# LABWORKS LIMS NGII Interface

# Labworks LIMS NGII Interface

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#### LABWORKS LIMS NGII Interface



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# **LABWORKS** Overview

LABWORKS is a Laboratory Information Management System (LIMS). It is a database used for recording sample information and test results in a laboratory environment. LABWORKS essentially involves logging in a sample, entering test results for the sample, validating the sample, managing quality assurance for the sample, and providing invoices and/or reports for the sample.

LABWORKS is a modular application. Each set of related functions in LABWORKS is contained in a subset or smaller streamlined programs. For example, a sample may be logged in by launching Multi-Sample Login, but sample results may be entered by launching Spreadsheet Results Entry or a related program. Each of these modular programs is specialized for its function.

LABWORKS is a client/server application. There are two options for the client application: LABWORKS Desktop (thick client) and browser based WebTop client with desktop being primary. The client application interacts with the LABWORKS database to send, filter and read data. Additionally, the LABWORKS uses services that run on a server computer to authenticate users and provide and receive data. The server resides on the server computer that is running LABWORKS Services. The file server is a computer that contains files common to all users. The LABWORKS base files are stored on the file server. The LABWORKS database is accessed from a database server. The database options are: SQL database is from the Microsoft Corporation and Oracle database.

# **About this Guide**

The purpose of this document is to provide the installation, configuration procedures and end-user use for an NGII Interface within the LABWORKS LIMS offerings.

# **NGII Interface Setup**

### **Before You Start**

The NGII (Next Generation Instrument Interface) are instrument parsing routines created by LABWORKS, so you will need an NGII instrument dll that will parse the instrument file. This dll can be supplied by LABWORKS and if you do not have one you may contact LABWORKS for us to design and create the dll. In this document the dll 'LWNGII\_Example.dll' is used.

### Installation

The delivered dll needs to be placed in the <LABWORKS SERVER SHARE>\LWDATA\NGIIInterface folder. Once the dll is in place you may proceed with the configuration in the following portions of this document.

# Configuration of an NGII

#### Interface Configuration Steps

Place the delivered DLL into the \LWDATA\NGIIInterface folder:

LWDATA\_DEMO > NGIIInterface

Launch the LABWORKS Desktop and Navigate to the Object Publisher. (The default menu path is File -> System Config -> Object Publisher):



The new DLL should be visible under the 'UNPUBLISHED -> INTERFACE' node within the Object Publisher. Select this interface, right click on it and choose 'Add to Publisher':

	ATE
SAMPLELABEL	α <b>τ</b>
	-1
	RECEIPTS
CRYSTAL F	ROUTESHEETS
CRYSTAL V	VORKSHEETS
• WORD	
+ ACCESS	
E LABEL	
INTERFACE	
LWI	
EXPORT	Add to Publisher

You may be audit trailed for this transition (depending on the Workflow Architect settings for the instrument interfaces). This action can be modified through the Workflow Architect if you desire.

🕲 LABWORKS - ES	Signature Authentication		$\times$					
ESignature required for State transition of INTERFACE 'LWINST_EXAMPLE.dll' from NULL state to DRAFT state.								
User								
Password								
Comments			~					
Commente								
Apply to All		OK	Cancel					

Once completed, the New Interface will be moved into the 'Draft' state within the Object Publisher. You may then right-click on the Interface to move it to the 'Active' State. The interface MUST BE in the 'Active' state in order to perform the next steps.

L	ABWORKS - Object Publisher
F	- INTERFACES
	LWINST_EXAMPLE
l 🗄	REPORTTEMPLATE
l 🗄	SAMPLELABEL
l i	SAMPLERECEIPT
l i	UNPUBLISHED
	SAMPLERECEIPT

# **Create the NGII Adapter Configuration**

Now that the Interface has been published, you can then create a new NGII Adapter. The executable 'NGIIAdapterConfiguration.exe' is in the \LABWORKS\Client' installation folder. You may add it to the Desktop menu or launch it directly from the install folder.



