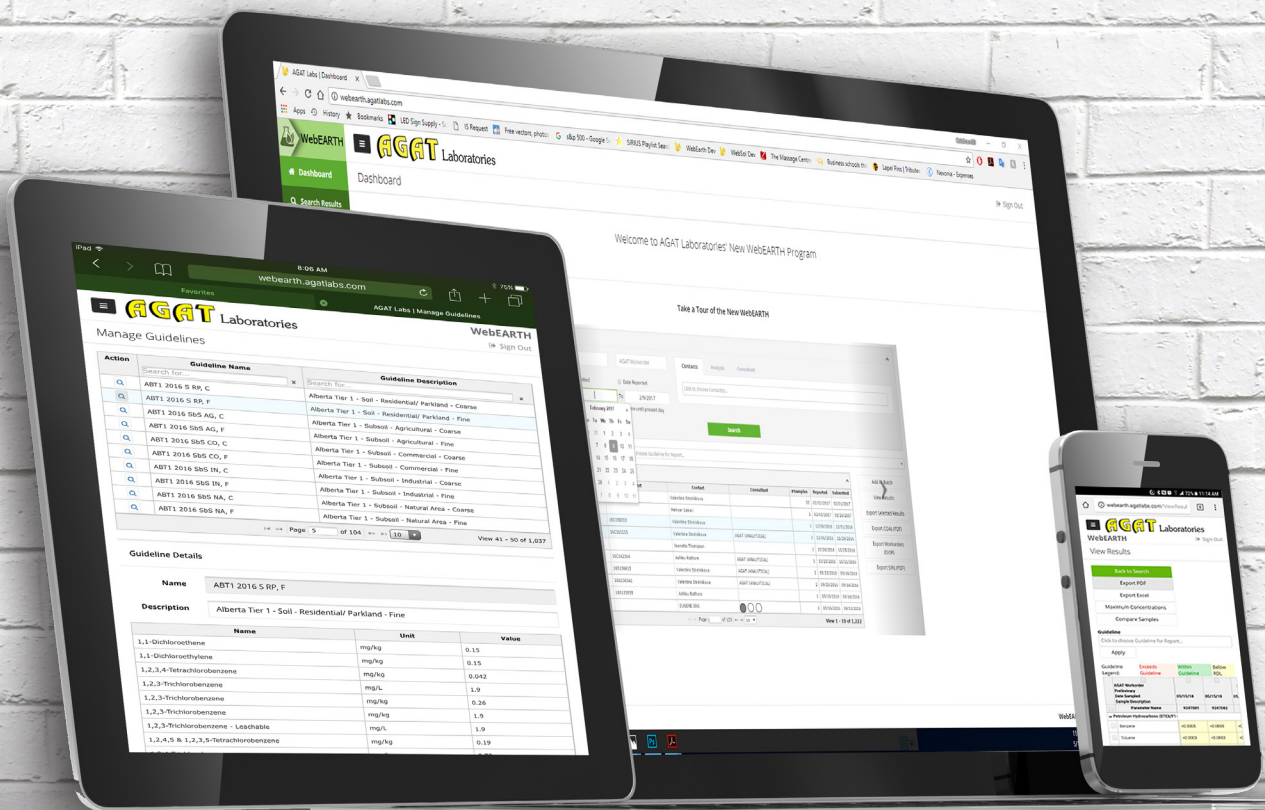


**AGAT** Laboratories 

# WebEARTH Service Guide



# Data Management with Unparalleled Flexibility

## Unparalleled Flexibility

AGAT's *WebEARTH* provides clients with a simple, user-friendly interface that facilitates quick and effective search options for our clients to access their analytical reports. Whether searching for a single sample's data or the combined results for 200 jobs comprising an entire project, clients analytical data is easily acquired and managed.

## "Time" Searching

AGAT's *WebEARTH* allows clients to narrow their searches by time. The calendar in the bottom left corner allows any date range to be searched. Clear the "From" date to bring up all of a client's historical work with AGAT Laboratories. Clients can also indicate specific dates to retrieve data which can be based on the date sampled or the date submitted to the laboratory.

