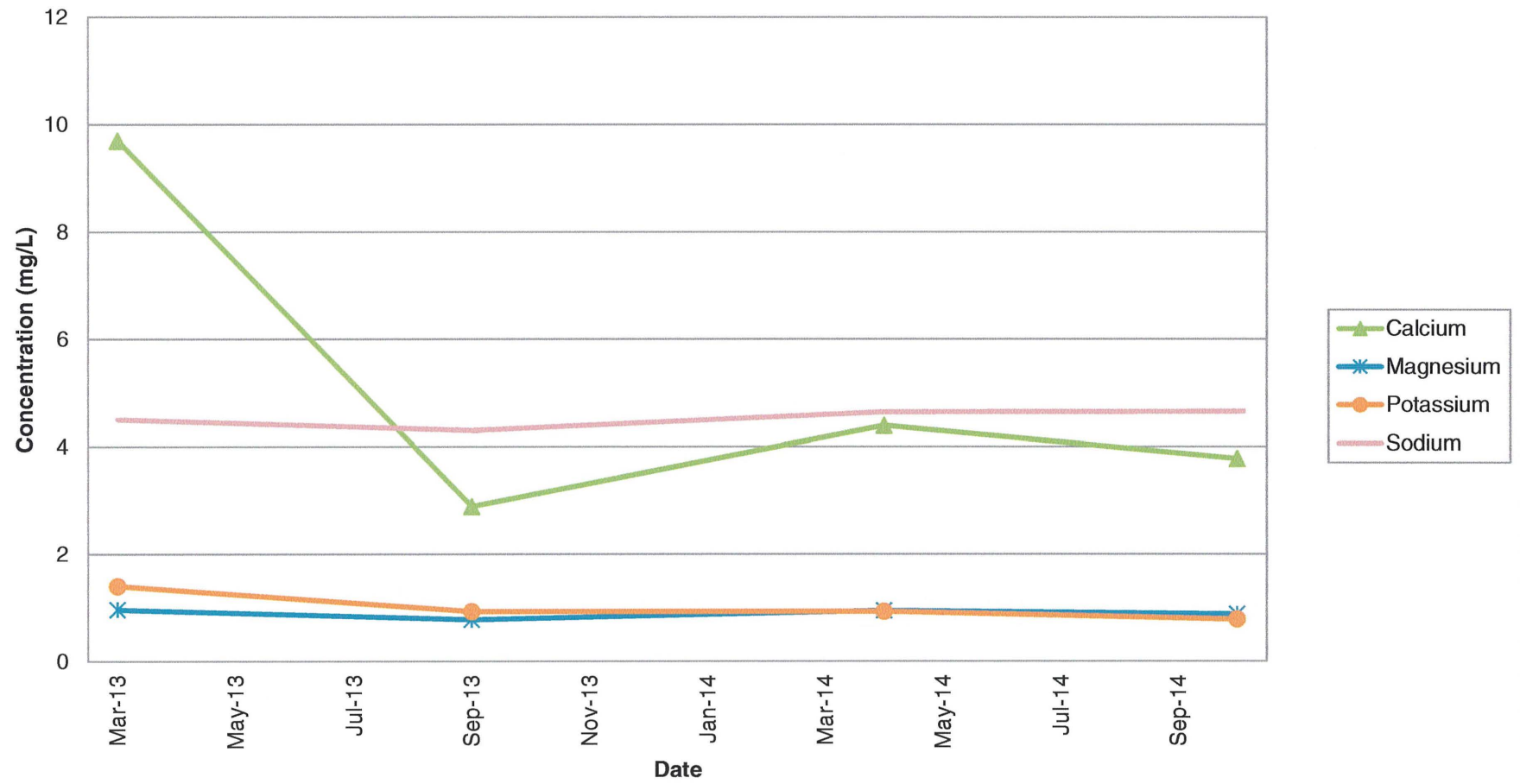
GE-5D Field Parameters (Part 1)



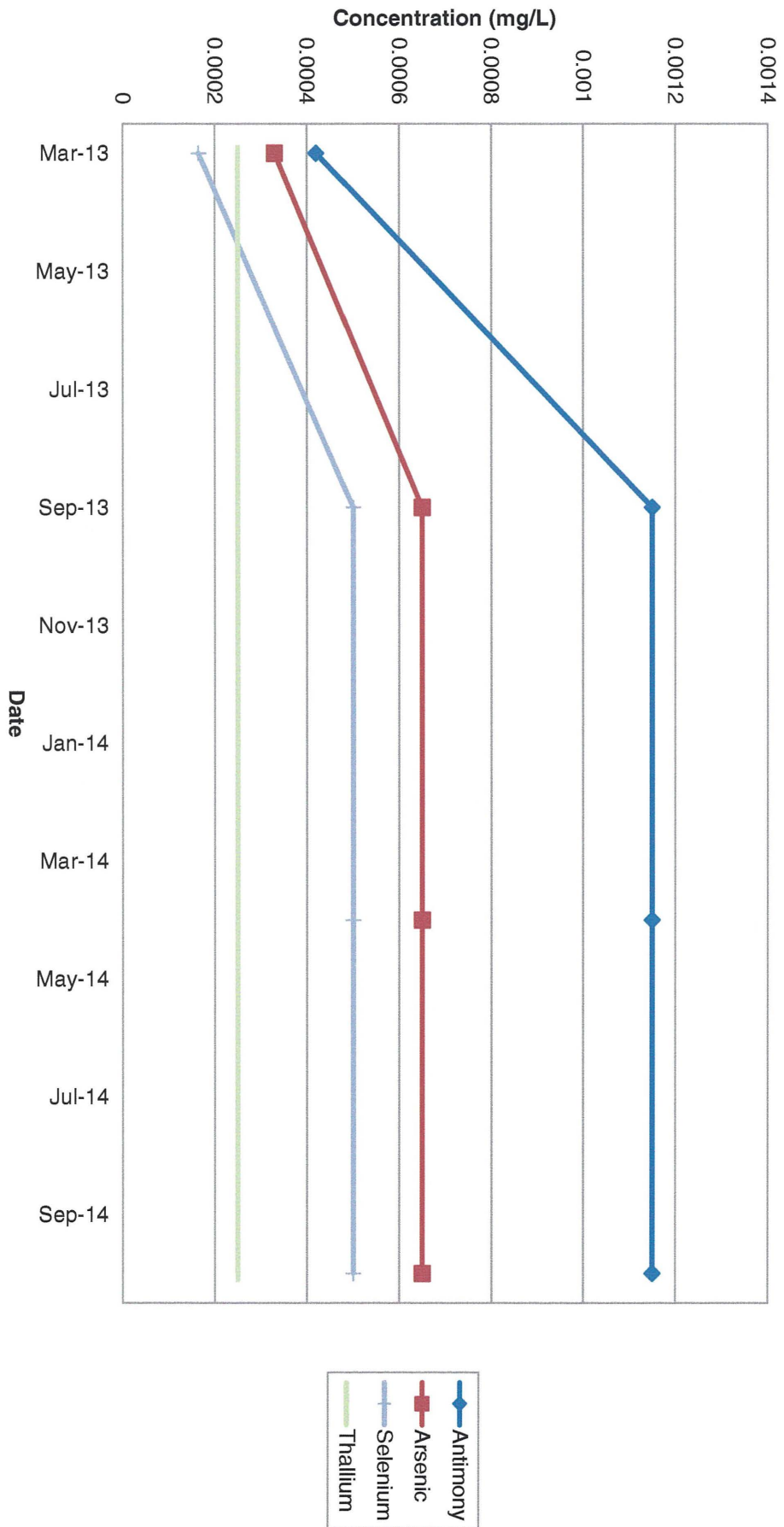
GE-5D Field Parameters (Part 2)



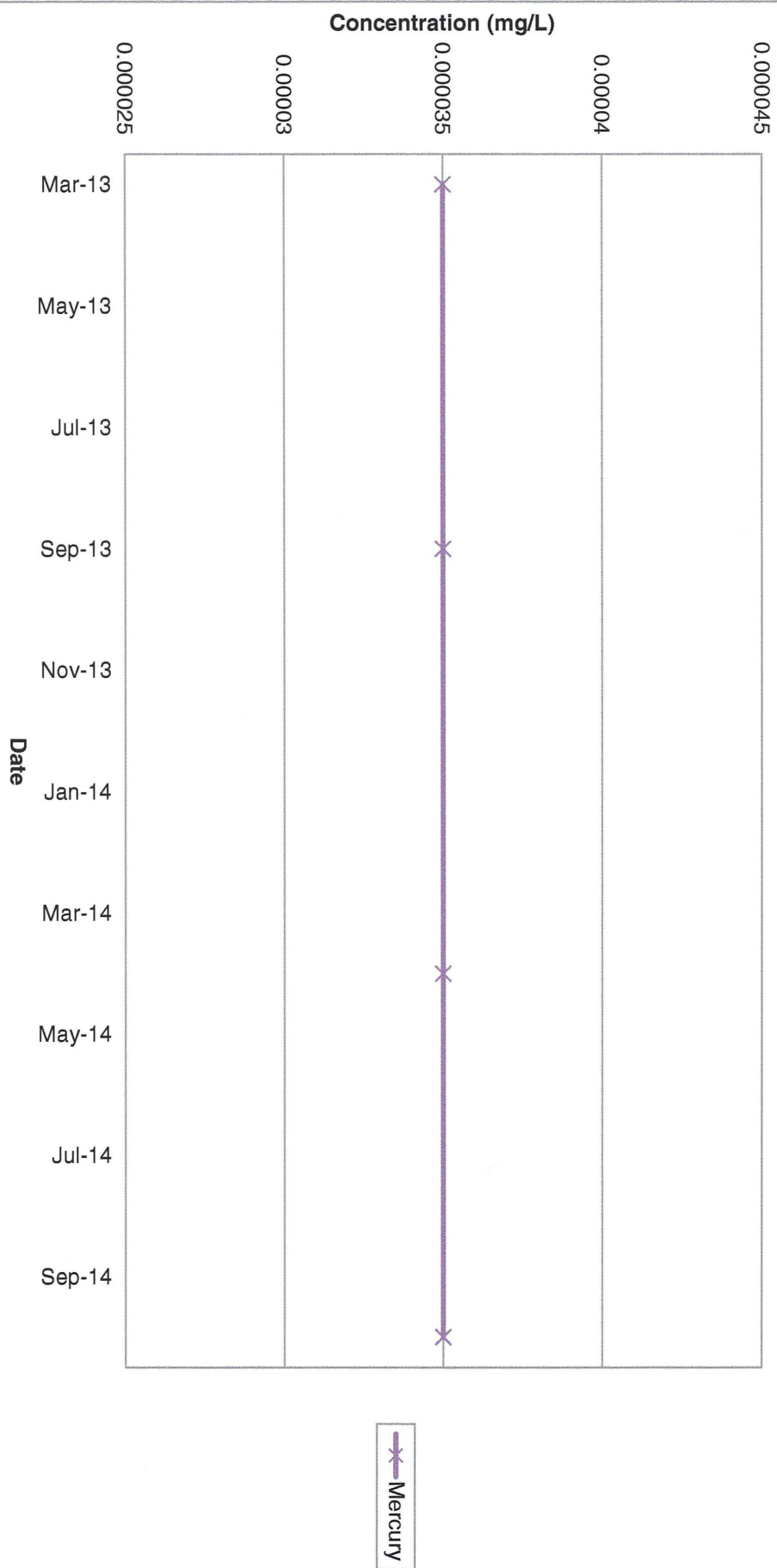
GE-6D Metals (Part 1)



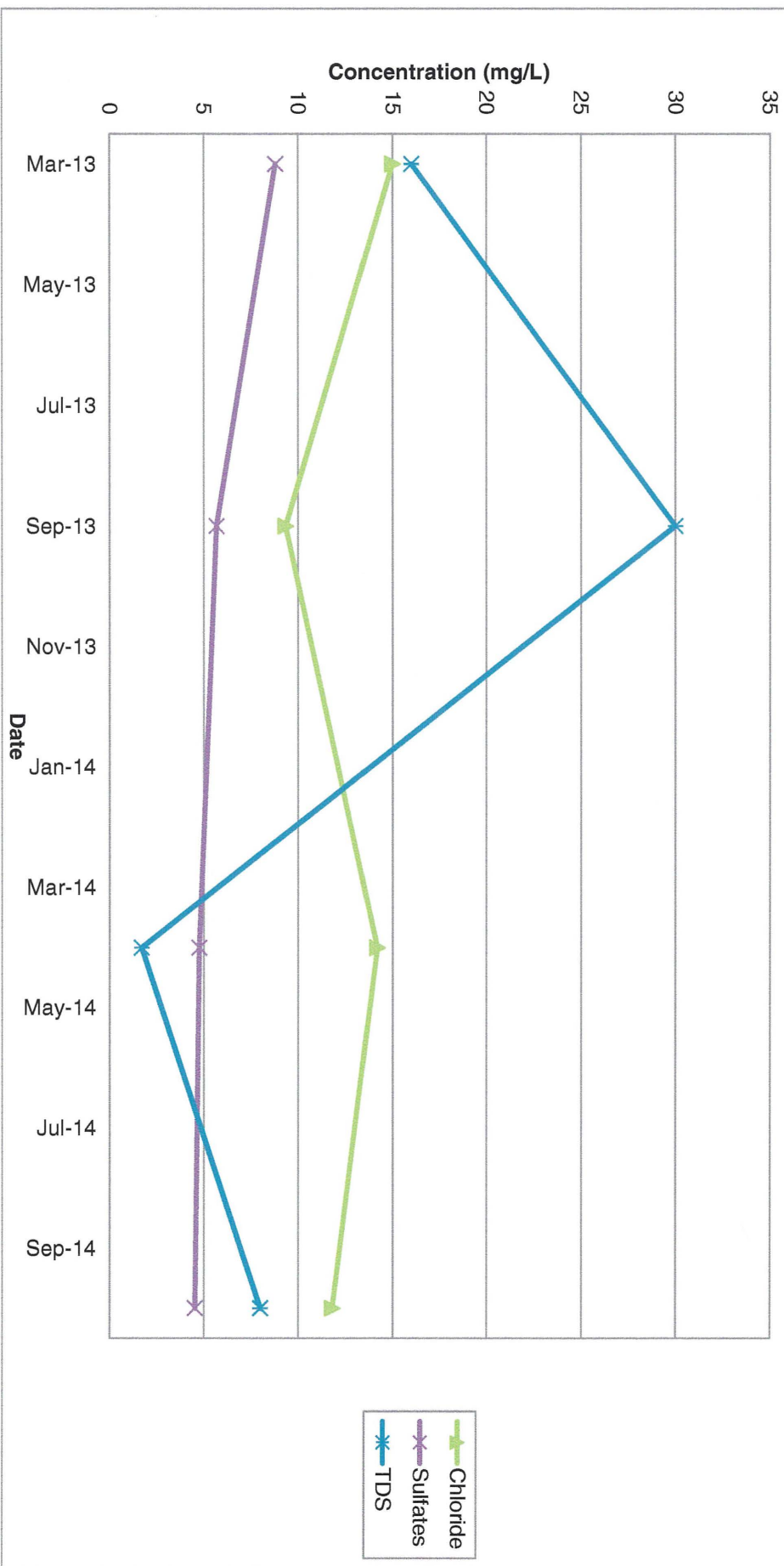
GE-6D Metals (Part 2)



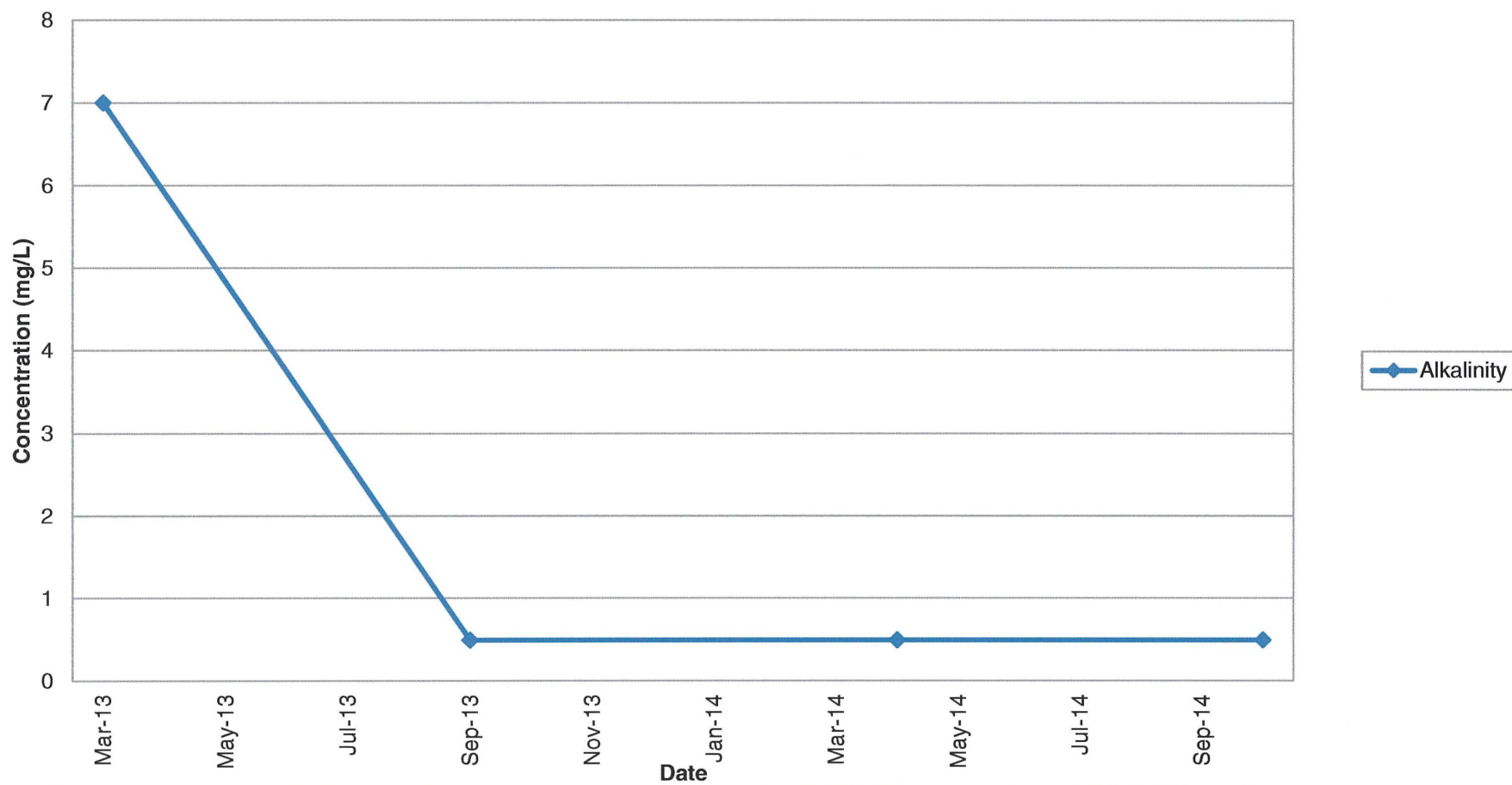
GE-6D Metals (Part 3)



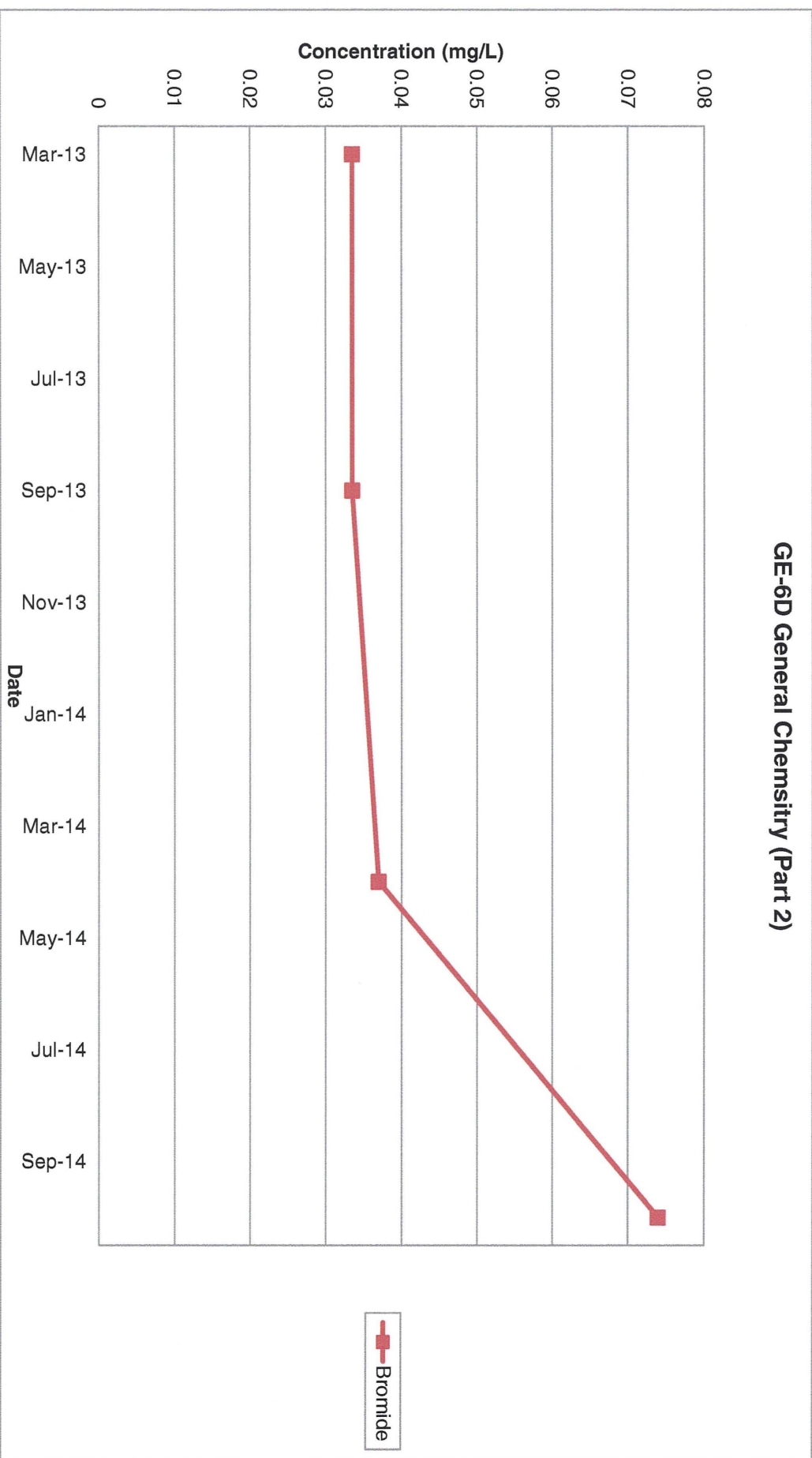
GE-6D General Chemistry (Part 1)



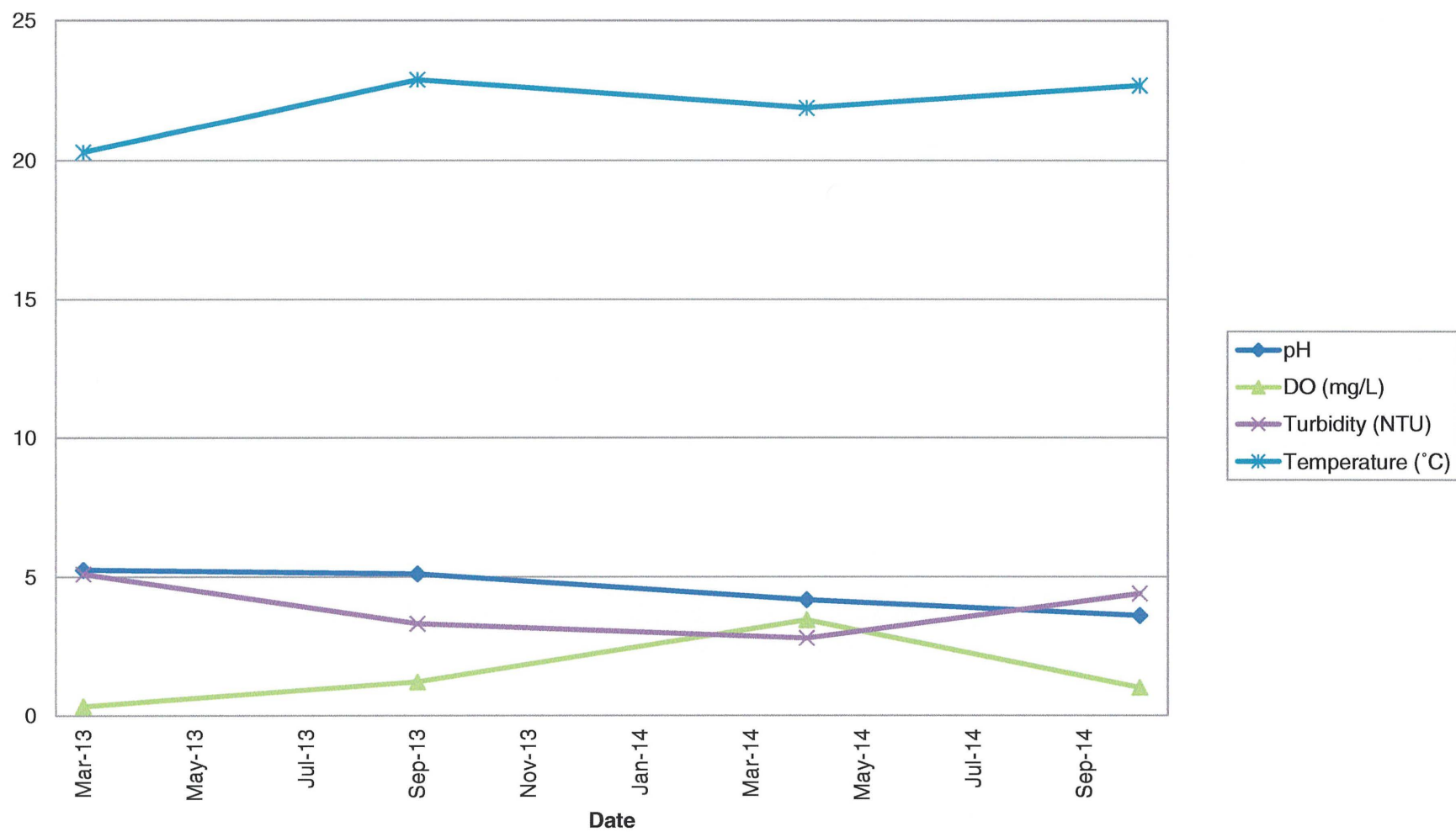
GE-6D General Chemsitry (Part 2)



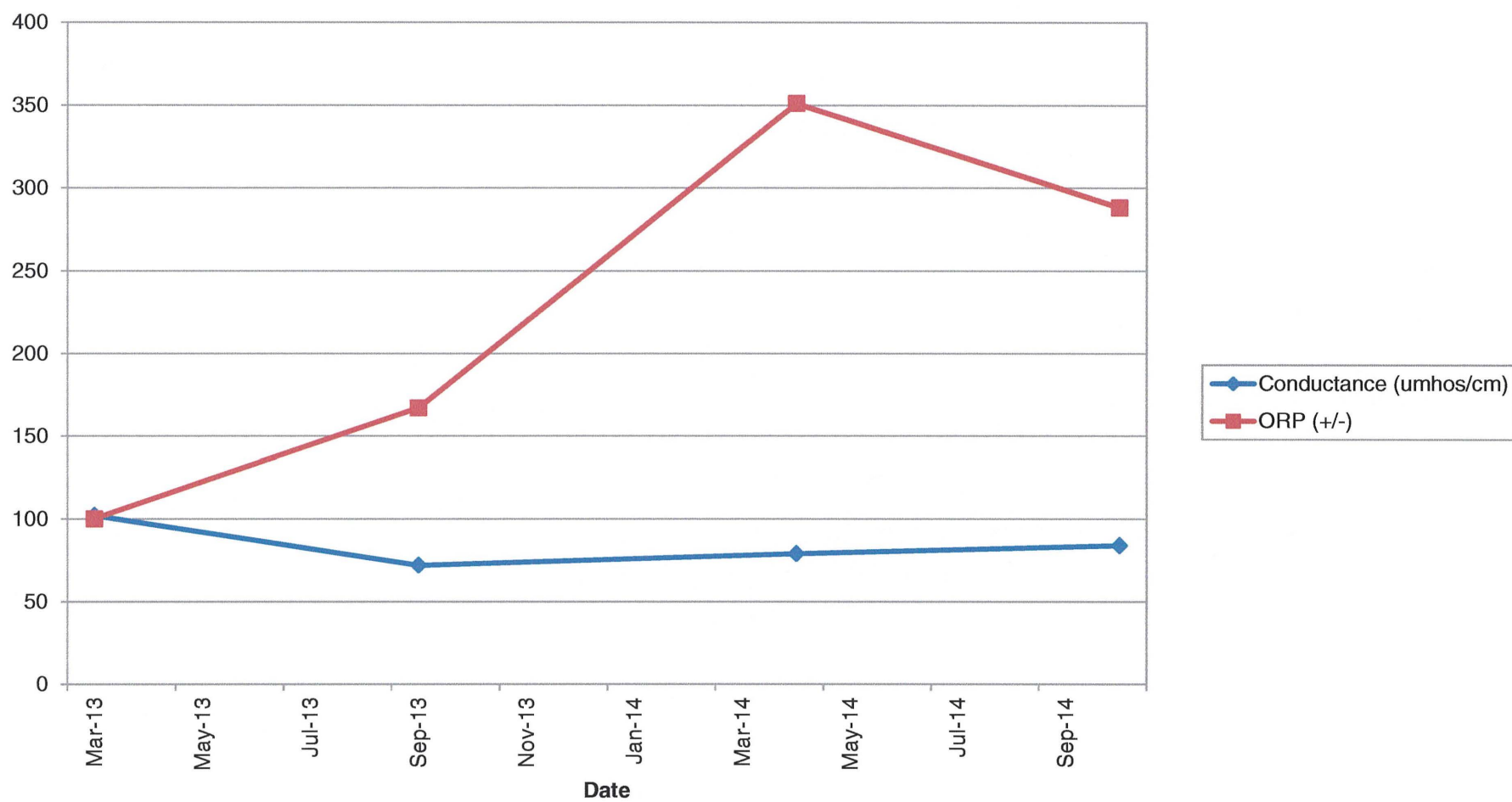
GE-6D General Chemistry (Part 2)



GE-6D Field Parameters (Part 1)



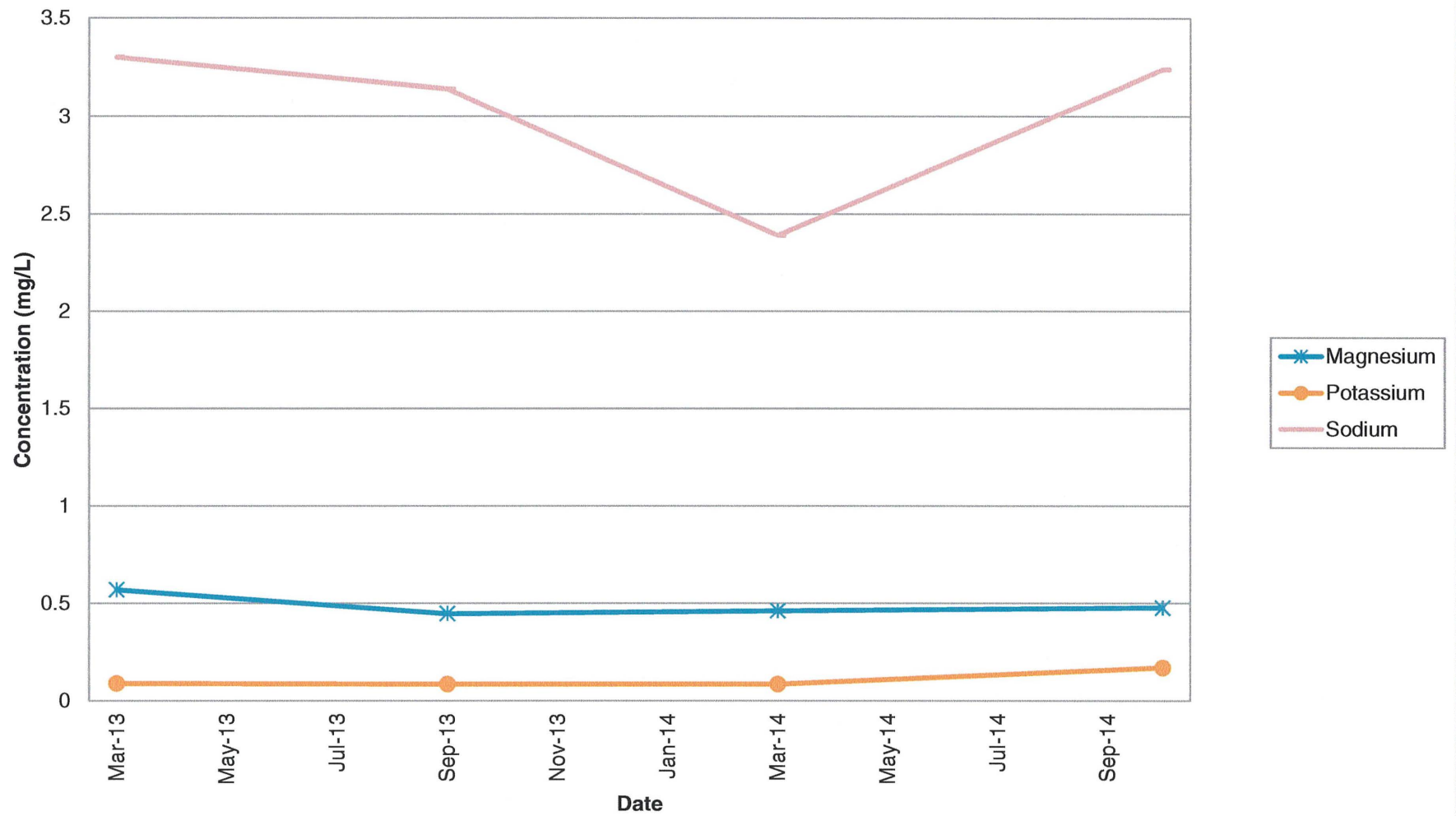
GE-6D Field Parameters (Part 2)



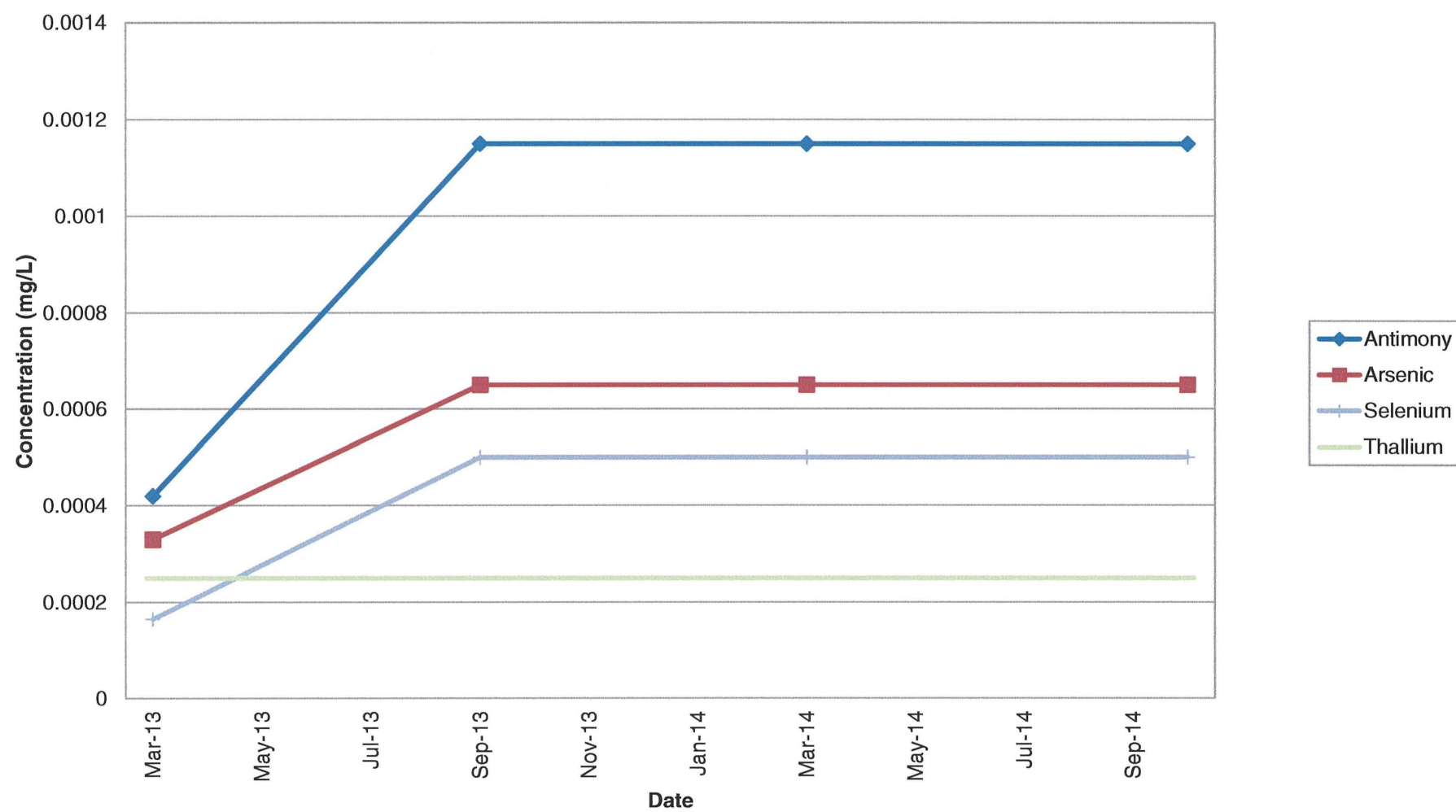
Appendix F

Surface Water Quality Graphs

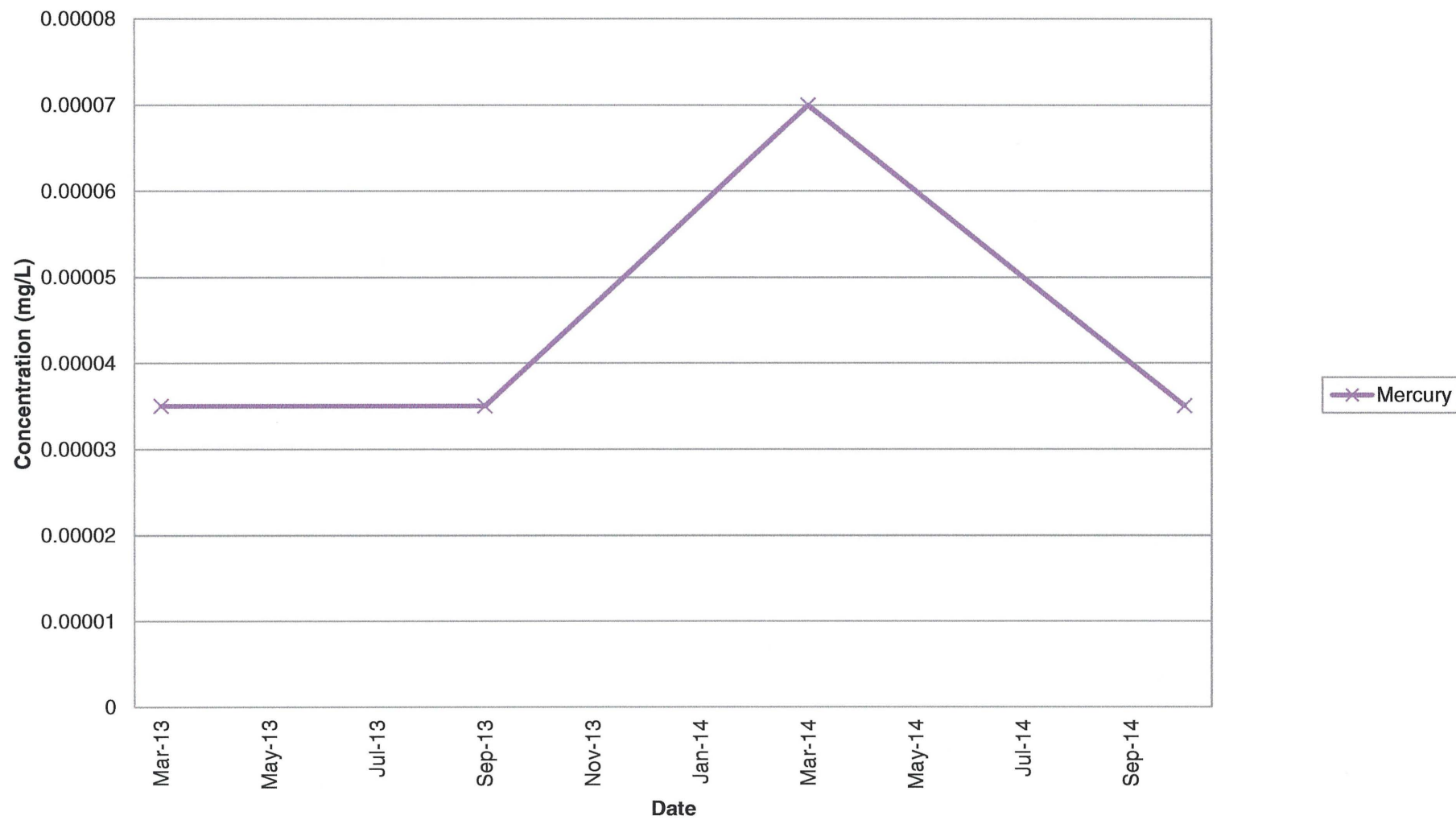
SW-1 Metals (Part 1)



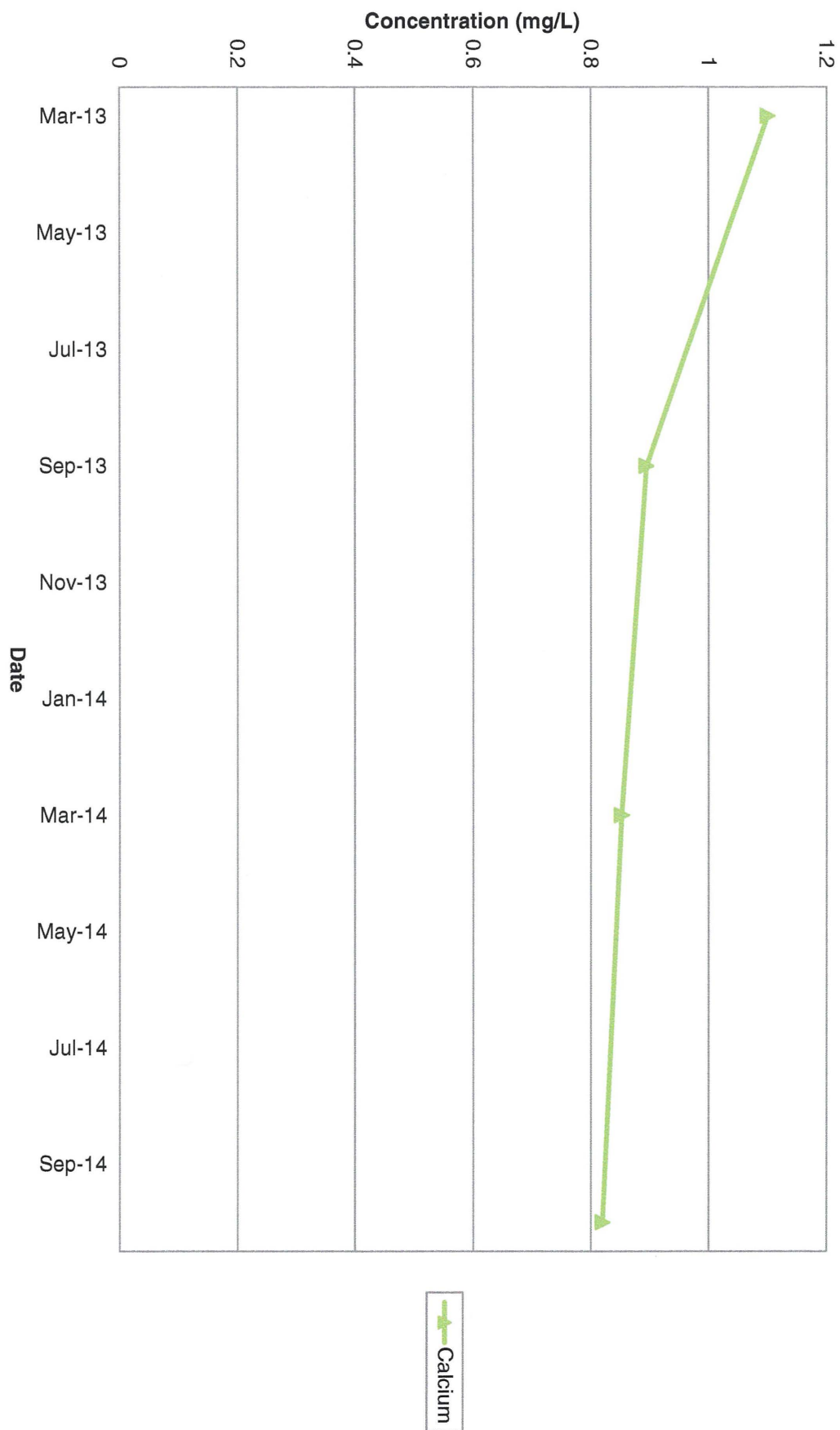
SW-1 Metals (Part 2)



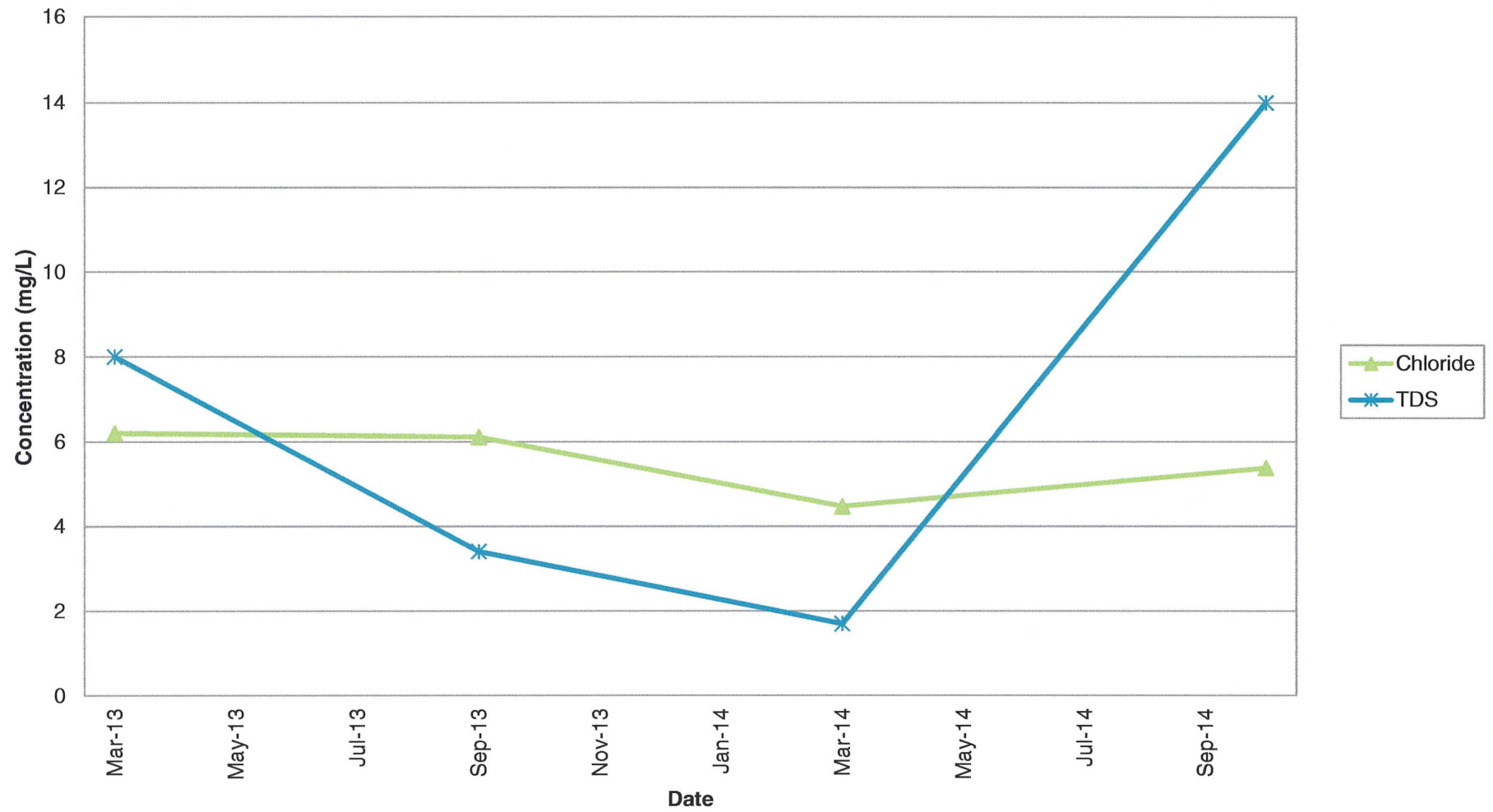
SW-1 Metals (Part 3)