Each dll is configured for either 'Single Component' or 'Multi Component' interface styles. Depending on the instrument interface type that you wish to create, right click on the respective type and choose 'Add new configuration':



The New Configuration for the NGII Adapter will open and you may go through the tabs to configure your specific Instrument Interface configurations.

### **Configuration Tab**

Configuration	Results	Sample and analyte mapping	QA parameter mapping	Custom data mapping
Name	SCC	ONFIG0		
Title				
NGII Interfa	ceSe	lect	~	
Single C	omponent			
O Multi Co	mponent			
Archive	NGII inter	face XML		
Folder path f	for archive	ed XML		
🗌 Log reje	cted samp	les		
🗌 Log reje	cted analy	tes		

Field Definitions and Configuration Options.

**Name**. This field references the unique name for the Adapter Configuration. You may Alter this name to be more descriptive if you prefer.

**Title**: This field will show the text to the end user when choosing which interface they would like to run withing LABWORKS Results Entry or Multi-Component Transfer.

NGII Interface: Select the published (Active) parsing dll that this configuration will use.

**Single Component / Multi-Component (Greyed out)**. Specifies which type of analysis code this Adapter Configuration will be used.

**Archive NGII Interface XML**: The interface can create an XML file that contains the parsed information for a specific instrument file. Use this option only during testing or configuration.

Folder for Archived XML: This is for the temp location where the Archived XML file will be created.

Log Rejected samples: If checked, an error log entry will be created for any rejected samples.

Log Rejected analytes: If checked, an error log entry will be created for any rejected analytes.

### **Results Tab**

Configuration	Results	Sample and analyte mapping	QA parameter mapping	Custom data mapping					
Display	result data	for review							
Allow to edit displayed result data									
< MDL valu	les								
<= 0 values									
	1DL a bu di	h tion factor							
	IDLS by ai	Jution factor							
Adjust P	QLs by dil	ution factor							
Adjust P	QLs by dil	ution factor							

**Display result data for review**: If checked, the interface will offer a new window so the user may review the result data within LABWORKS.

Allow to edit displayed result data: If checked (and the Display result data for review must be checked), then the user will be able to edit the displayed result data.

< MDL Values: Value that you would like to be inserted for result values less than the MDL.

<=0 values: Value that you would like to be inserted for result values less than or equal to 0.

Adjust MDLs by dilution factor: If checked, the MDL will be adjusted based on the dilution factor (if the dilution factor is also passed in the interface).

Adjust PQLs by dilution factor: If checked, the PQL will be adjusted based on the dilution factor (if the dilution factor is also passed in the interface).

# Sample and Analyte Mapping Tab

Configurat	ion Results	Sample and anal	lyte mapping	QA parameter mapping	Custom data mapping	
Analyte			Ir	nport from analysis list	Import from NGII	
	Instrument an	nalyte designation			LABWORKS analysis code	
•						
Sample						
C	Map sample	e field to sample id				
	🔘 Use hig	ghest sample id				
	O User se	elect				
	_					
	Accept LA	BWORKS sample i	d			

This tab is designed to allow the user to map Instrument Analytes to a LABWORKS analysis code. You can load a list of analytes from the Analysis List (by selecting a LABWORKS analysis code) OR through the NGII dll (by selecting an instrument file).

**Map sample field to sample id**: This is used to look up the sample number from based on a value in one of the SAMPLE or SUSERFLDS values. The application will use the selected rules of Highest or User Select to find Sample ID matching the criteria.

**Use highest sample id**: If map sample field is selected, the use the Highest/Most recently logged in Sample Number.

User select (if map sample field is selected): For Future Use

Accept LABWORKS sample id: Used together with Map Sample Field to permit direct Sample ID evaluation when Sample ID Mapping is enabled.

# QA Parameter Mapping Tab

Config	uratior	n Results	Sample and	analyte mapping	QA parameter mapping	Custom	data mapping
		Instrument name suffi	t sample x	Analysis code p	refix		QA parameter description

The QA parameter mapping tab is designed to allow the user to easily define what QC will be used by this NGII Adapter Configuration.