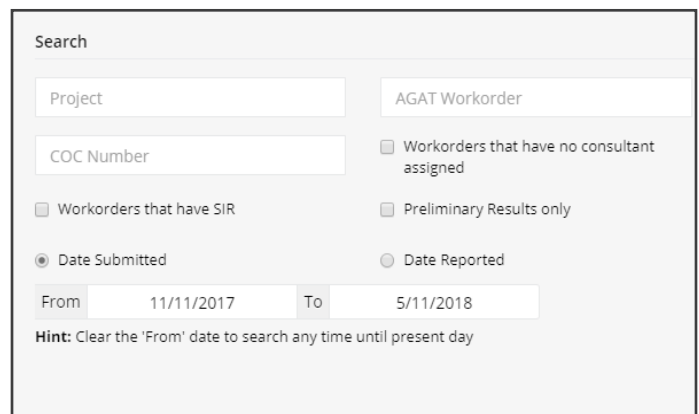
## "Project Number" Searching

Searching data by client project number is one of the most useful search features in *WebEARTH*. By combining a search for the project number with a time criteria, our clients are able to access specific sets of work orders that may be relevant during a project review. This way, a particular subset of data can be reviewed without the client having to sort through an entire project's data. *WebEARTH* enables our clients to search for data for a particular project and search for data within a specific timeframe of that project.

These advanced search features make *WebEARTH* the ultimate on-line filing cabinet for environmental laboratory analysis.

## "Work Order Number" Searching: A Targeted Approach

Sometimes it is only a single work order that requires retrieval. For quick and easy access to a single work order, *WebEARTH* includes an "AGAT Work Order Number" field. Populating this field and querying the system enables access to a work order in one easy step without having to sort through extraneous data.



The screenshot shows a search interface with the following elements:

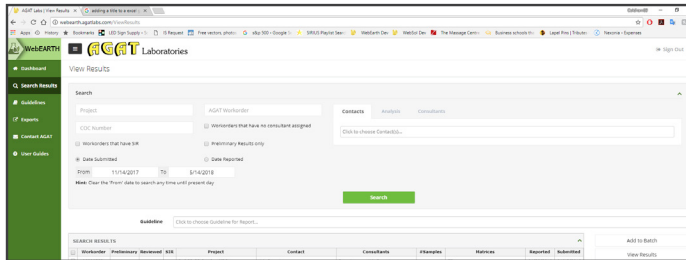
- Search** header
- Project** input field
- AGAT Workorder** input field
- COC Number** input field
- Workorders that have no consultant assigned
- Workorders that have SIR
- Preliminary Results only
- Date Submitted
- Date Reported
- From** 11/11/2017 **To** 5/11/2018
- Hint:** Clear the 'From' date to search any time until present day



**WebEARTH** is AGAT Laboratories' industry-leading analytical data centre that provides clients with an array of options for data retrieval, archiving and management. It includes custom downloads in client specified formats, the substitution of cross-Canada regulatory standards, various reporting formats, and trending and graphing options, all in a secure and managed environment.

## Get Results Early

Clients sometimes need their results quicker than AGAT's quickest turn-around time and request preliminary results. Once the Client Project Manager has "hit the switch", the client's results will be available in real-time. Clients can search for all of their preliminary-only workorders in AGAT's system, allowing them view data as it is being generated in order to make crucial field decisions.



## Regulatory Options

### Guideline Management and Viewing

AGAT Laboratories was the first to routinely integrate regulatory standards into its Certificates of Analysis in 1997 and to utilize a comprehensive, on-line data management system in *WebEARTH*. We pride ourselves in using client feedback and our review processes to continue anticipating and developing innovative new methods for efficiency and quality improvements within our laboratories and data management systems.

*WebEARTH* incorporates all major environmental regulatory criteria for all jurisdictions across Canada and the opportunity to apply them to reports. This includes, but is not limited to, BC Contaminated Sites Regulations, Alberta Tier One, Ontario Regulation 153/04 standards and Atlantic PIRI. This application allows comparison through the multiple criteria options and clear visible identification of any anomalies or exceedances in BOLD, making data review and site management decisions simple and straightforward.