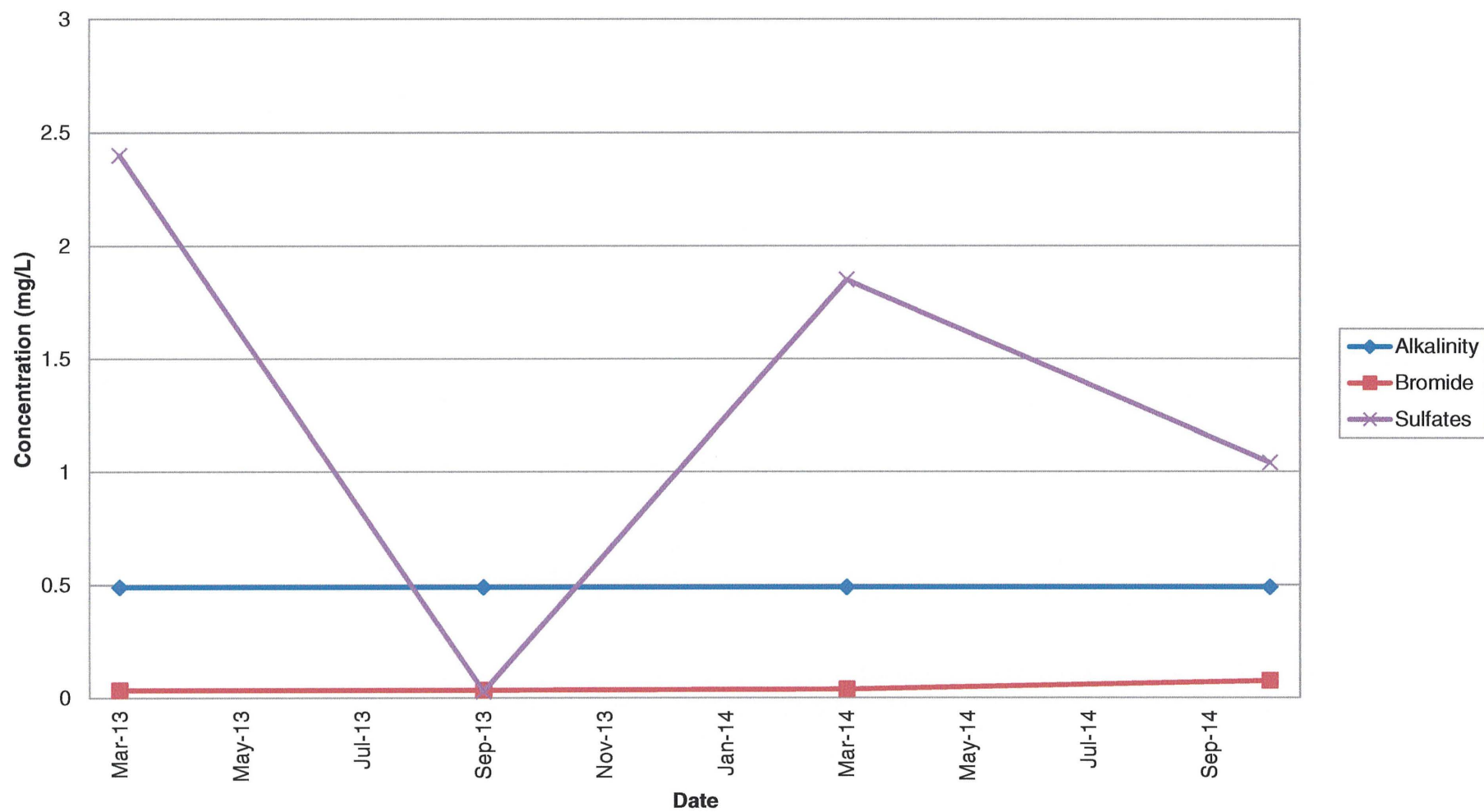
SW-1 Metals (Part 4)



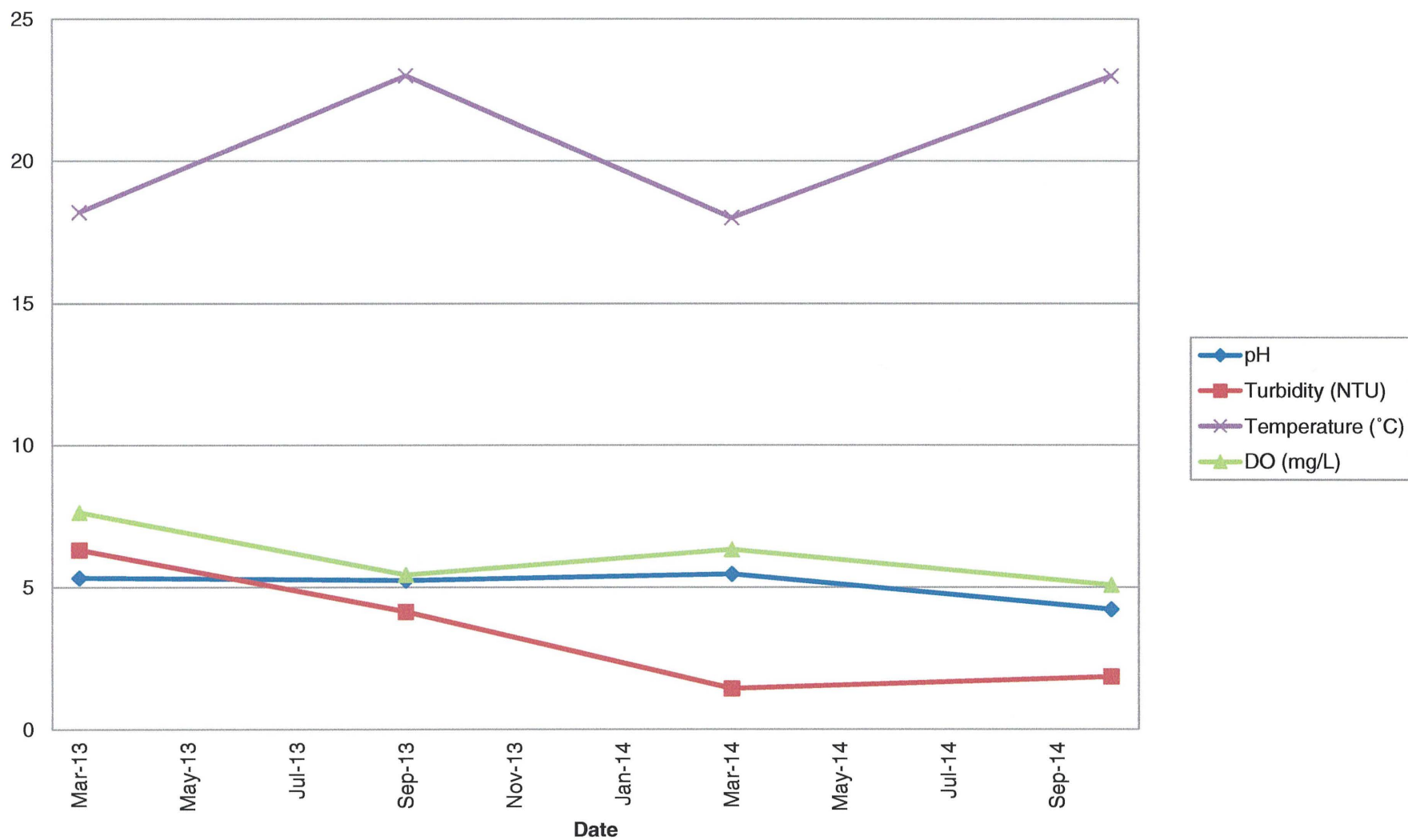
SW-1 General Chemistry (Part 1)



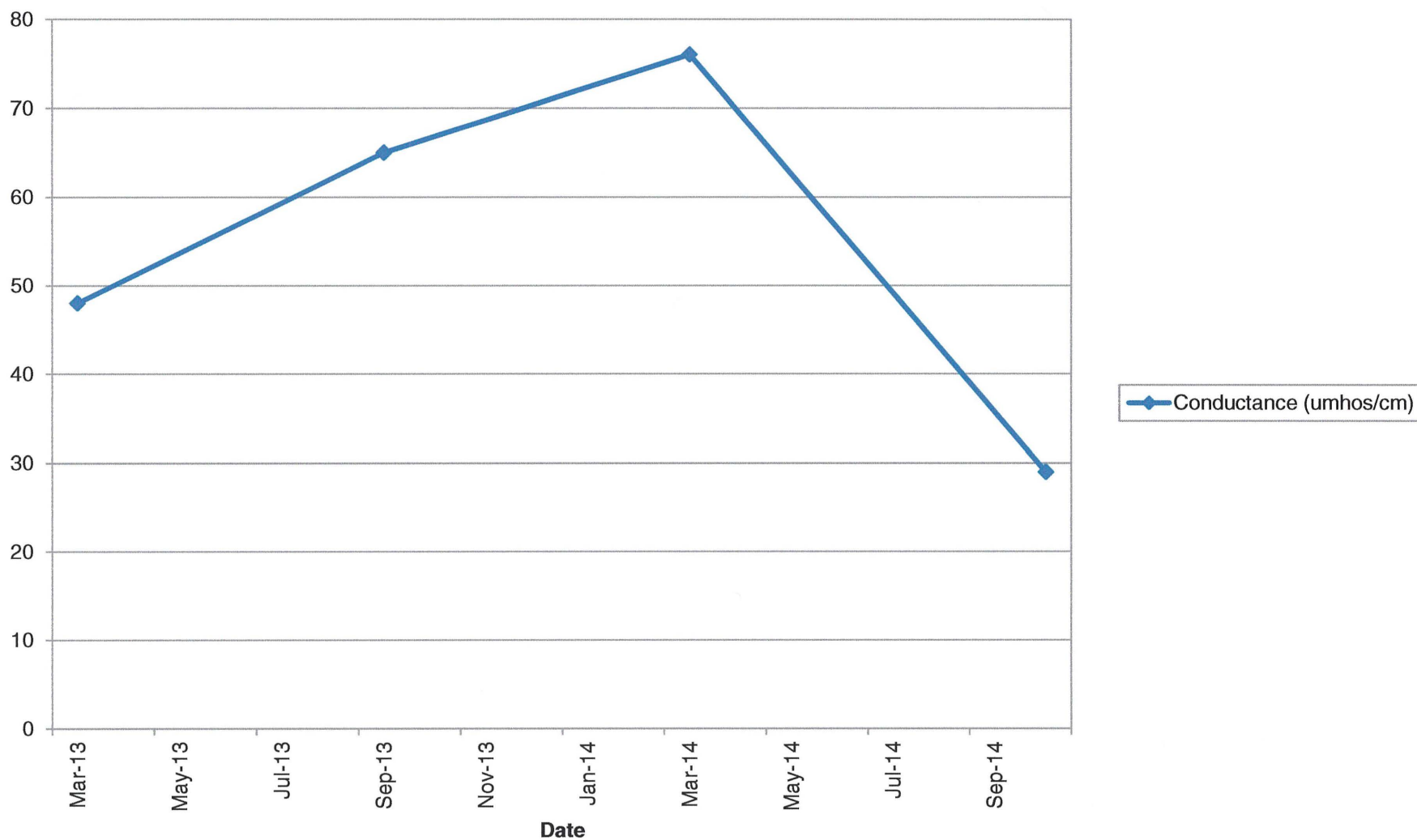
SW-1 General Chemistry (Part 2)



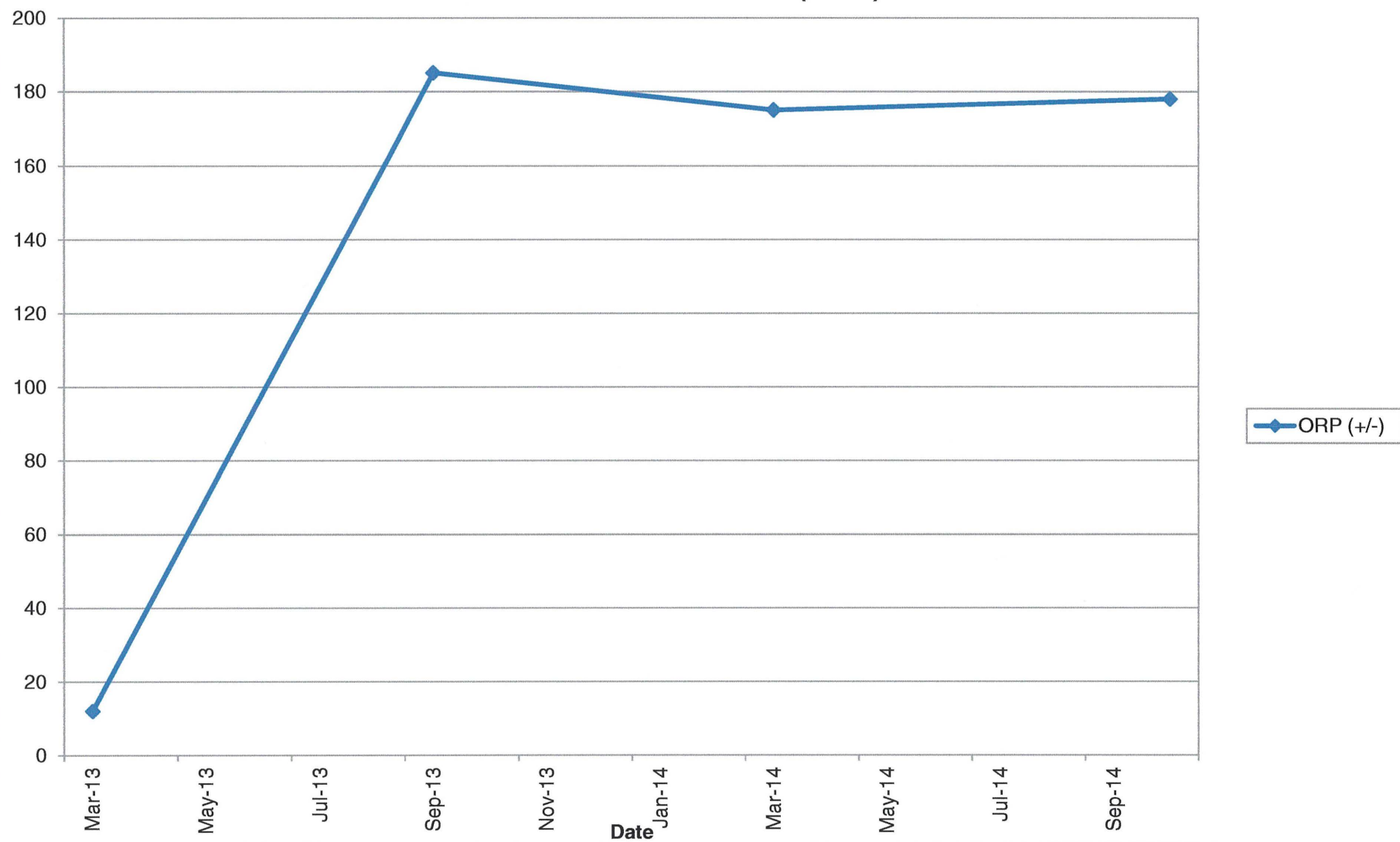
SW-1 Field Parameters (Part 1)



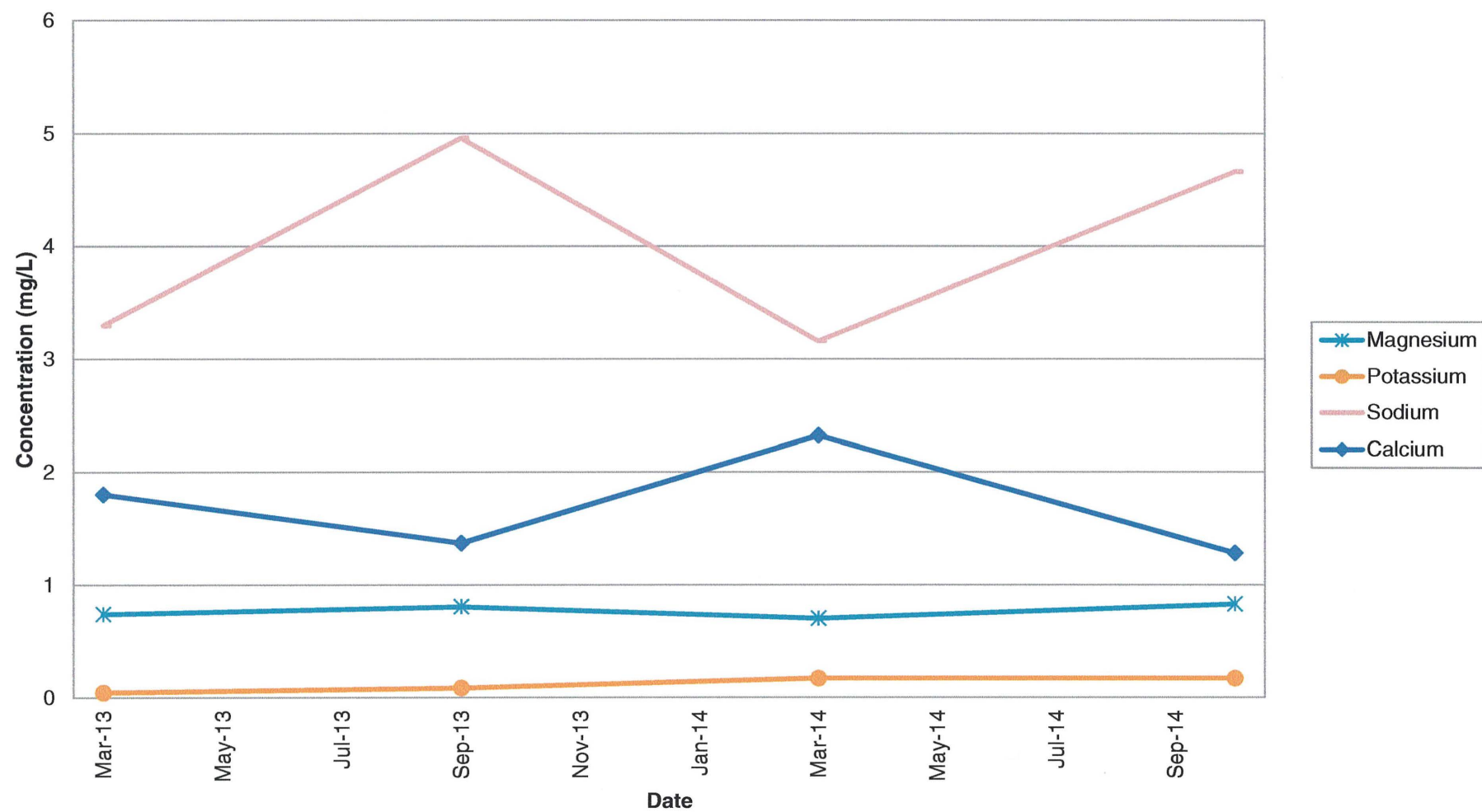
SW-1 Field Paramaters (Part 2)



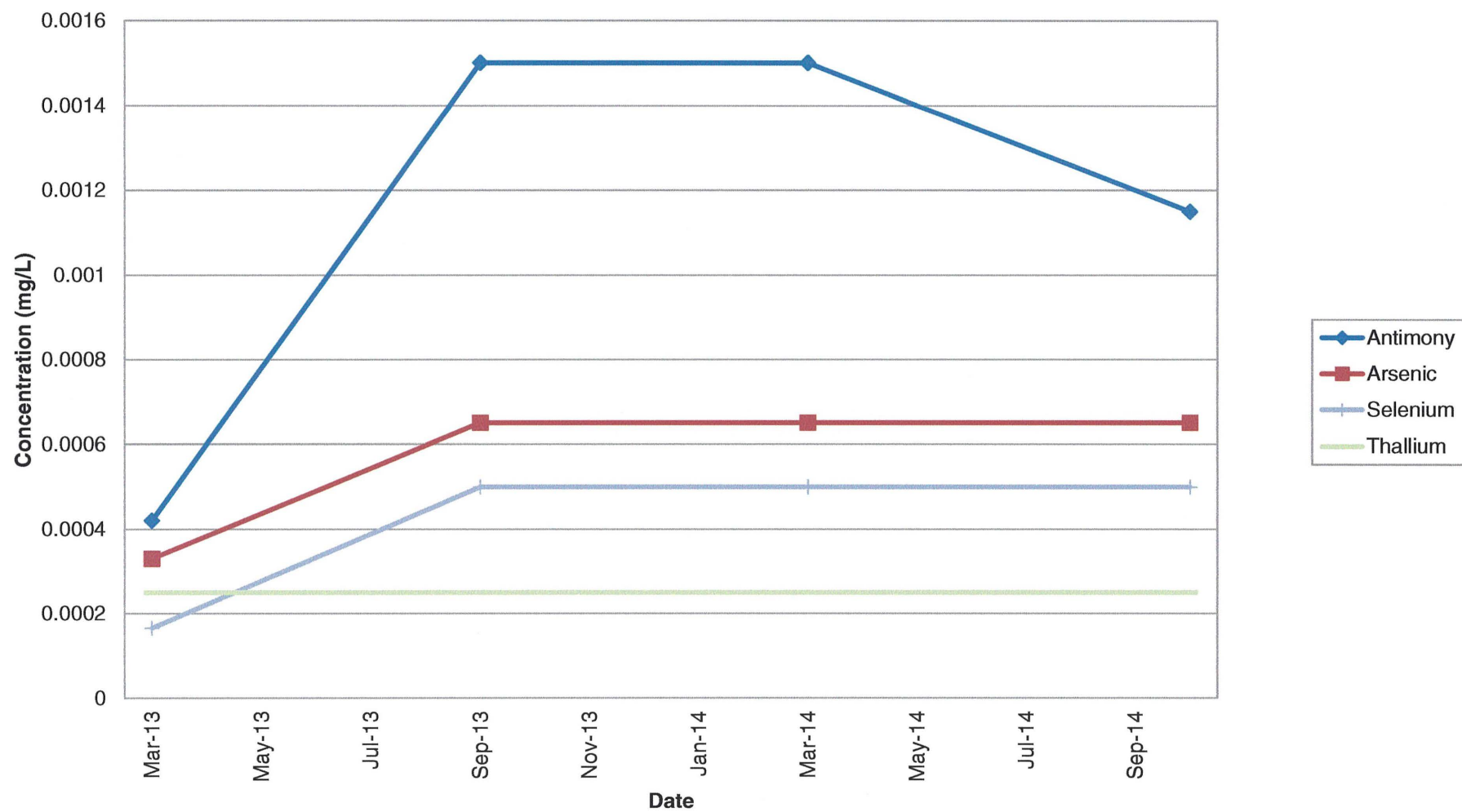
SW-1 Field Parameters (Part 3)



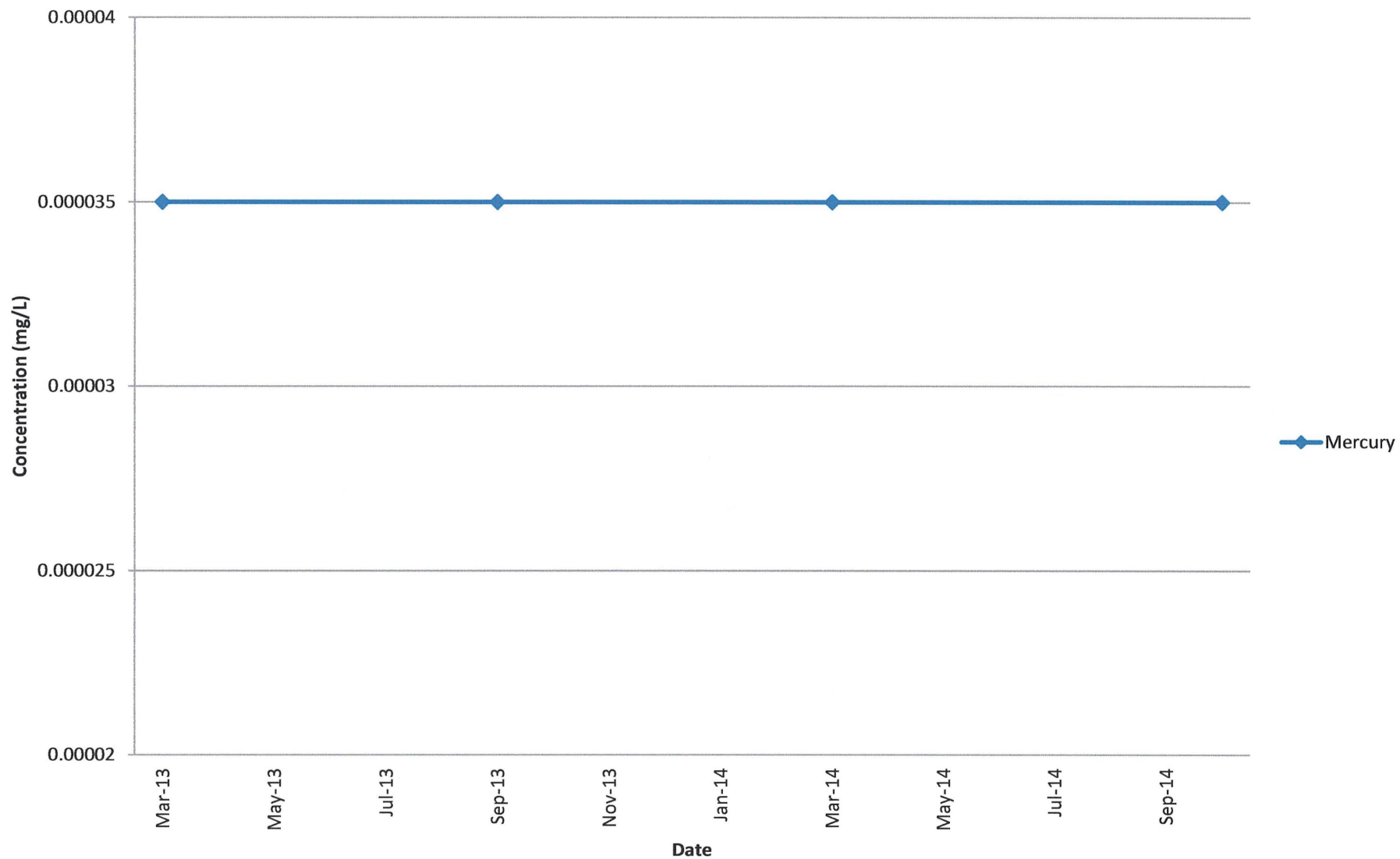
SW-2 Metals (Part 1)



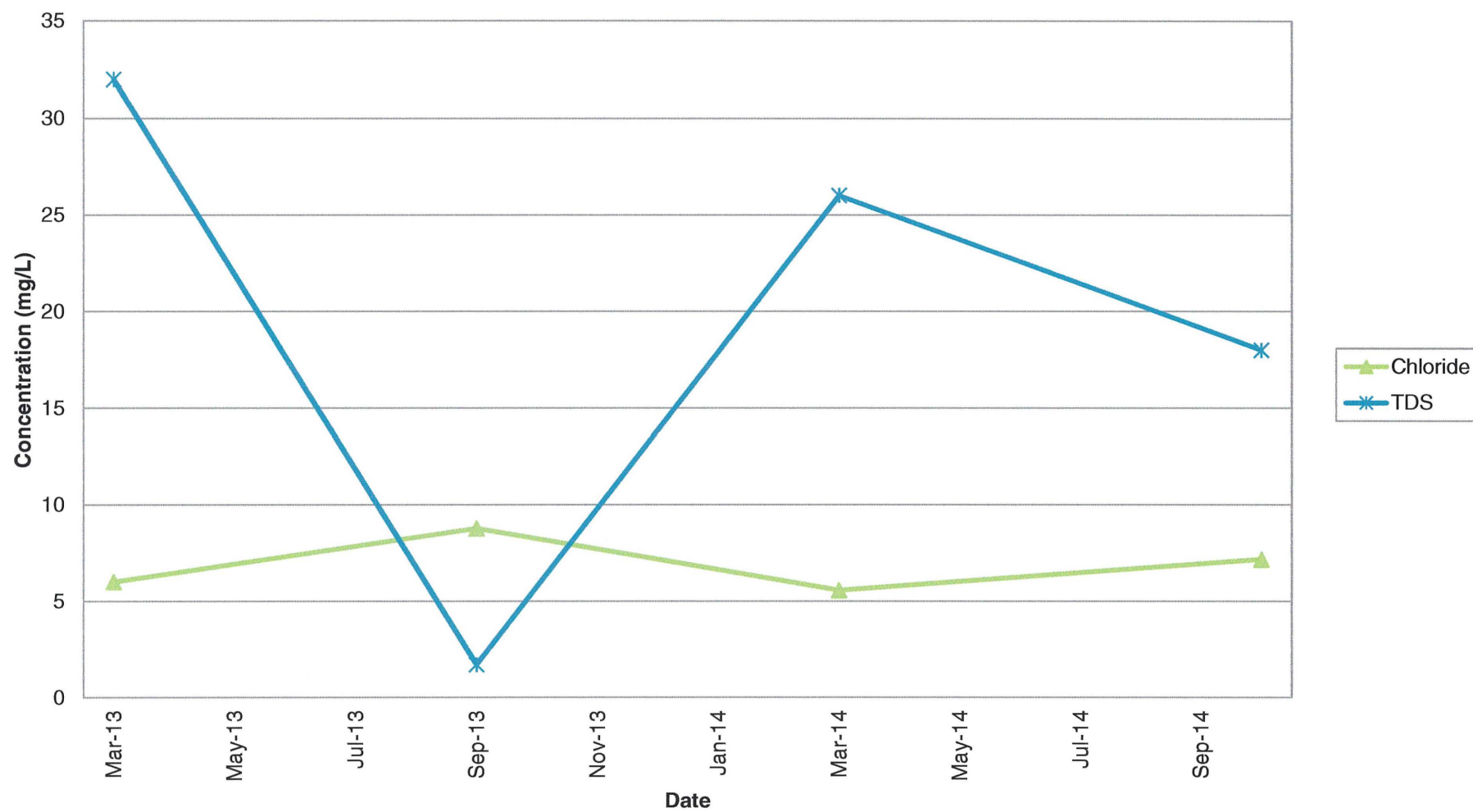
SW-2 Metals (Part 2)



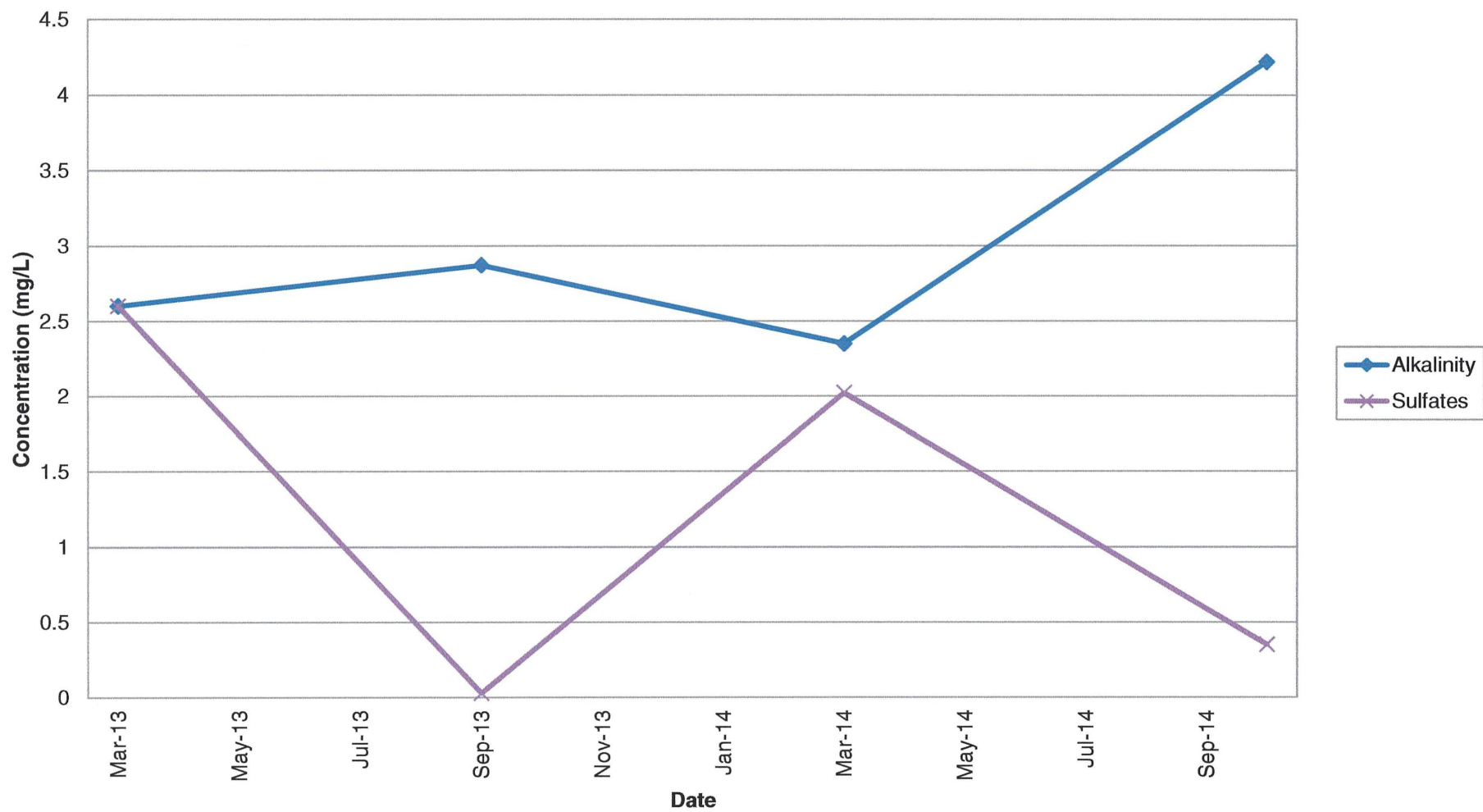
SW-2 Metals (Part 3)



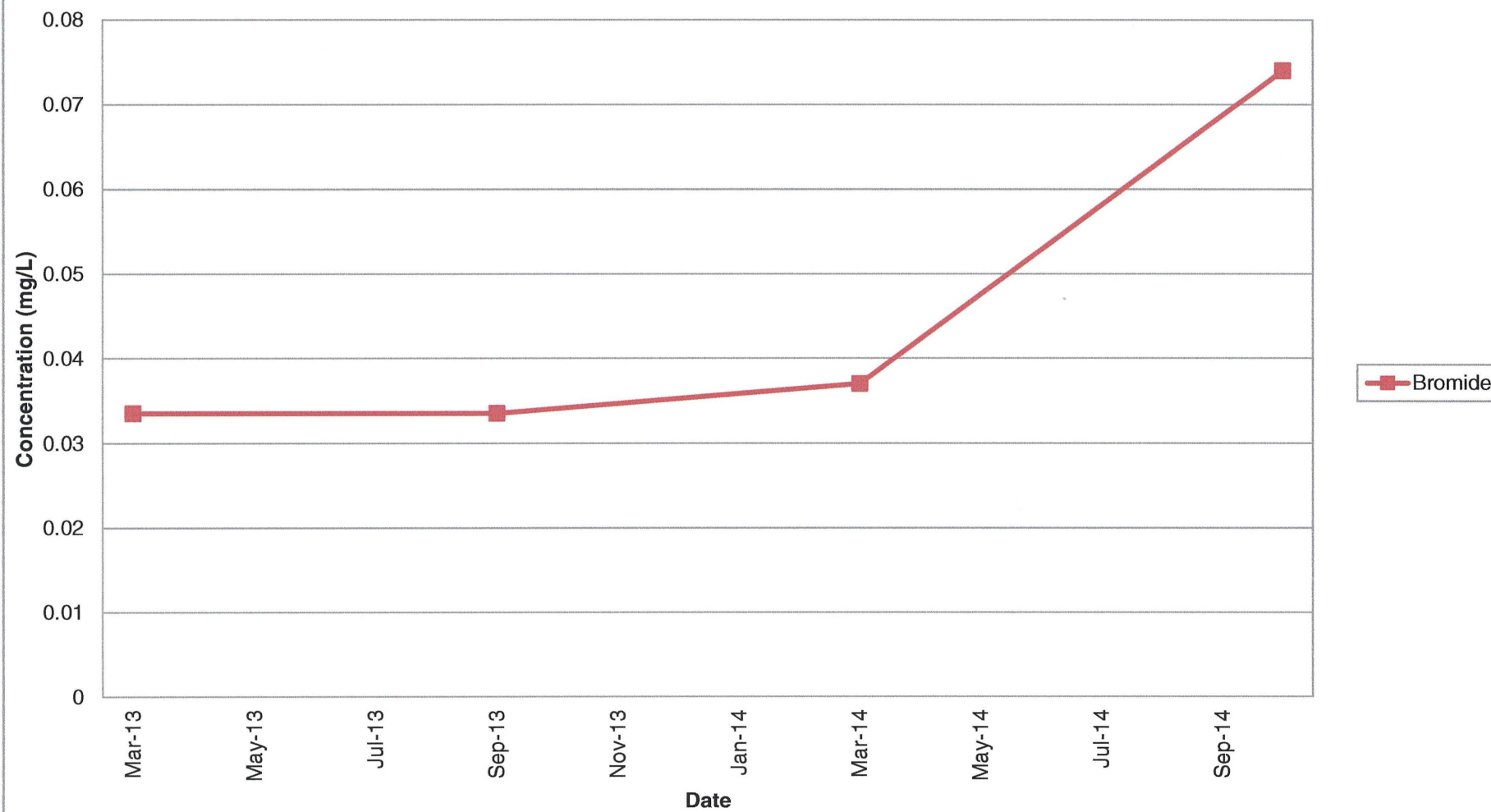
SW-2 General Chemistry (Part 1)



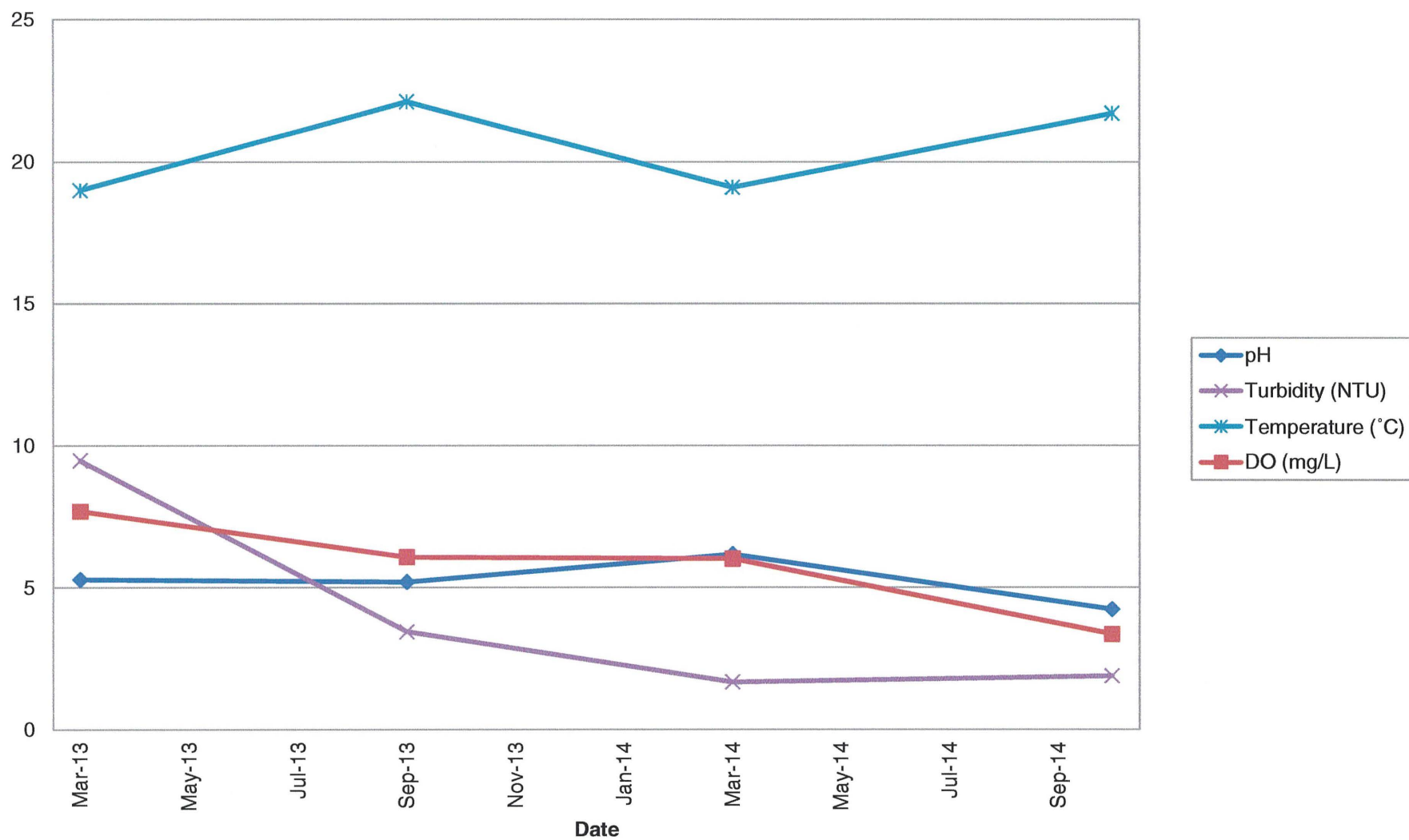
SW-2 General Chemistry (Part 2)



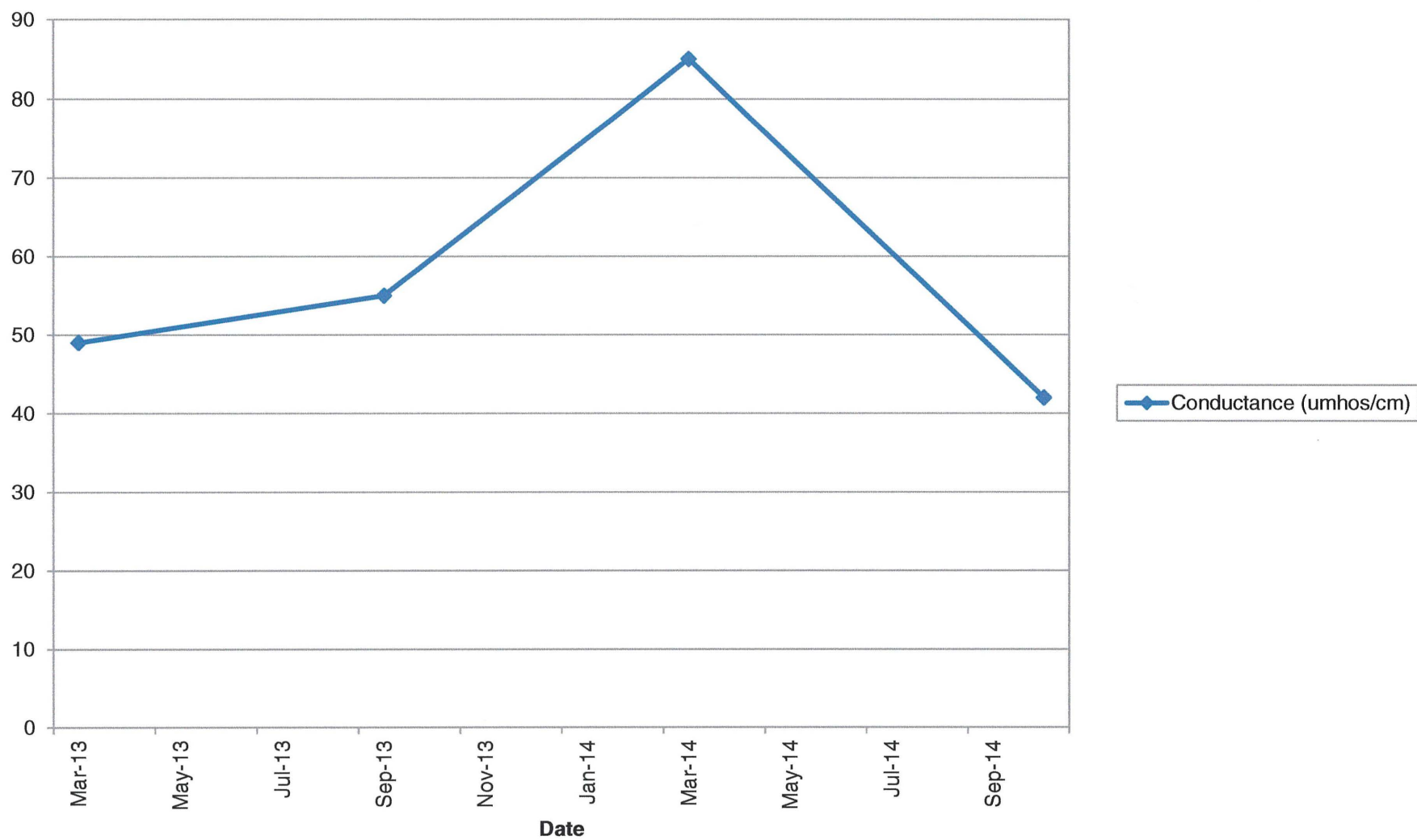
SW-2 General Chemistry (Part 3)



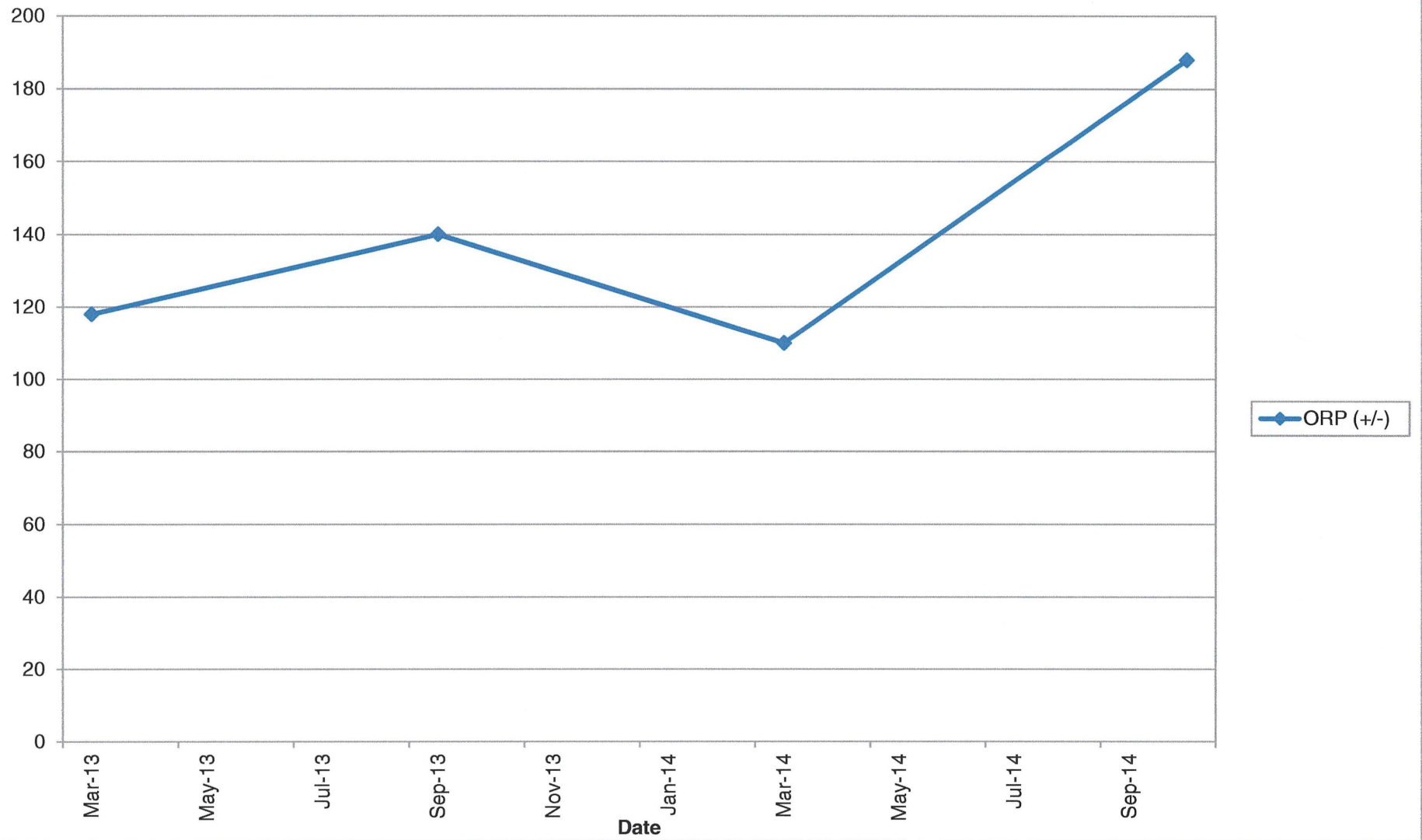
SW-2 Field Parameters (Part 1)