**Instrument sample name suffix**: This setting will allow the user to enter in the different suffixes used on the instrument. For example, the analyst may enter 'AA12345\_S' in the sequence on the instrument, indicating that the Spike Sample is assigned to LABWORKS Sample ID 'AA12345'. The '\_S' portion is the sample name suffix.

**Analysis code prefix**: This will be what QA Analysis Code prefix that we are assigning to the sample name suffix. In the Spike example, maybe the 'Analysis Code Prefix' in 'QSPR\_'. This mapping will help the analyst at the instrument (they type in \_S) and the Adapter Configuration maps this to 'QSPR\_'.

**QA** parameter description: A simple description field to allow the user to enter a description of the QA parameter.

# **Custom Data Mapping Tab**

Configur	ration Results	Sample	and analyte mapping	QA parameter mapping	Custom data mapping	3			
	Parent element	type	Parameter name	LIMS object	Detail1	Detail2	Detail3	Detail4	Detail5
•		~		~	~	~	~		

The Custom data mapping tab is designed to allow the interface to map different data elements from the Instrument file into a sample within LABWORKS. The interface dll needs to be defined to parse the information out of the instrument file and tag it properly for the Adapter Configuration to use the data. The following shows the Parent Elements. The feature is only available when processing data via ScanDaemon Service, not when processing files via ResultsEntry or Multi-Component Transfer.

#### Parent element type:

- LW\_ANALYTE\_RESULT
- LW\_INTERFACE\_DATA
- LW\_INTF\_DATA\_SET
- LW\_INTF\_SAMPLE

#### LIMS Object

- ANALYSIS
- RESULT
- SAMPLE
- SAMPLEGROUP

### **Publishing the NGII Adapter**

Once the Adapter Configurations are complete, you then must publish the configuration within the Object Publisher so that the Adapter is active. Once the Adapter is active, it will be visible within the respective LABWORKS Applications for use.

LABWORKS - Object Public	sher	
REPORTTEMPLATE		
SAMPLELABEL		
SAMPLERECEIPT		
CRYSTAL_RECEIPTS	<b>FT</b> 0	
	E15	
	:15	
ACCESS		
NGIIEXAMP' -		_
EXPORT	Add to Publisher	

Once published it is now available in LABWORKS:

LABWORKS - Object Publisher							×
ADAPTER_CONFIGURATIONS		File Name	File Specification	Modified User	Modified Date	Current State	Object Type
	•	NGIIEXAMPLE	NGIIEXAMPLE	USR	11/7/2017 2:15 PM	ACTIVE	NGIICONFIG

# Launching the Instrument Interfaces

Single-Component NGII Interfaces through LABWORKS ResultsEntry:

When LABWORKS ResultsEntry is launched, the user may select the 'Import Instrument Result' Icon at the top of the ResultsEntry window:



Or the user can go to File -> Import Instrument Results:



#### LABWORKS LIMS SWM Interface

The Instrument Selection window will appear and the configured Instrument Interfaces will be available for selection:

$\bigotimes$ Intelligent Instrument Interface Result File Selection			—		$\times$
		Browse	<u>0</u> K	<u>C</u> an	cel
Available Instrument Interfaces:	Selected files:				
C LABWORKS Flat Results File					×
C LABWORKS Excel Workbook					
C ASCII Text File					
C LABWORKS Text File .RLT					
C LABWORKS PR6 .CSV					
C Dionex Ion Chromatograph					
C Leco Protein Analyzer					
C Perkin Elmer WinLab AA					
C Custom Interface #1					
C Custom Interface #5					
C NGII Example					
	I				

The configured NGII Example from above is selectable here since it was configured as a Single Component instrument interface. The user can choose this interface using the radial button and then Browse for an instrument file.