## AGAT at your Fingertips

*WebEARTH* integrates a variety of ways to view project data. The Grid View viewing system visually identifies guideline exceedances, along with our PDF export menu and Excel export menu to allow our clients to export their results their way.

### Grid View - Visualizing your Results

AGAT's clients wanted an easy-to-view, color-coded system that they can export and include in their reports to regulators or to their clients. As a result, we came up with the Grid View system. Now a client can choose up to 4 regulatory guidelines in our system and get instant visual feedback on exceedances. No longer does a client need to comb through the data to find all of the exceedances. Our system shades the cells in red (single guideline) or changes the text (multiple guidelines) in order to show the client instantly what has exceeded the regulatory guidelines.

| - Particle Size by Sieve  |       |       |       |        |        |
|---|-------|-------|-------|--------|--------|
| <input type="checkbox"/> Sieve Analysis - 75 microns                      | %     | 1     |       | 9      | 6      |
| <input type="checkbox"/> Sieve Texture                                    |       |       |       | Fine   | Fine   |
| - Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (Methanol Field Stabilized) |       |       |       |        |        |
| <input type="checkbox"/> Benzene  | mg/kg | 0.005 | 0.046 | <0.005 | <0.005 |
| <input type="checkbox"/> Toluene  | mg/kg | 0.05  | 0.52  | <0.05  | <0.05  |
| <input type="checkbox"/> Ethylbenzene                                     | mg/kg | 0.01  | 0.073 | <0.01  | <0.01  |
| <input type="checkbox"/> Xylenes  | mg/kg | 0.05  | 0.99  | <0.05  | <0.05  |
| <input type="checkbox"/> C6 - C10 (F1)                                    | mg/kg | 10    |       | <10    | <10    |
| <input type="checkbox"/> C6 - C10 (F1 minus BTEX)                         | mg/kg | 10    | 210   | <10    | <10    |
| <input type="checkbox"/> C10 - C16 (F2)                                   | mg/kg | 10    | 150   | <10    | <10    |
| <input type="checkbox"/> C16 - C34 (F3)                                   | mg/kg | 10    | 1300  | <10    | 20     |
| <input type="checkbox"/> C34 - C50 (F4)                                   | mg/kg | 10    | 5600  | <10    | <10    |
| <input type="checkbox"/> Gravimetric Heavy                                |       |       |       |        |        |

## Reporting Flexibility

Clients can export their analytical in PDF or Excel and have multiple user-friendly formats to choose from, however in addition can customize their PDF reports to give them the specific information they want. Select only the cover page, CoA, QA/QC Section, Method Summary, and Chain of Custody to make the report any way that is preferred. Report layouts are designed to match client's needs.

The Grid View can be exported exactly the way it appears in *WebEARTH* or exported into a custom Excel file specifically configured by the user in *WebEARTH*. No matter the time of workorders completion or if the client wants the PDF file years down the road, analytical reporting is provided in the format that they prefer.

## The Ultimate in Large Project Data Management

Whether the project is reclamation, remediation or monitoring-based in nature, *WebEARTH* provides the necessary tools to save hours in time and thousands in administrative costs associated with large projects. Conceived in consultation with the environmental community, *WebEARTH* was designed with consultants' needs in mind.

AGAT Laboratories' main design goals included flexibility, ease of use and reliability. *WebEARTH* achieves these goals by utilizing a functionality termed "batching" results.

## Creation of the Batch

Batch: A way of looking at any number of work orders as a single data set. This functionality has great utility in minimizing the administrative and data management costs associated with large-scale environmental projects.

*WebEARTH* allows users to create a batch by first performing a search using time, project and contact criteria. Once the search results have been returned, a batch can be created by adding individual work orders to the batch or by adding all query results to a batch using the "Add all to batch" function. Once all required work orders have been added to a batch, all the data that is included can then be viewed by the system as one single data cache.