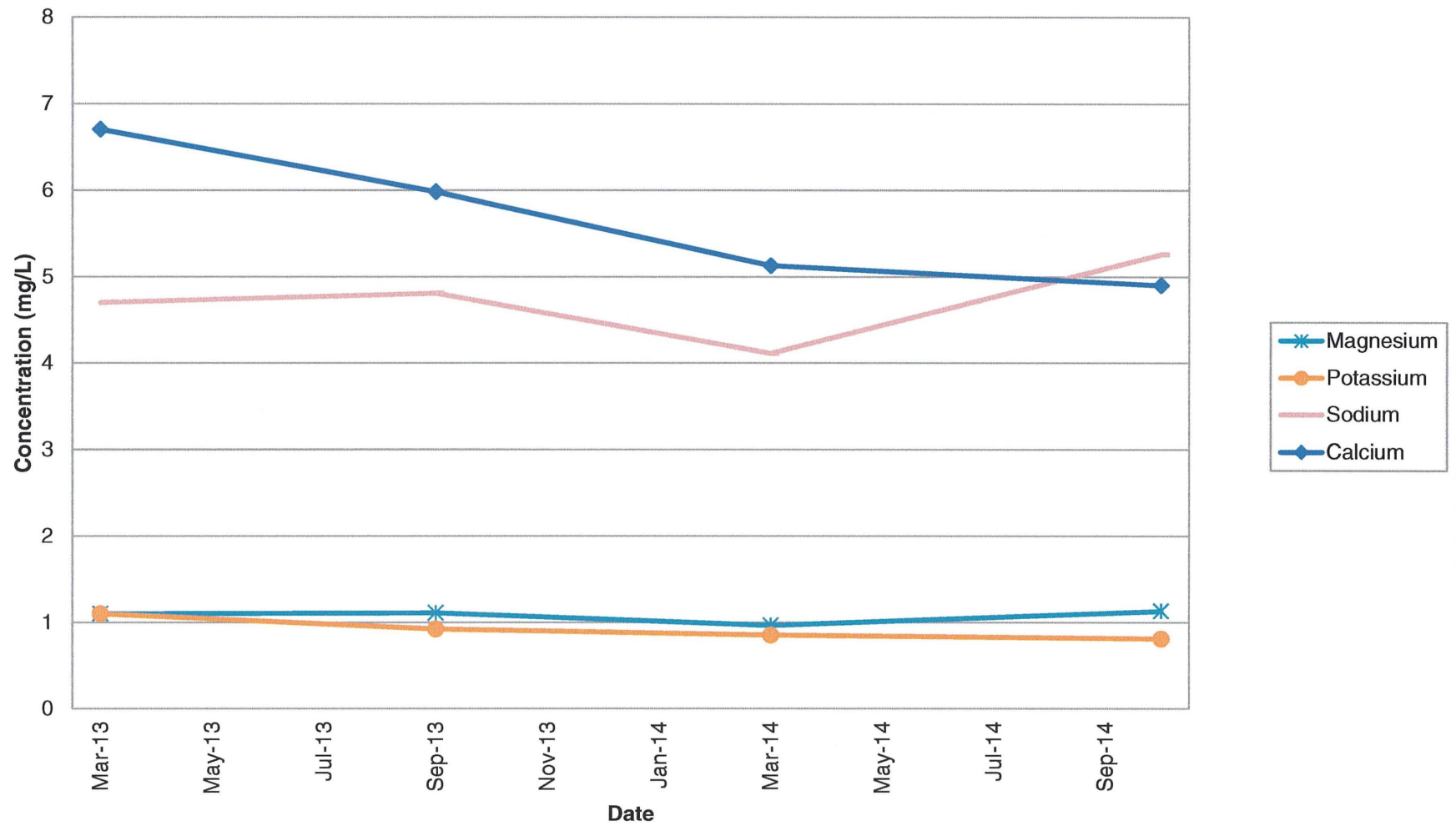
SW-2 Field Paramaters (Part 2)



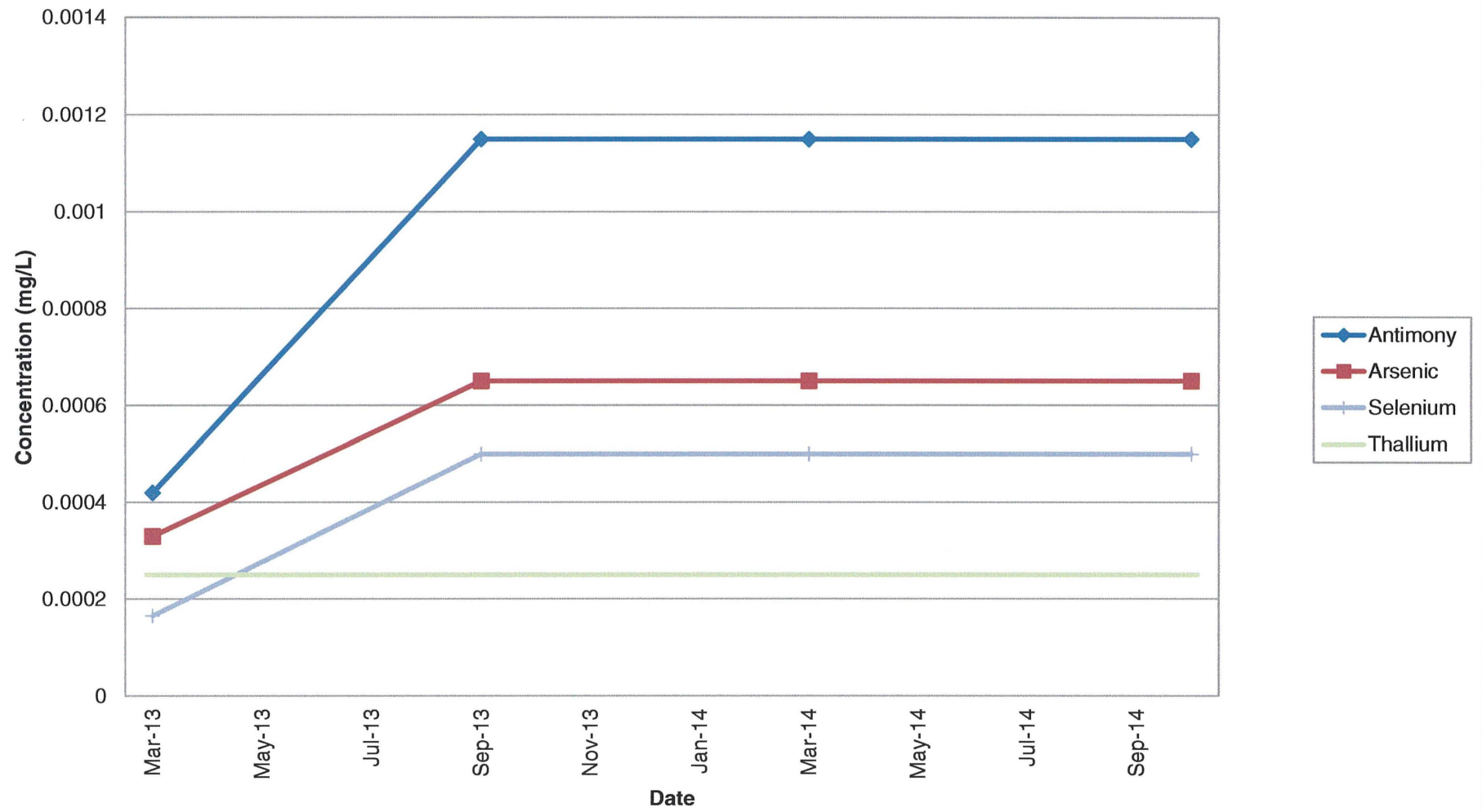
SW-2 Field Parameters (Part 3)



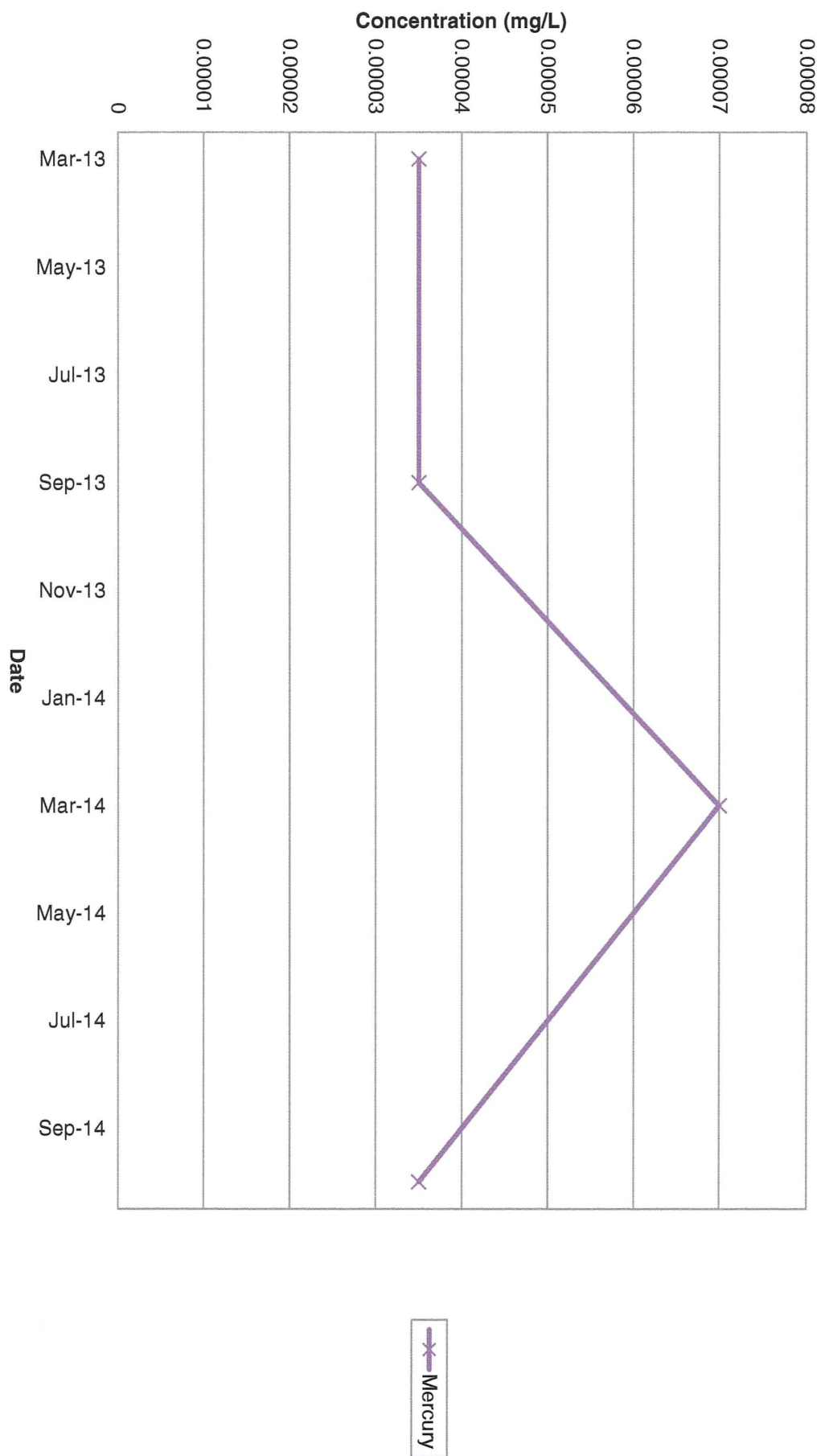
SW-3 Metals (Part 1)



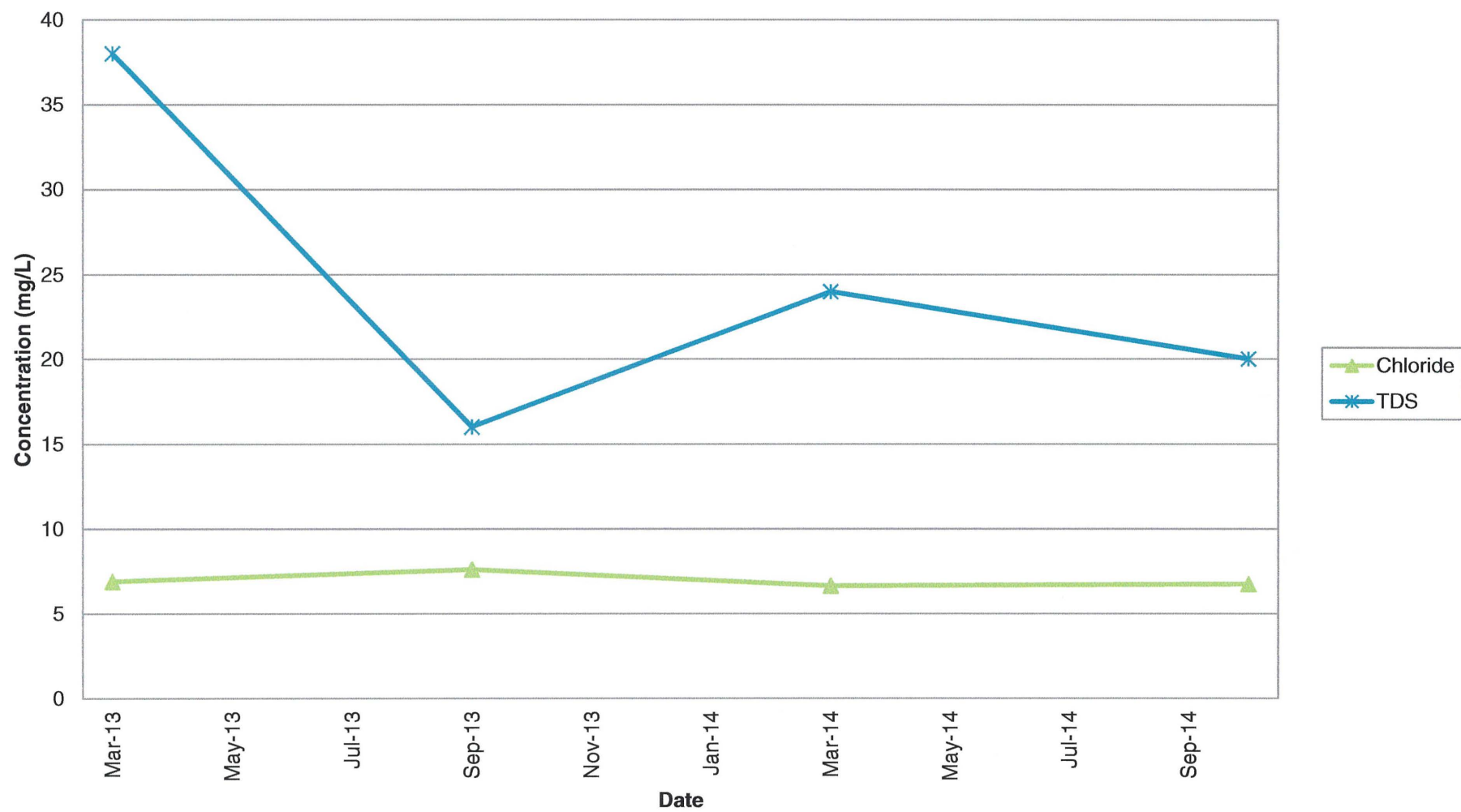
SW-3 Metals (Part 2)



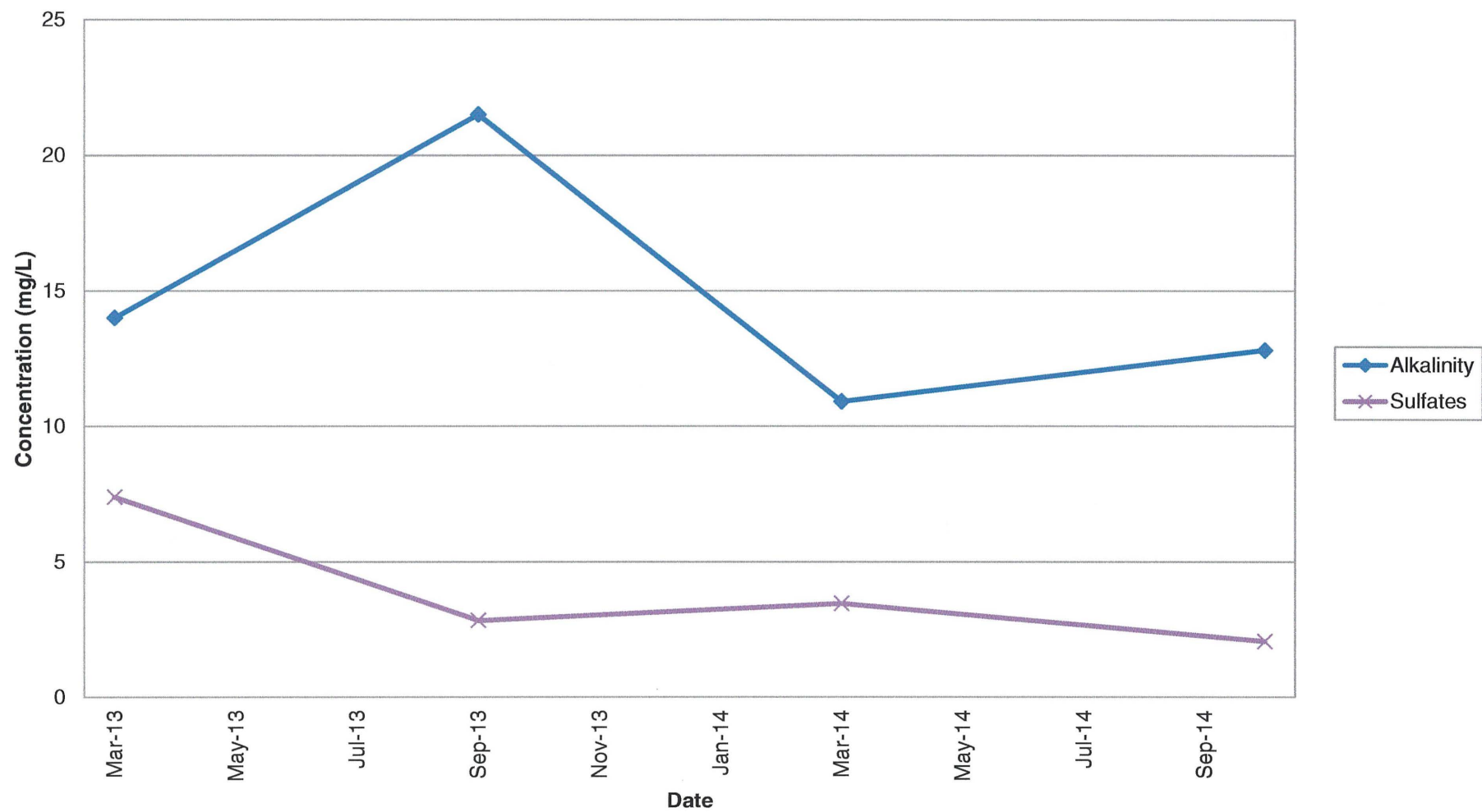
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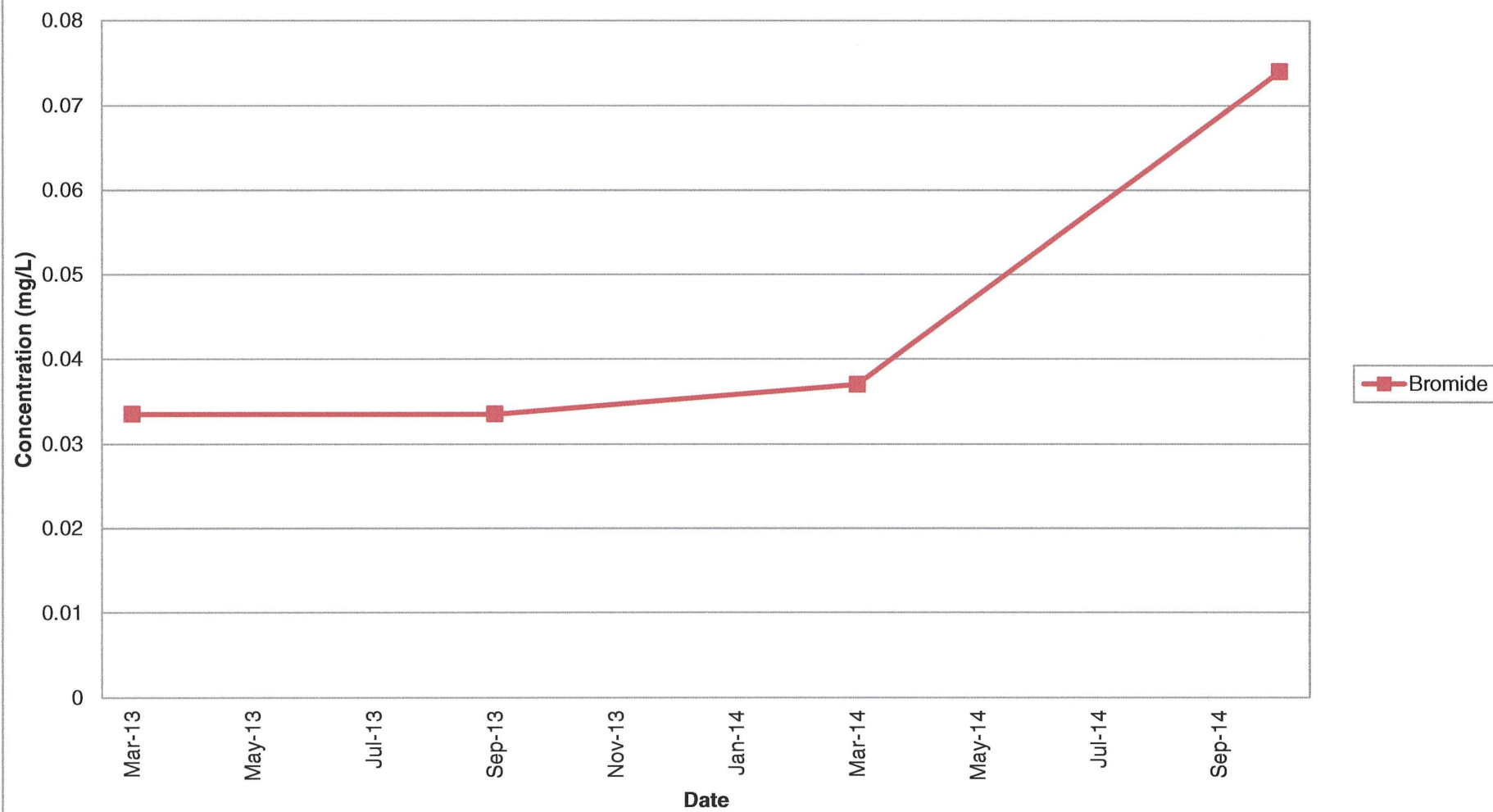
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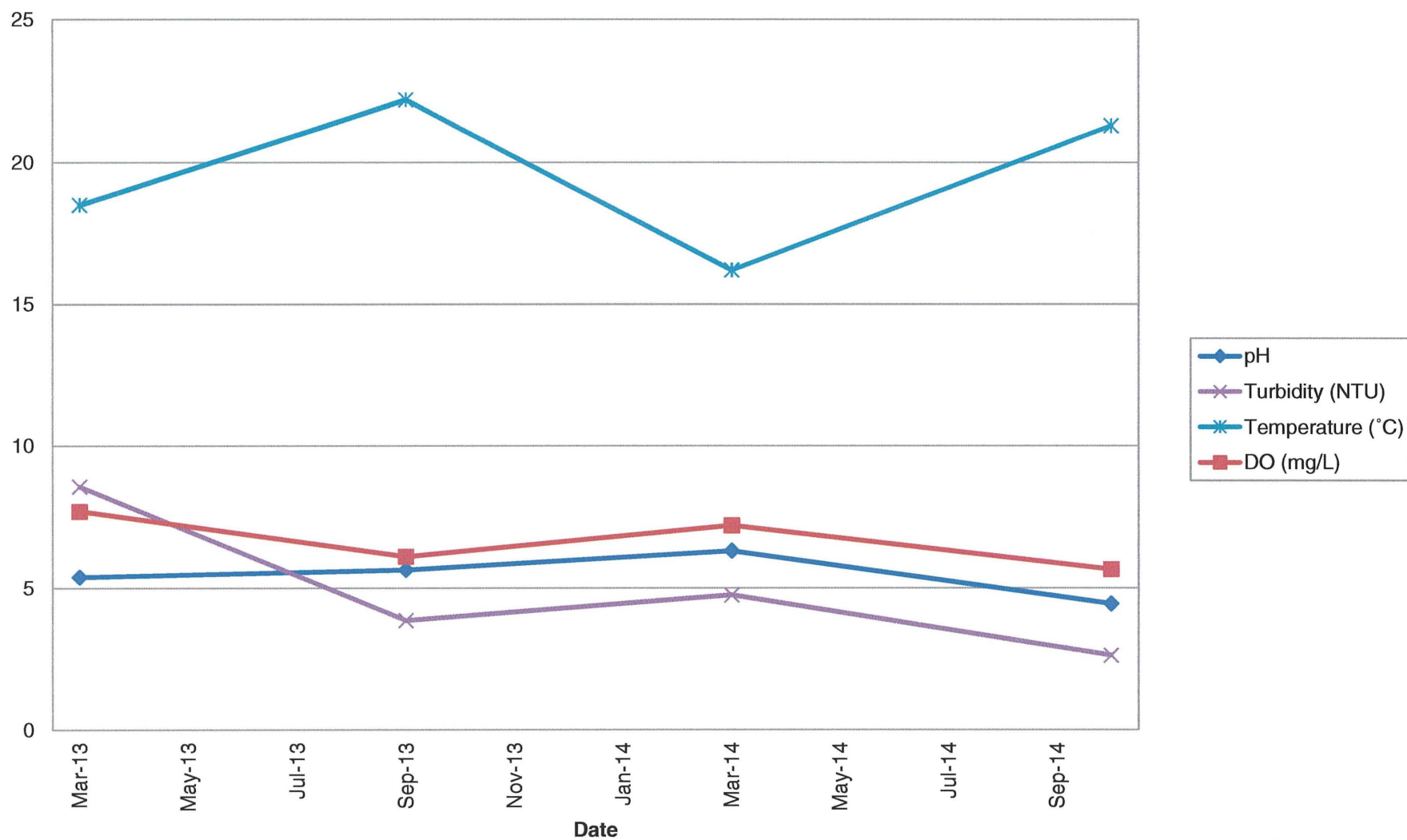
SW-3 General Chemistry (Part 2)



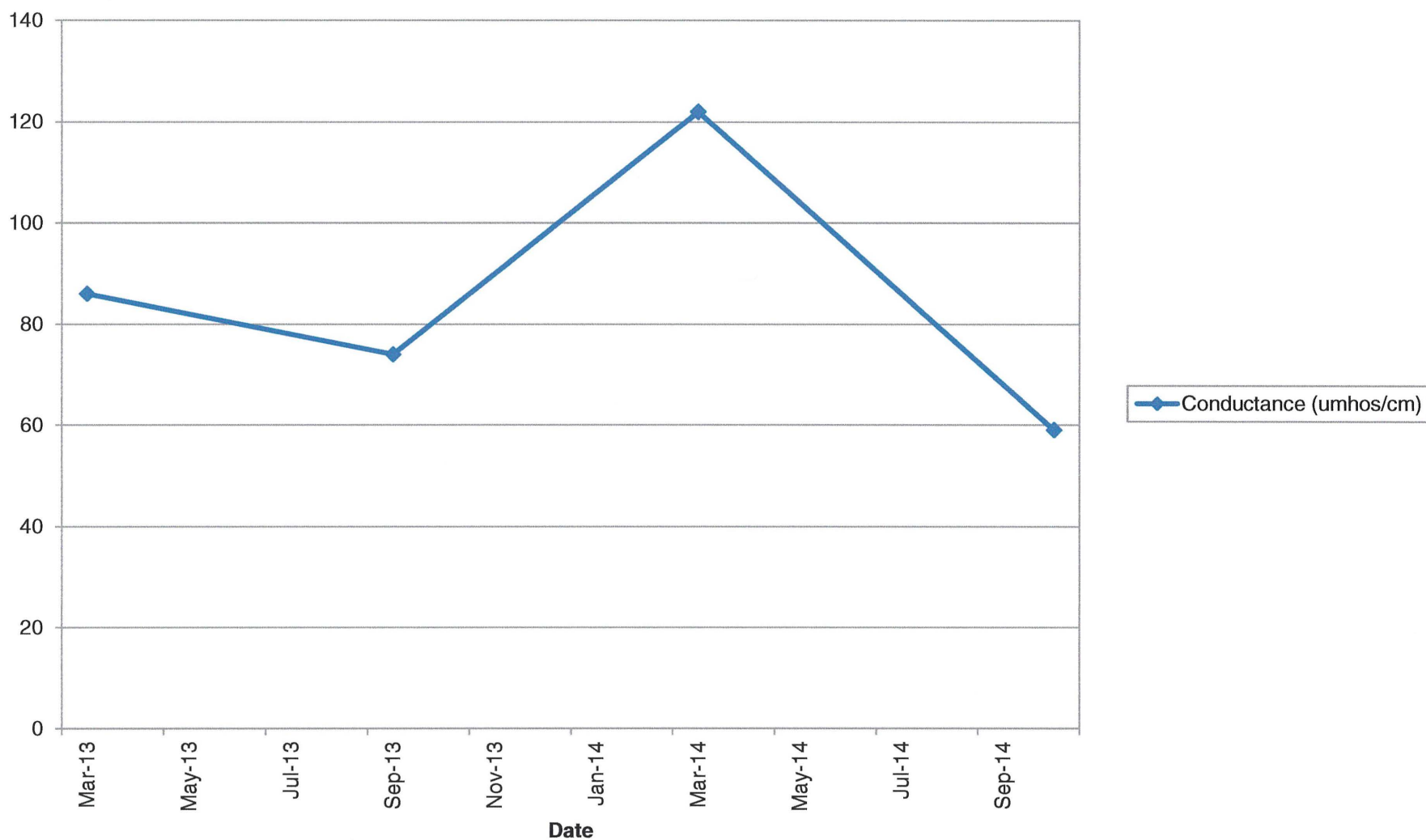
SW-3 General Chemistry (Part 3)



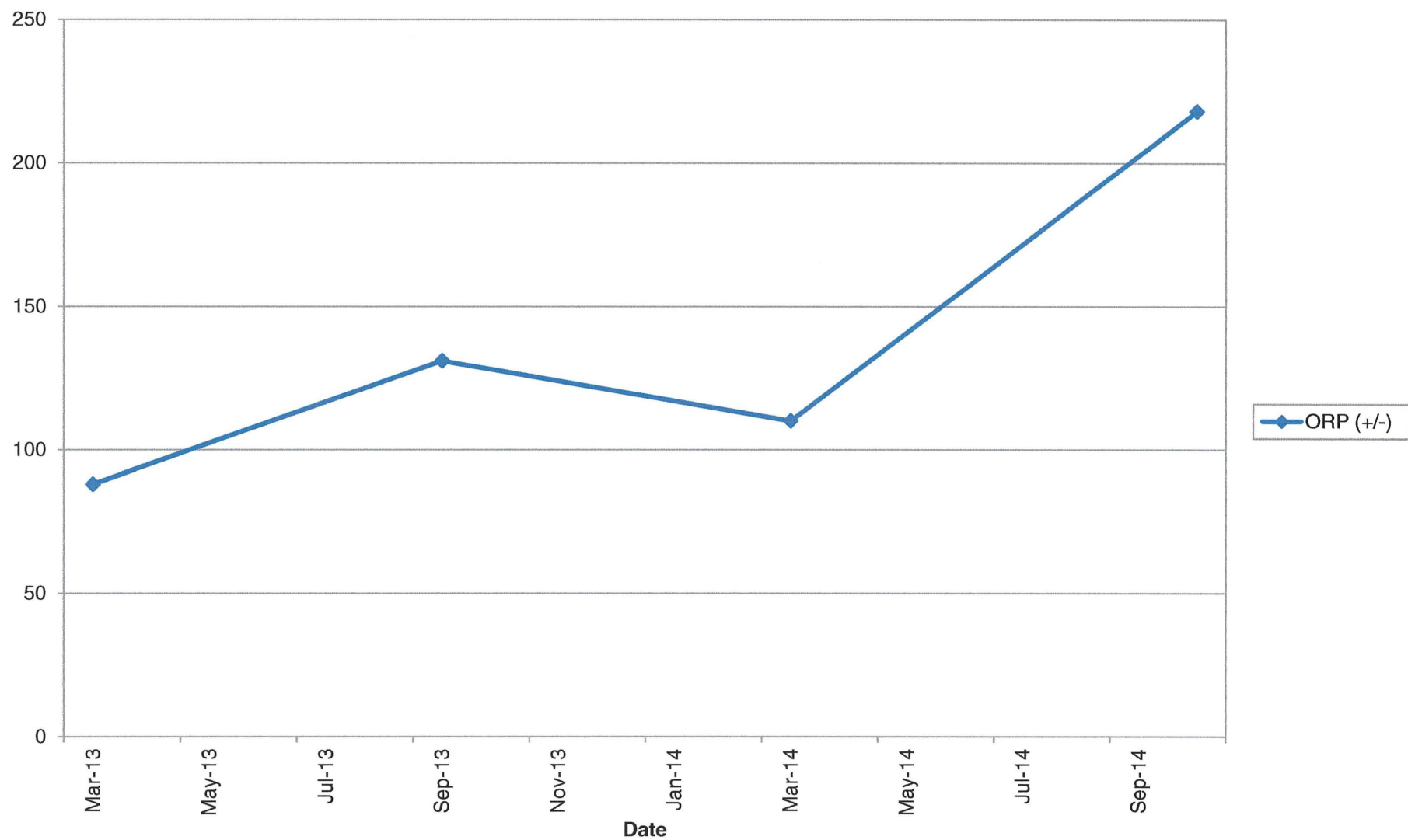
SW-3 Field Parameters (Part 1)



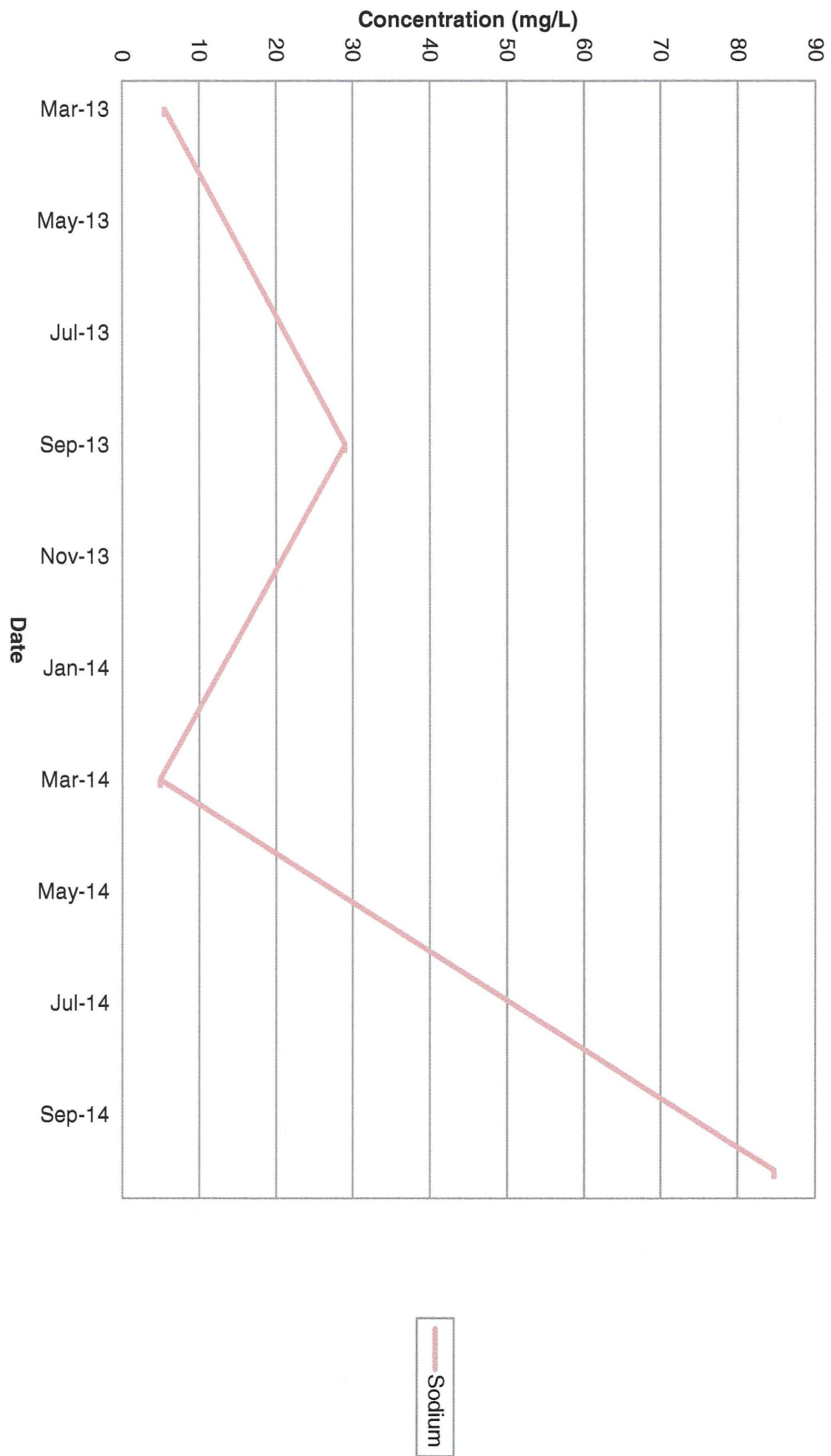
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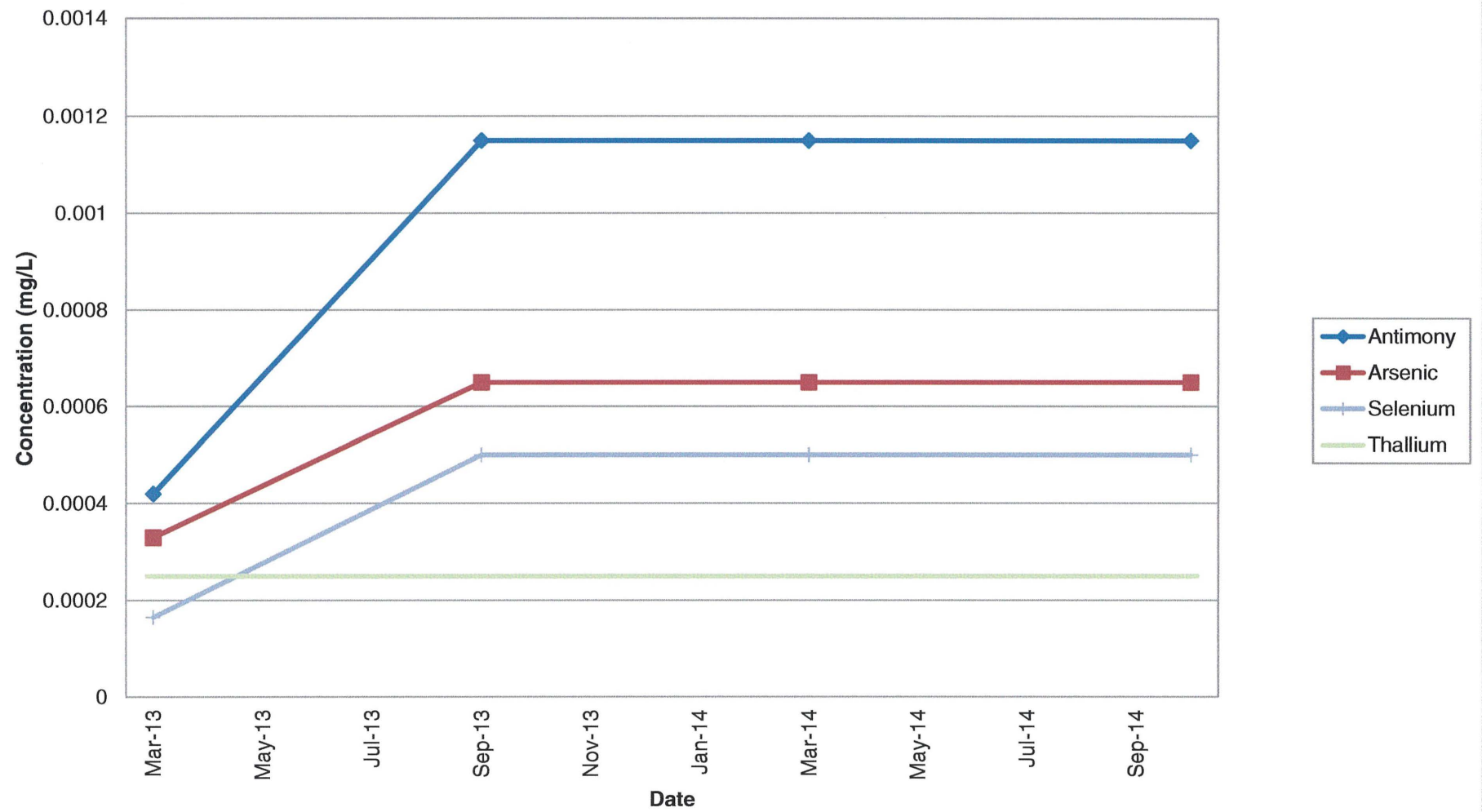
SW-3 Field Parameters (Part 3)



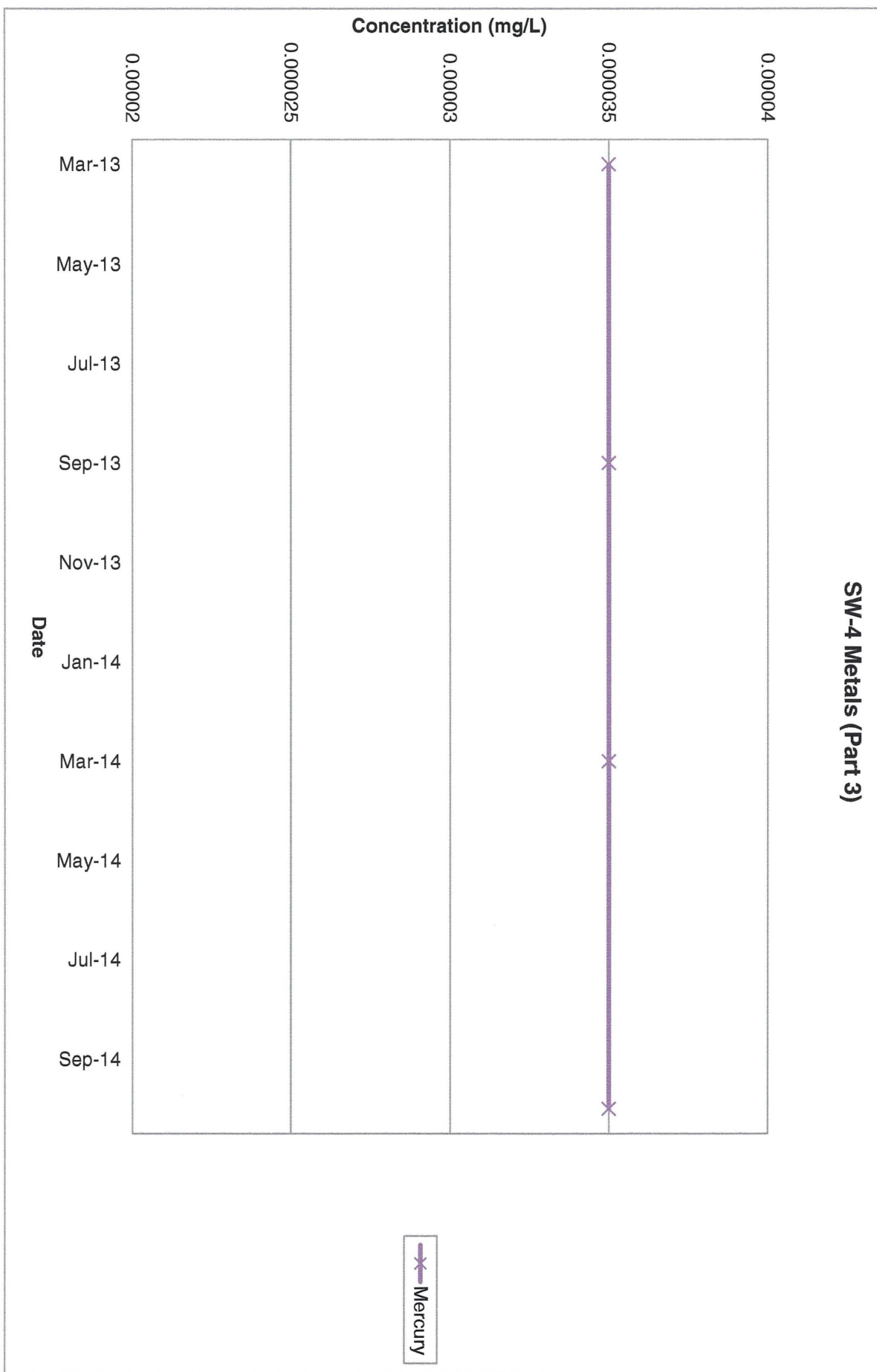
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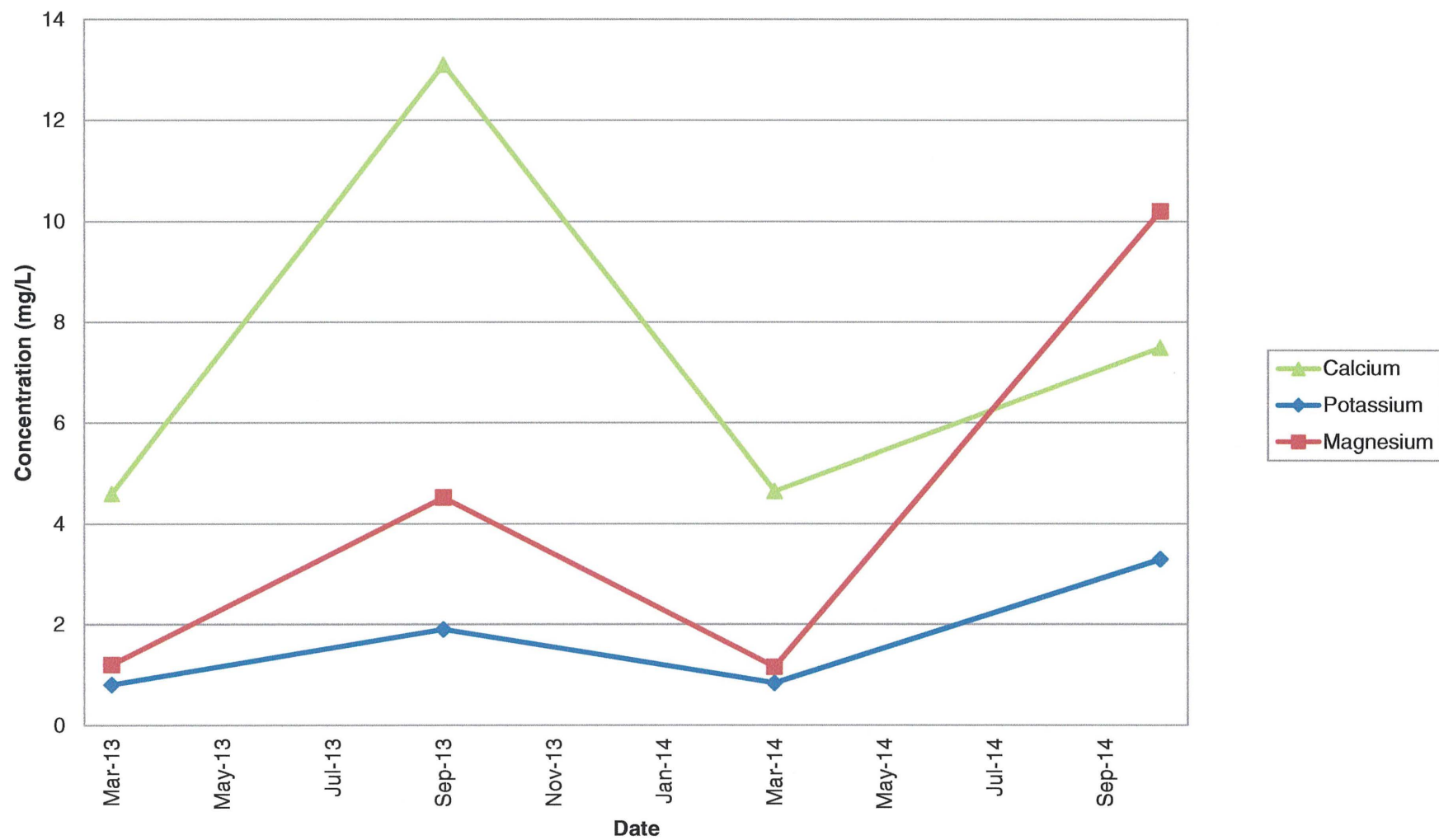
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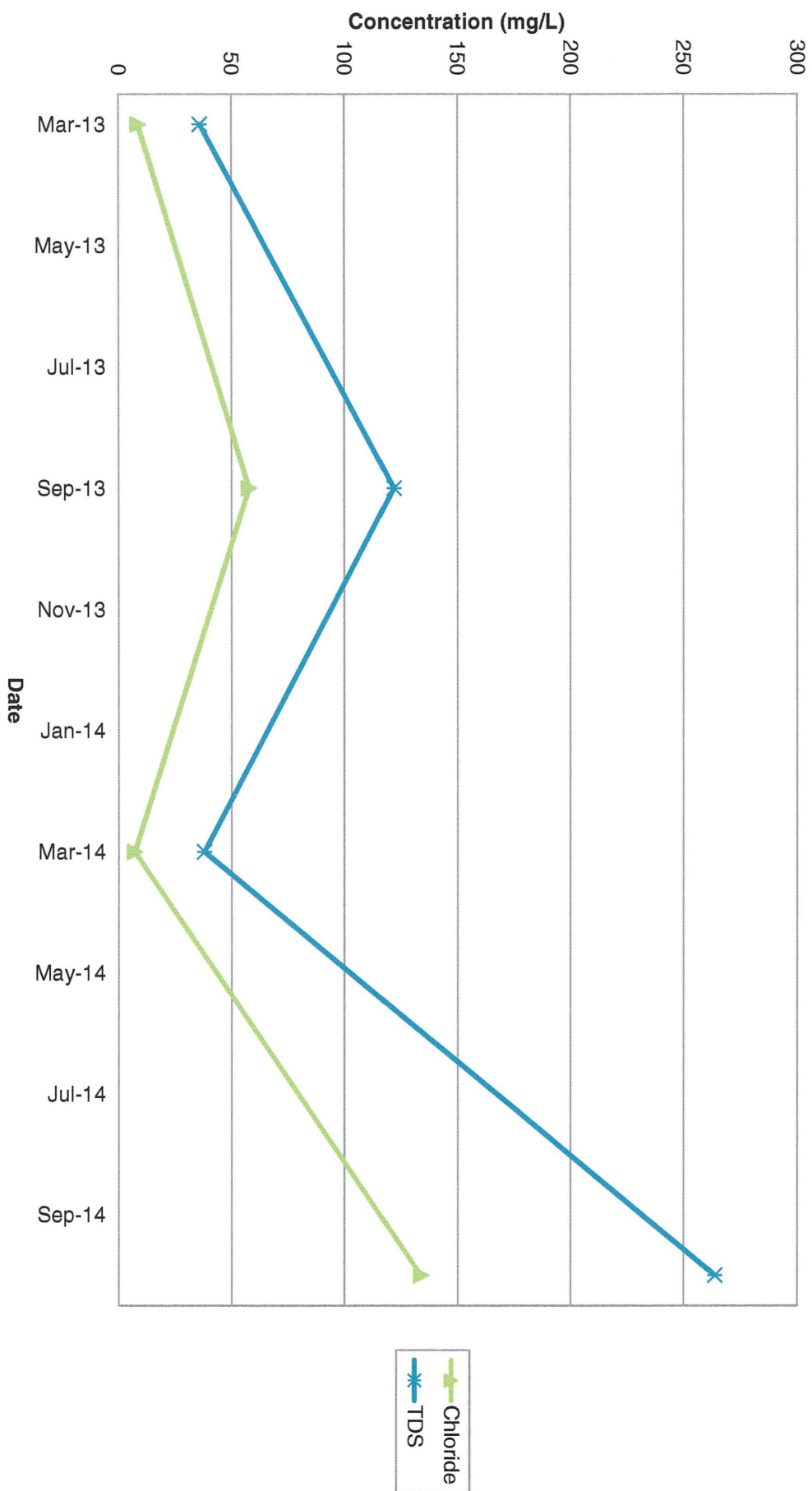
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SW-4 Metals (Part 4)



