



Nick Tumney

Senior Implementation Manager

Addressing the need for
**Data Governance &
Digital Transformation**
in our Industry.

**A Valuable Tool in Site
Assessment & Remediation**

ESG Compliant?



Environmental Practice



Social Responsibility



Data Governance

Data Governance?

Spreadsheets
vs
databases

Challenges

- Tons of paperwork
- Data Intensive
 - years' worth
- Manual Transcription
 - errors, delays, rework
- Security



The Solution!

“Digital Transformation”

- Integrated digital tools & EDMS
- Capture all stages of the Project Life Cycle

Input



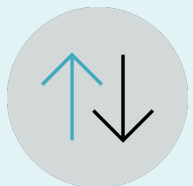
Sample Planning



Field Notes



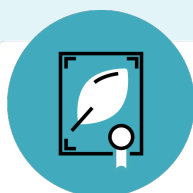
Lab Reports



Historical Data

EDMS

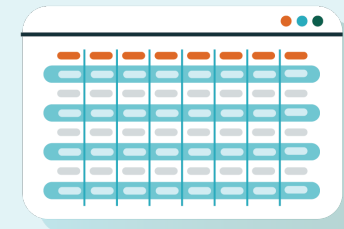
esdat 



Regulatory
Guidelines

Data QA,
Review and
Acceptance

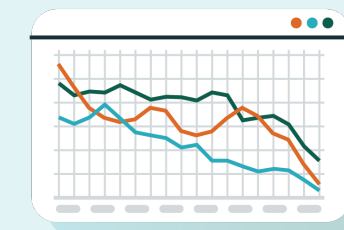
Output



Exceedance
Tables

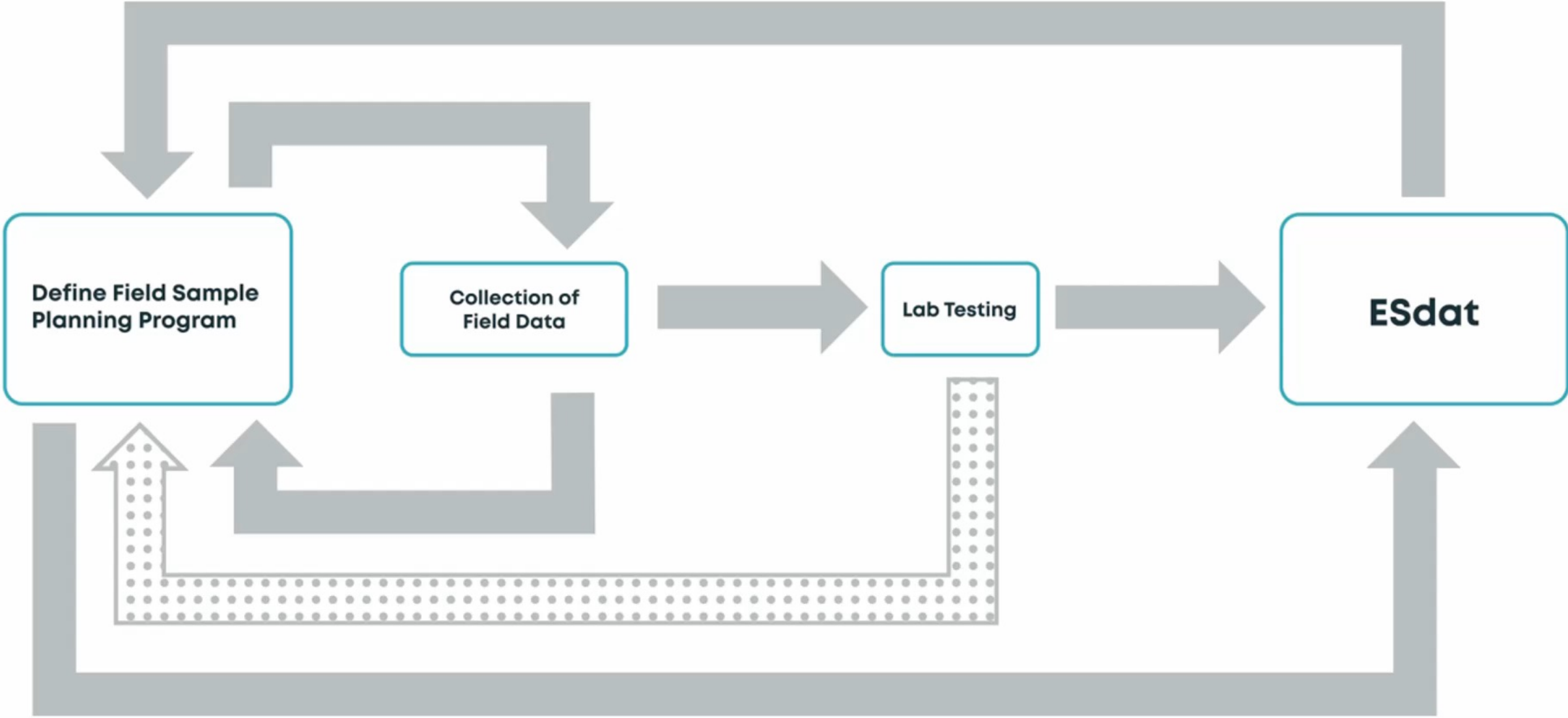


Mapping



Trend Analysis
And Graphs

Project Lifecycle



Online Sample Management

Increase efficiency
Reduce errors