## The Batch Comparison Function

The creation of a batch enables the user to view an entire project's (or projects') worth of data as a single data set. *WebEARTH* uses the batch comparison feature as a tool to quickly identify any standard exceeding properties within a large batch.

View Results

Back to Search Export PDF Export Excel Maximum C

Guideline: ABT1 2016 S RP, F (Alberta Tier 1 - Soil - Residential/ Parkland - Fine)

Guideline Legend: Exceeds Guideline Within Guideline Below RDL

| AGAT Workorder Preliminary Date Sampled                                   | Sample Description             | Unit  | RDL   | G / S | 9226498 | 9226499 | 9226500 | 9226474 | 9226475 |
|---|--------------------------------|-------|-------|-------|---------|---------|---------|---------|---------|
| - Particle Size by Sieve  |                                |       |       |       |         |         |         |         |         |
| <input type="checkbox"/>  | Sieve Analysis - 75 microns    | %     | 1     |       | 37      | 77      | 12      | 15      | 92      |
| <input type="checkbox"/>  | Sieve Texture                  |       |       |       | Fine    | Coarse  | Fine    | Fine    | Coarse  |
| - Petroleum Hydrocarbons (BTEX/F1-F4) in Soil (Methanol Field Stabilized) |                                |       |       |       |         |         |         |         |         |
| <input type="checkbox"/>  | Benzene                        | mg/kg | 0.005 | 0.046 | <0.005  | <0.005  | <0.005  | <0.005  | <0.005  |
| <input type="checkbox"/>  | Toluene                        | mg/kg | 0.05  | 0.52  | <0.05   | <0.05   | <0.05   | <0.05   | <0.05   |
| <input type="checkbox"/>  | Ethylbenzene                   | mg/kg | 0.01  | 0.073 | <0.01   | <0.01   | <0.01   | <0.01   | <0.01   |
| <input type="checkbox"/>  | Xylenes                        | mg/kg | 0.05  | 0.99  | <0.05   | <0.05   | <0.05   | <0.05   | <0.05   |
| <input type="checkbox"/>  | C6 - C10 (F1)                  | mg/kg | 10    |       | <10     | <10     | <10     | <10     | <10     |
| <input type="checkbox"/>  | C6 - C10 (F1 minus BTEX)       | mg/kg | 10    | 210   | <10     | <10     | <10     | <10     | <10     |
| <input type="checkbox"/>  | C10 - C16 (F2)                 | mg/kg | 10    | 150   | 7410    | <10     | <10     | 6380    | <10     |
| <input type="checkbox"/>  | C16 - C34 (F3)                 | mg/kg | 10    | 1300  | 87500   | 60      | 80      | 107000  | 160     |
| <input type="checkbox"/>  | C34 - C50 (F4)                 | mg/kg | 10    | 5600  | 170     | <10     | 40      | 510     | <10     |
| <input type="checkbox"/>  | Gravimetric Heavy Hydrocarbons | mg/kg | 1000  |       | N/A     | N/A     | N/A     | N/A     | N/A     |
| <input type="checkbox"/>  | Moisture Content               | %     | 1     |       | 38      | 18      | 24      | 22      | 13      |
| <input type="checkbox"/>  | Toluene-d8 (BTEX)              | %     |       |       | 99      | 100     | 100     | 98      | 99      |
| <input type="checkbox"/>  | Ethylbenzene-d10 (BTEX)        | %     |       |       | 105     | 123     | 104     | 84      | 99      |
| <input type="checkbox"/>  | o-Terphenyl (F2-F4)            | %     |       |       | 109     | 120     | 95      | 116     | 96      |

WebEARTH will automatically combine all packages and analytes within the selected batch. By selecting a particular legislative standard, the user is able to quickly identify any standard violations through an entire project's worth of data because those anomalies will be highlighted in red. Using the scroll bar across the bottom of the comparison window, data can be easily scanned and issues can be identified within seconds.