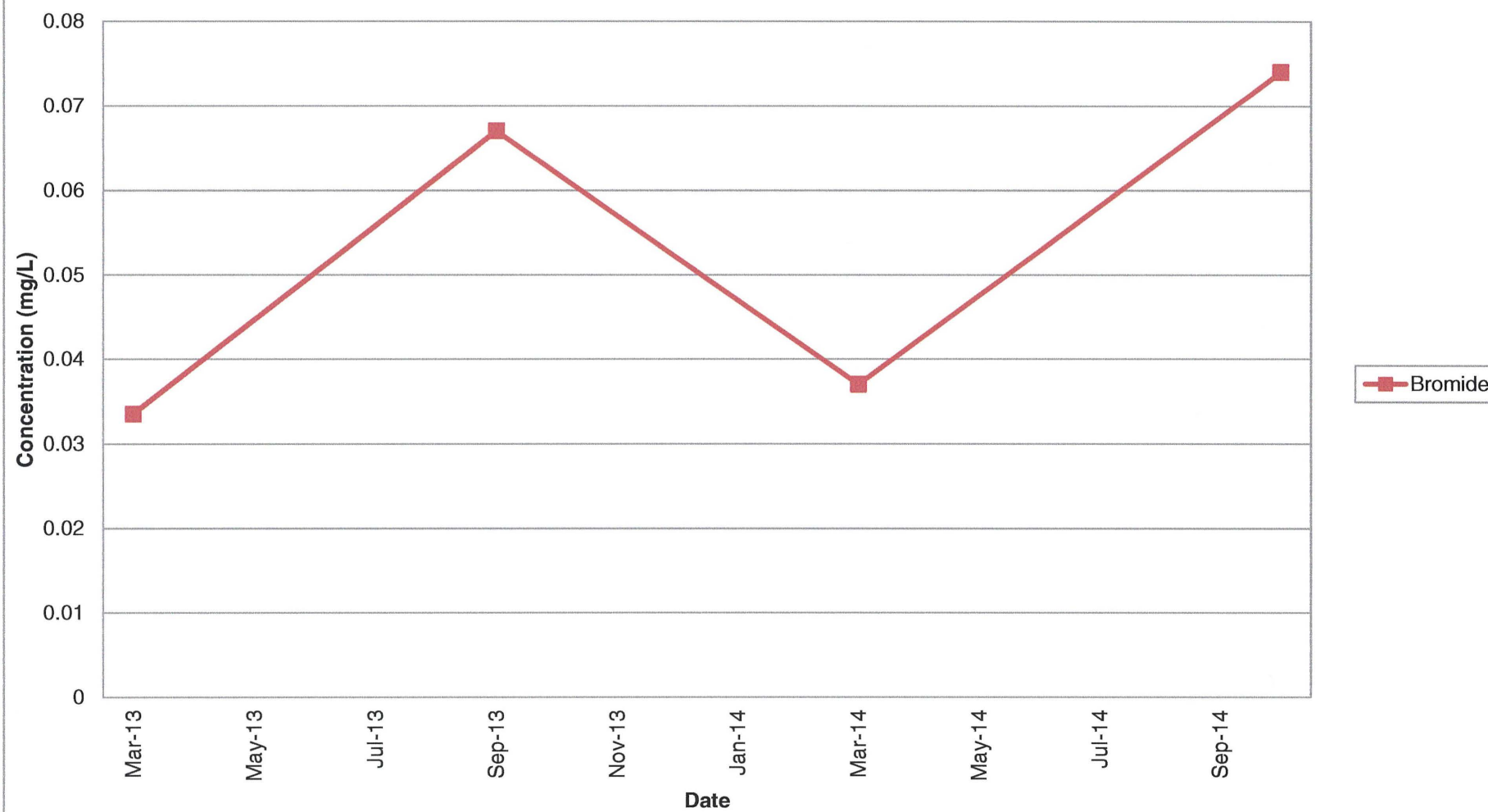
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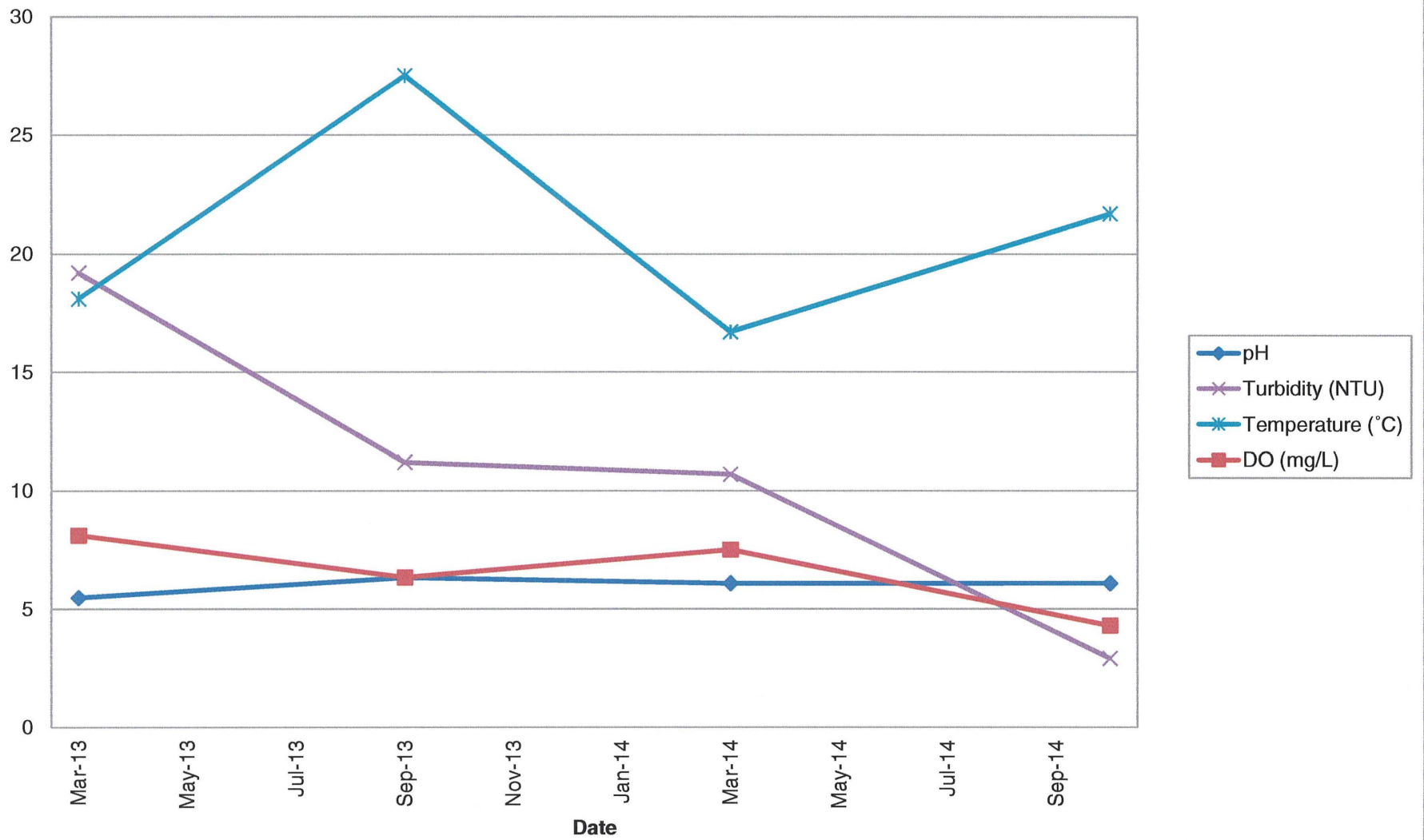
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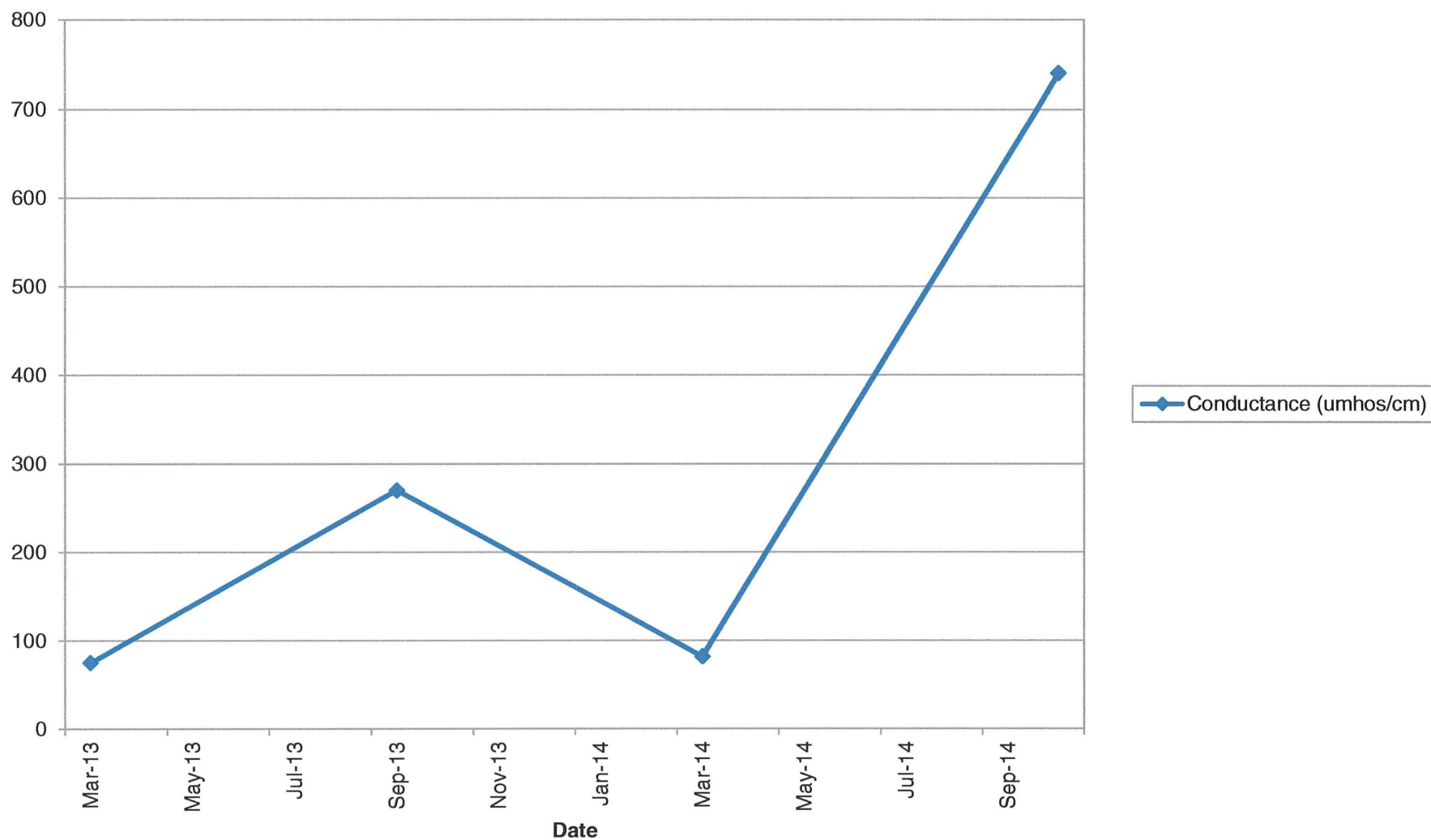
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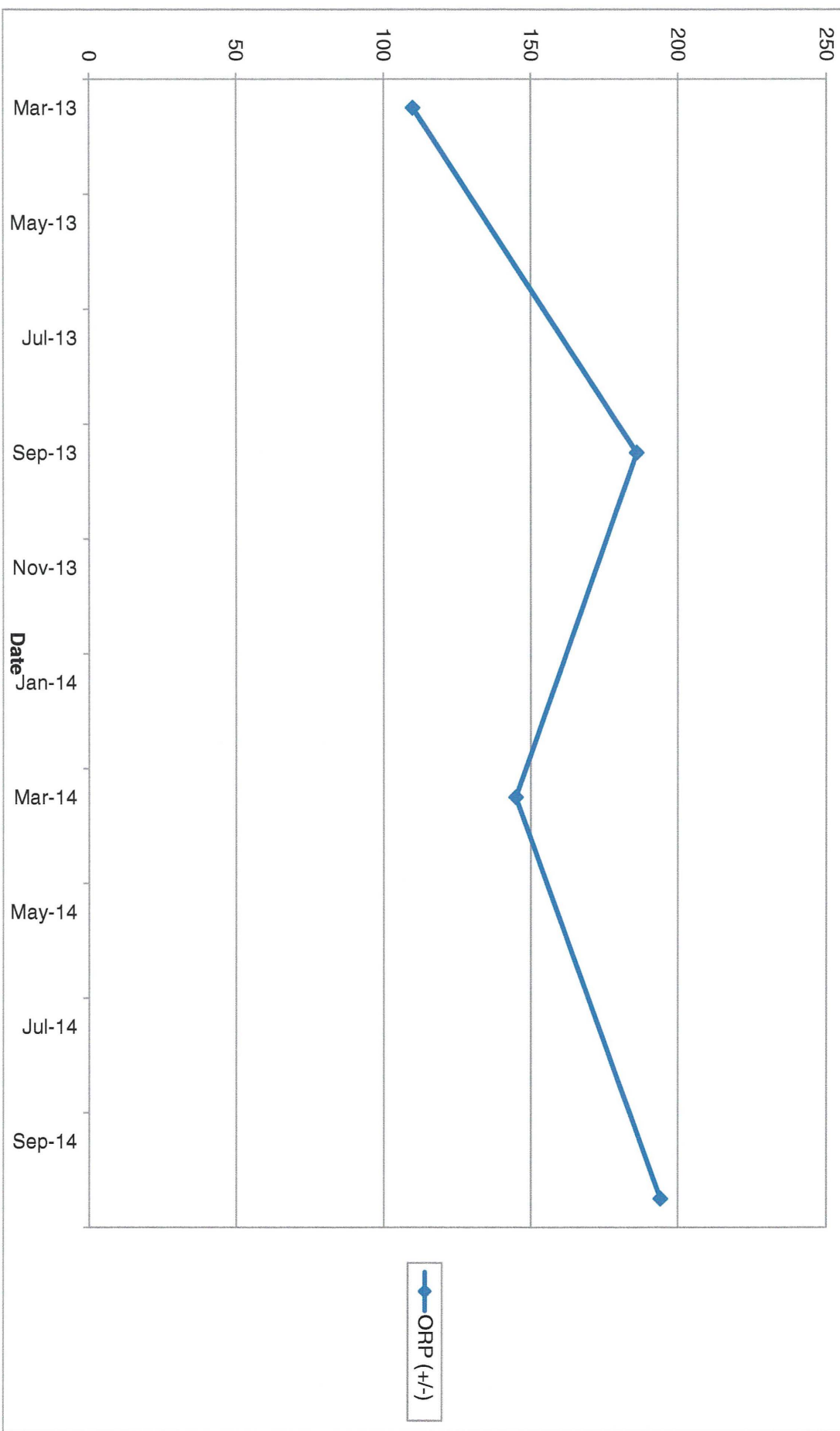
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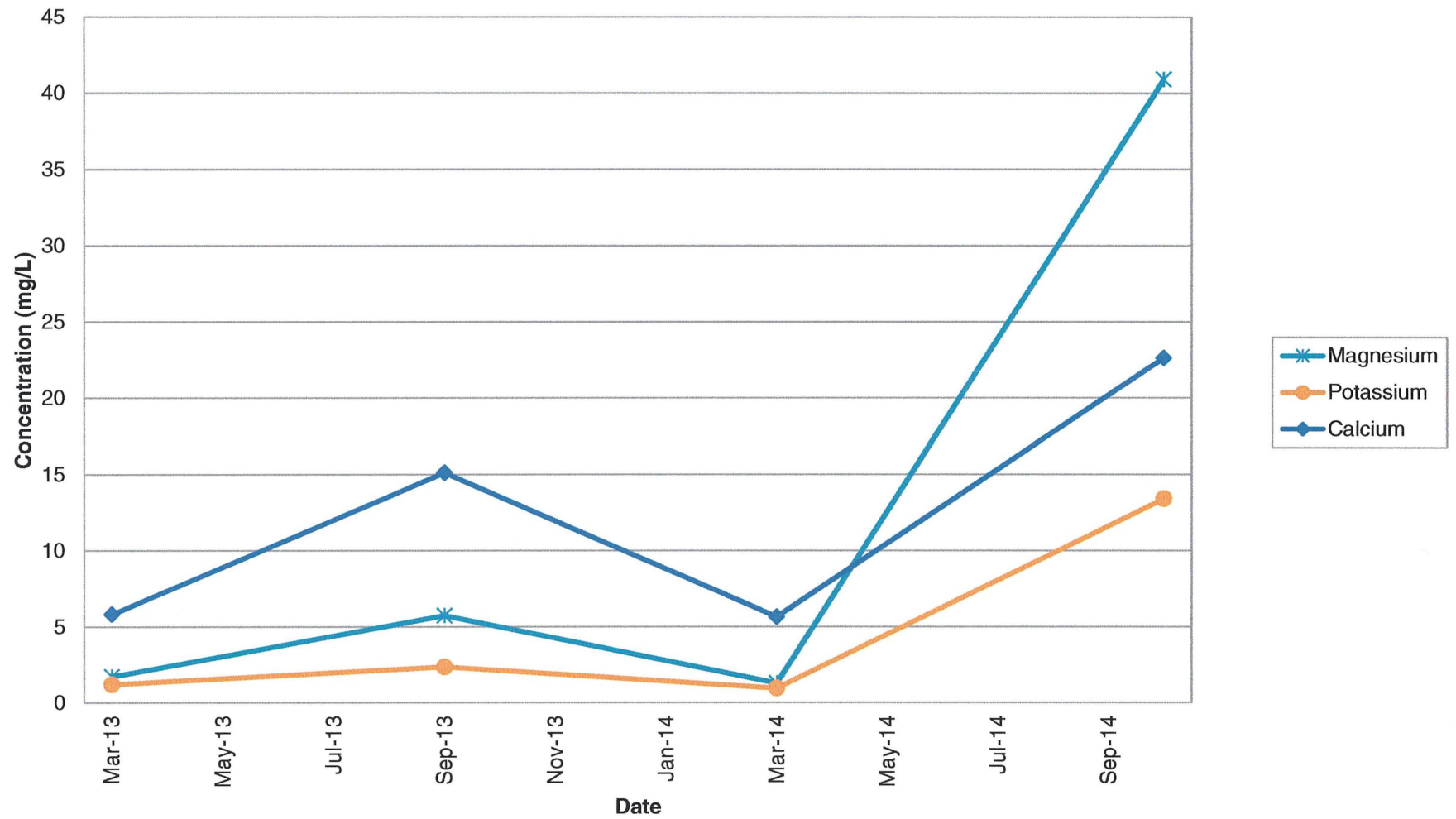
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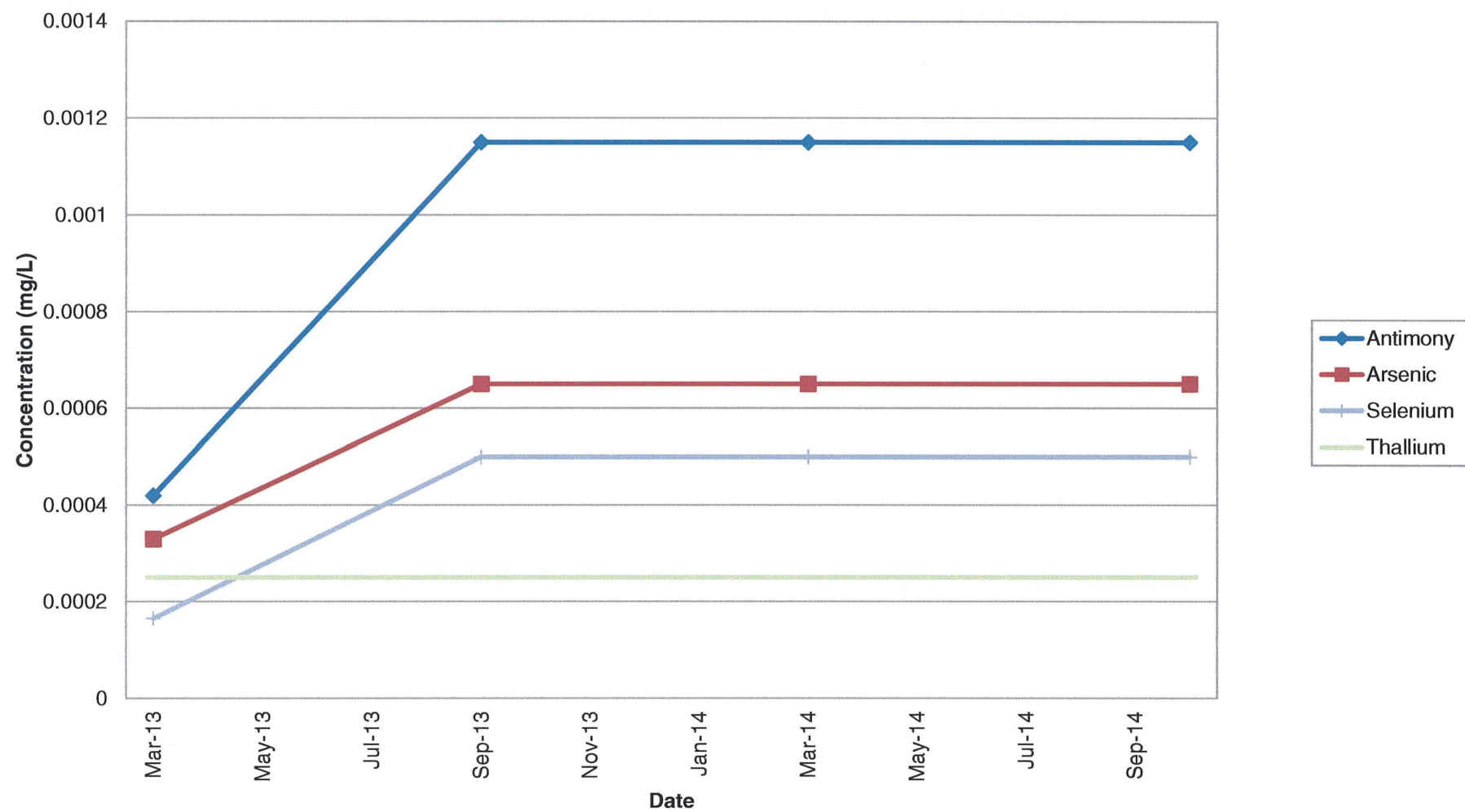
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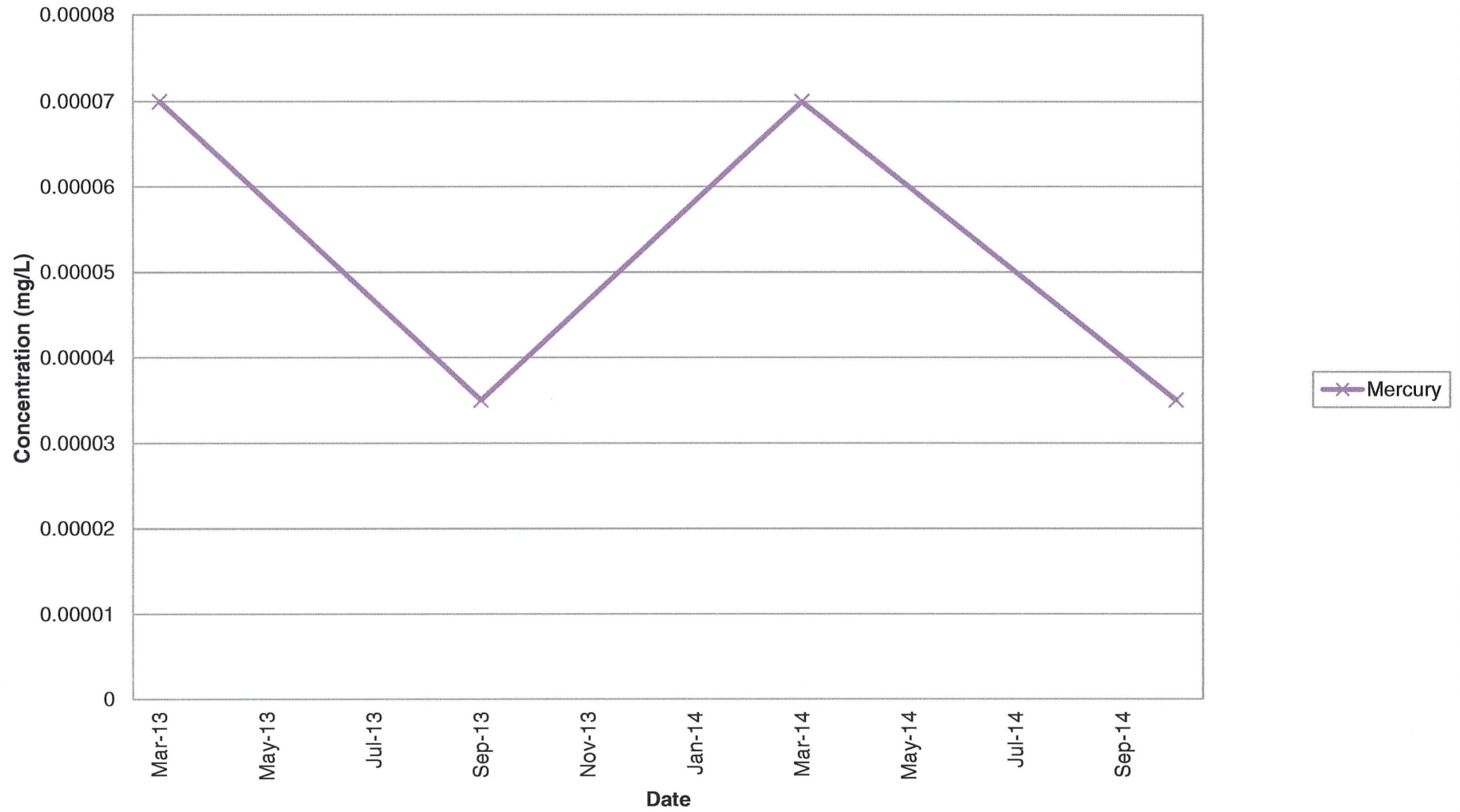
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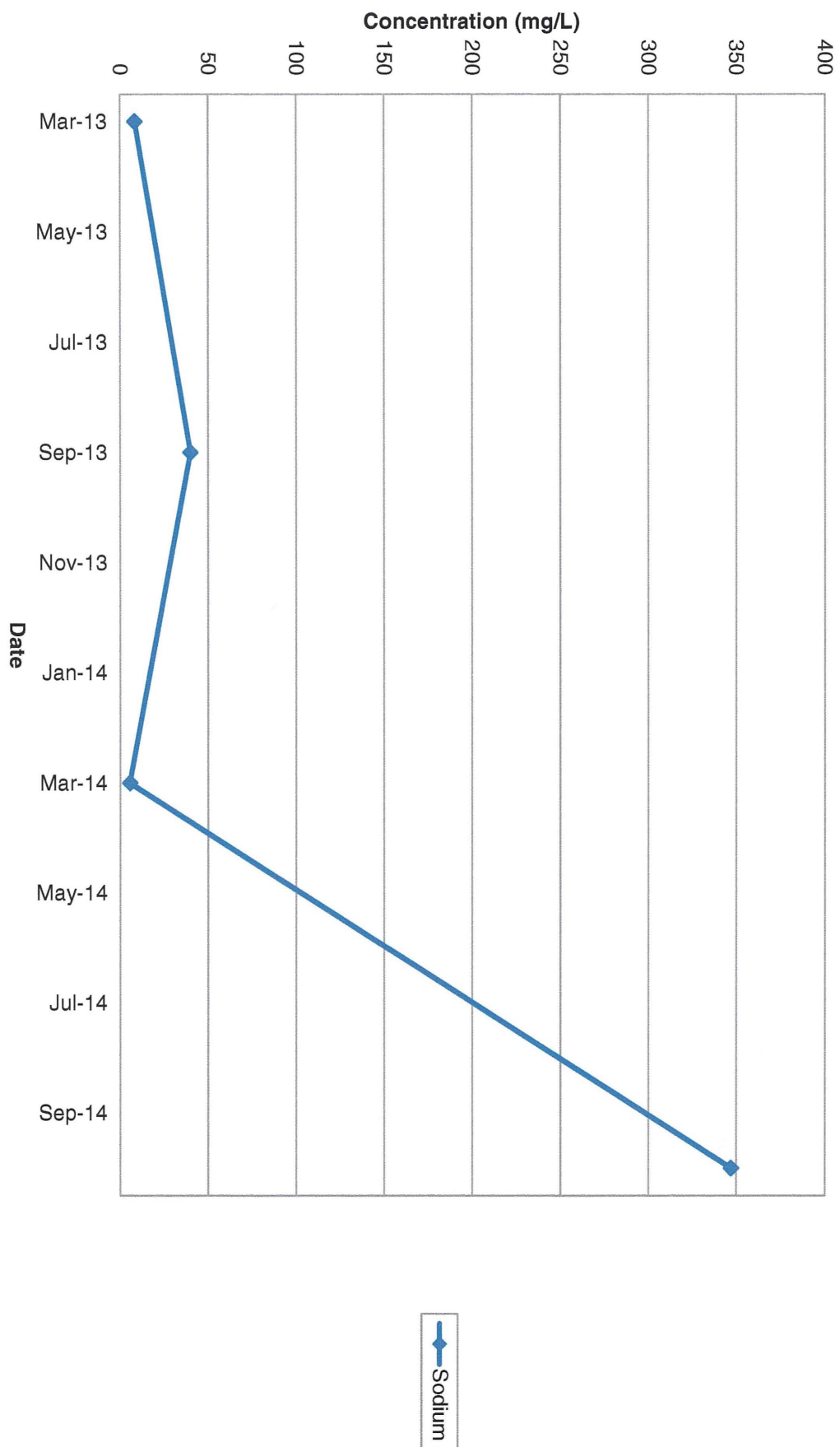
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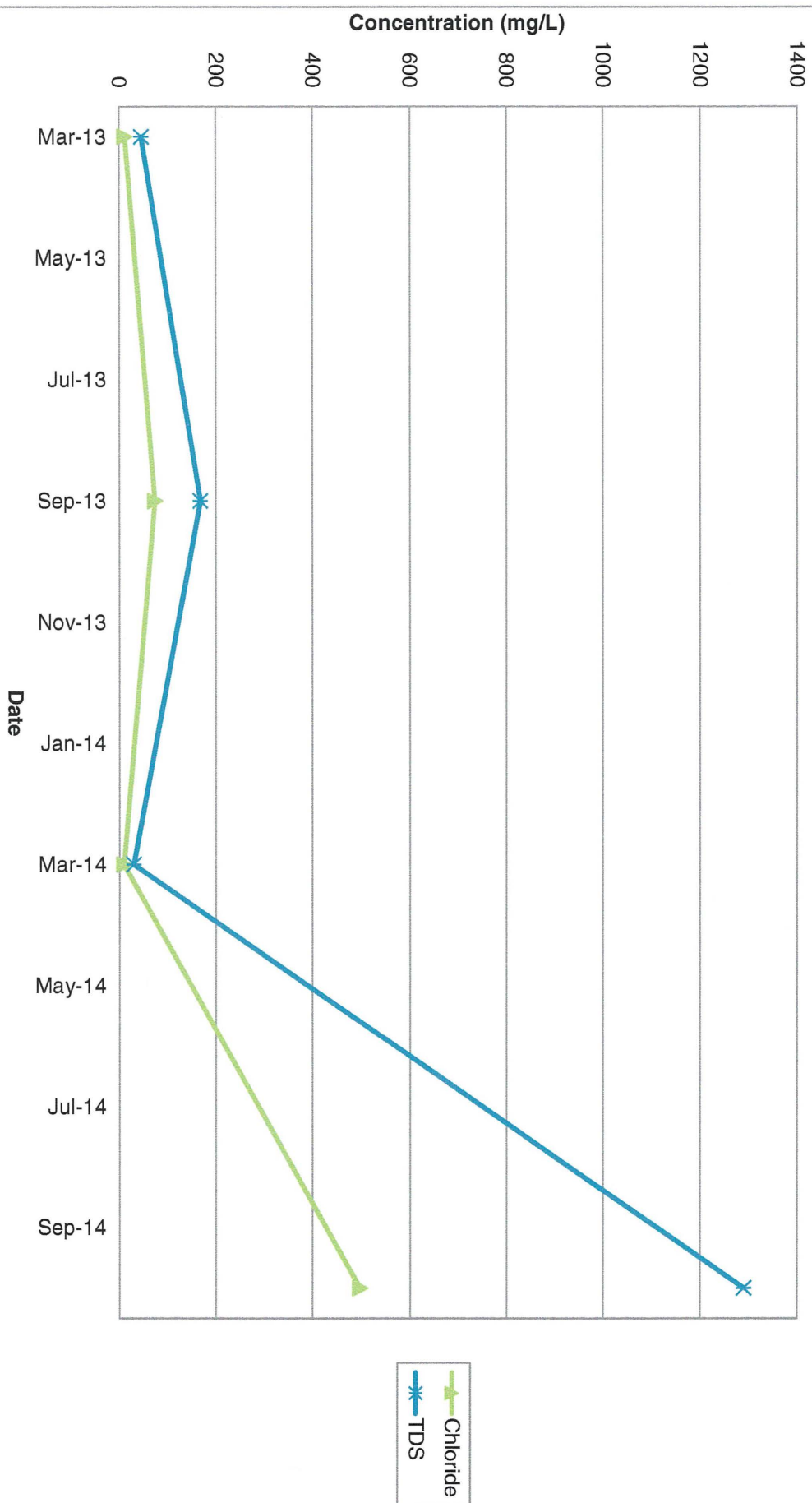
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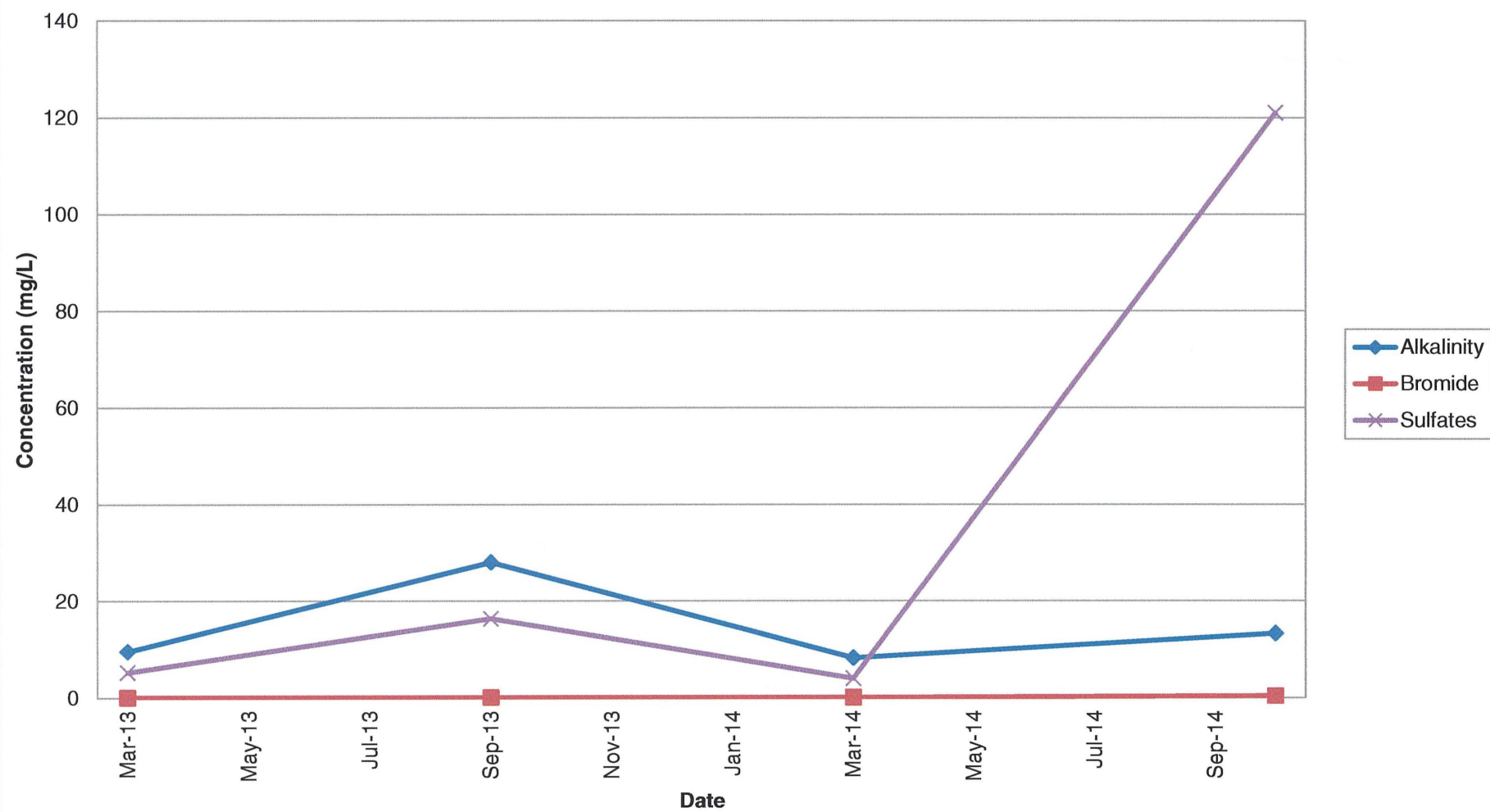
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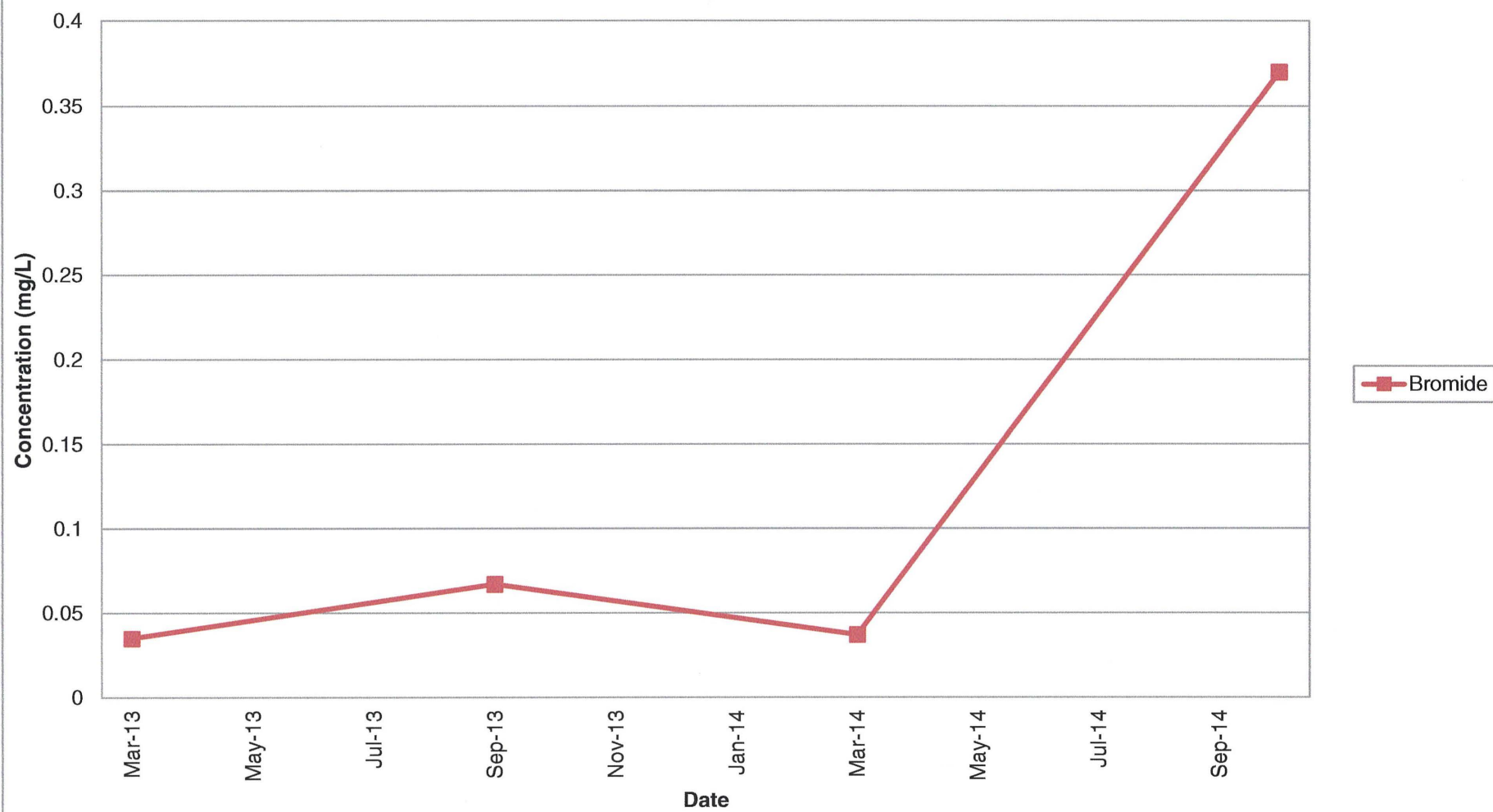
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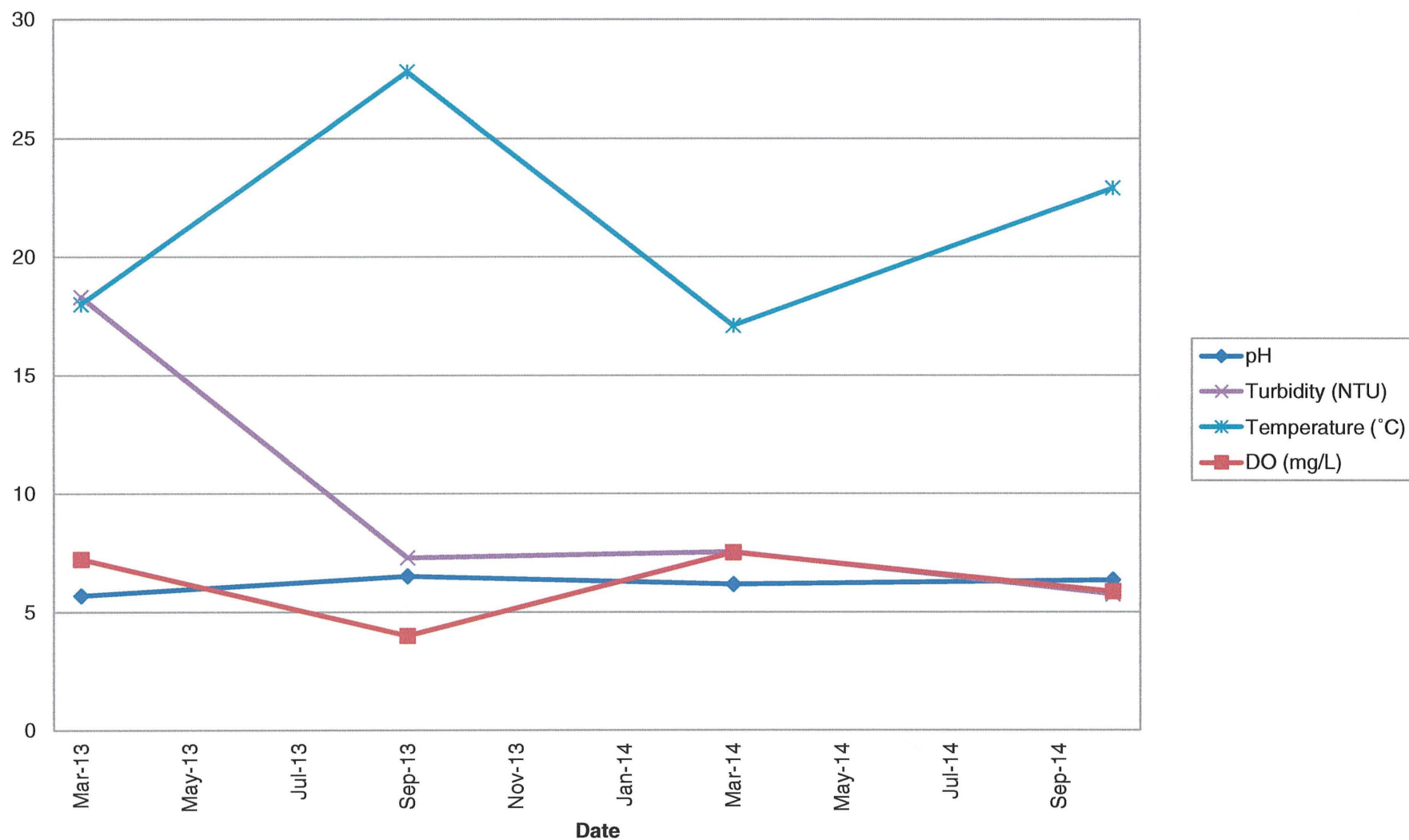
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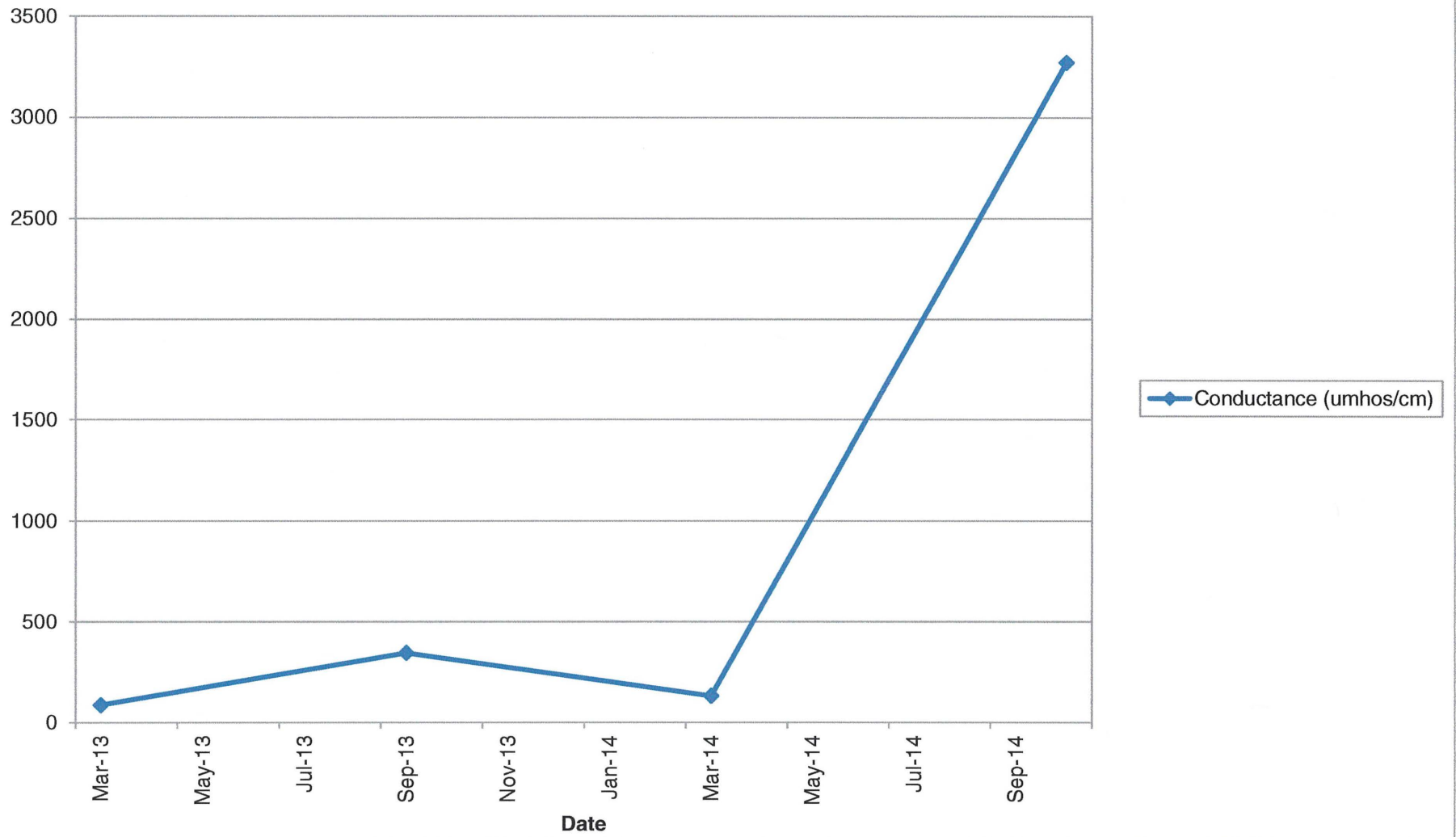
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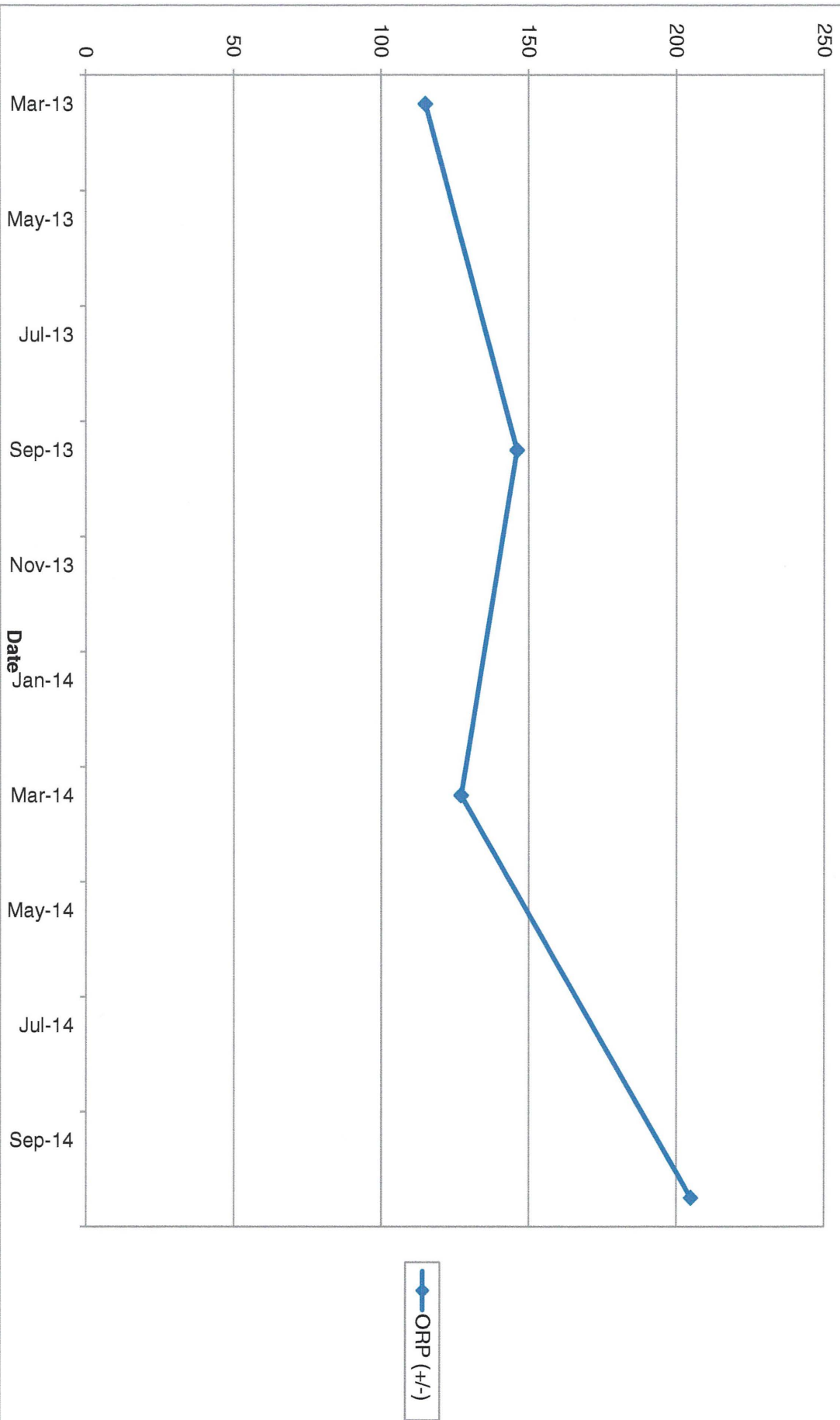
SW-5 Field Parameters (Part 1)