Electronic & Remote
field program
management

Input or Upload
Field data

Increase visibility on
costs

Traceability:
link to lab, eCOC,
eQuote, etc.

Schedule &
Automate:
Repetitive, recurring
sampling events





Sample Planning Quotes & Budgeting

Quote: A2

- Metals and Inorganics
 - pH in Water
 - Conductivity in Water
 - Solids, Total Suspended in Water
 - Cyanide, WAD in Water
 - Anions by IC (2) Pkg in Water
 - Chromium, Speciated (diss) Pkg in water
 - Metals, Dissolved by ICPMS (BC CSR) Pkg in Water
 - Metals, Total by ICPMS (BC CSR) Pkg in Water**

Name *

Type	Preservative	Vol.	Filtered	Desc.	Qty.	
C05_125 mL Plastic (Metals)	HNO3	125 ml	No	Red	1	<input type="button" value="X Delete"/>

Analyses

Name	Unit	ChemCode	Detection Limit	Quantitation Limit
Aluminum total	mg/L	7429-90-5	0.005	0.005
Antimony total	mg/L	7440-36-0	0.0002	0.0002
Arsenic total	mg/L	7440-38-2	0.0005	0.0005
Barium total	mg/L	7440-39-3	0.005	0.005
Beryllium total	mg/L	7440-41-7	0.0001	0.0001
Boron total	mg/L	7440-42-8	0.05	0.5
Cadmium total	mg/L	7440-43-9	0.00001	0.00001