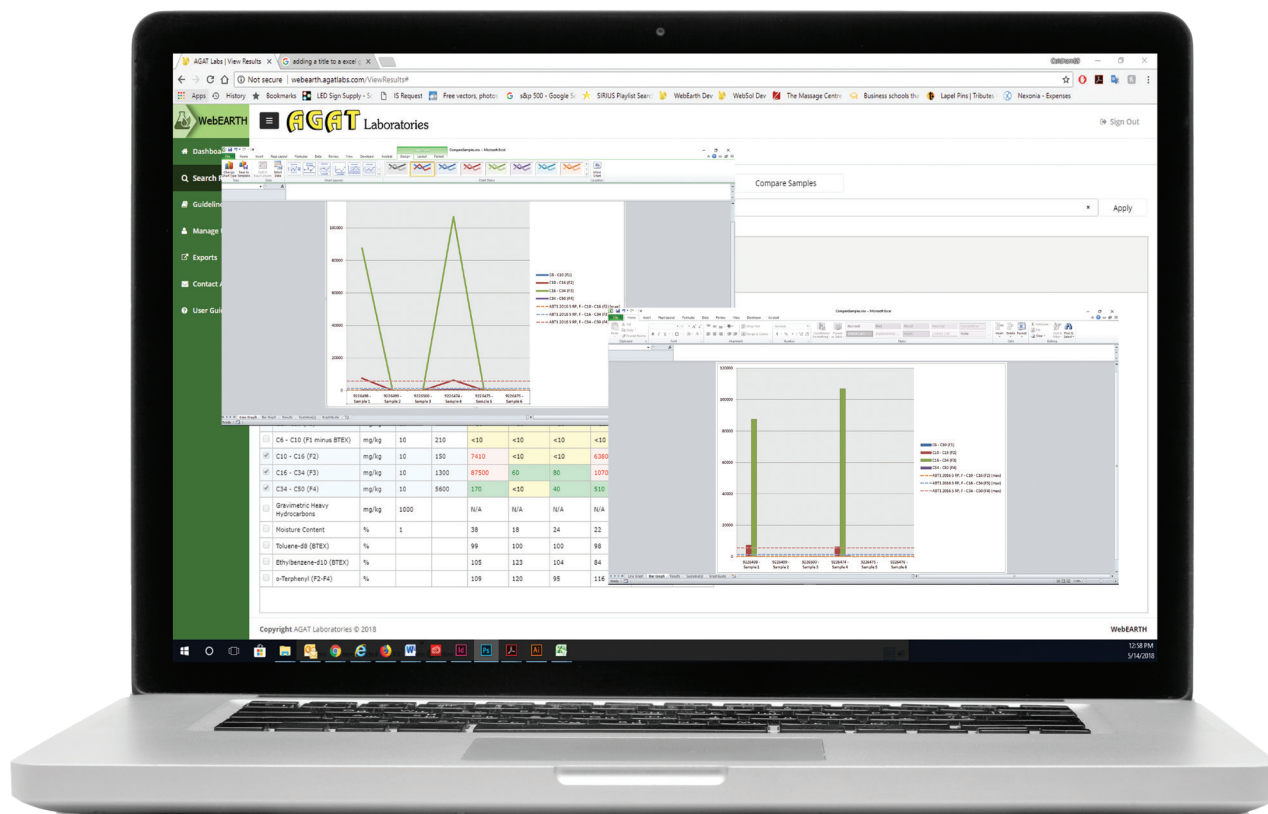
WebEARTH also allows the user to export from the Grid View page. An Excel file that includes all the compared data is created. In this way, clients are able to print an entire project's worth of data in a concise and easy to read format without having to go through the process of putting together numerous Certificates of Analysis.

## Comparison Across Work Orders

WebEARTH's comparison feature can also be utilized for selecting particular samples from across work orders in the system. This is of particular importance when comparing particular analytes from a single sampling point over time.

WebEARTH allows the user to perform a search and subsequent batch construction. From there, the user is able to identify particular samples from across work orders to compare analyte concentrations. In doing so, the user is also able to set the Relative Per cent Difference (RPD) standards between sampling events at the same location, flagging percentage differences that exceed the set parameters.