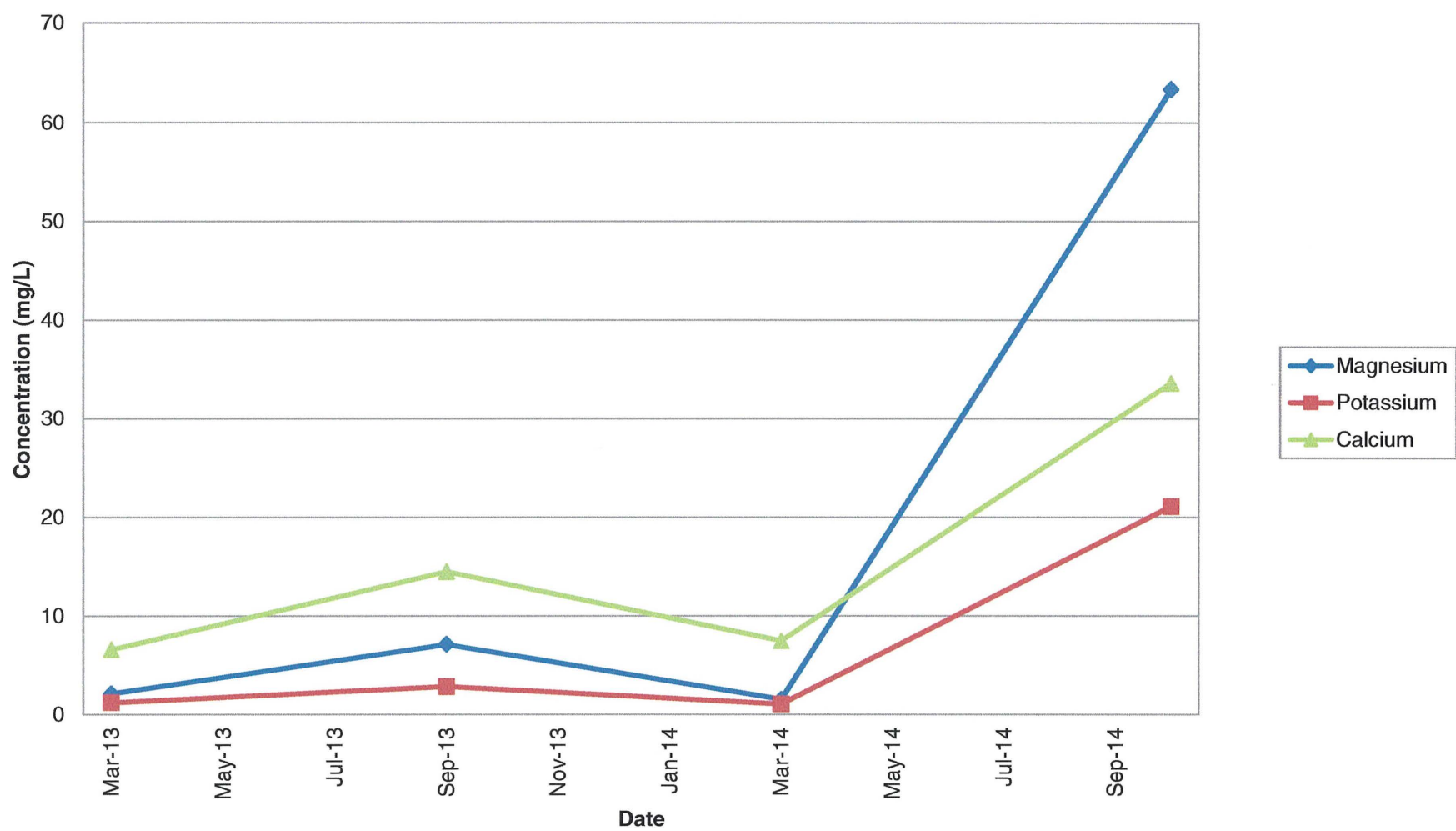
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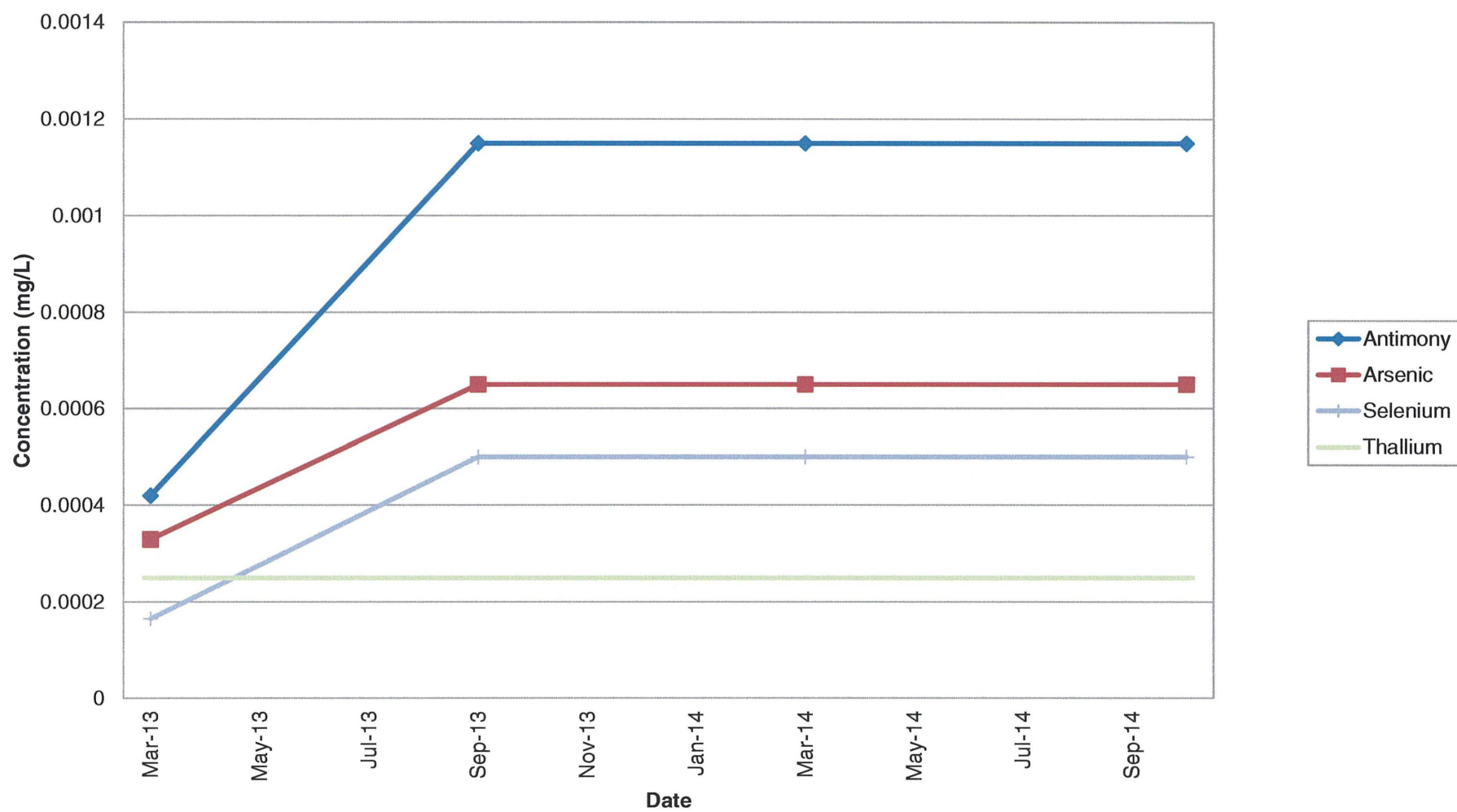
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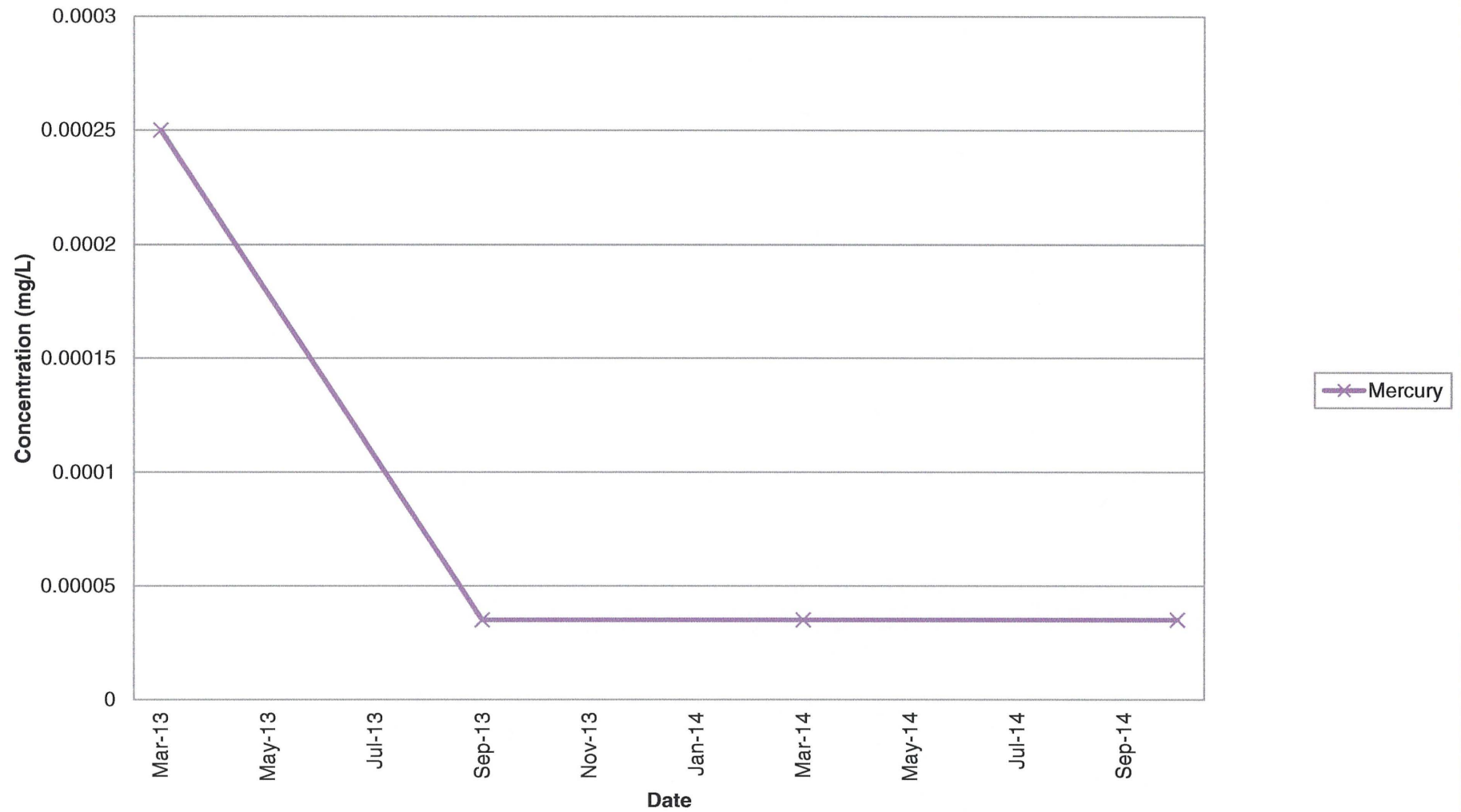
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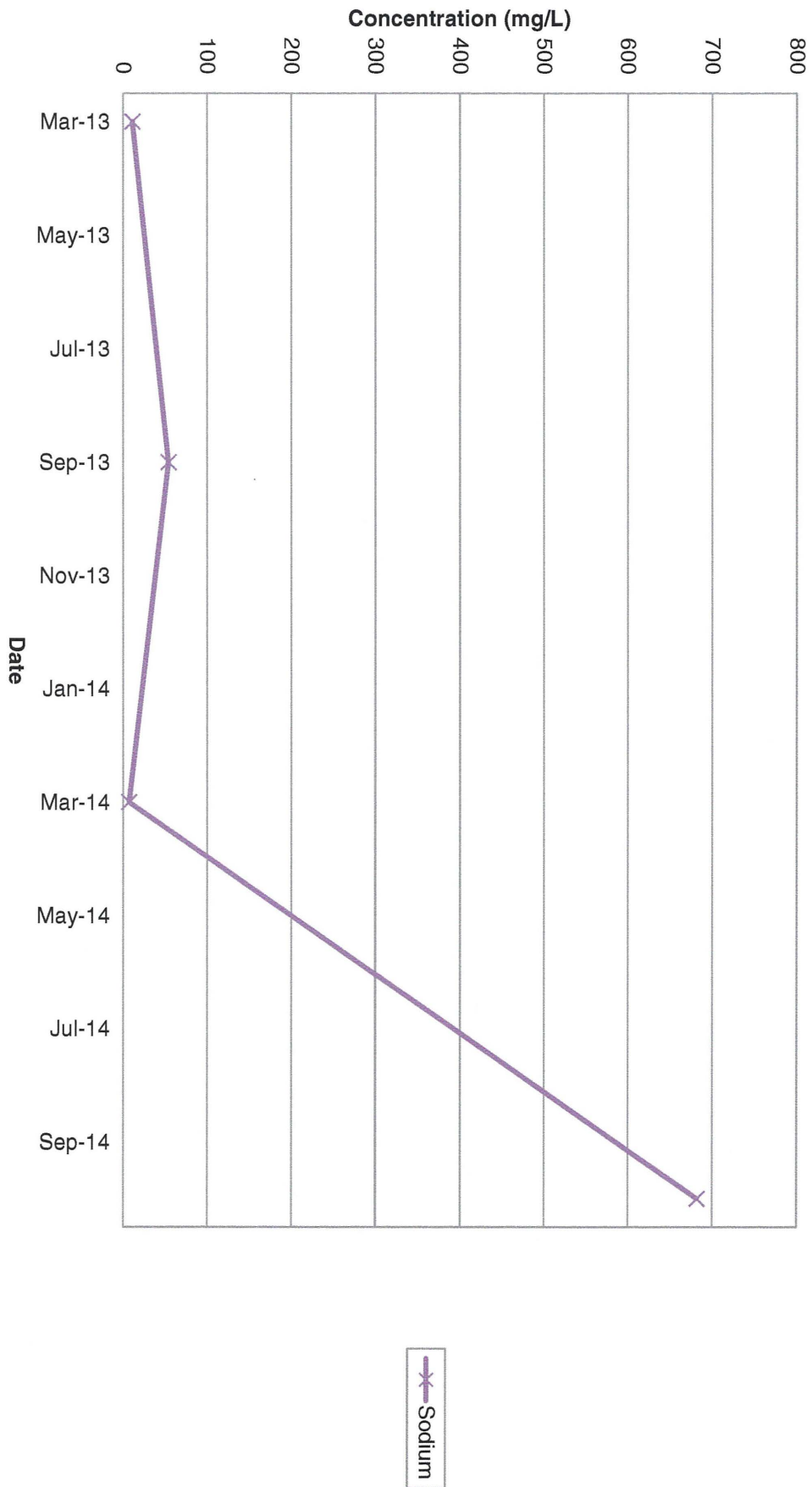
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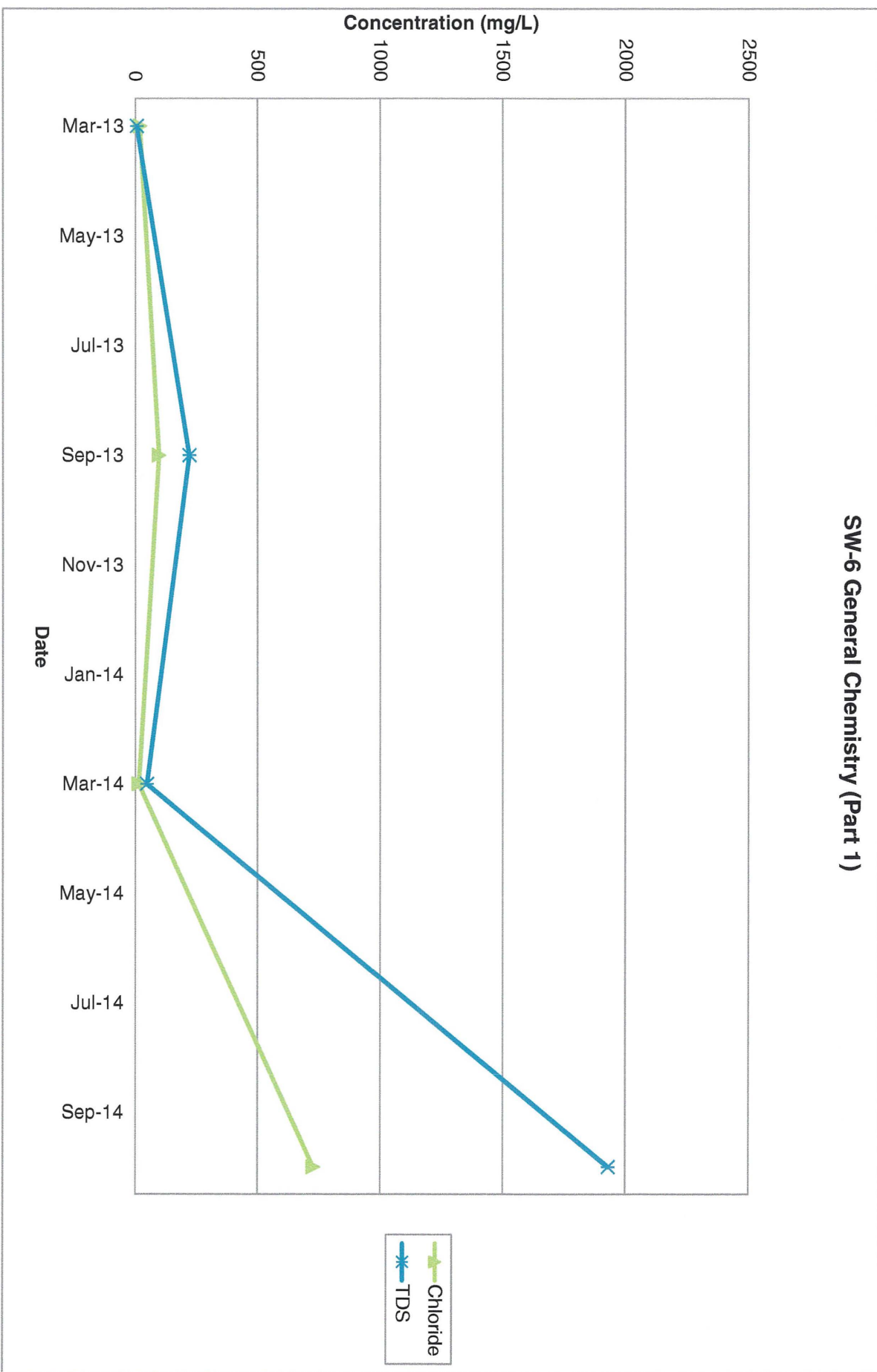
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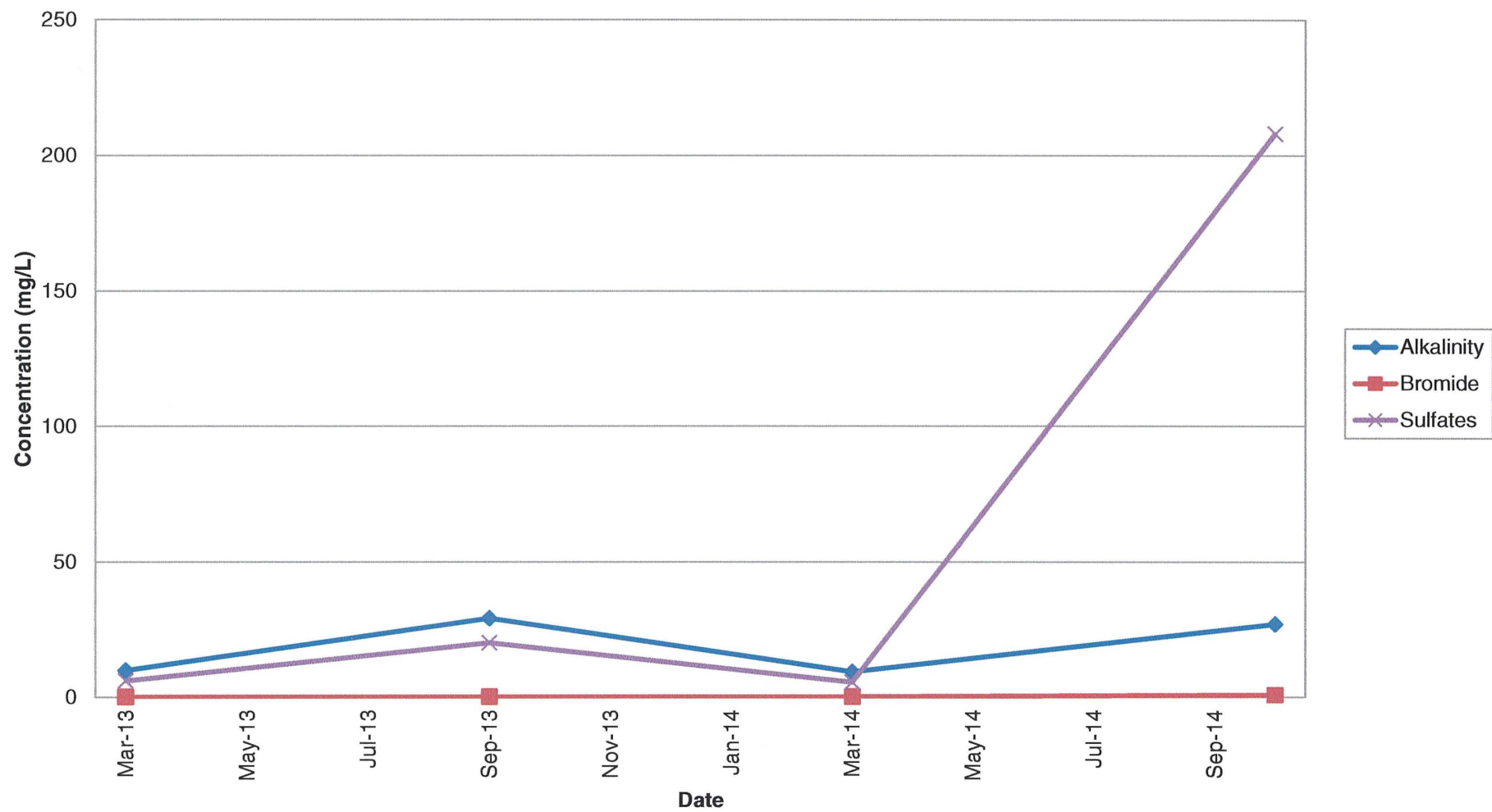
SW-6 Metals (Part 4)



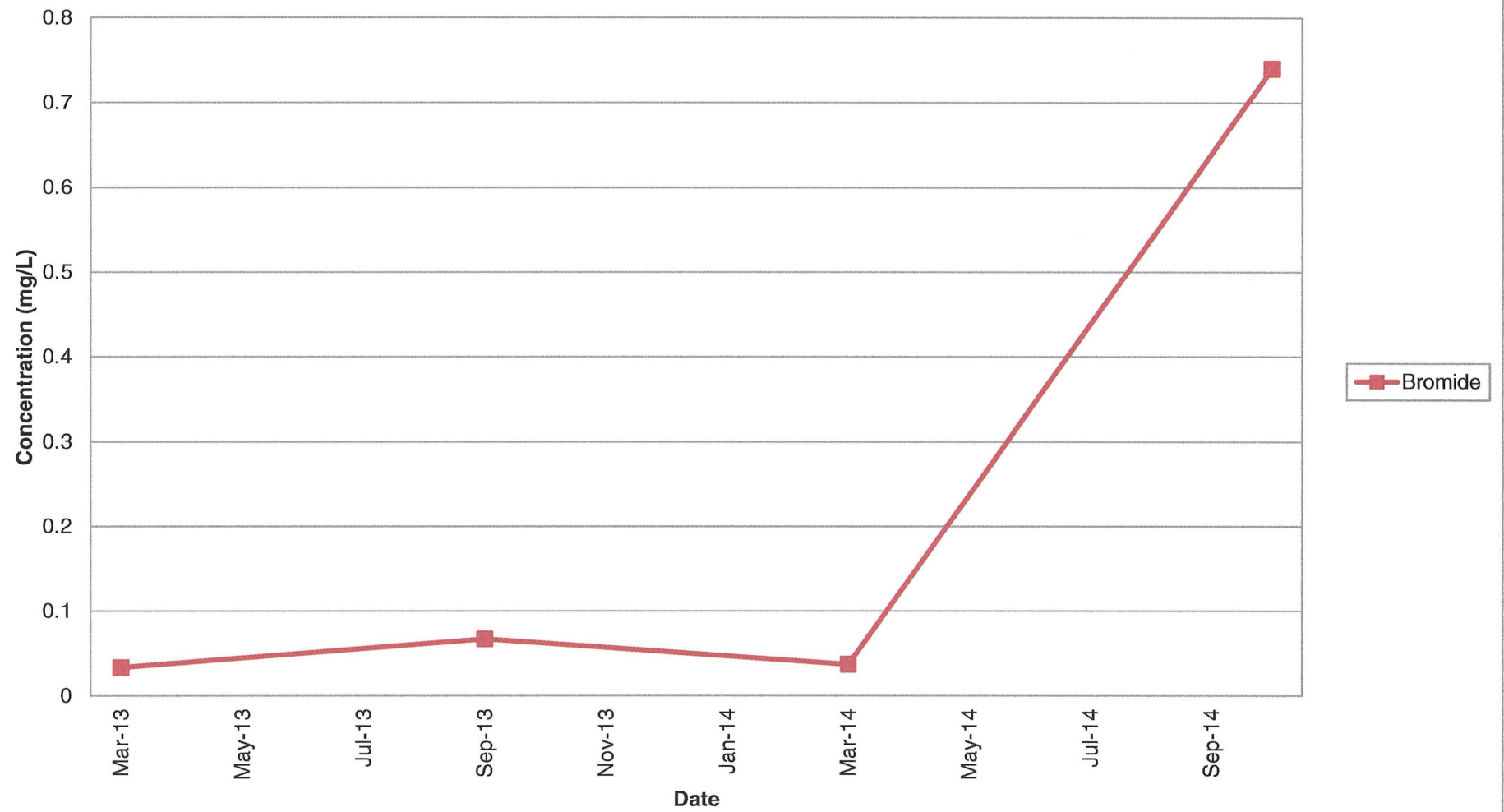
SW-6 General Chemistry (Part 1)



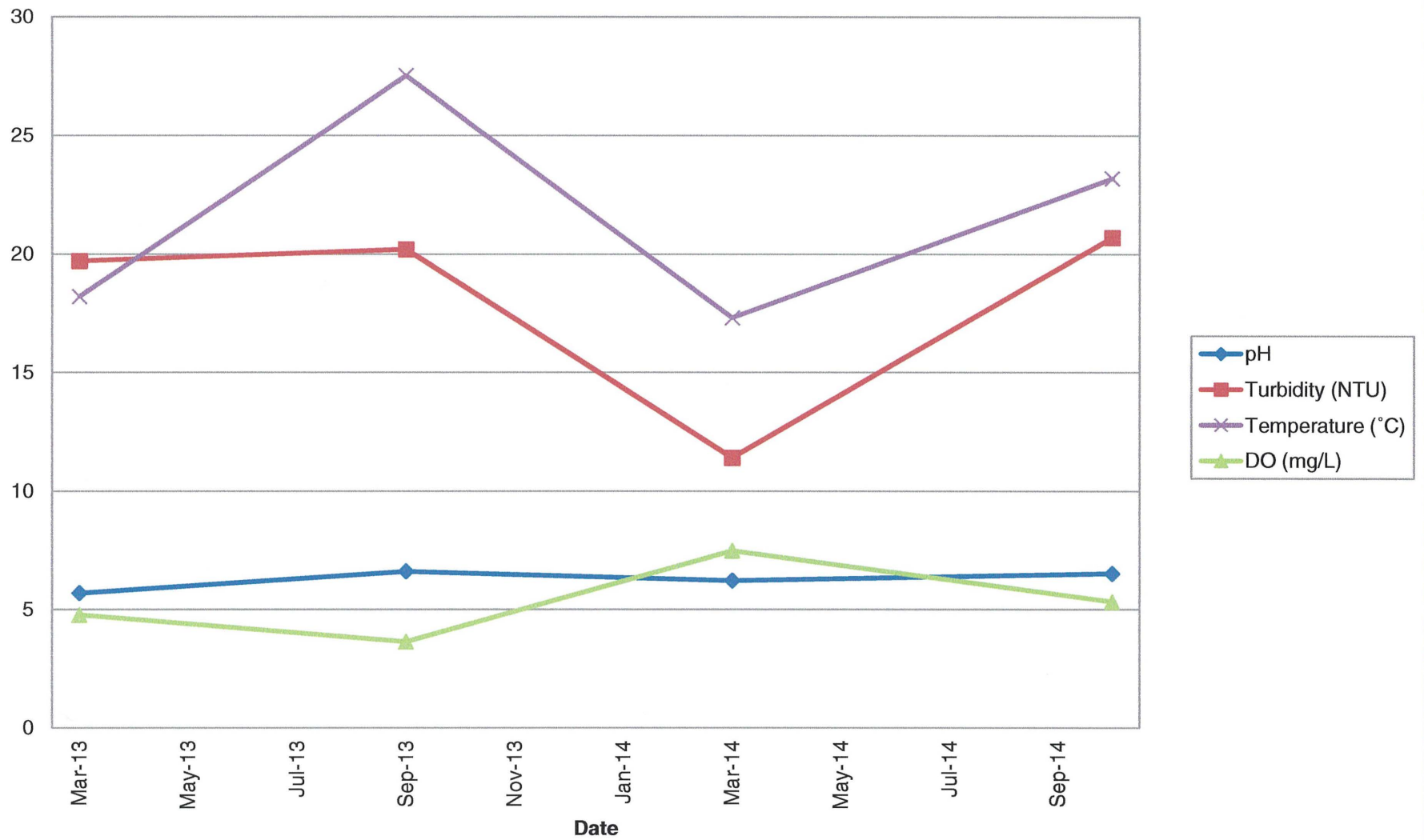
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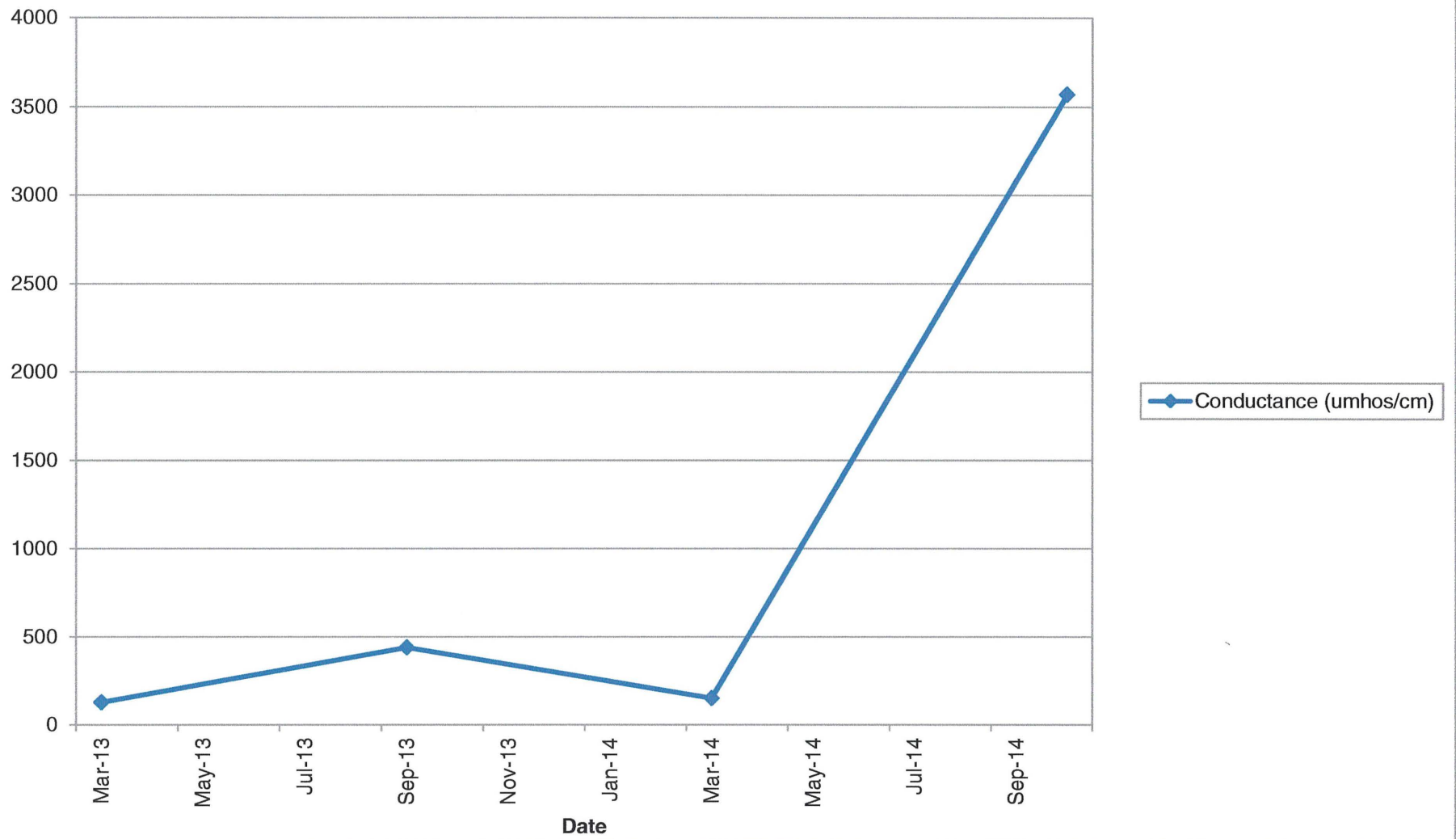
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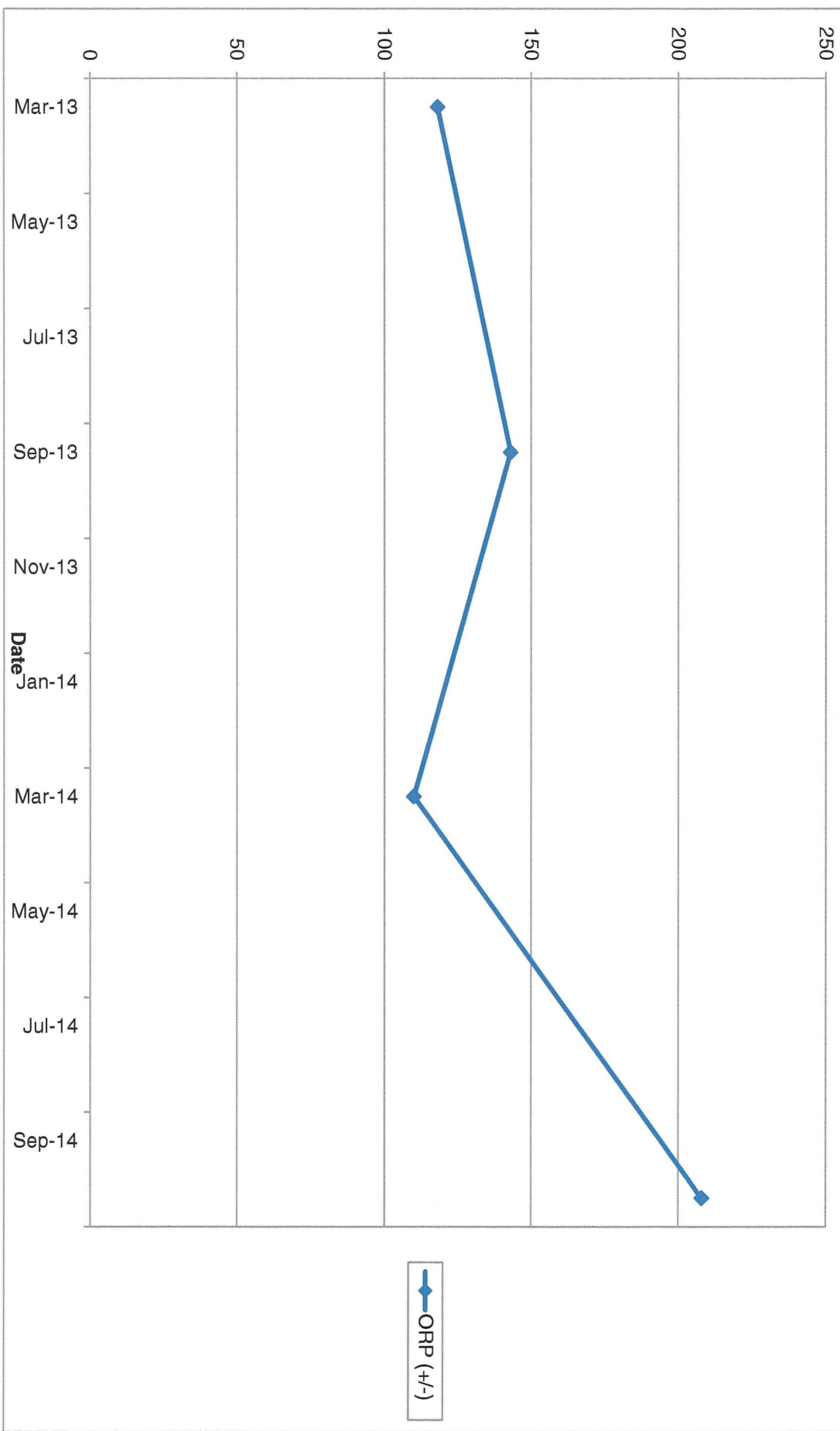
SW-6 Field Parameters (Part 1)