Monitoring Rounds

Laboratories

Tracking

Your Active

All

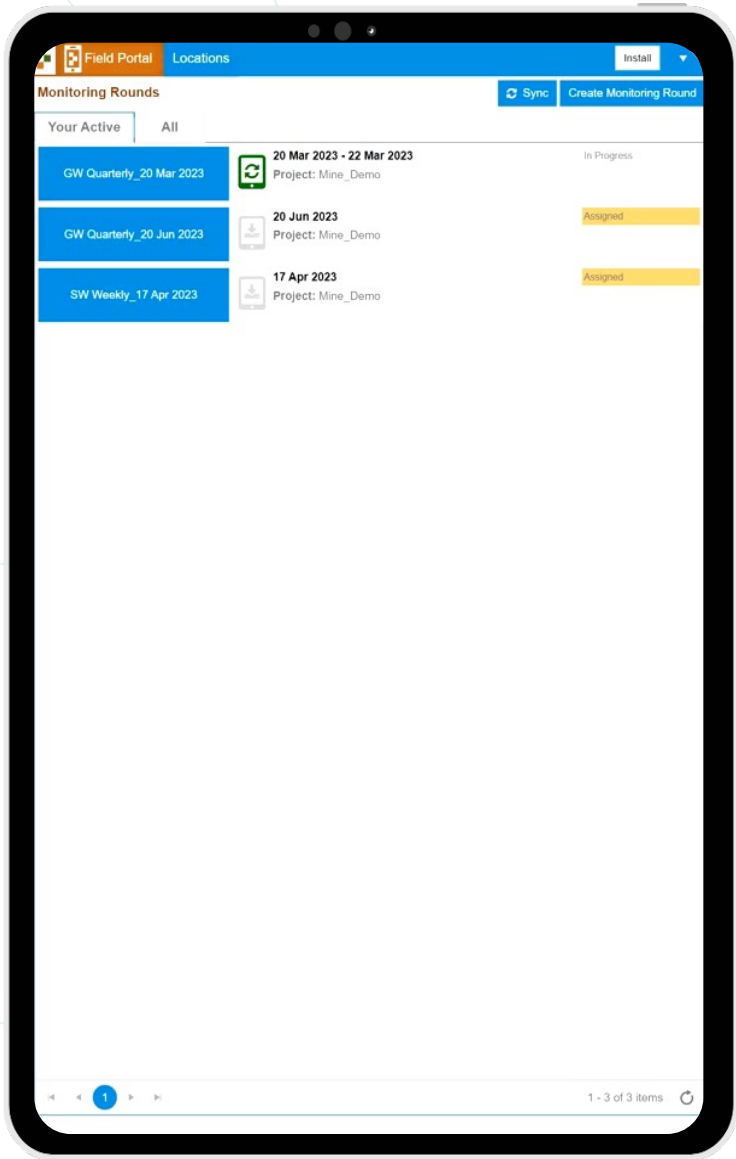
Schedules



Create Monitoring Round

Filter Monitoring Rounds

<p>GW Quarterly_20 Mar 2023 20 Mar 2023 - 22 Mar 2023 Project: Mine_Demo</p> <p>Cancel</p>	<p>Plan Assigned To: Nick Turney</p> <p>View</p>	<p>Field Data In Progress</p> <p>Overview</p>	<p>Location Visits CA-eCOC-001</p> <p>NS</p>
<p>SW Weekly_17 Apr 2023 17 Apr 2023 - Project: Mine_Demo</p> <p>Cancel</p>	<p>Plan Assigned To: Nick Turney</p> <p>View</p>	<p>Field Data Assigned</p> <p>Overview</p>	<p>Location Visits</p>
<p>GW Quarterly_20 Jun 2023 20 Jun 2023 - Project: Mine_Demo</p> <p>Cancel</p>	<p>Plan Assigned To: Nick Turney</p> <p>View</p>	<p>Field Data Assigned</p> <p>Overview</p>	<p>Location Visits (9 Pending)</p>



Lab Testing

1

Sample Receipt

Log Samples

Containers

Analysis

2

Analyze Samples

3

Generate reports and distribute to client

Field Profile: Standard | [Print Plan](#) | [Approve](#) | [Cancel](#)

Field Data [Add New](#)

Fieldwork Status: Completed

Location Visits | Groundwater | Field Samples | Field Chem | Lab | Photos & Files | [Enable Delete](#)

	Site ID	Monitoring Zone	Location	Arrival Time	Departure Time	Executed By	Comments	Weather
MW01	DemoSite	Zone2	MW01					
MW02	DemoSite	Zone2	MW02					

Laboratory Submissions [Add New](#)

Sample Delivery Group	Relinquished Date	Laboratory	Request:Version	SRN	Lab Reports	Status
DemoProject_25 Apr 2023			1 : 1 Add Cancel ⓘ	SRN Not Received	Add/Remove	Request Cancelled
Caro		Caro	1 : 1 Add Cancel ⓘ	SRN Not Received	Add/Remove	Request Cancelled
DemoProject_25 Apr 2023			1 : 1 Add Cancel ⓘ	SRN Not Received	A46574 A16713 A16715 TK003B Add/Remove	Request Not Sent
CA_VAN_21	25 Apr 2023 3:00 PM	Caro	1 : 1 Add Cancel	SRN Not Received	Add/Remove	Request Sent - Awaiting SRN

Reports | [Field Data \(by Location Visit\)](#) | [Field Data \(Tabulated\)](#) | [Exceedances](#)

Data Processing



Lab Results Issued

PDF
EDD



Results imported into EDMS

Excel
ESdat
Other



Reconciliation with field notes

Sample locations
Sample types
Parent samples



Utilize built-in QA/QC

RPDs, other DQOs
Fit for purpose

Automation, Integration!

ESdat - Lab Report Received has Exceedances and Outlier(s) - Message (HT...)