Additionally, WebEARTH can print in a PDF document using the identity of specific samples. This lets the user construct their own analytical summary for specific sampling sites across numerous work orders over time.



# Saving Time and Money

## The Custom Excel Download

WebEARTH allows our clients access to all relevant fields in our Laboratory Information Management System (LIMS) for their convenience. From there, clients are able to modify WebEARTH's settings to match how they'd like their particular downloads constructed.

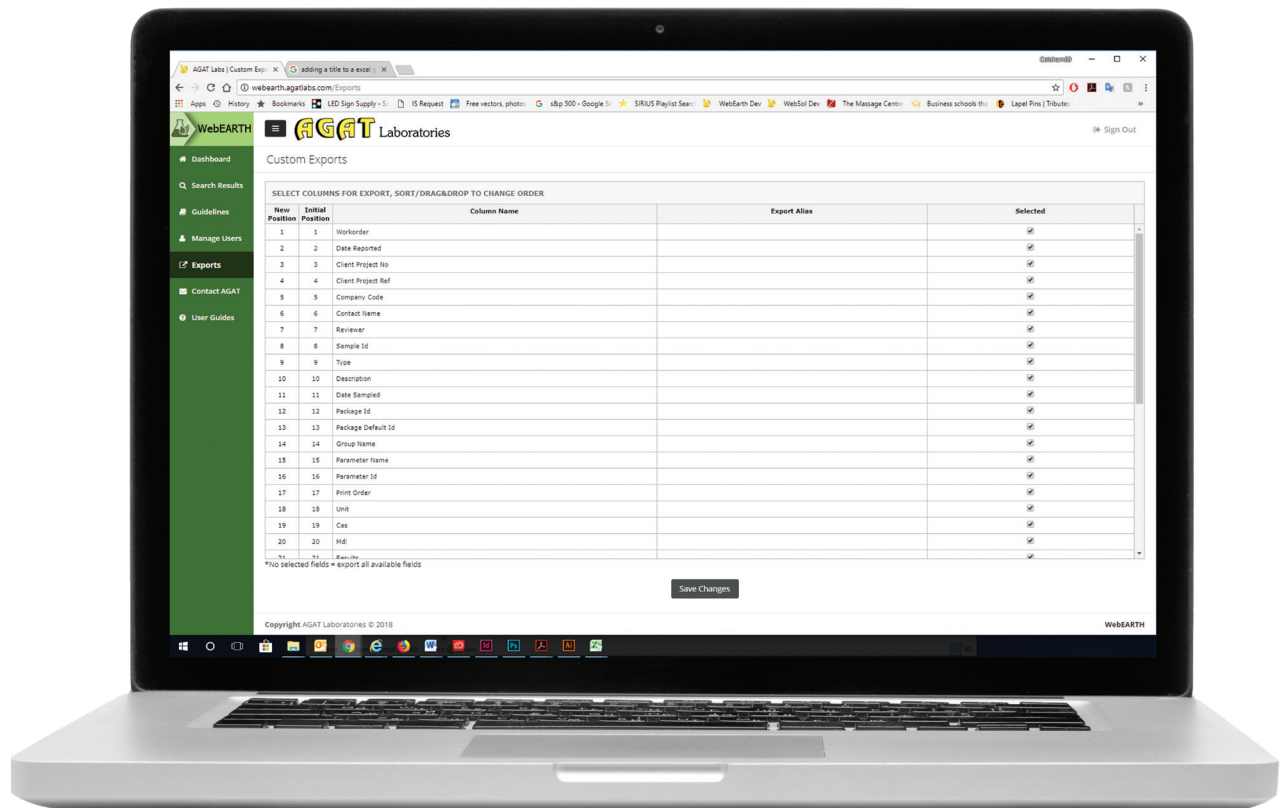
Fields for selection include, but are not limited to:

- Parameter/Unit
- Results
- Standard
- CAS Number
- Client Contact
- Client Name
- Project Number
- Sample Name
- Sample Number
- Work Order Number

By utilizing this function, clients can eliminate hours of administrative time in data management after project completion, or when a project requires periodic reporting. They have the ability to download 250 work orders at once and utilize auto-filters and sorting functions to further enhance their data management capabilities.