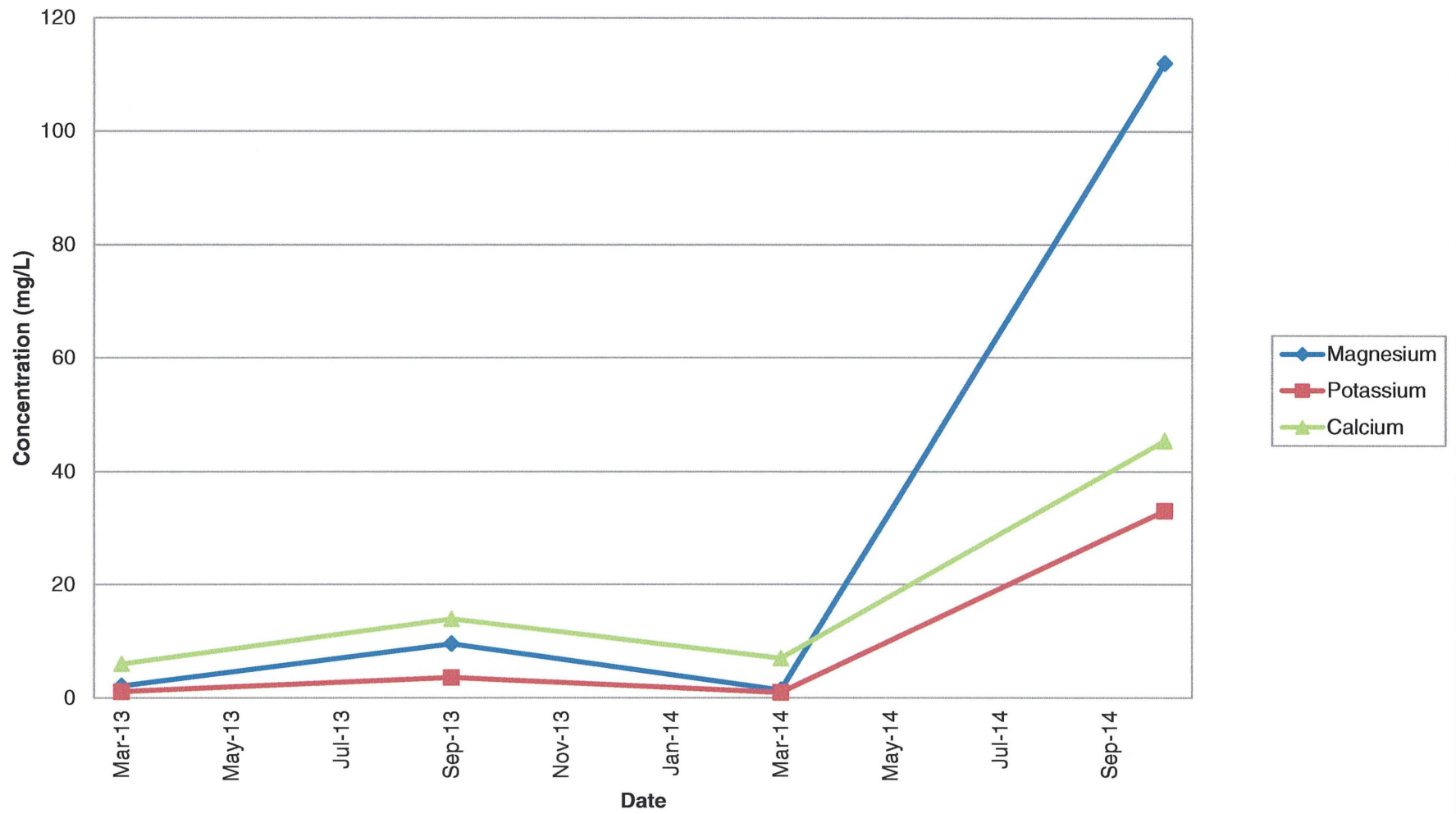
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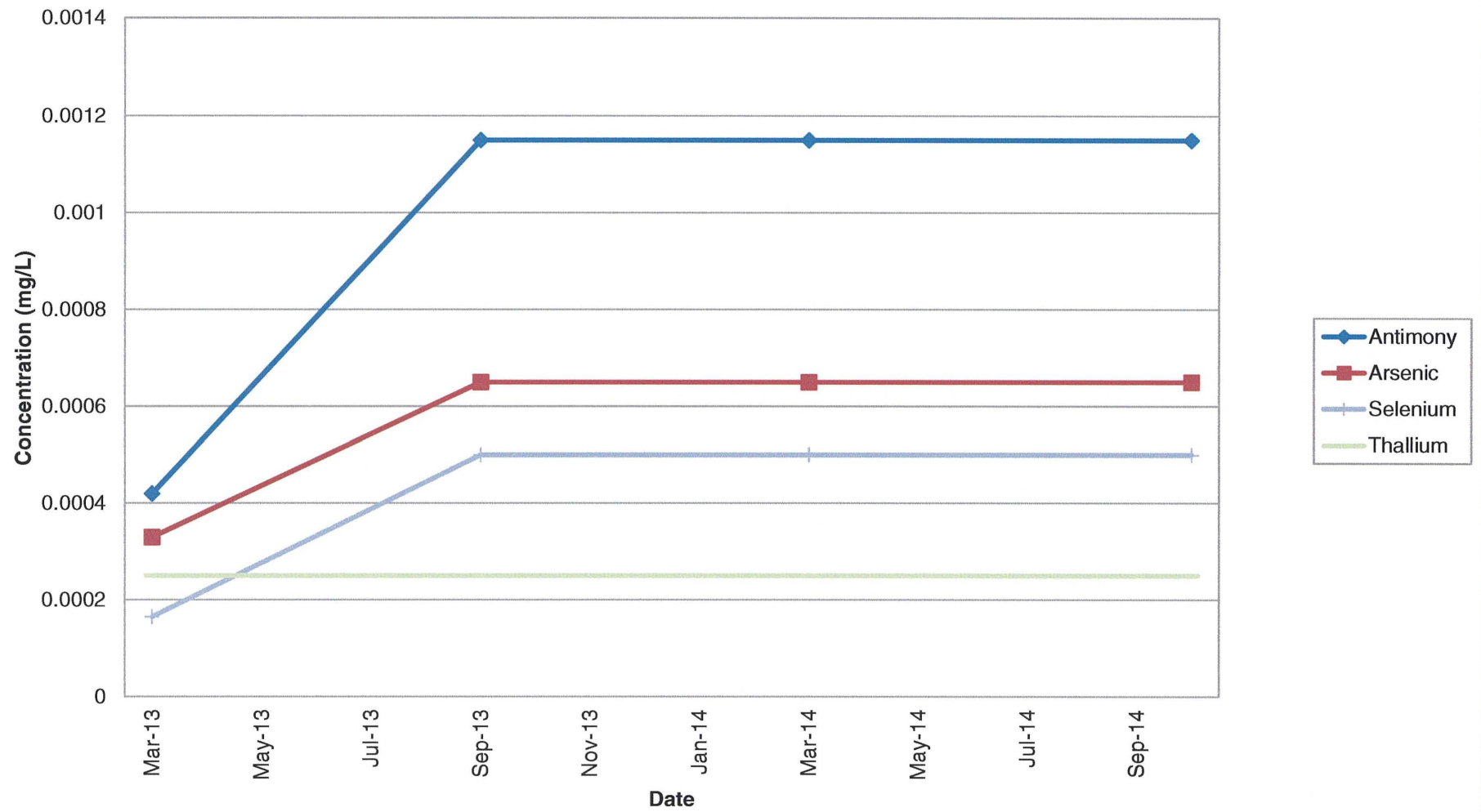
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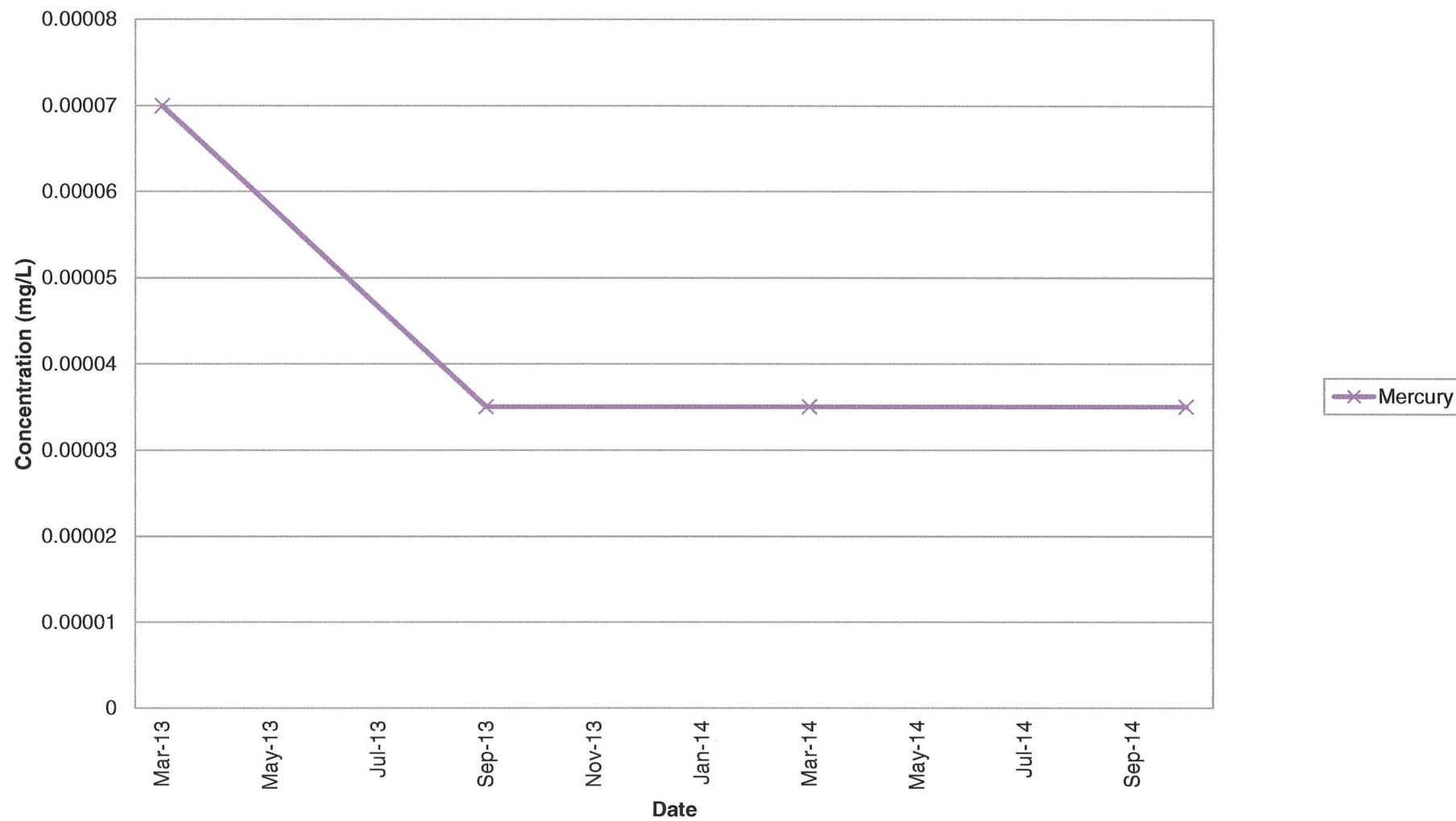
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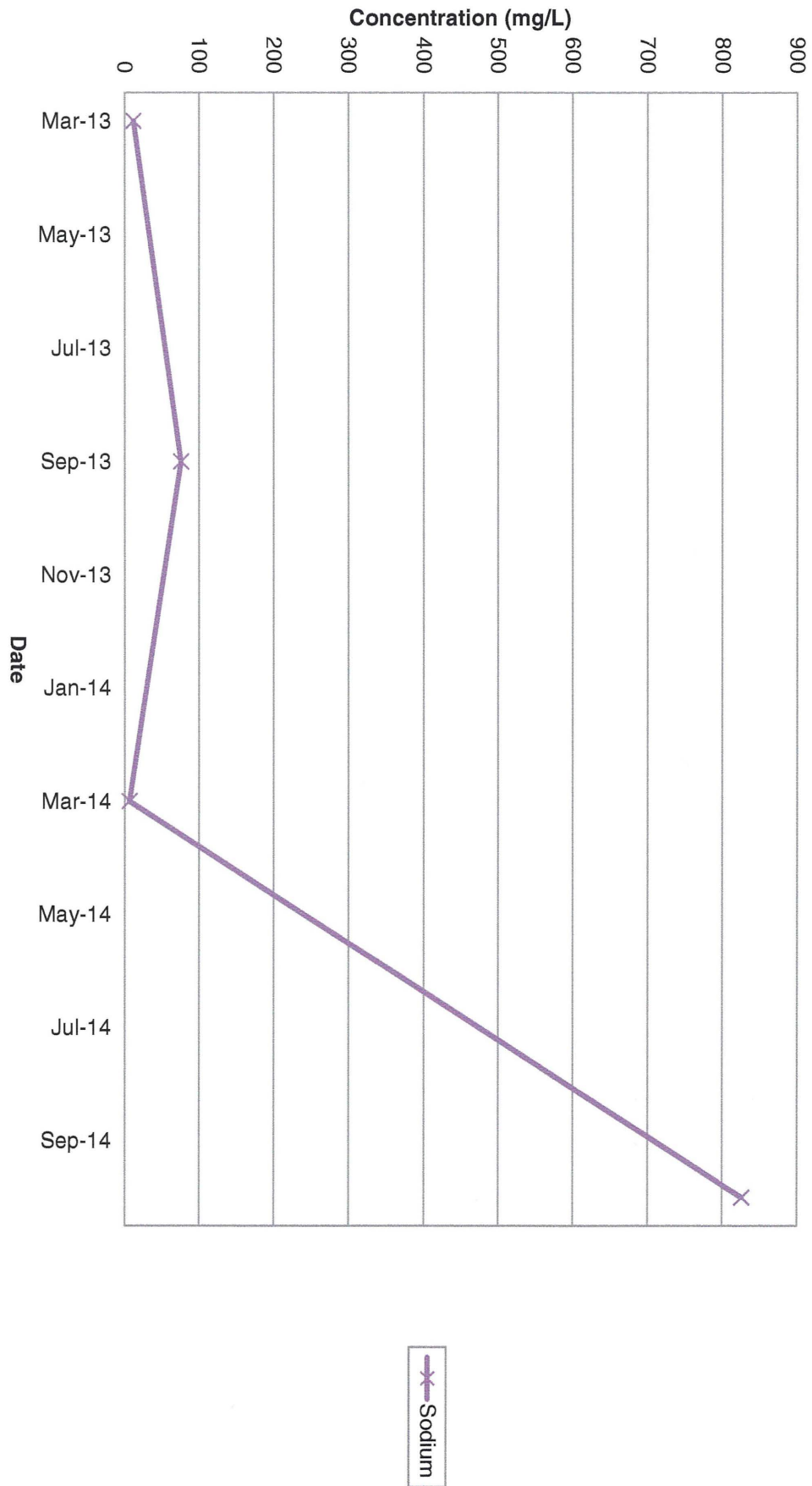
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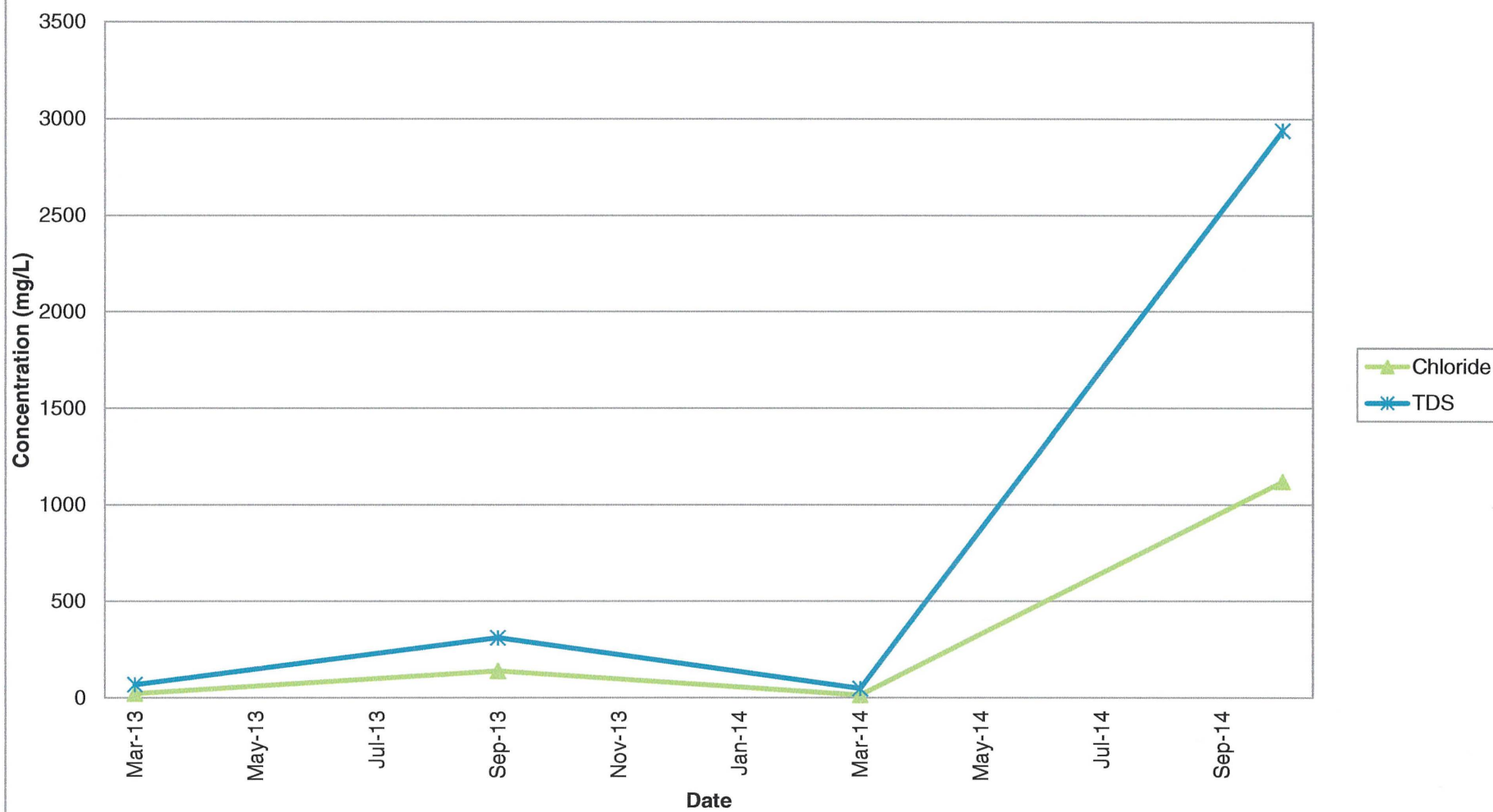
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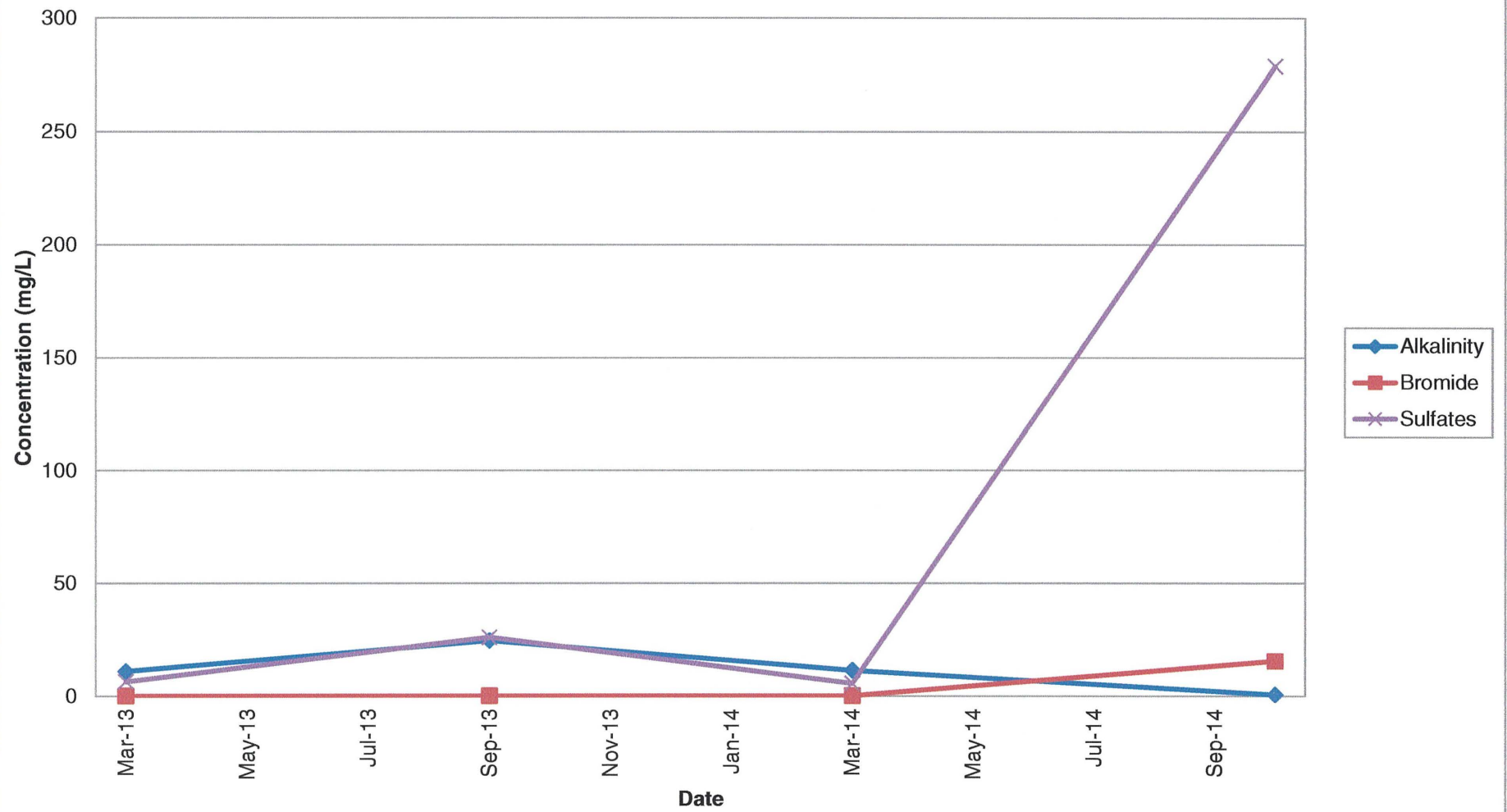
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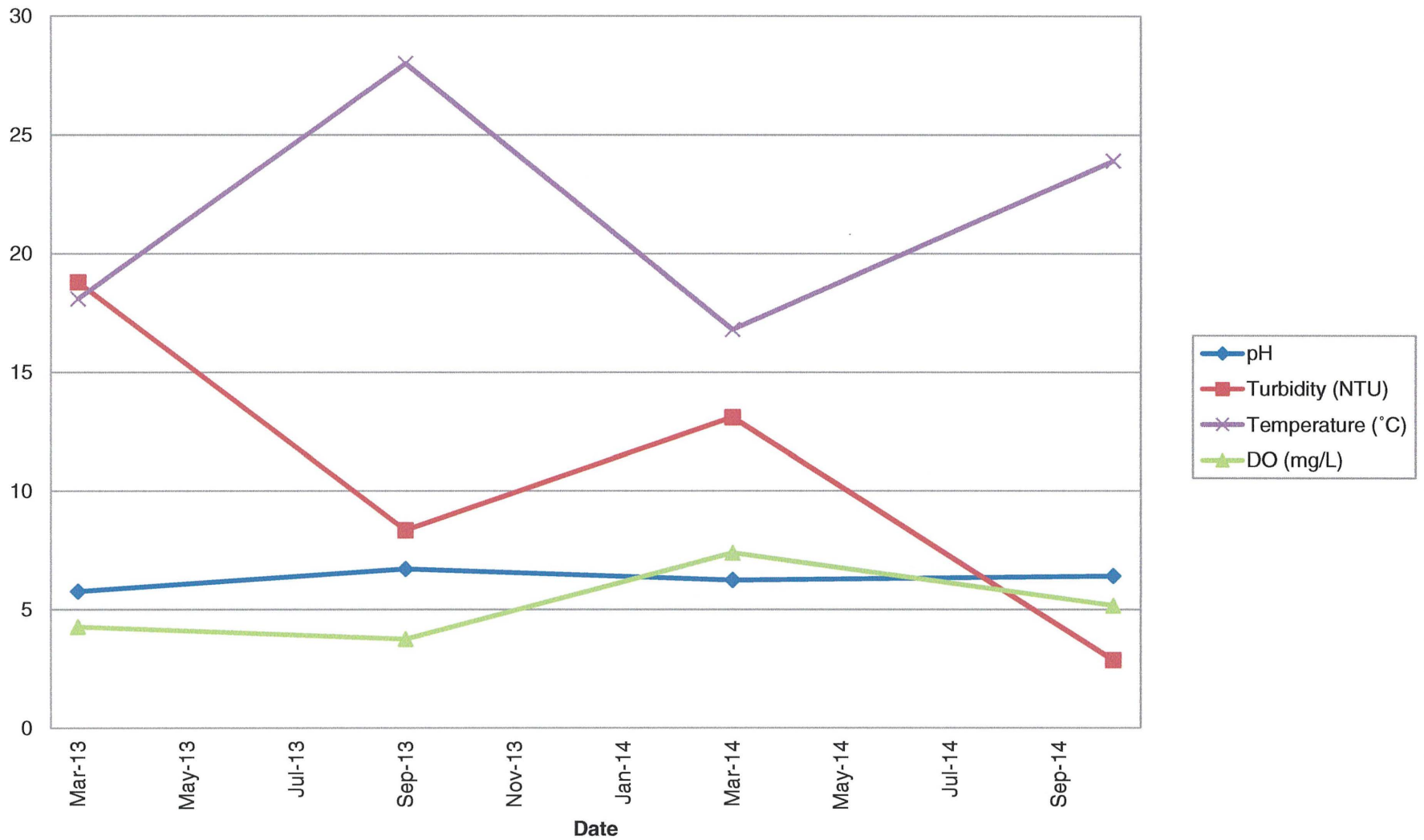
SW-7 General Chemistry (Part 1)



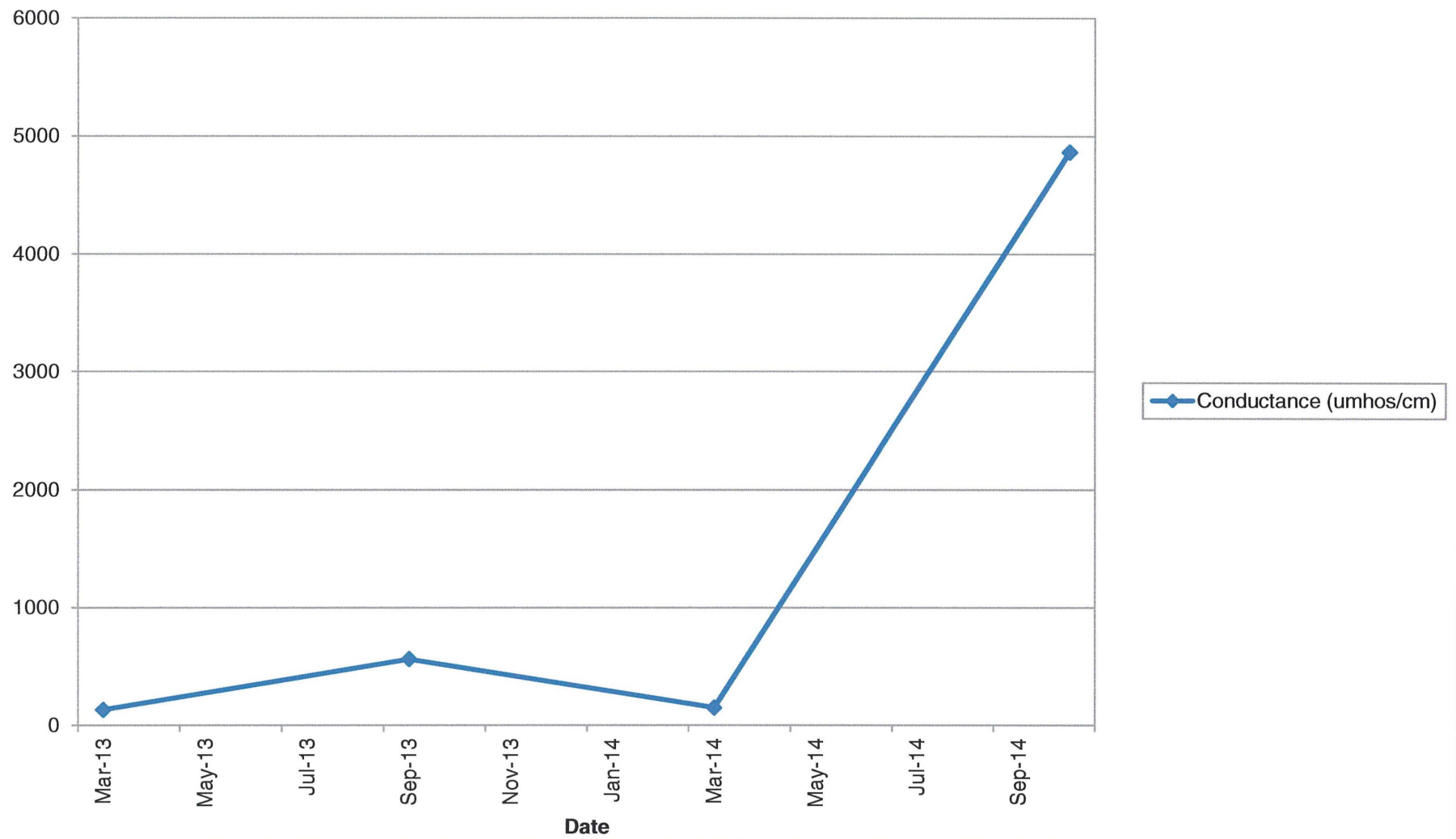
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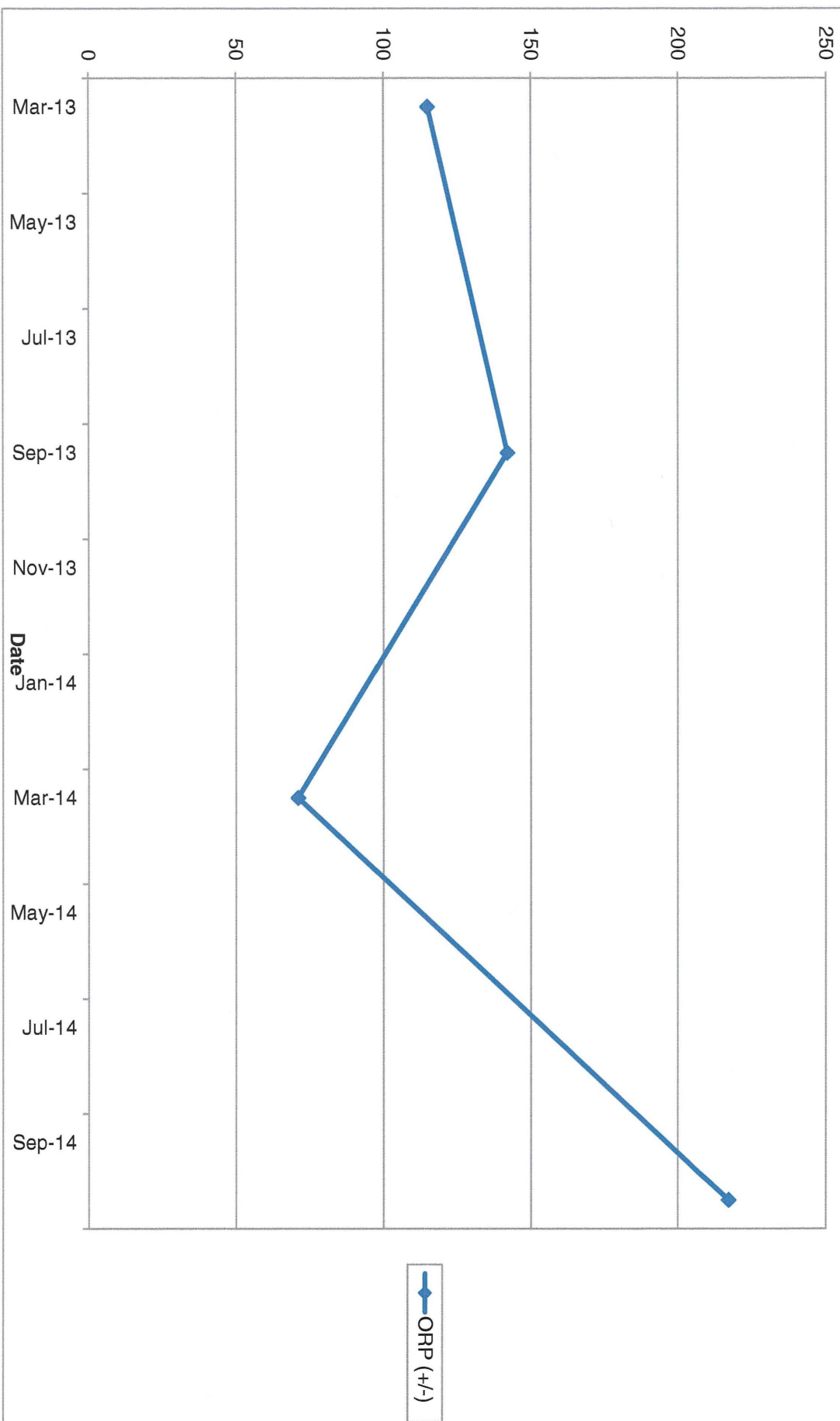
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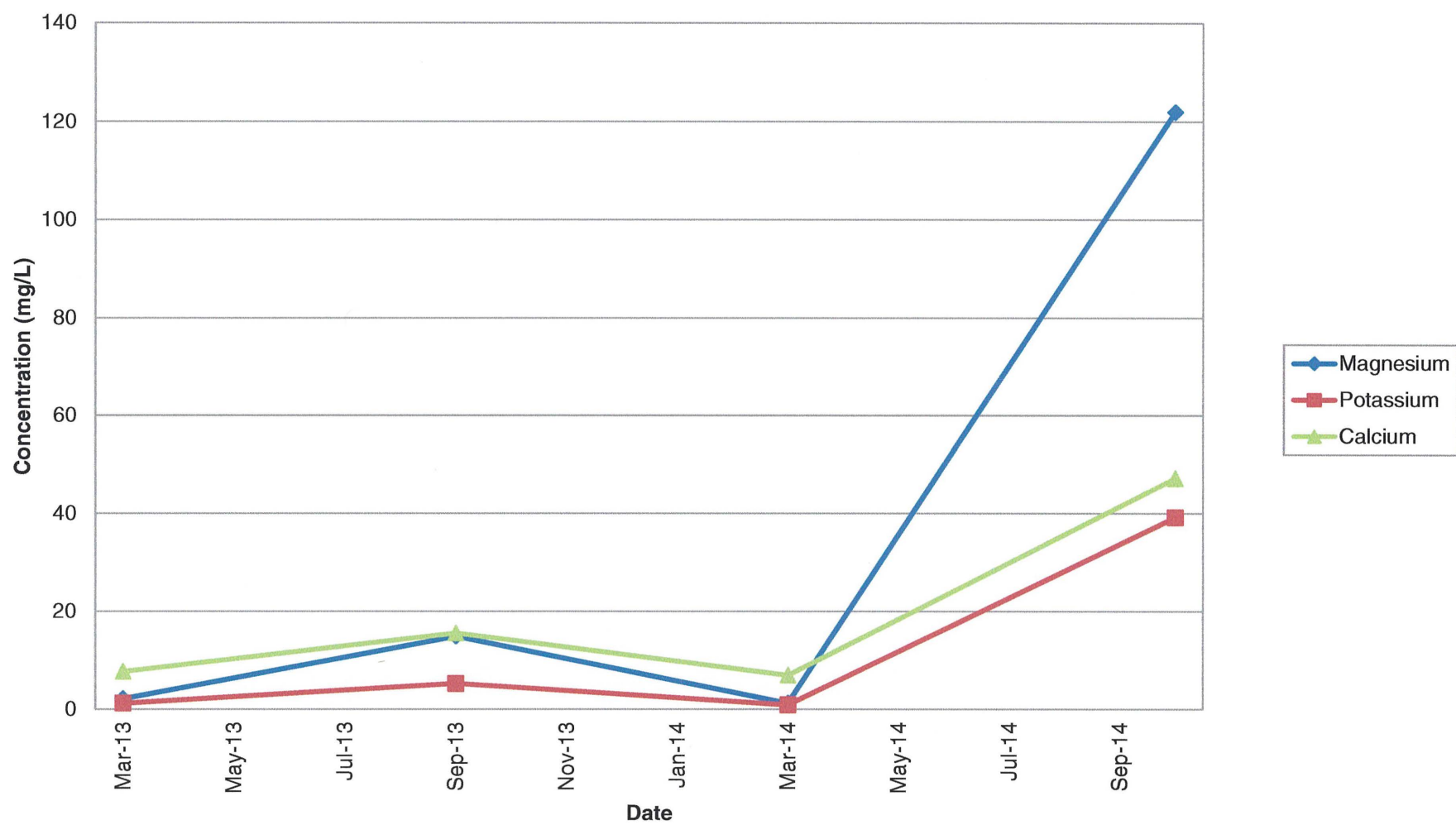
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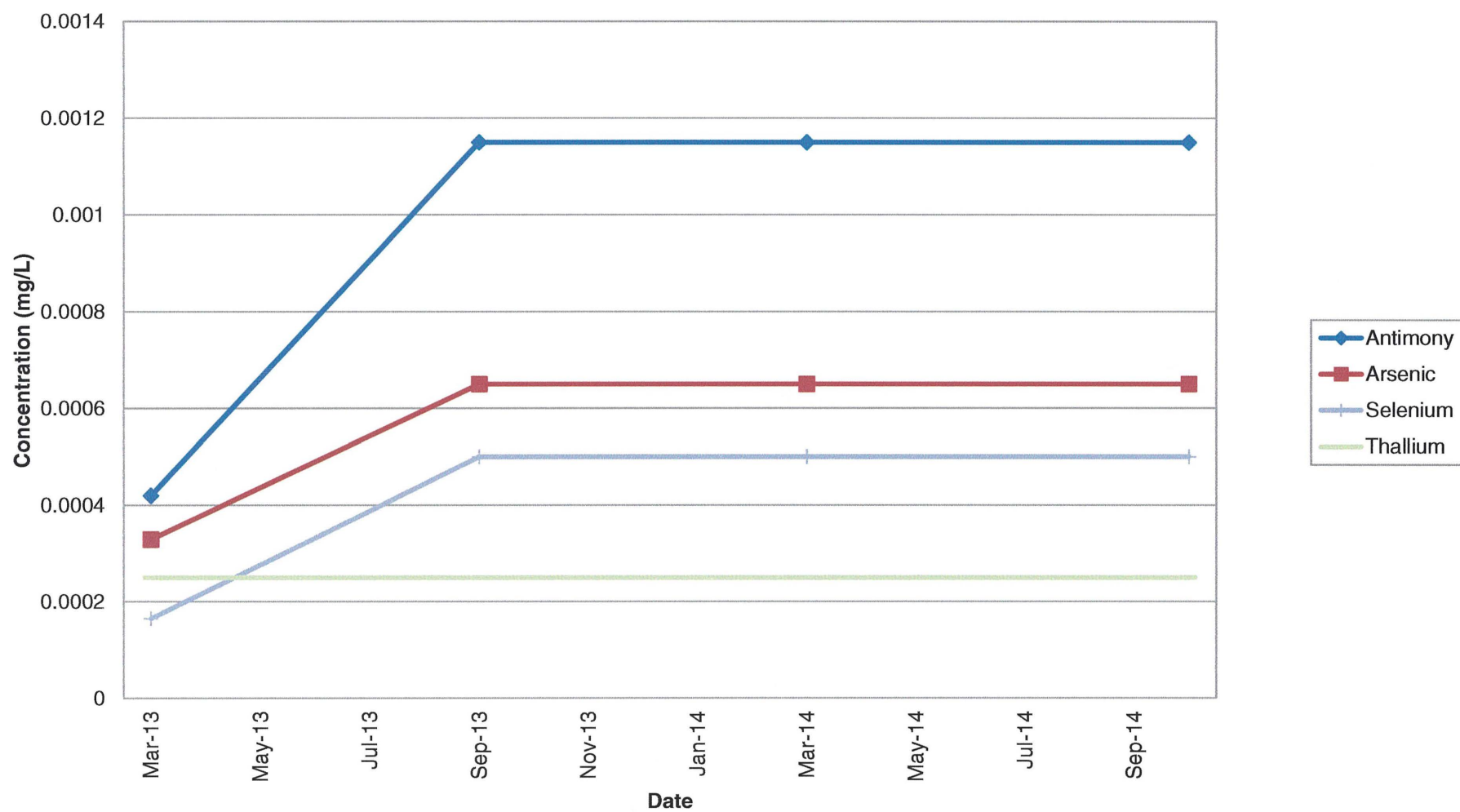
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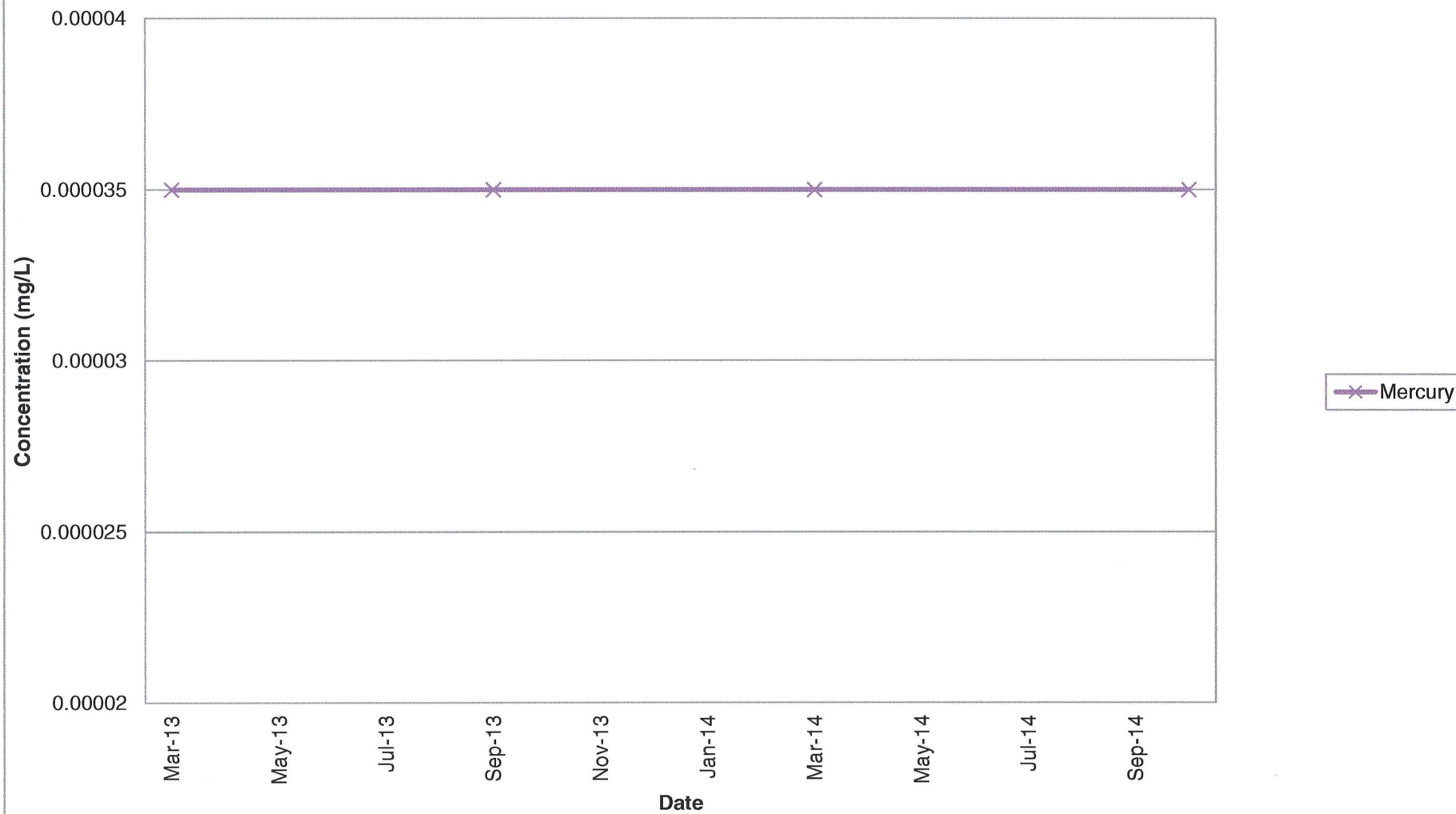
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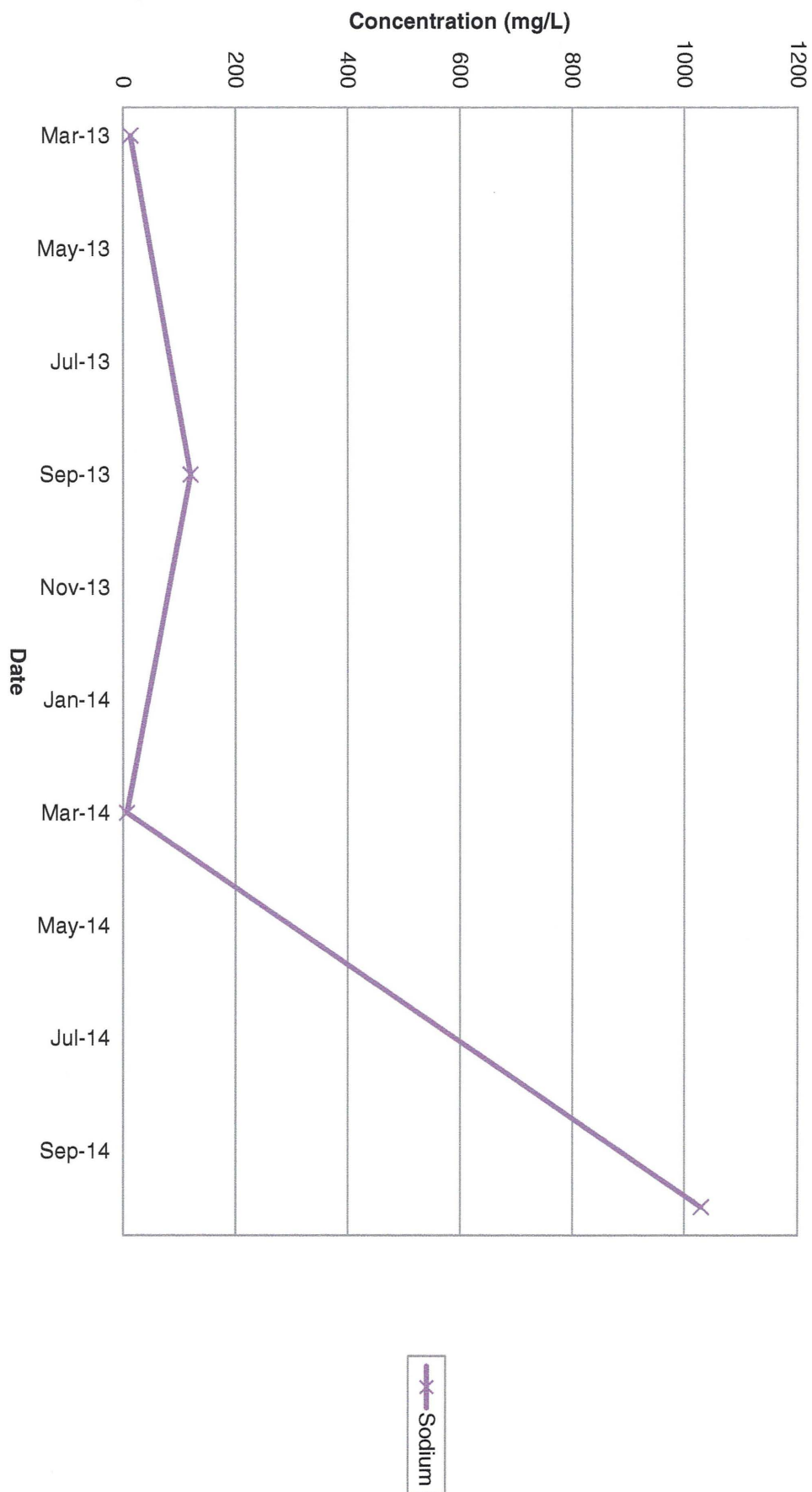
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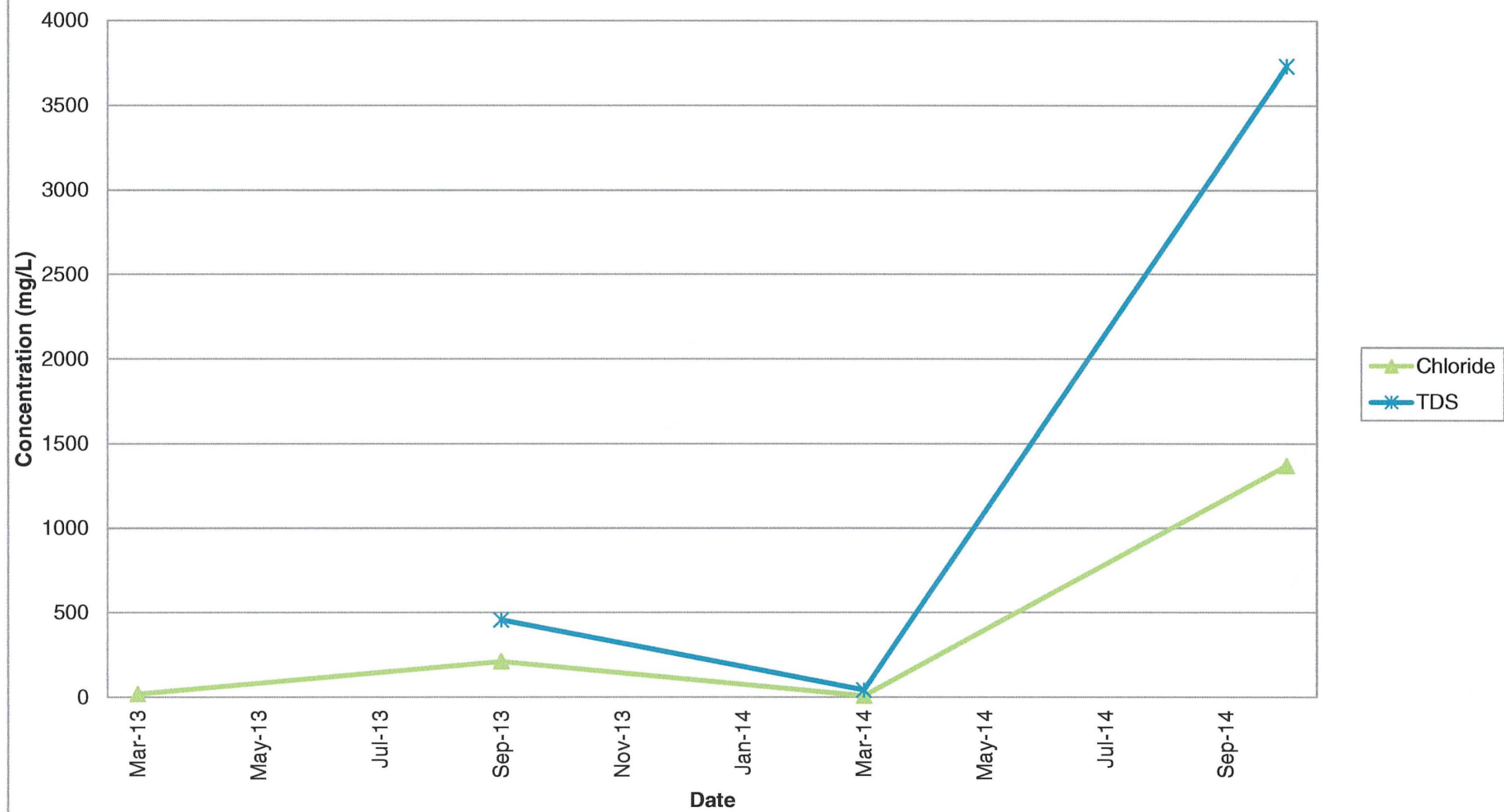
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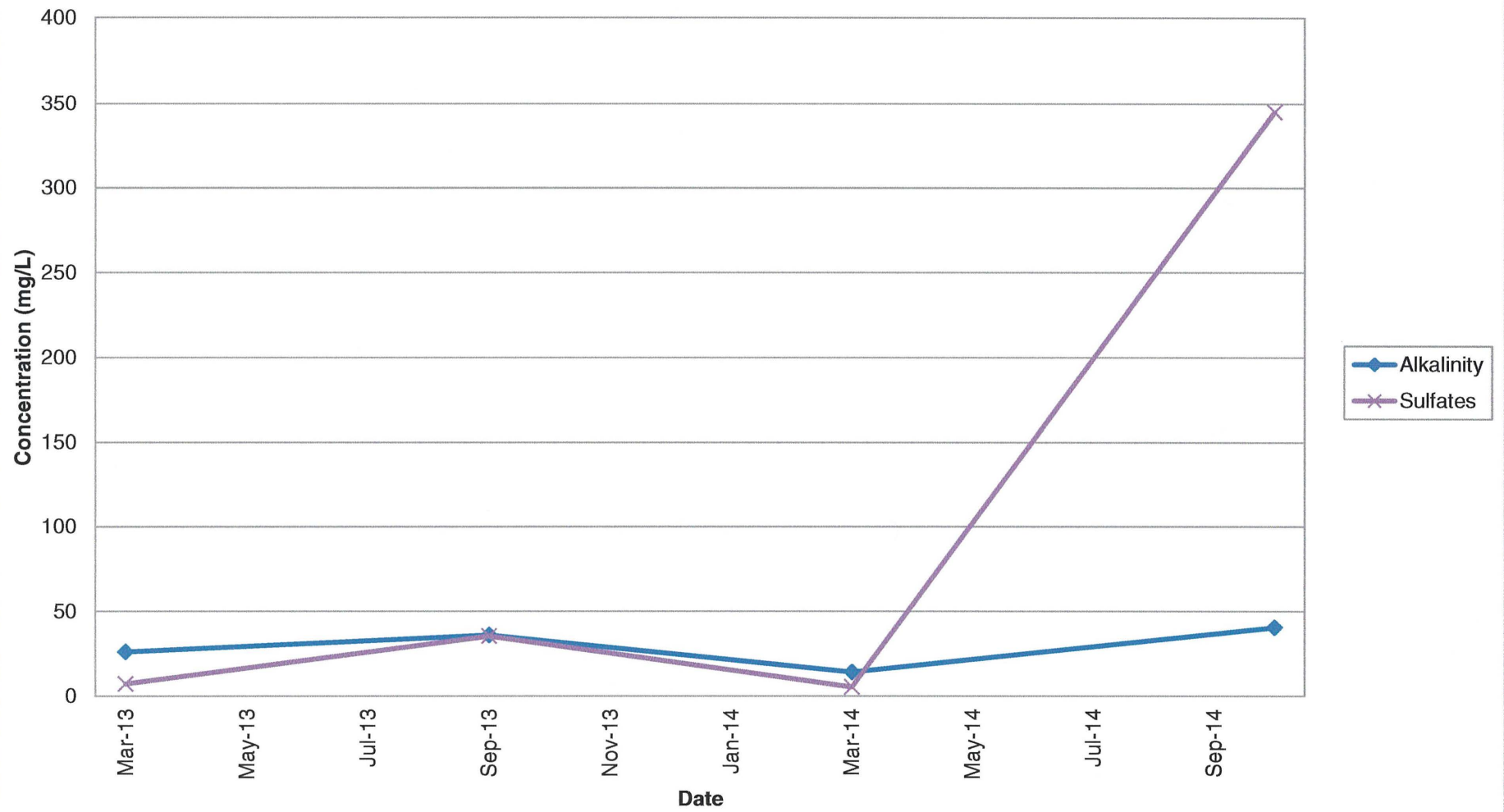
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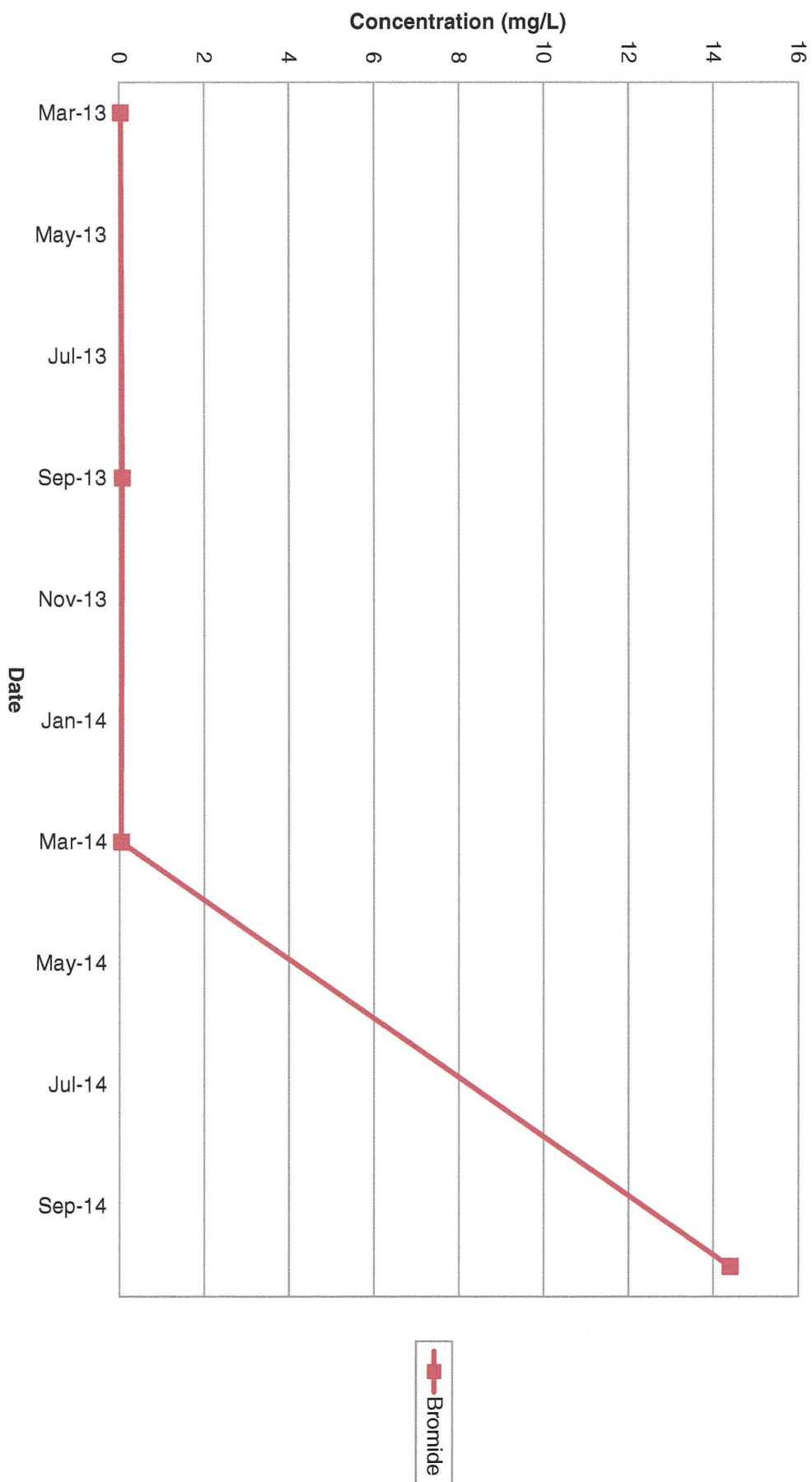
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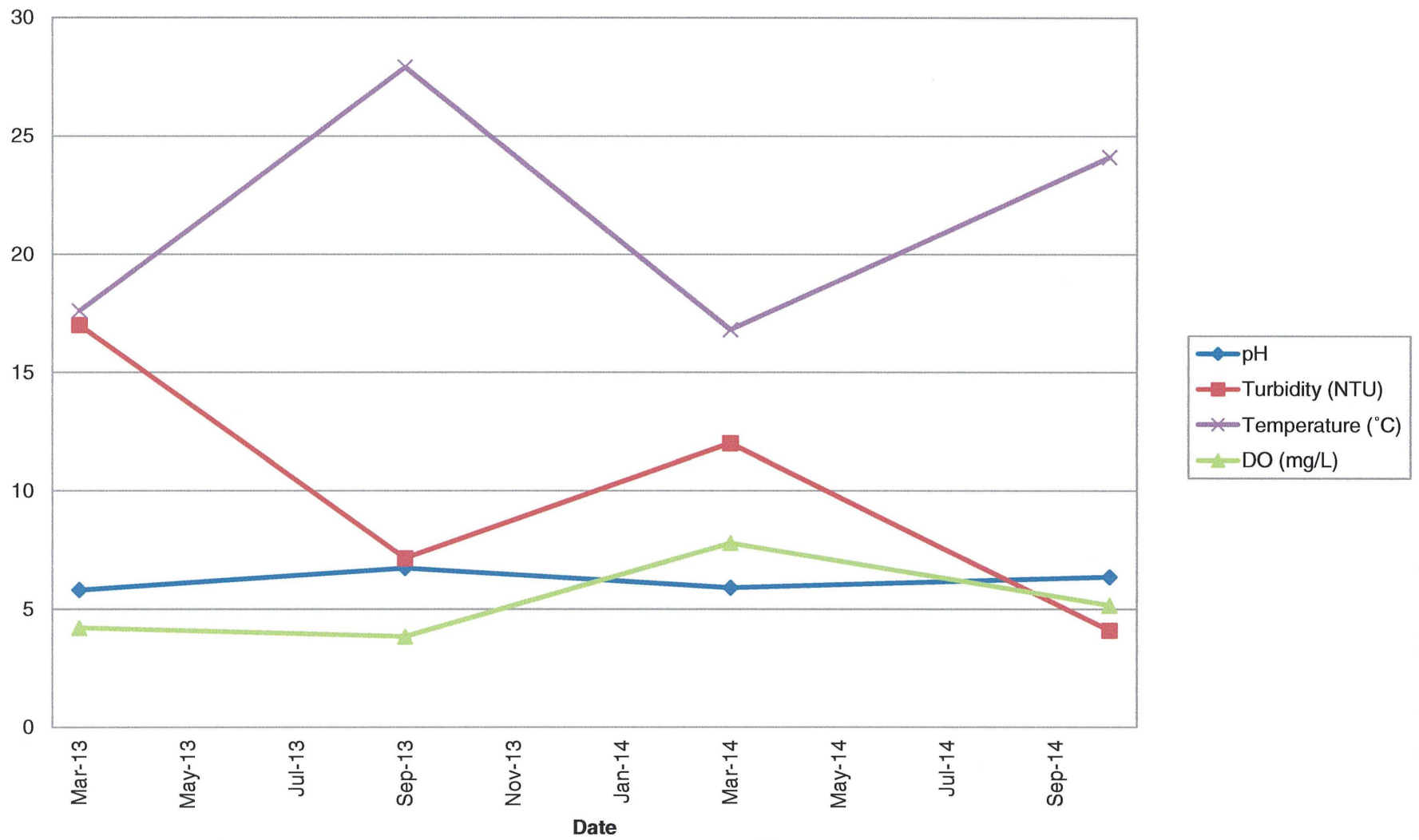
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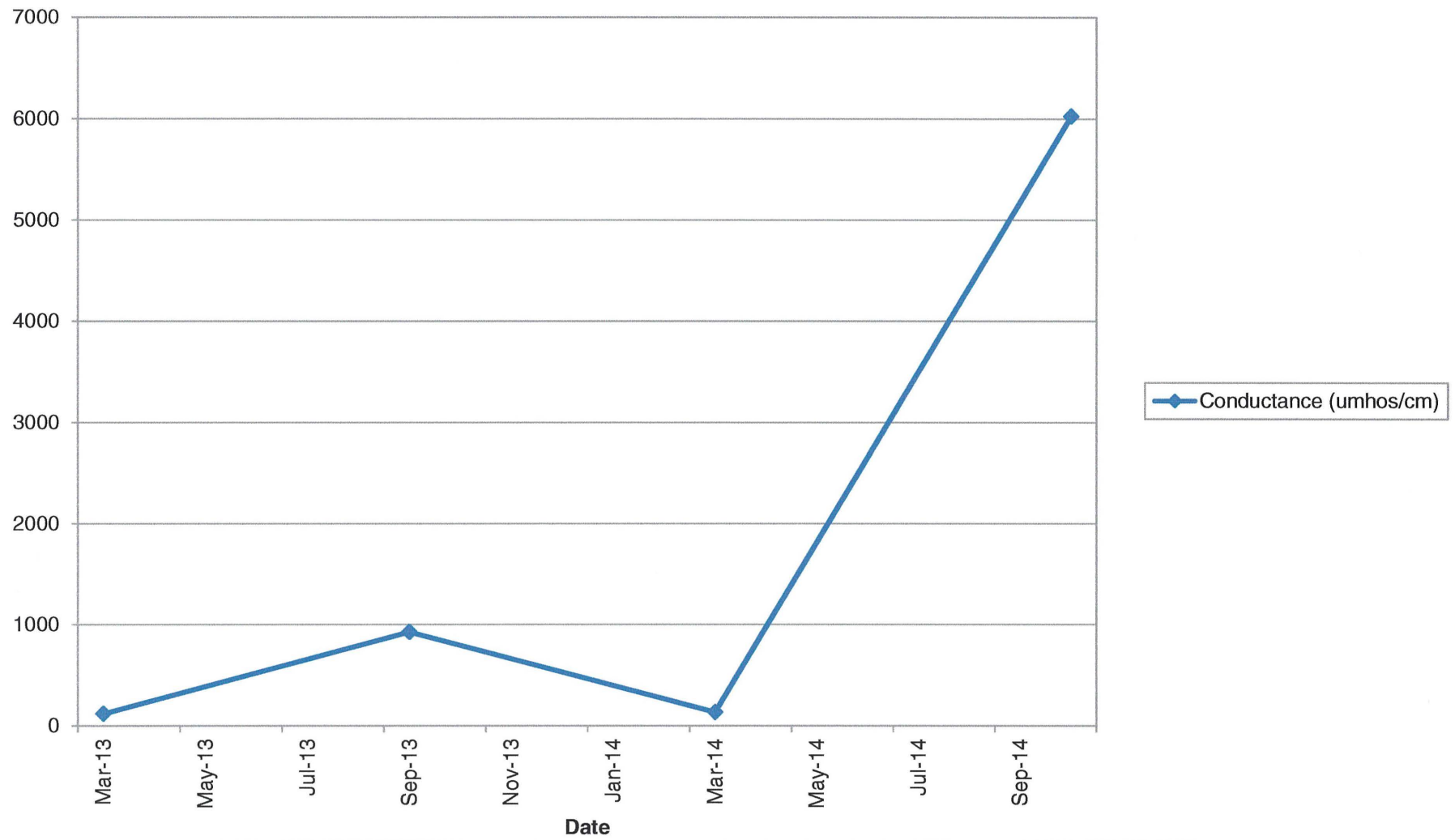
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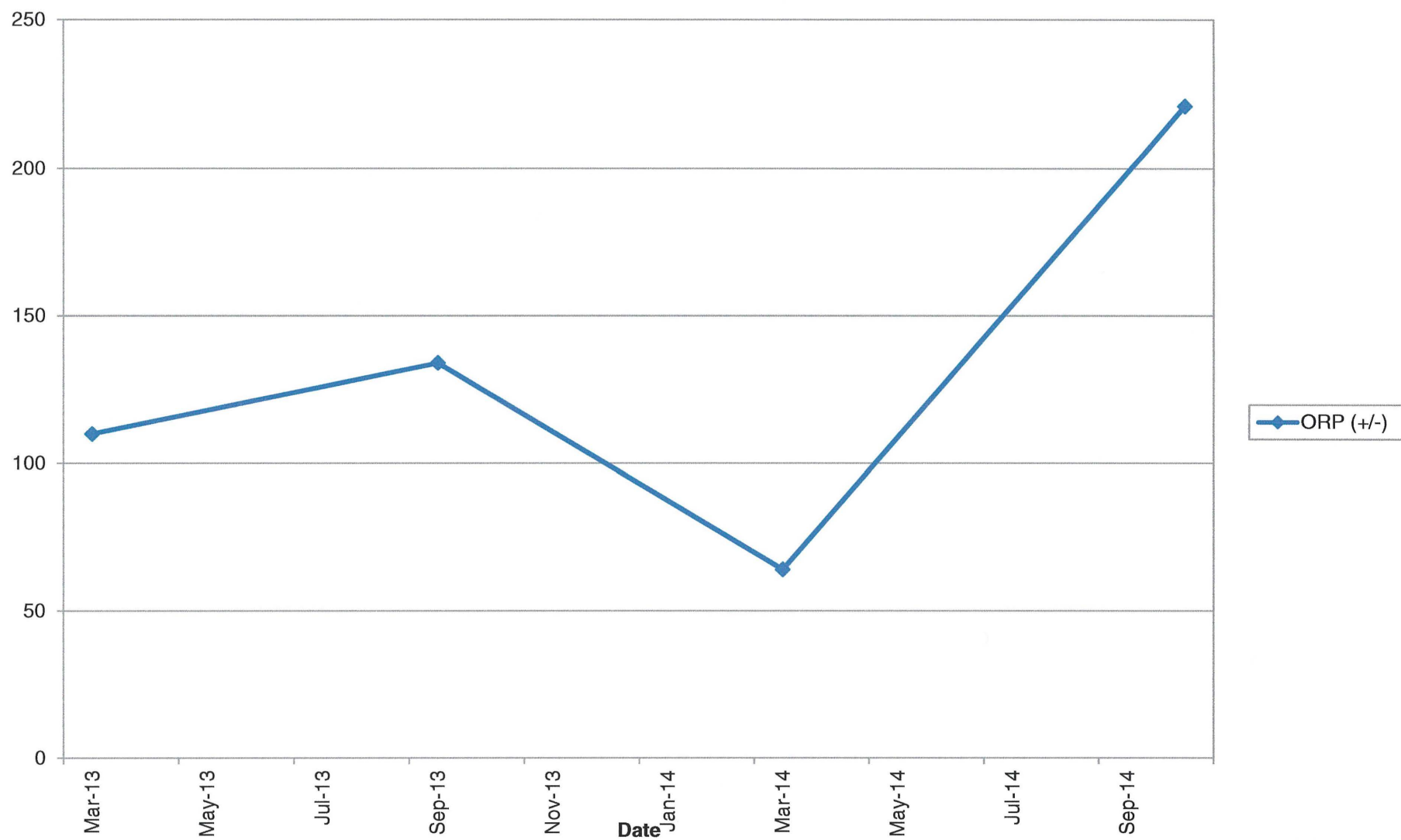
SW-8 Field Parameters (Part 1)