File Message Help

ESdat - Lab Report Received has Exceedances and Outlier(s)

online.ca@esdat.net
To Nick Tumney

Archive 2024-04-11

Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

Lab Report Received has Exceedances
Lab Report Received has Outlier(s)

The laboratory report CA231234X from CARO has been received.

The Laboratory Report relates to:
Monitoring Round: GW Quarterly_20 Mar 2023
Laboratory Submission: CA-eCOC-001
Project: Mine_Demo
Monitoring Programs: This monitoring round relates to the following schedules:
GW Quarterly
Sites: This monitoring round relates to the following Sites:
Mine_Demo
View the Laboratory Report [Details](#), [Chem Table](#), [Chem Map](#).

The selected results have been compared against the following Environmental Standards associated at the Site and Location level:

- BC WQG Drinking Water
- BC WQG Fresh Water Aquatic Life Long Term Chronic

The following results were found to exceed one or more of the standards:

Site ID	Location Code	Well	Field ID	Matrix Type	Sampled Date	Depth	Chem Name	Result	Action Level Source	Action Level Values	Reportable	Source
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		pH (Lab)	2.9 -	BC WQG Fresh Water Aquatic Life Long Term Chronic	6.5 - 9 -	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Aluminium	52.4 mg/L	BC WQG Drinking Water	9.5 mg/L	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Arsenic	4.18 mg/L	BC WQG Drinking Water	0.01 mg/L	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Arsenic	4.18 mg/L	BC WQG Fresh Water Aquatic Life Long Term Chronic	0.005 mg/L	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Cadmium	0.495 mg/L	BC WQG Drinking Water	0.005 mg/L	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Cadmium	0.495 mg/L	BC WQG Fresh Water Aquatic Life Long Term Chronic	0.000127 mg/L	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Cobalt	0.431 mg/L	BC WQG Fresh Water Aquatic Life Long Term Chronic	0.004 mg/L	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Copper	9.26 mg/L	BC WQG Fresh Water Aquatic Life Long Term Chronic	0.0002 mg/L	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Copper	3.24 mg/L	BC WQG Fresh Water Aquatic Life Long Term Chronic	0.0002 mg/L	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Lead	0.822 mg/L	BC WQG Drinking Water	0.01 mg/L	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Lead	0.822 mg/L	BC WQG Fresh Water Aquatic Life Long Term Chronic	0.0034 mg/L	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Manganese	21.9 mg/L	BC WQG Fresh Water Aquatic Life Long Term Chronic	0.7678 mg/L	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Manganese	13.6 mg/L	BC WQG Fresh Water Aquatic Life Long Term Chronic	0.7678 mg/L	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Silver	< 0.0005 mg/L	BC WQG Fresh Water Aquatic Life Long Term Chronic	5E-05 mg/L	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Zinc	6.43 mg/L	BC WQG Fresh Water Aquatic Life Long Term Chronic	0.0075 mg/L	Not Specified	Site
Mine_Demo	MW055	-	MW055_20 Mar 2023	Water	20 Feb 2023 11:49AM		Zinc	30.2 mg/L	BC WQG Fresh Water Aquatic Life Long Term Chronic	0.0075 mg/L	Not Specified	Site