## The Database Option

Often our clients have their own data deliverable specification set out to match their own in-house or commercially available data management software. This will most often take the form of a CSV file deliverable. As WebEARTH was designed and instituted completely by AGAT Laboratories' programmers, we have the ability to offer on-going updates and improvements to the system. In most cases, AGAT Laboratories can customize a particular clients' WebEARTH account so that they have an option to download directly from WebEARTH to their own database systems.



# The Sample Integrity Report

In addition to the data management functionality, one of the most dynamic and strategic management tools on the program integral to a consultant's site management comes in the form of the Sample Integrity Report. This report tracks the key metrics for field programs utilizing a thorough program of sample submission checks that include work order specific criteria, missing client project numbers and sample-specific criteria.

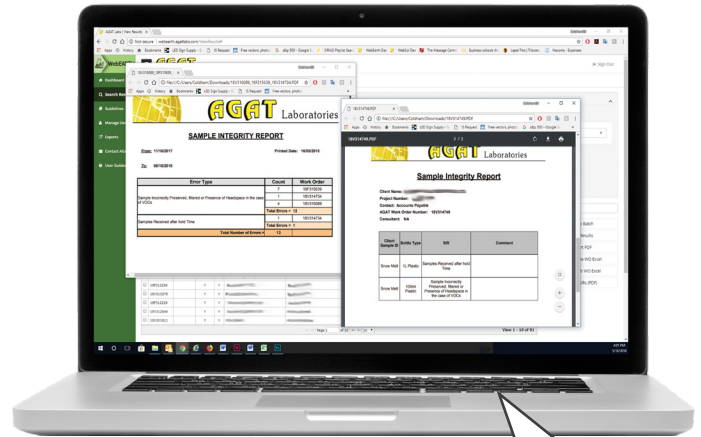
## Work Order Specific Criteria


- Custody Seal Broken (if applicable)
- Temperature greater than 10°C (for temperature sensitive analytes)
- No Chain of Custody
- Incomplete Chain of Custody
- Chain of Custody not signed by the client

## Missing Client Project Number and Sample-Specific Criteria

- Broken bottles
- Bottles missing in shipment
- Bottles missing on the Chain of Custody
- Analysis Required being unclear on Chain of Custody
- A problem with the sample bottles being labelled
- Samples received greater than five days after sampling
- Samples received after a hold-time has been exceeded
- Incorrect sample bottle being used
- Sample bottle being incorrectly preserved or filtered
- An insufficient quantity of bottles

The Sample Integrity Report is able to be generated on a “per work order” or on a “per batch” basis. Utilizing the latter functionality, the Sample Integrity Report becomes a project summary and includes valuable field program statistics related to project-wide sample integrity that can be utilized by qualified persons and management personnel to better understand and evaluate field staff.




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### Sample Integrity Report

**Client Name:**  
**Project Number:**  
**Contact:**  
**AGAT Work Order Number:**  
**Consultant:** NA

| Client Sample ID | Bottle Type       | SIR   | Comment   |
|------------------|-------------------|---|---|
| Sample#1         | 40ml Vial w/ MeOH | Sample Incorrectly Preserved, filtered or Presence of Headspace in the case of VOCs | Vial received with less volume (end weight 37.783g) Proceeding with as received |
| Sample#1         | 120ml Jar         | Labeling Issues (Label Missing / Incorrect)   | No sample Id on the Container. Proceeding with as per as on the COC             |
| Sample#1         | 250ml Glass Jar   | Labeling Issues (Label Missing / Incorrect)   | No sample Id on the Container. Proceeding with as per as on the COC             |
| Sample#1         | 250ml Glass Jar   | Labeling Issues (Label Missing / Incorrect)   | No sample Id on the Container. Proceeding with as per as on the COC             |
| Sample#1         | 40ml Vial w/ MeOH | Labeling Issues (Label Missing / Incorrect)   | No sample Id on the Container. Proceeding with as per as on the COC             |



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wide range of laboratory services.