SW-8 Field Paramaters (Part 2)



SW-8Field Parameters (Part 3)



Appendix G

Hydrographs, Water Level Summary, and Rainfall

Plant Crist Water Level and Rainfall Data

Table 1G. Rainfall Data

CRIST RAINFALL DATA	
Month	Rainfall
Jan-13	2.119
Feb-13	11.140
Mar-13	11.82
Apr-13	4.836
May-13	2.05
Jun-13	8.51
Jul-13	20.808
Aug-13	9.7467
Sep-13	8.941
Oct-13	2.305
Nov-13	4.328
Dec-13	3.173
Jan-14	3.9
Feb-14	8.909
Mar-14	8.578
Apr-14	26.57
May-14	7.216
Jun-14	5.147
Jul-14	7.56
Aug-14	2.11
Sep-14	4.2
Oct-14	2.427
Nov-14	1.41
Dec-14	3.71

Table 2G. Unit 1 water level data.

Well	Mar-13	Sep-13	Mar-14	Oct-14
MWC-12	12.71	13.62	13.71	14.84
MWP-2	84.78	85.21	85.4	83.97
MWP-3	69.59	69.33	70.39	Dry
MWP-4	92.21	92.34	92.85	89.92
MWP-7	95.88	99.54	97.64	96.60
MWC-11	92.62	95.74	94.67	91.85
MWP-1	54.35	52.62	55.29	Dry

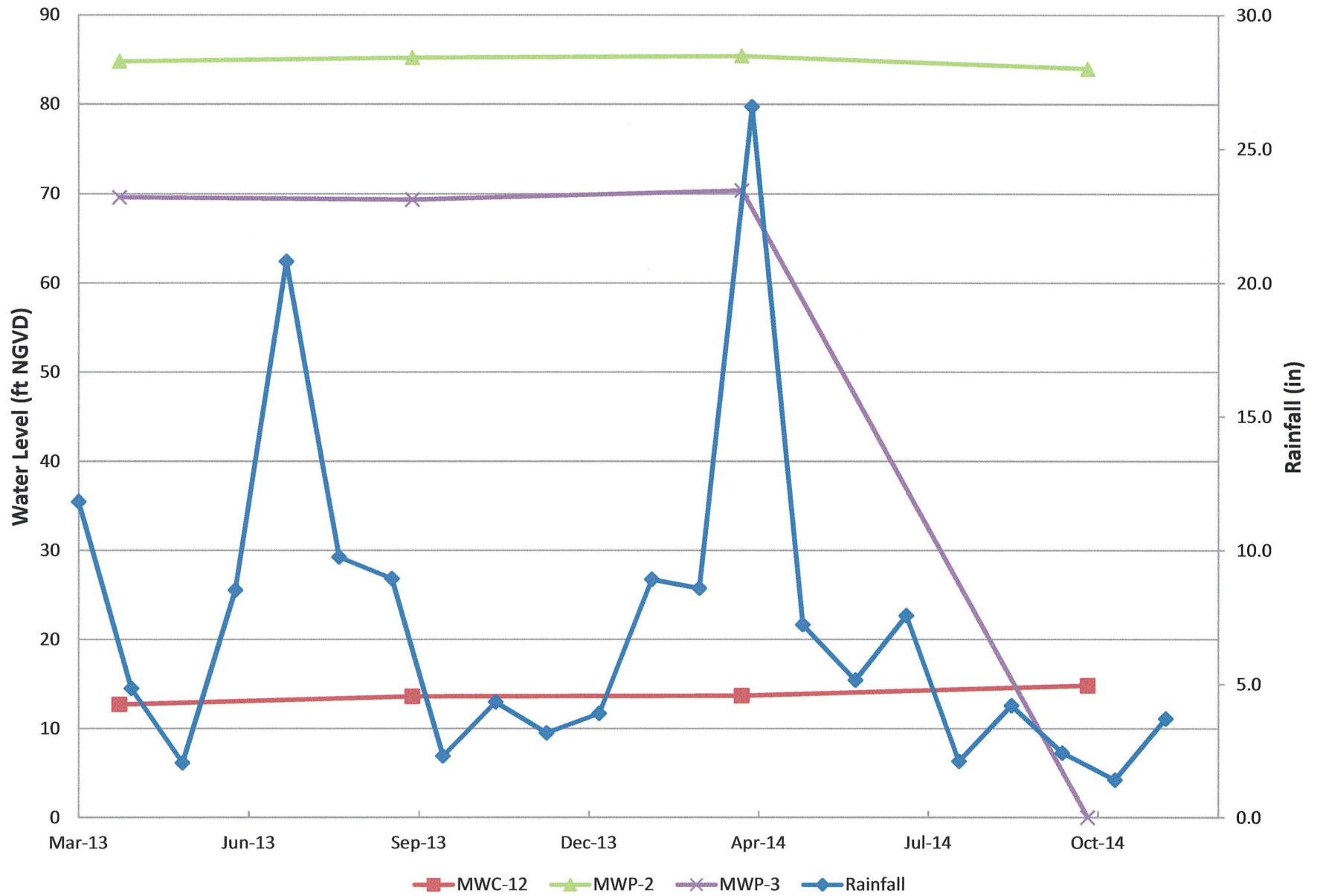
Table 4G. Unit 5 water level data.

Well	Mar-13	Sep-13	Mar-14	Oct-14
MWB-1	9.12	12.58	10.75	13
MWC-3	5.91	6.37	6.23	6.26
MWC-4	8.21	8.84	8.77	9.26
MWC-8	7.57	7.75	7.78	8.95
MWP-9	8.09	8.8	8.55	8.79
MWP-11	10.88	11.74	11.59	12.12
MWP-13	11.42	12.17	12.49	13.93
GE-1D	3.38	3.73	3.05	3.56
GE-2D	1.89	2.11	1.77	2.02
GE-3D	6.99	7.3	5.81	8.2
GE-4D	6.34	6.81	6.7	6.86
GE-5D	8.54	9.03	8.48	10.25
GE-6D	4.29	4.65	4.39	4.52

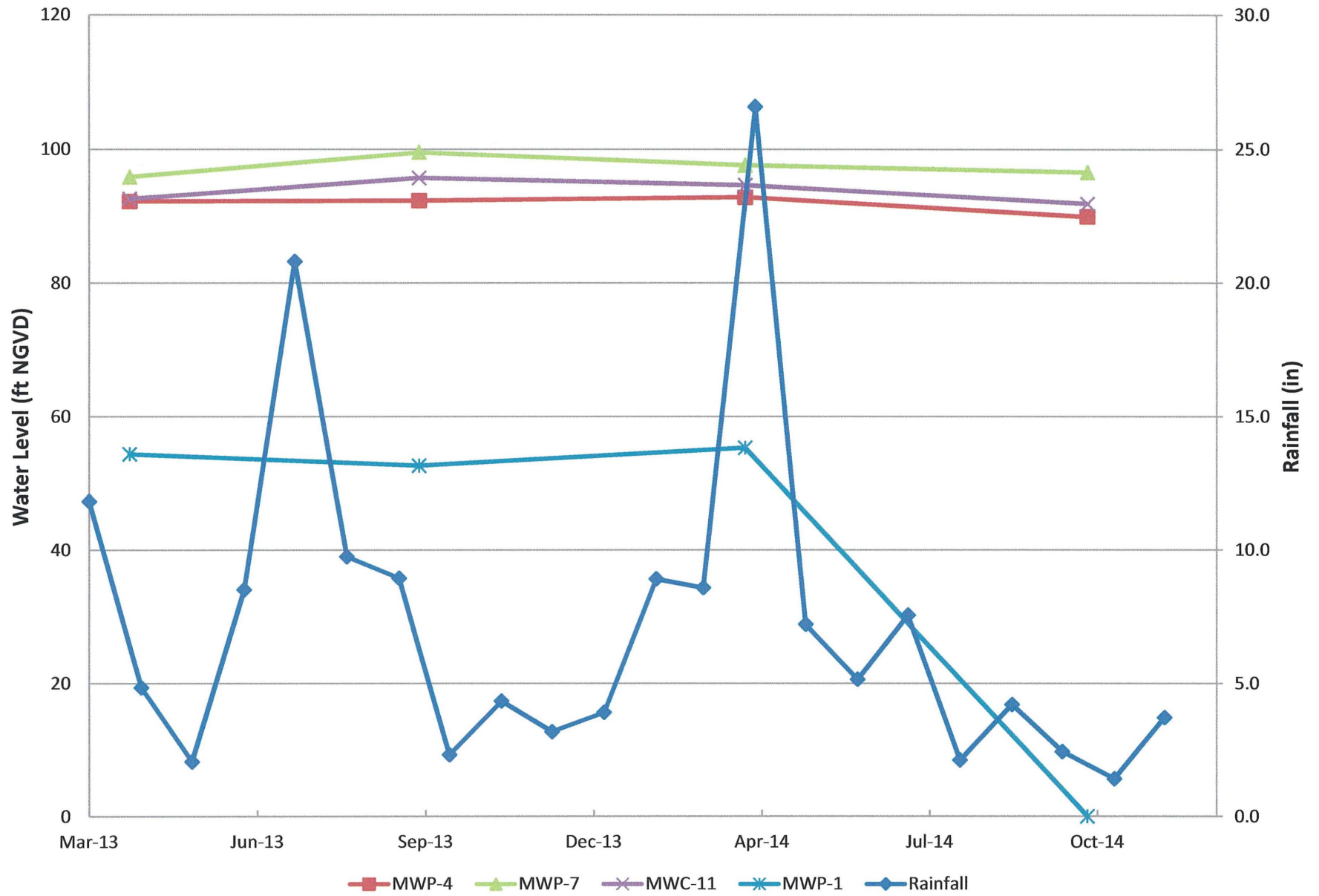
Table 3G. Unit 2 water level data.

Well	Mar-13	Sep-13	Mar-14	Oct-14
MWI-1	6.33	6.74	6.73	6.15
MWP-8	9.01	9.71	9.51	8.95
MWC-10	7.35	7.86	8.21	9.51
MWI-2	9.49	10.06	10.52	10.42
MWB-2	11.75	12.59	13.38	15.2
GW-1S	11.89	12.84	12.9	13.93
MWP-10	10.6	11.62	11.41	9.51
MWP-12	11.43	13.62	13.71	13.98
GE-1S	3.26	3.21	3.24	2.86
GE-2S	1.35	1.51	1.1	1.35
GE-3S	4.27	4.57	4.39	4.55
GE-4S	5.49	5.6	5.69	5.26
GE-5S	8.09	8.86	8.92	9.32
GE-6S	3.98	3.86	3.92	3.35

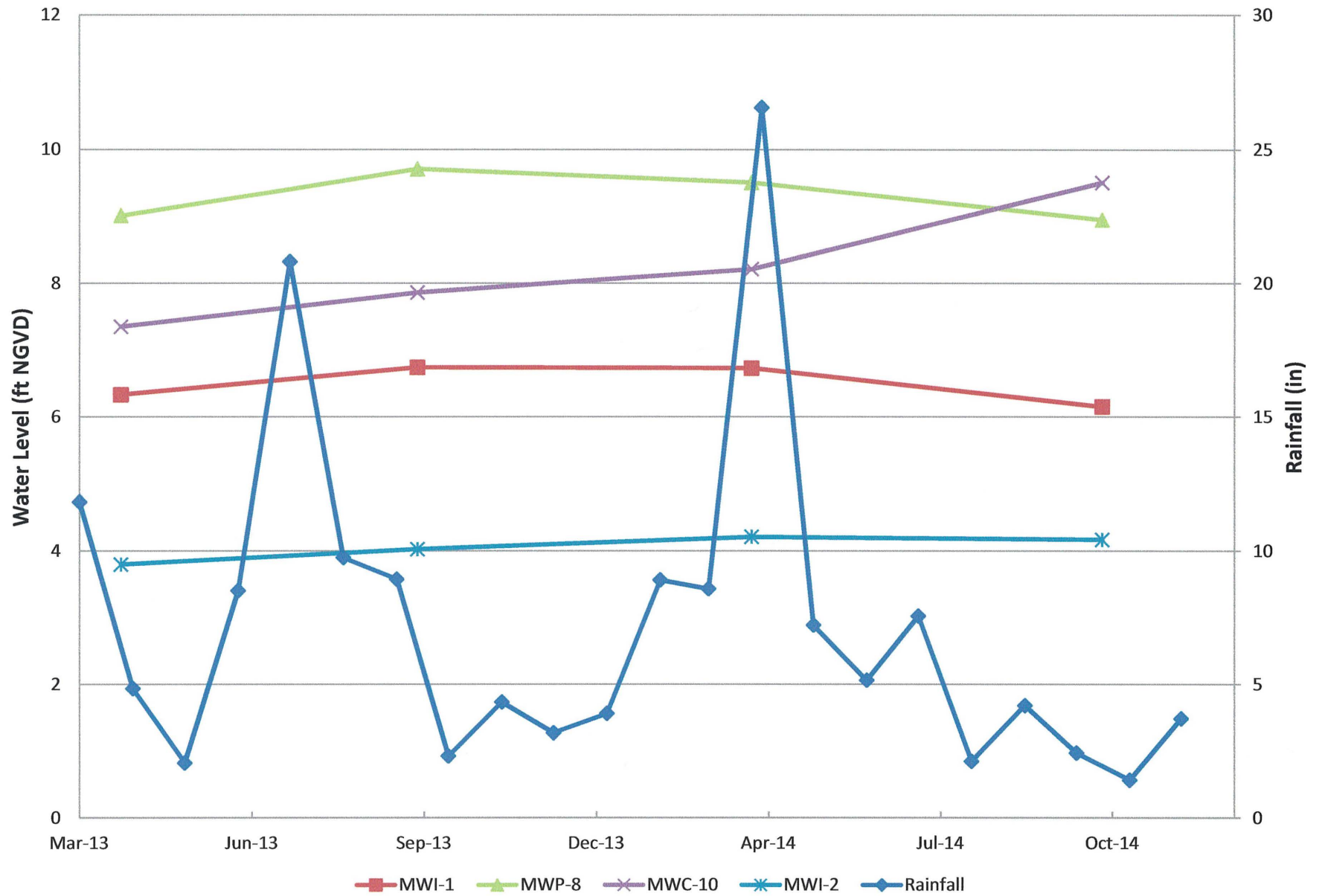
Unit 1 Hydrograph (Part 1)



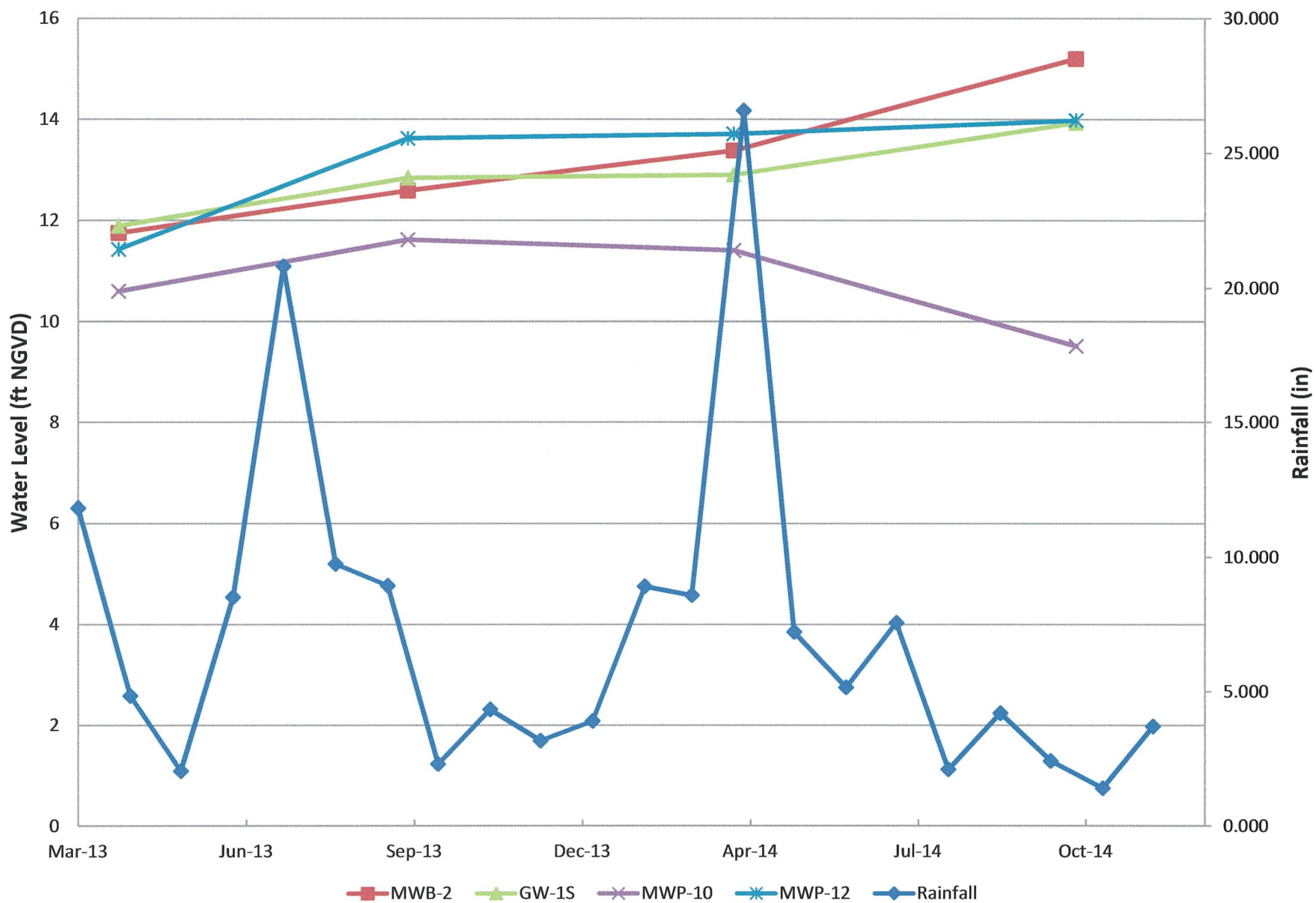
Unit 1 Hydrograph (Part 2)



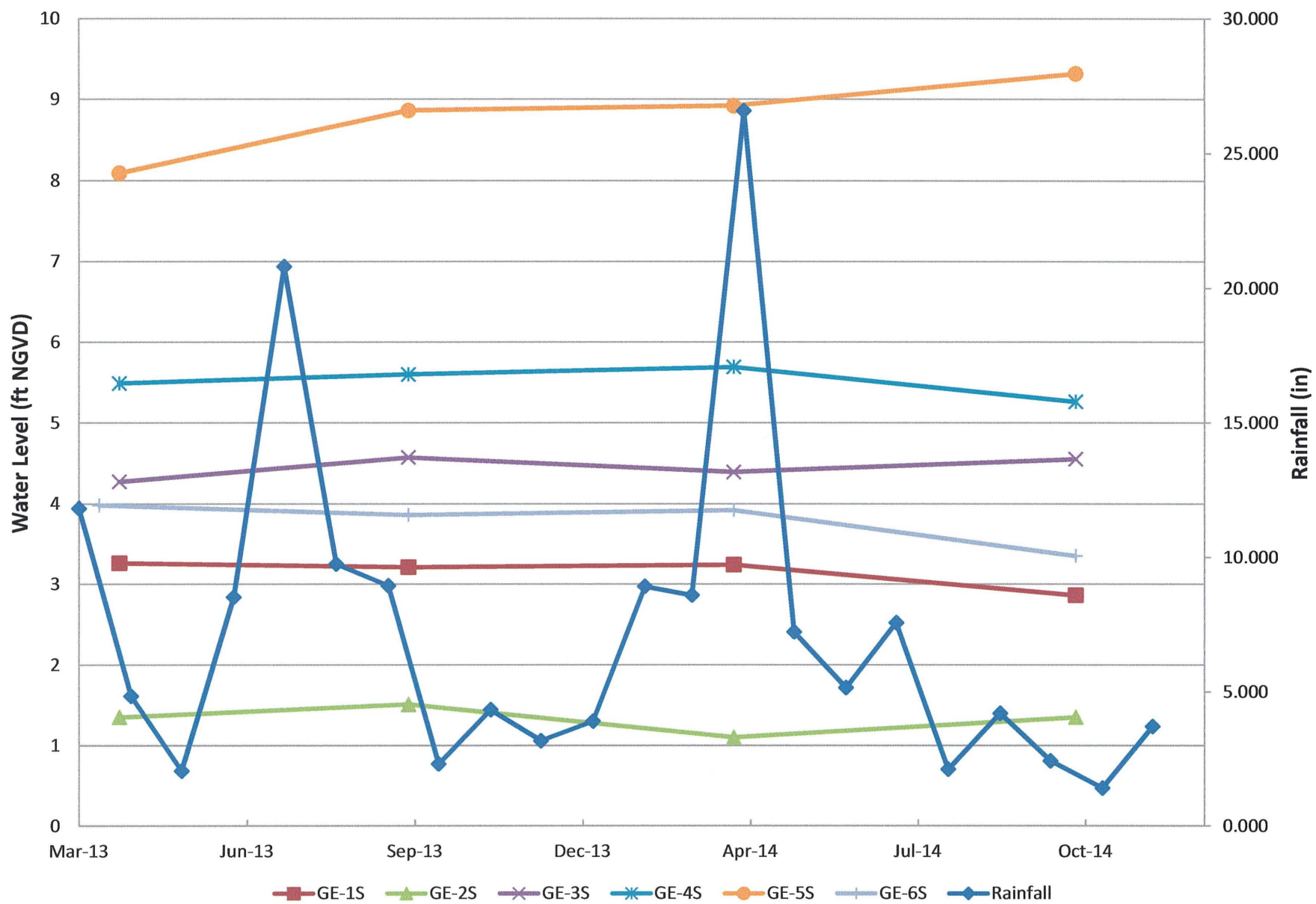
Unit 2 Hydrograph (Part 1)



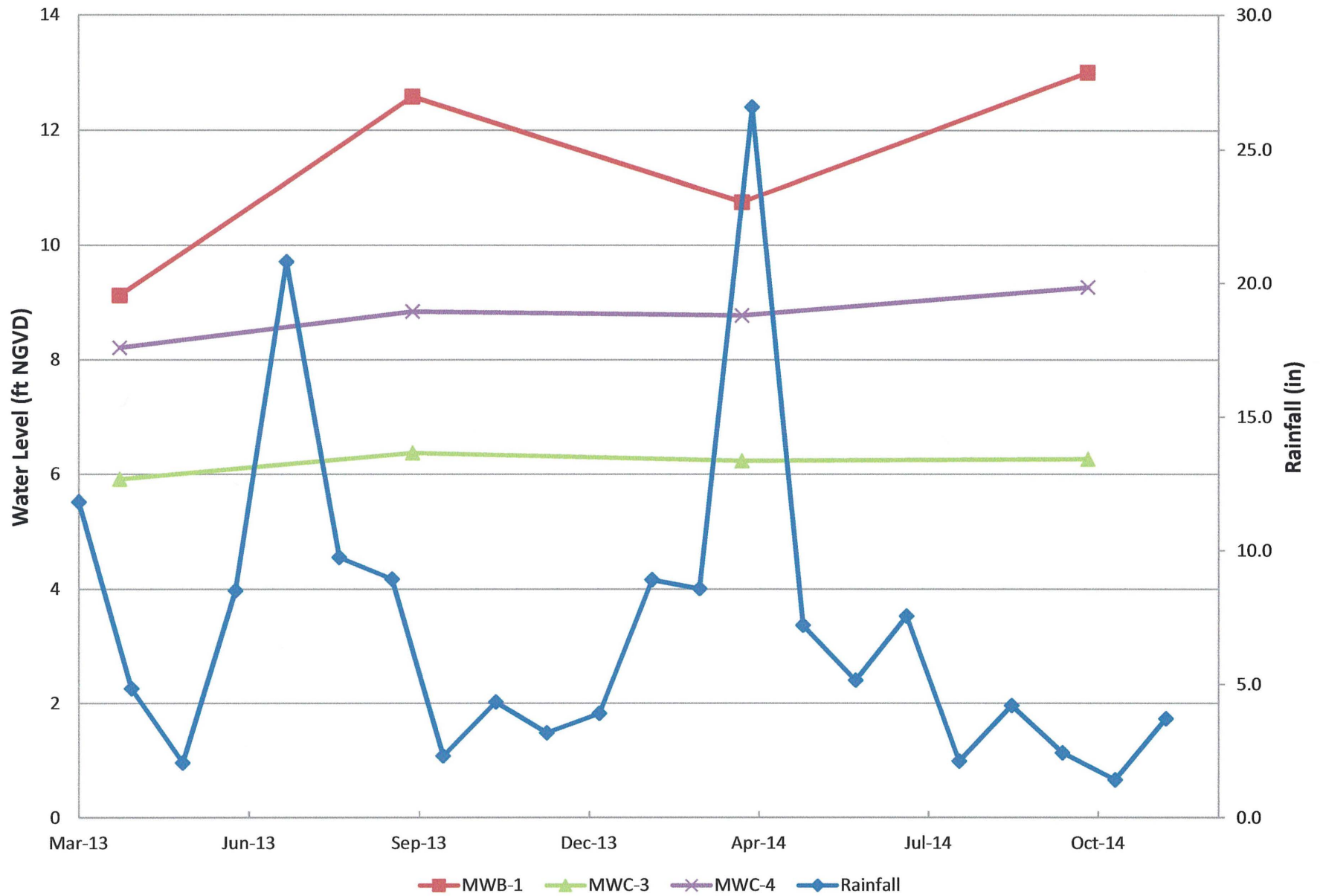
Unit 2 Hydrograph (Part 2)



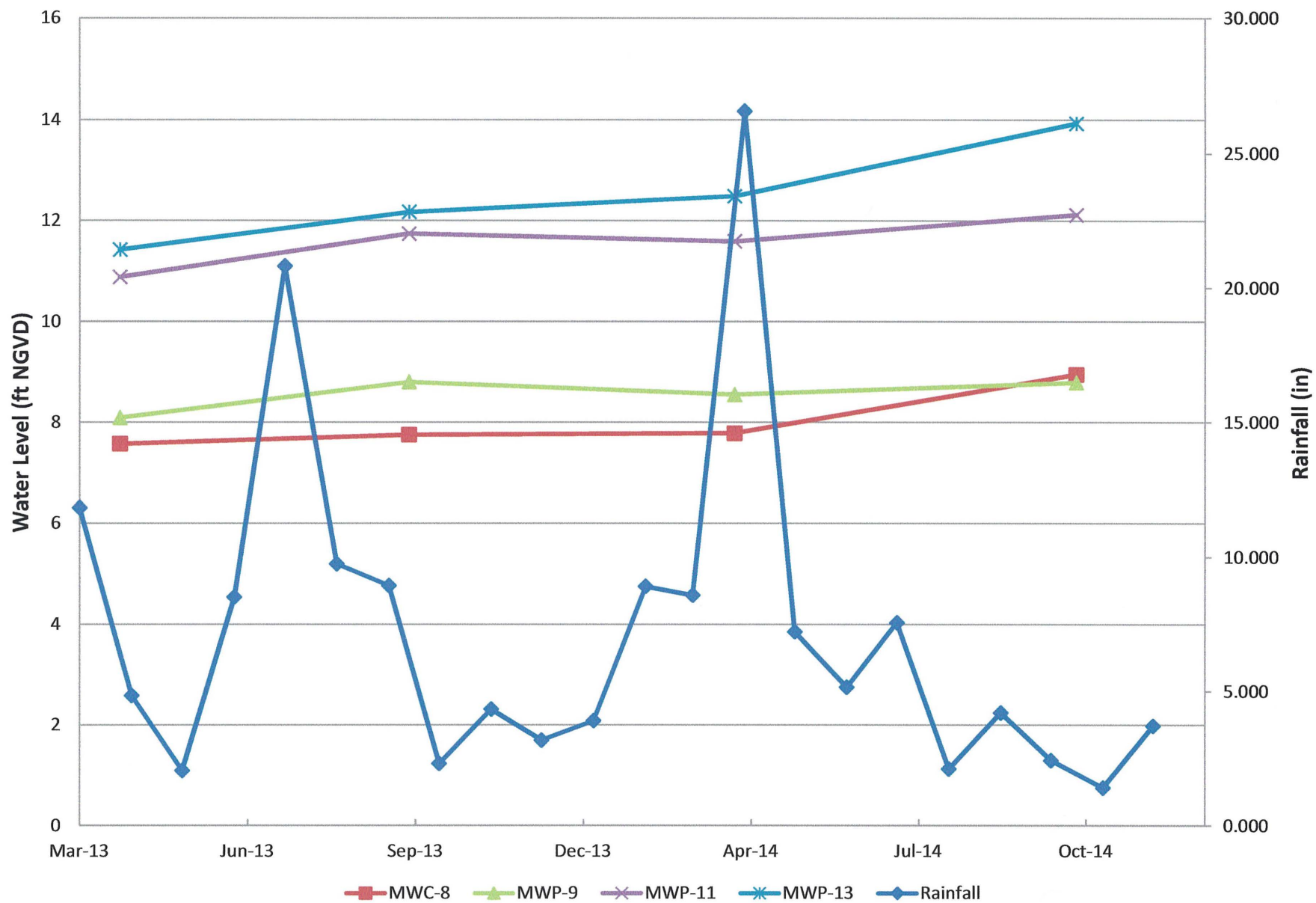
Unit 2 Hydrograph (Part 3)