ESdat


Your data. Organized. Analyzed. Reported. Faster

 Projects & Sites

 LSPECS

 Field Portal

 Lab Reports

 Data View

Interpretation and Reporting

Lab Report: CA231234X

Lab Reports Details Edits Chem Tables QA Map Outliers Exceedances Other Formats

Add Filter Search

Chem Profile Env Standards Sample Information Statistics Results Excel Export

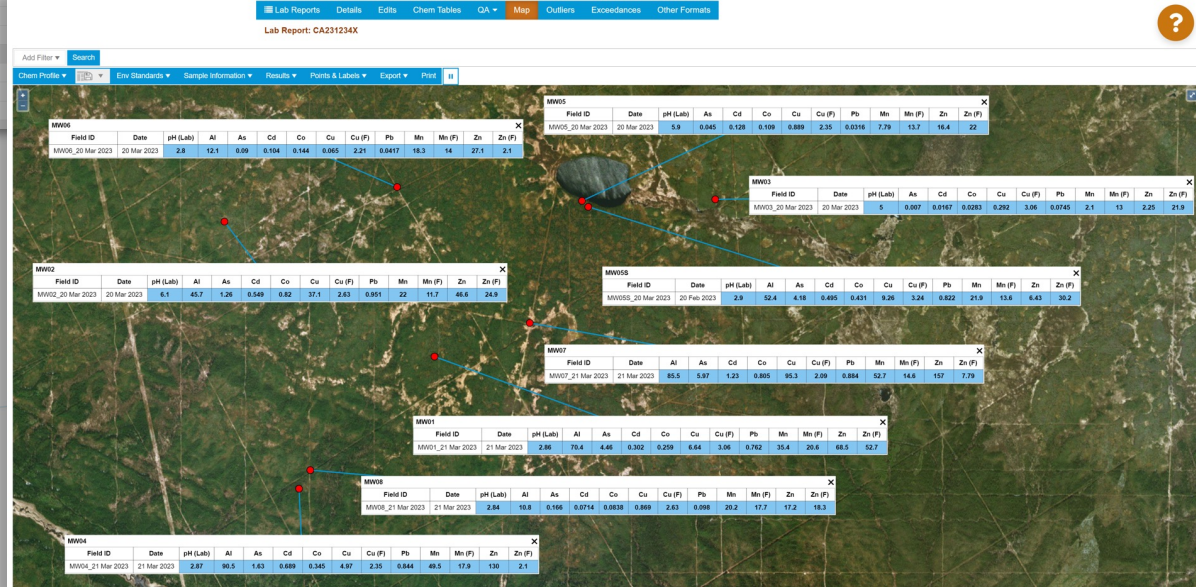
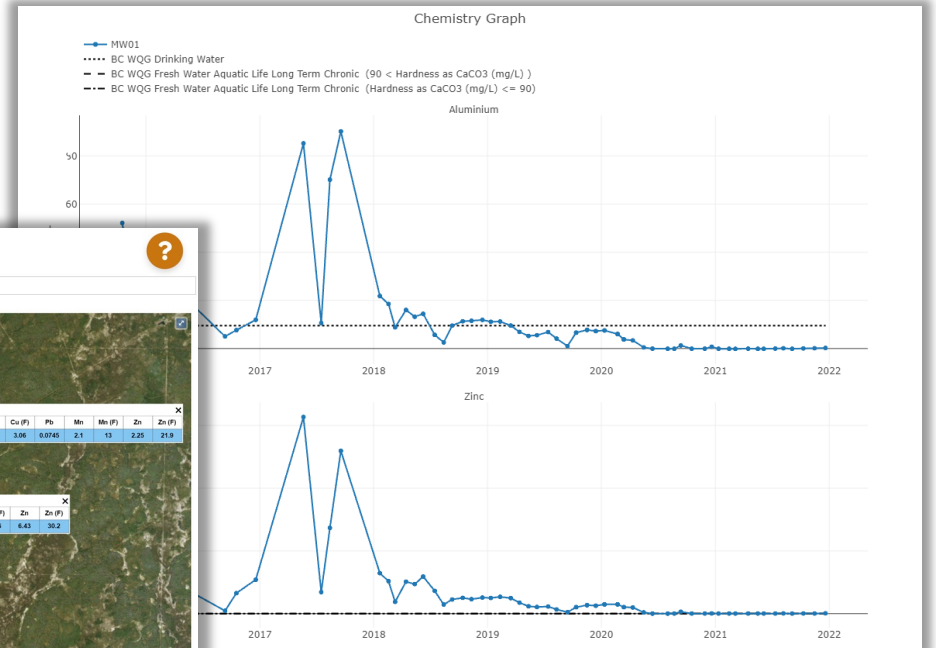
Environmental Standards	Inorganic			Biological										Metals									
	pH (Lab)	Acidity (as CaCO3)	Alkalinity (as CaCO3)	E. Coli	Aluminum	Antimony	Arsoic	Barium	Beryllium	Bismuth	Cadmium (Total)	Cadmium	Chromium (Total)	Cobalt	Copper	Copper (Free)	Iron	Iron (Free)	Lead	Magnesium (Free)	Manganese	Mercurium (Total)	
ESL	0.001	1	1	1	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.0005	0.0001	0.0001	0.1	0.1	0.0005	0.001	0.05	0.05	
BC WQG Drinking Water				10	9.5		0.01				0.005			0.004	0.0002	0.0002			0.01				
BC WQG Fresh Water Aquatic Life Long Term Chronic	6.5-9						0.005				0.000127								0.0034		0.7678	0.7678	

Monitoring Pt.	Location Code	Date	Field ID	pH	Acidity	Alkalinity	E. Coli	Aluminum	Antimony	Arsoic	Barium	Beryllium	Bismuth	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercurium			
GW Quarterly	MW01	21 Mar 2023	MW01_21 Ma	2.86	551	279	0	70.4	100	4.46			0.293	90.8	0.302	0.001	0.259	6.64	3.06	583	495	0.762	177	35.4	20.6
GW Quarterly	MW02	20 Mar 2023	MW02_20 Ma	6.1	1725	11	0	45.7	0.0207	1.26	0.021	0.149	154	0.549	0.051	0.82	37.1	2.63	841	312	0.951	134	22	11.7	
GW Quarterly	MW03	20 Mar 2023	MW03_20 Ma	5	161	28.85	0	5.2	0.0023	0.007	0.016	0.0642	13.4	0.0167	0.001	0.0283	0.292	3.06	1.36	0.865	0.045	10.3	2.1	13	
GW Quarterly	MW04	21 Mar 2023	MW04_21 Ma	2.87	511	252	0	90.5		1.63			0.552	75.3	0.689	<0.001	0.345	4.97	2.35	896	276	0.844	266	49.5	17.9
GW Quarterly	MW05	20 Mar 2023	MW05_20 Ma	5.9	281	42.27	0	7.82	0.0032	0.045	0.017	0.168	29.7	0.128	<0.001	0.109	0.889	2.35	48.6	41.8	0.0316	77	7.79	13.7	
GW Quarterly	MW05S	20 Feb 2023	MW05S_20	2.9	1899	<1	0	52.4	0.0035	4.18	0.017	0.163	49.4	0.032	0.431	9.26	3.24	818	742	0.822	101	21.9	13.6		
GW Quarterly	MW06	20 Mar 2023	MW06_20 Ma	3.8	4257	330	0	12.1	0.0135	0.09	0.116	75.1	0.104	0.001	0.144	0.085	2.21	54.6	32.4	0.0417	89.8	18.3	14		
GW Quarterly	MW07	21 Mar 2023	MW07_21 Ma	7	3828																				
GW Quarterly	MW08	21 Mar 2023	MW08_21 Ma	2.84	522																				

95% UCL (Student's-t)

% of Detects

% of Non-Detects





ArcGIS



EDMS



Surfer



GWSDAT



ESlog

CREATE BORELOGS WITHOUT THE HEADACHES FOR FREE!

Browser based No set-up or install required	Rapid Simple, easy to use interface	ESdat Users Export direct from ESdat
Licence? No ESlog licence required	Templates Select from our list or edit your own	ESlog Users Integrate with ESdat & ESlog
Who can use? Anyone can use ESlog	Branding? Add your company logo	Export to PDF for your reports
COMMENTS Go to eslog.esdat.net on your browser and start creating borelogs today		LOGGED BY You BY GOING TO eslog.esdat.net

PID	Sample	Analyzed	% Recovery	Depth (m)	ESlog Log	Moisture	ESlog Description	Well Diagram	Elevation (m)
02	BH01_2-3-1						EASY TO USE: Create logs with your favourite browser and see wells as you make them TIME SAVED: No training required, just point where you want to enter data, click and start typing ESlog is produced by ESlog, the company that brings you ESdat. MORE EMDS SOLUTIONS: visit esdat.com.au to learn more about our range of scalable products to meet your needs TRY ESlog TODAY! eslog.esdat.net	concrete cement grout backfill	45 44 43 42 41 40 39
04	BH01_5-5-3	Y							
	BH01_5-5-6								
	BH01_6-6-1								



Data Governance!

- *Central & Secure Location for all data*
- *Streamline workflow & communication: Reduce errors*
- *Data tabulation: Real-time/as soon as available*
- *Automated for efficient data comparison*
- *Traceable: improve internal QC measures*

Takeaway

“Don't work for your data,
Make your data work for you!”

**Thank you.
Questions?**



**Learn more!
Contact:**