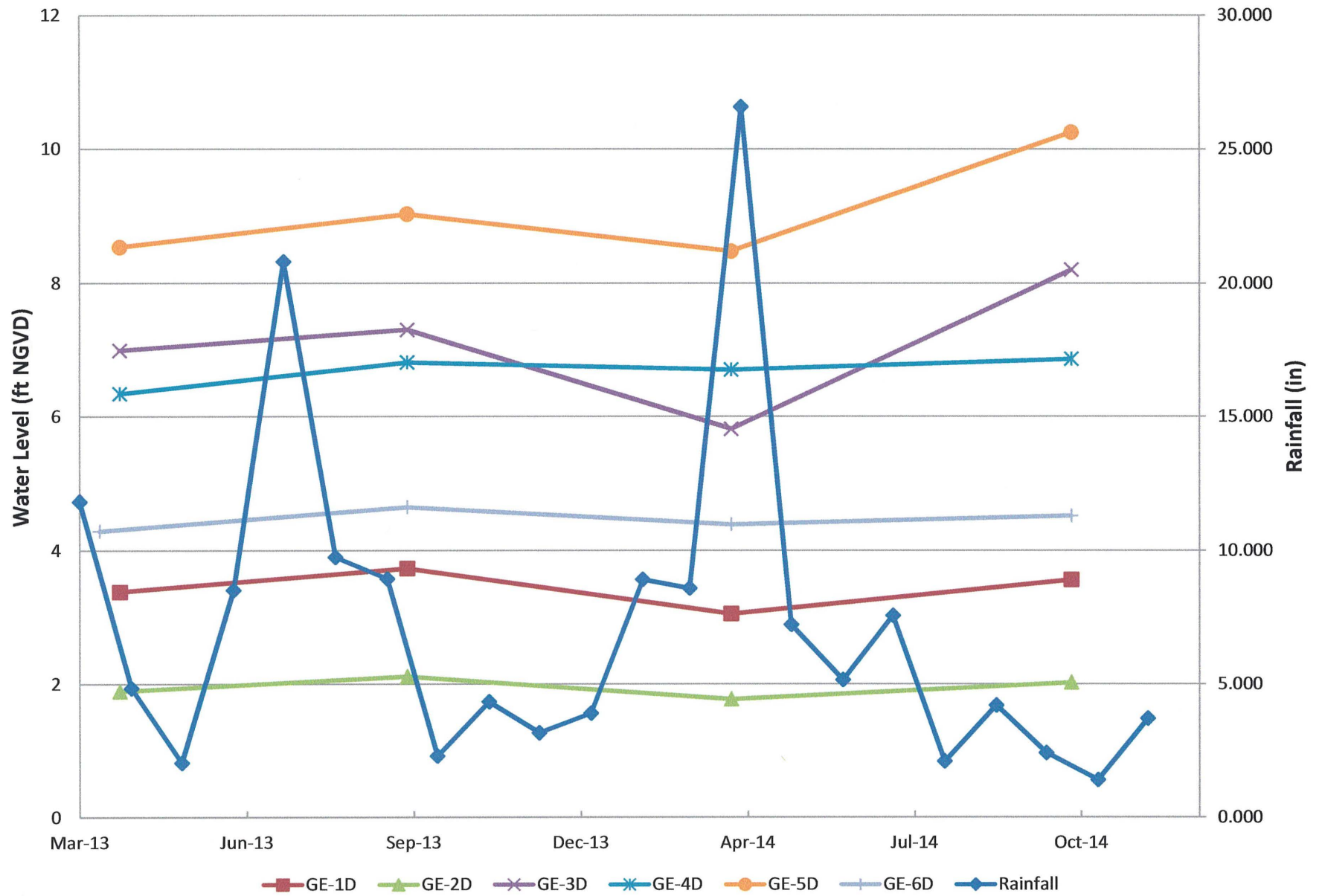
Unit 5 Hydrograph (Part 1)



Unit 5 Hydrograph (Part 2)

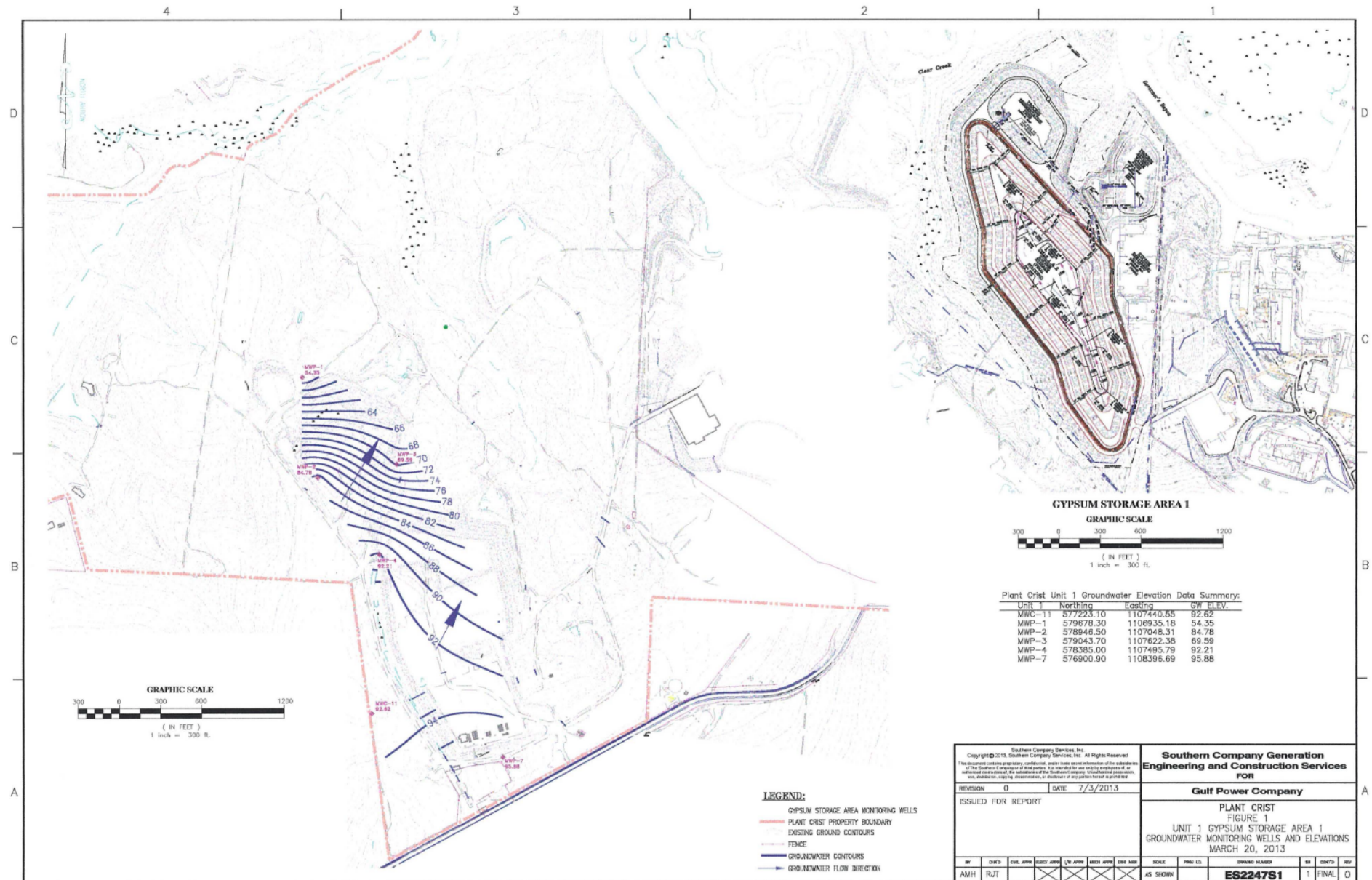


Unit 5 Hydrograph (Part 3)



Appendix H

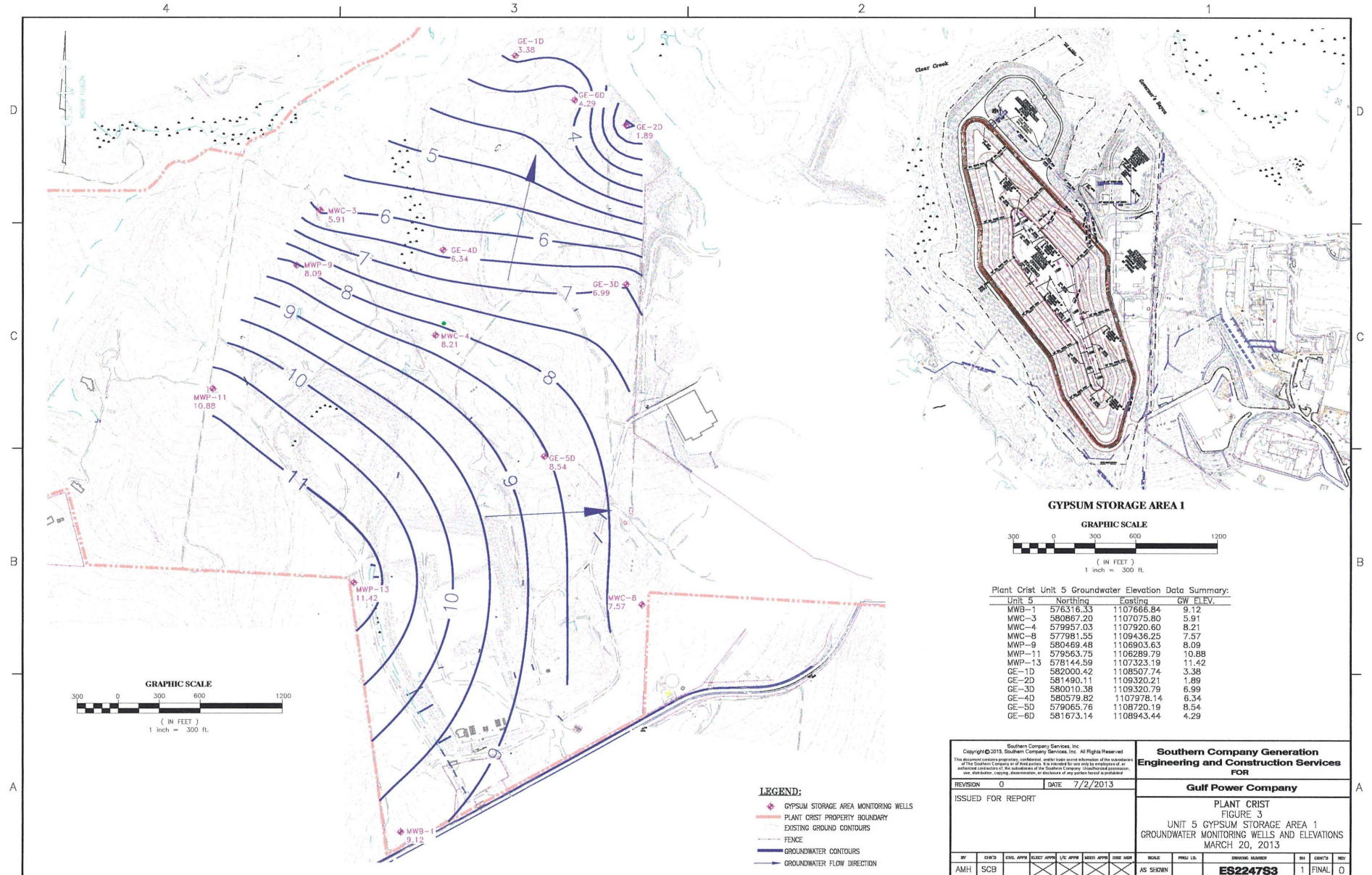
Potentiometric Maps



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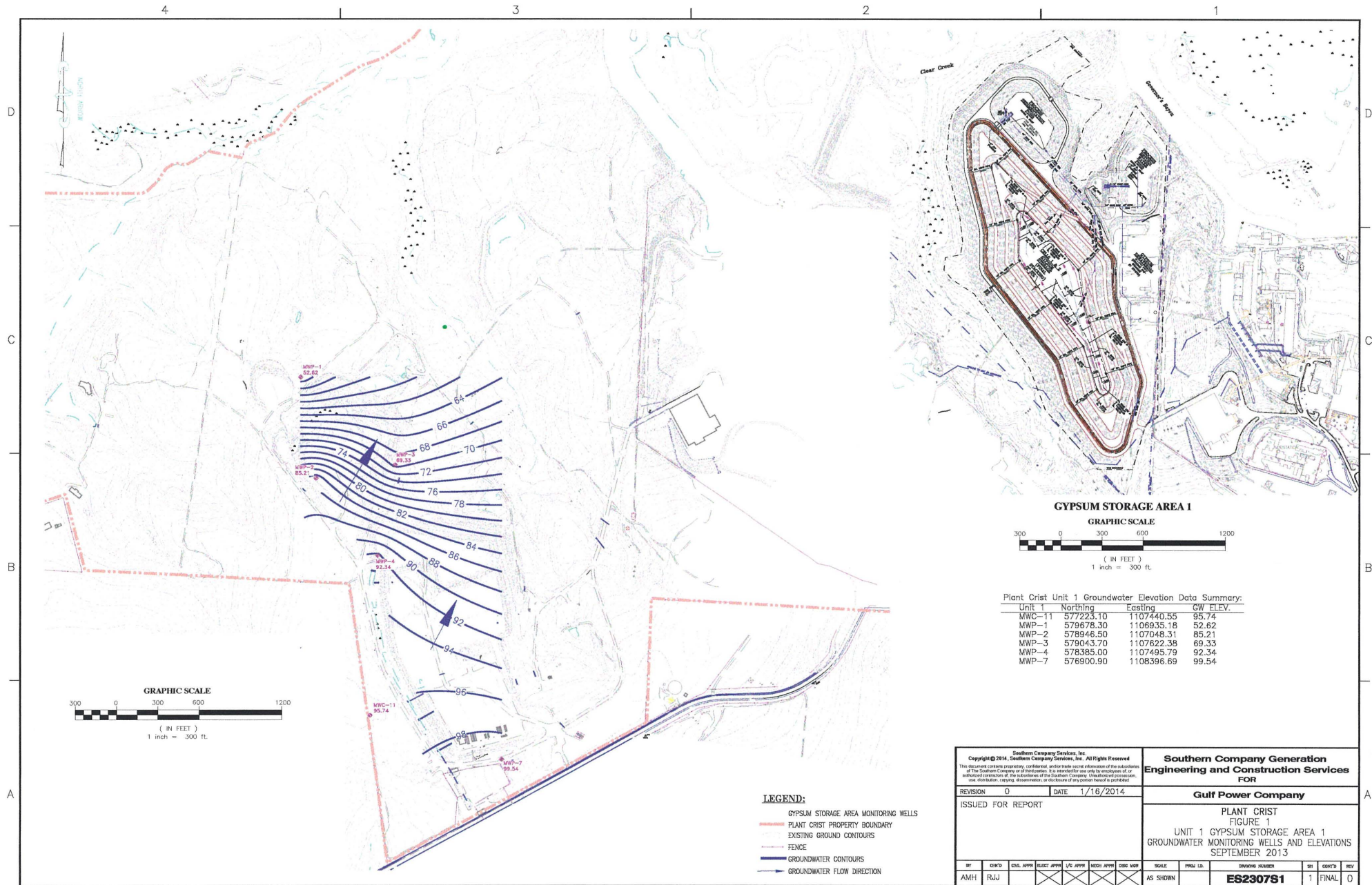
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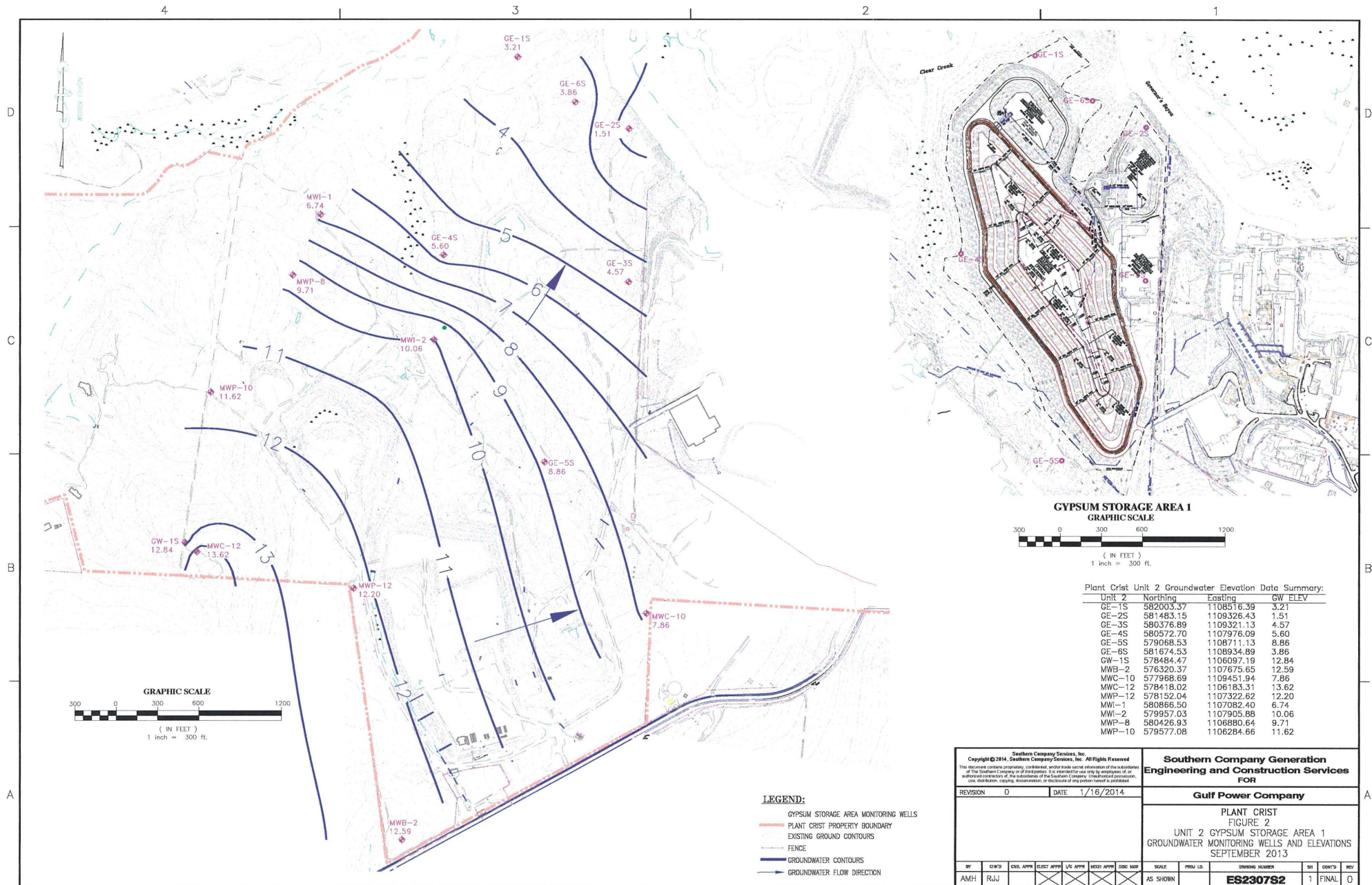
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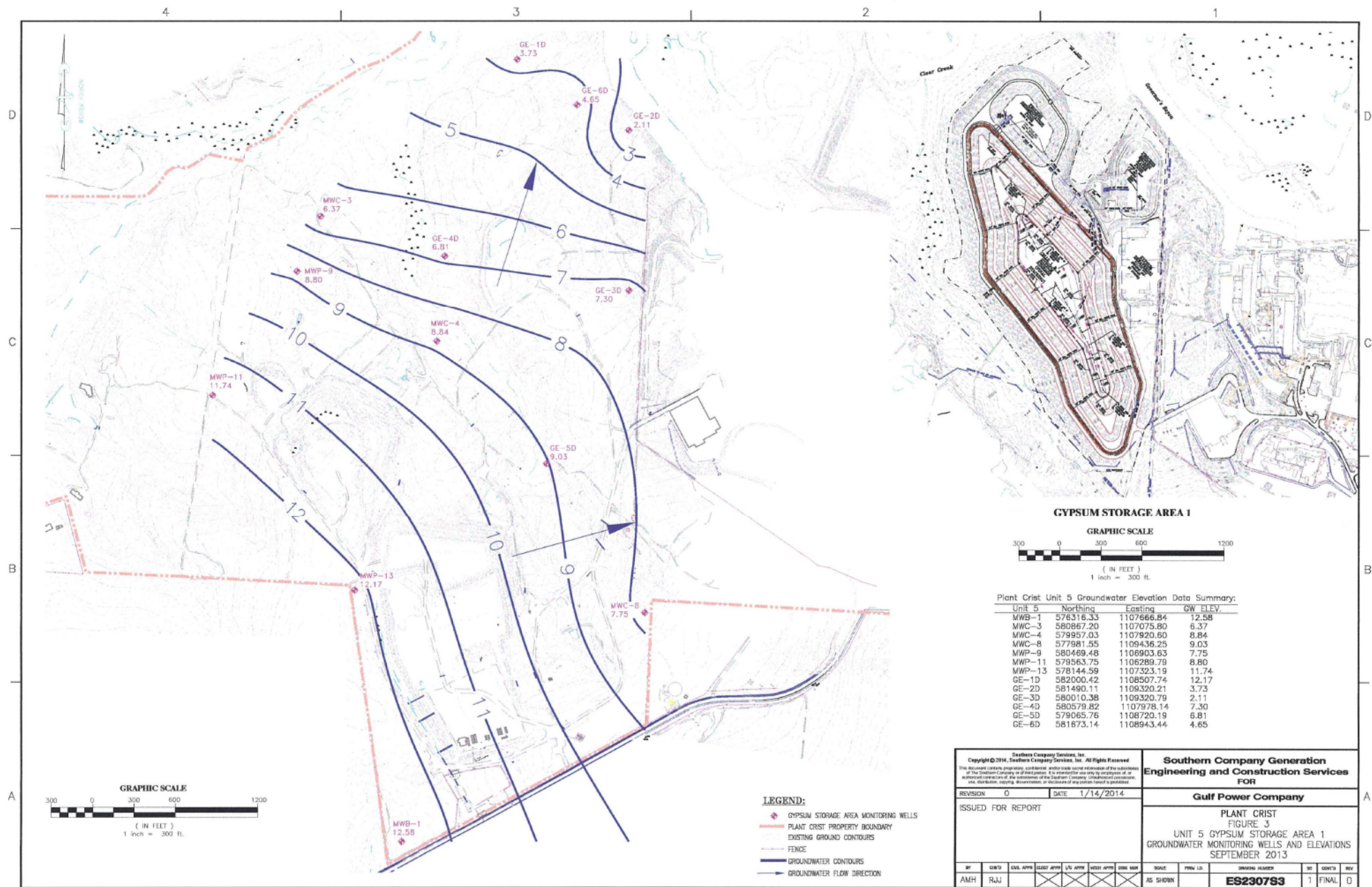


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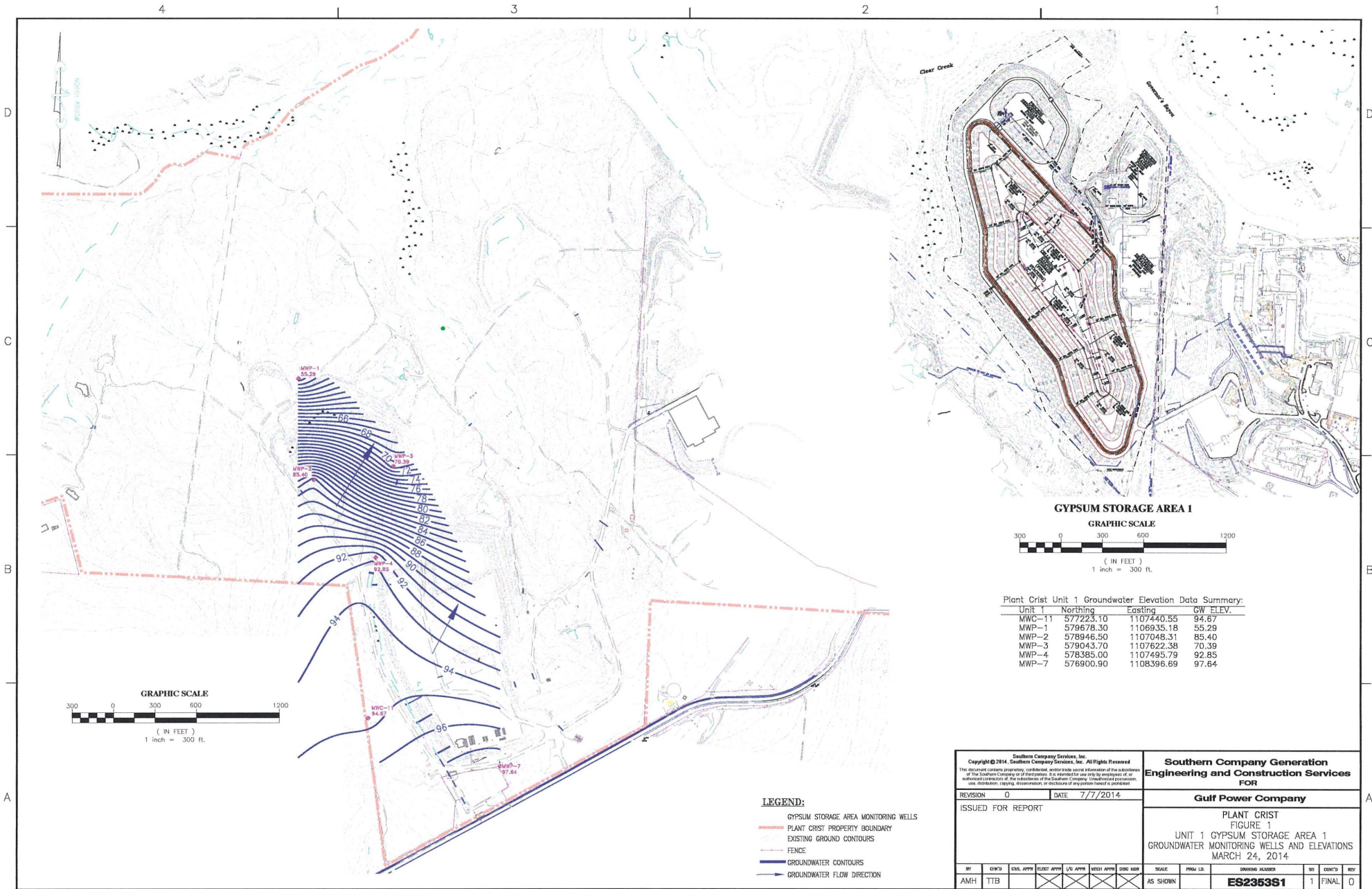




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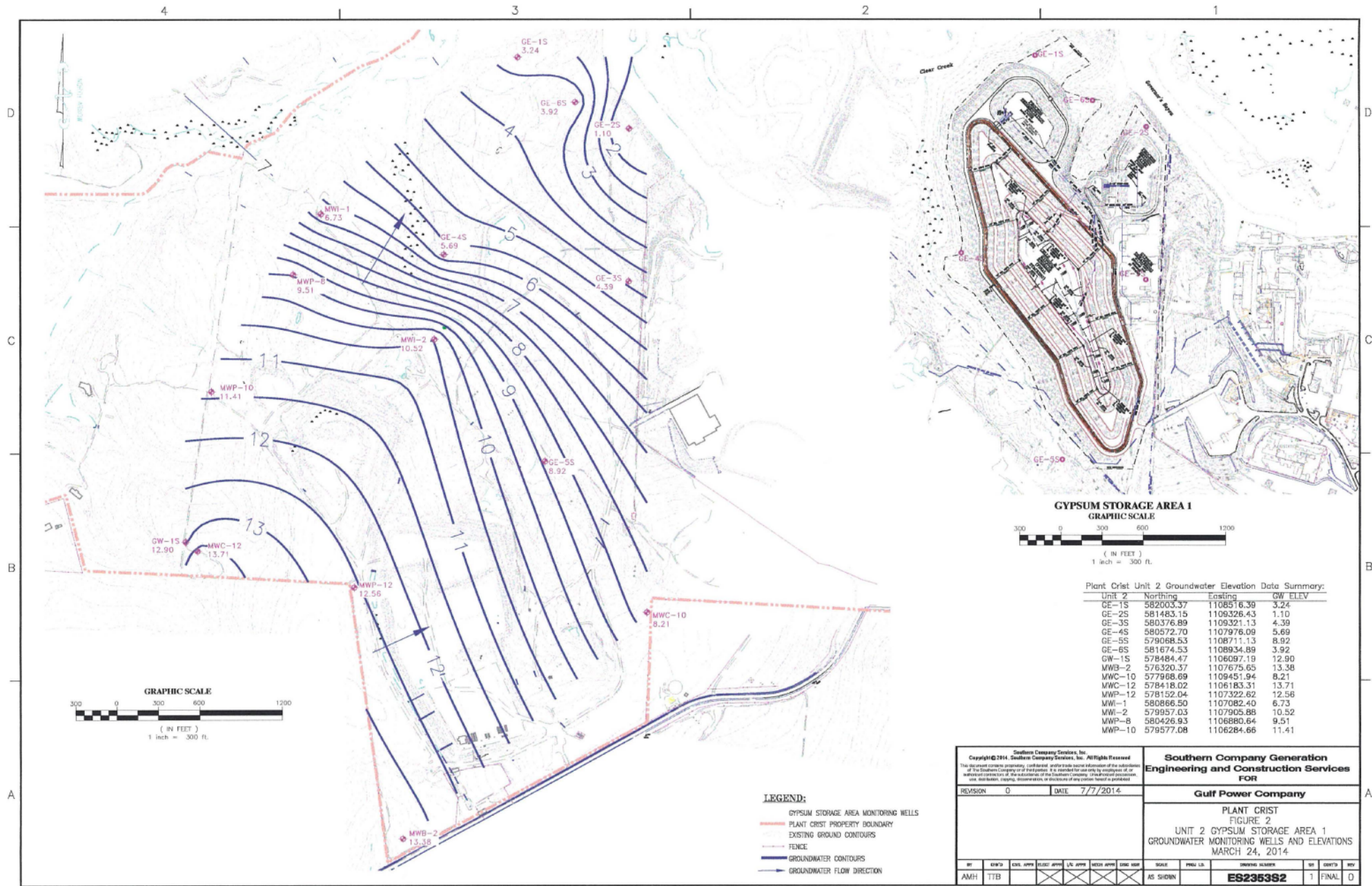
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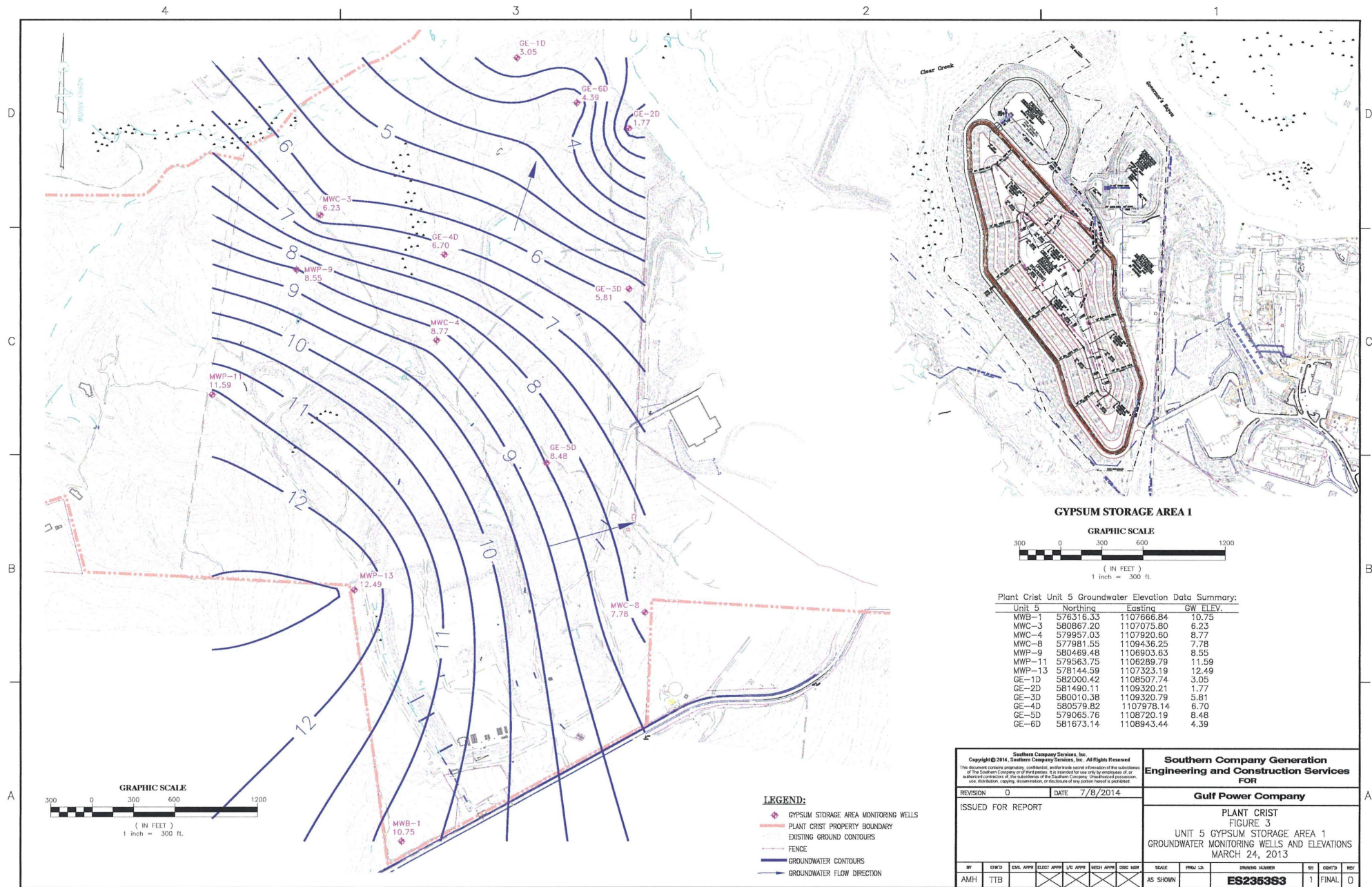


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ANSI D: 34X22 Acad2006

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Revision 0 ISSUED FOR REPORT		DATE 7/7/2014	
PLANT CRIST FIGURE 1 UNIT 1 GYPSUM STORAGE AREA 1 GROUNDWATER MONITORING WELLS AND ELEVATIONS MARCH 24, 2014		Gulf Power Company	
BY	CHK'D	DATE	REV
AMH	TTB		
SCALE: AS SHOWN		DRAWING NUMBER: ES2353531	
PROJ. ID:		SHEET: 1 OF 1	
DATE:		REV: 0	





Drawing name: T:\ESEE MAJOR PROJECTS\PROJECTS\CRIST\2014\ES23533_Groundwater Monitoring Report\dwg\ES235333.dwg Jul 09, 2014 - 2:08pm

ANSI D: 34X22

Acad2006



0 1,000 2,000 4,000 6,000 8,000 Feet
1 inch = 2,000 feet

Plant Crist Unit 1 Groundwater Elevation Data Summary

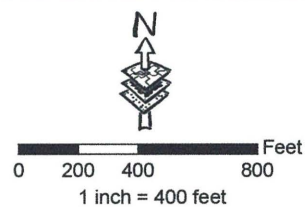
Unit 1	Northing	Easting	GW Elevation
MWC-11	577223.10	1107440.55	91.85
MWP-1	579678.30	1106935.18	DRY
MWP-2	578946.50	1107048.31	83.97
MWP-3	579043.70	1107622.38	DRY
MWP-4	578385.00	1107495.79	89.92
MWP-7	576900.90	1108369.69	96.60

Notes:

1. The coordinates as shown are referenced to the Florida State Plane Coordinate System North Zone, relative to the North American Datum of 1983.
2. The elevations as shown are referenced to the North American Vertical Datum of 1988 (NAVD88).
3. ft indicates feet.
4. Water levels were collected on October 8, 2014.

Legend

- Monitoring Well MWP-2 83.97 Well ID Groundwater Elevation (ft NAVD88)
- Property Boundary
- 92 Potentiometric Surface Contour (ft NAVD88)
- Groundwater Flow Direction



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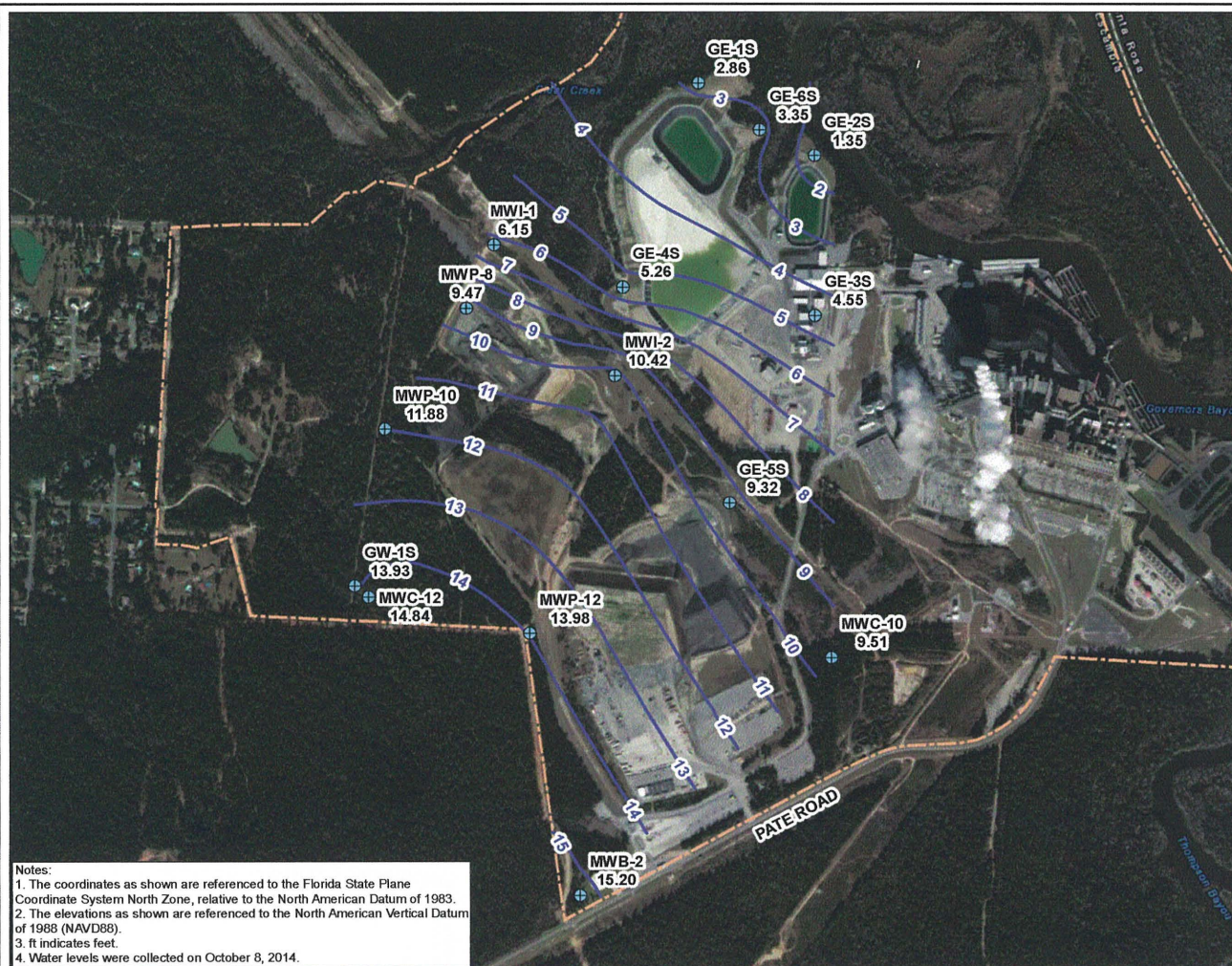
FIGURE 1
GROUNDWATER MONITORING WELLS
AND ELEVATIONS - OCTOBER 2014
PLANT CRIST - UNIT 1

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Gulf Power Company

Drawing Number **ES2417S1**



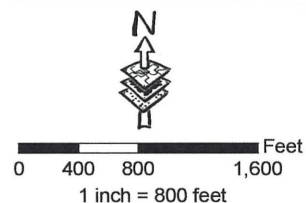
0 1,000 2,000 4,000 6,000 8,000 Feet
 1 inch = 2,000 feet

Plant Crist Unit 2 Groundwater Elevation Data Summary

Unit 2	Northing	Easting	GW Elevation
GE-1S	582003.37	1108516.39	2.86
GE-2S	581483.15	1109326.43	1.35
GE-3S	580376.89	1109321.13	4.55
GE-4S	580572.70	1107976.09	5.26
GE-5S	579068.53	1108711.13	9.32
GE-6S	581674.53	1108934.89	3.35
GW-1S	578484.47	1106097.19	13.93
MWB-2	576320.37	1107675.65	15.20
MWC-10	577968.69	1109451.94	9.51
MWC-12	578418.02	1106183.31	14.84
MWI-1	578152.04	1107322.62	6.15
MWI-2	580866.50	1107082.40	10.42
MWP-10	579957.03	1107905.88	11.88
MWP-12	580426.93	1106880.64	13.98
MWP-8	579577.08	1106284.66	9.47

Legend

- + Monitoring Well + Well ID + Groundwater Elevation (ft NAVD88)
- Property Boundary
- Potentiometric Surface Contour (ft NAVD88)
- Groundwater Flow Direction



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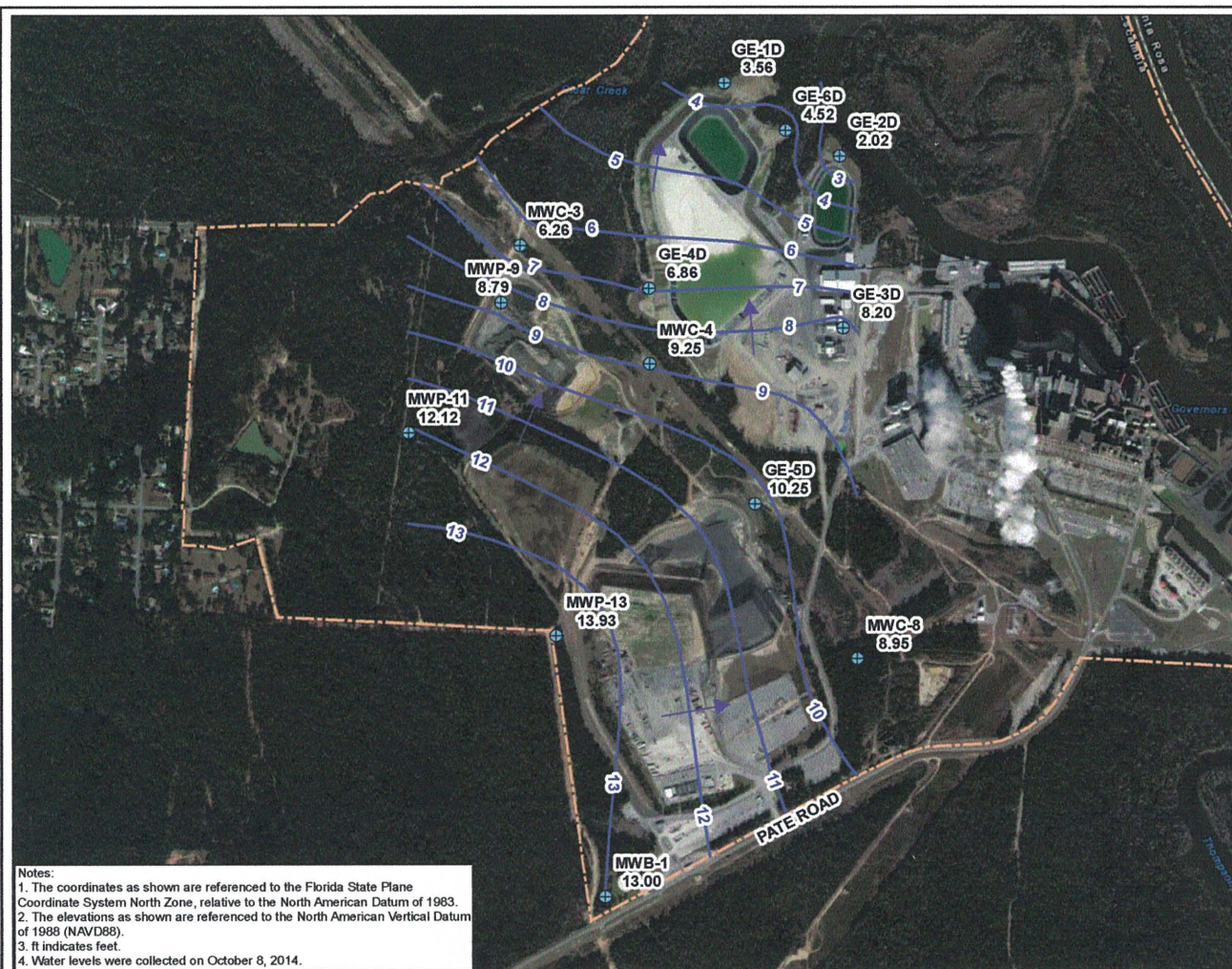
FIGURE 2
 GROUNDWATER MONITORING WELLS
 AND ELEVATIONS - OCTOBER 2014
 PLANT CRIST - UNIT 2

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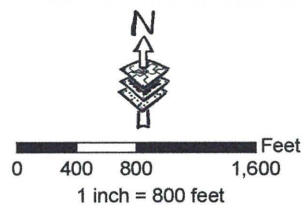
0 1,000 2,000 4,000 6,000 8,000 Feet
1 inch = 2,000 feet

Plant Crist Unit 5 Groundwater Elevation Data Summary

Unit 5	Northing	Easting	GW Elevation
GE-1D	582000.42	1108507.74	3.56
GE-2D	581490.11	1109320.21	2.02
GE-3D	580010.38	1109320.79	8.20
GE-4D	580579.82	1107978.14	6.86
GE-5D	579065.76	1108720.19	10.25
GE-6D	581673.14	1108943.44	4.52
MWB-1	576316.33	1107666.84	13.00
MWC-3	580867.20	1107075.80	6.26
MWC-4	579957.03	1107920.60	9.25
MWC-8	577981.55	1109436.25	8.95
MWP-11	579563.75	1106289.79	12.12
MWP-13	578144.59	1107323.19	13.93
MWP-9	580469.48	1106903.63	8.79

Legend

- Monitoring Wells GE-1D Well ID 3.56 Groundwater Elevation (ft NAVD88)
- Property Boundary
- Potentiometric Surface Contours (ft NAVD88)
- Groundwater Flow Direction



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FIGURE 3
GROUNDWATER MONITORING WELLS
AND ELEVATIONS - OCTOBER 2014
PLANT CRIST - UNIT 5

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FOR

Gulf Power Company

Drawing Number **ES2417S3**