Q Intelligent Instrument Interface Result File Selection	_	
	Browse	<u>C</u> ancel
Available Instrument Interfaces:	Selected files:	
O LABWORKS Flat Results File	C:WGII/LWINST_EXAMPLE.CSV	×
C LABWORKS Excel Workbook		
O ASCII Text File		
C LABWORKS Text File .RLT		
C LABWORKS PR6 .CSV		
C Dionex Ion Chromatograph		
C Leco Protein Analyzer		
C Perkin Elmer WinLab AA		
C Custom Interface #1		
C Custom Interface #5		
• NGII Example		

Choosing 'OK' will then parse the file and show the user a preview of what was parsed from the file.

results from (	c:\ngii\lwinst_exam	ple.csv		- 🗆 X
Display options:	results 🔲 Qualif	iers 🔲 MDLs	Refresh	<u>O</u> K <u>C</u> ancel
Instrument	LABWORKS	PH		
Sample Name	Sample ID	PH		
AA00416	AA00416	8.5		
	Second result			

Choosing OK will advance the user into Results Entry for the specific sample-analysis code combination and show the user the final rounded results:

-Enter key	action:		
O Non	e O	Right	Own
User Info	Sample ID	AA00416	
PH	Result	8.5	
HG	Result		
700 00	Result		
ICP-CR	<b>D</b>		
SILVER	Result		
SILVER COLOR	Result		

# **Multi-Component Transfer**

After the user launches Multi Component Transfer from the Results folder:



The user then can choose either 'Backlog Mode' or 'Result File Mode', which will launch two windows. Navigating to the 'Selected Result Files' window:

Selected Result Files

~	Clear List	Add Fi	es to List	
	Result File		-	Sample Name

Choosing to 'Add Files to List' will then show our list of available Multi-component instrument interfaces:

The user can select the named Instrument Interface and the Data File to parse using NGII.

#### LABWORKS LIMS SWM Interface

Selected Result Files

Clear List Add F	iles to List					
Result File	Sample Name	Sample ID	Anl Code	Dil Fac	Date Analyzed	Rlt Type
c:\abworks\wuser\5571126.csv	aa00405 \$icpraw	AA00405	\$ICPRAW	1	10/09/17 11:09	NGII_AGILENTMCICP
c:\abworks\wuser\5571126.csv	aa00406 \$qcle_icp_fd_raw	AA00406		1	10/09/17 11:12	NGII_AGILENTMCICP
c:\abworks\wuser\5571126.csv	aa00406 \$qclf_icp_fd_raw	AA00406		1	10/09/17 11:14	NGII_AGILENTMCICP
c:\abworks\wuser\5571126.csv	aa00406 \$qclr_icp_fd_raw	AA00406		1	10/09/17 11:16	NGII_AGILENTMCICP
c:\abworks\wuser\5571126.csv	aa00495 \$icpraw	AA00495	\$ICPRAW	1	10/09/17 11:19	NGII_AGILENTMCICP
c:\abworks\wuser\5571126.csv	aa00639 \$icpraw	AA00639	\$ICPRAW	1	10/09/17 11:21	NGII_AGILENTMCICP
c:\abworks\wuser\5571126.csv	aa00395 \$icpraw	AA00395	\$ICPRAW	1	10/09/17 11:23	NGII_AGILENTMCICP
c:\abworks\wuser\5571126.csv	aa00396 \$icpraw	AA00396	\$ICPRAW	1	10/09/17 11:26	NGII_AGILENTMCICP
c:\abworks\wuser\5571126.csv	aa00397 \$icpraw	AA00397	\$ICPRAW	1	10/09/17 11:28	NGII_AGILENTMCICP
c:\abworks\wuser\5571126.csv	aa00398 \$icpraw	AA00398	\$ICPRAW	1	10/09/17 11:30	NGII_AGILENTMCICP
c:\abworks\wuser\5571126.csv	aa00399 \$icpraw	AA00399	\$ICPRAW	1	10/09/17 11:33	NGII_AGILENTMCICP

Navigating to the 'Multicomponent Analyses for Selected Result Files' window and then selecting 'Find Samples' will select available samples within LABWORKS that were in the Parsed Data File:

Multicompon	ent Analyse	es for Selected Res	ult Files							
	Eind Samples	s <u>A</u> dd S	Sample	Load F	Results	Save	Results		Attach Object	Close
Sample ID	Analysis	Sample Point	Prev Result	Save	Dil Fac	Act/Norm	Review	Viol	Result File	<b>_</b>
AA00495	\$ICPRAW	WATER	No	<b>v</b>	1	Α			c: Vabworks Vwuser V5571126.csv	
AA00639	\$ICPRAW	WATER	No	<b>V</b>	1	Α			c:\abworks\wuser\5571126.csv	

The user can then 'Load Results' and review this results by selecting the corresponding sample (clicking on the 'Review' number):

Multico	mpone	ent Analyse	es for Selected Res	ult Files									
	E	ind Samples	s <u>A</u> dd S	Sample	Load F	Results	Save	Results		Attach Object			Close
Samp	e ID	Analysis	Sample Point	Prev Result	Save	Dil Fac	Act/Norm	Review	Viol	Resu	lt File		<b>_</b>
AA0049	5	\$ICPRAW	WATER	No	~	1	A	7 💧	None	c: Vabworks Vwuser V5571	126.csv		-
AA0063	9	\$ICPRAW	WATER	No	<b>v</b>	1	A	7	None	c: Vabworks Vwuser V5571	126.csv		
	0	Results Re	view for Sample: A	A00495 Sample	e Point:W	VATER Ana	alysis: \$ICPRA	w				$\times$	
	- Ana	alysis: Me	etals by ICP				Units: mg/L	Enter	· kev act	ion:	Save Chan	iges	
		<ul> <li>Actual</li> <li>Normaliz</li> </ul>	red				-	e C	Right Down		Cancel Char	nges	
	Star	t date: 👖	0/9/2017	End da	ite: 10/	9/2017		Ana	lyst: U	ISR	Test Comm	ents	
	Star	t time: 11	1:19	End tin	ne: 11:	19 🖨		Dilu	tion fact	or: 1	Samp Comm	ients	v

The Review of the parsed Results:

	Results Review for Sample: A	A00495	Sample Point:W	VATER Analy	sis: \$ICPRAW	1					×
Ana	lysis: Metals by ICP			ι	Jnits: mg/L					Save Cha	anges
⊢Re	sult options:					Enter ke	ey action:				
(	Contraction Actual					○ Rig ○ Do	ght wn			Cancel Ch	anges
Start	time:		End date: 10/	9/2017		Analys	st: USR			Test Com	ments
	11:15		11:	19 🔻			1			Samp Con	iments
	Component Name	Viol	Result	MDL	Start Date	Time	End Date	Time			<b>_</b>
1	Chromium		18.8	0.010							
2	Lead		0.537	0.010							
4	Nickel		12.2	0.020							
5	Zinc		31.8	0.010							
6	Sulfur		5060								
7	Silicon		0.562								
8											
9											_
10											
11											
12											_
13	1	I	I	I	I	I	I	I			•

# LWMultiComponentTransfer (new in 6.8)

In this example, we will use the 'Backlog Mode' to load Results.

The program can be added to your Default Menu (LWMultiComponentTransfer.exe). Launch the program (Results - > LW Multi Component Transfer):

Menu Items	-	J
۹		
😂 File		
System Preferences		
System Config		
对 System Status		
📴 User Preferences		
📴 Login		
📴 Results		
Results Entry		
Custody Tracking		
Sample And Analysis Validation		
Multi Component Transfer		
Instrument Results Conversion		
MC Select		
Post Results 6		
ScanDaemon		

After the program opens, go to Mode -> Backlog Mode

eWorksheet Builder

🔁 qa/qc

LW Multi Component Transfer

File Tool	Mode	Help		
e Selection	E F	Backlog Mode Result File Mode		
			Result File	

The LABWORKS – Analysis Selection will open:

Search         #Aol       Analysis Name         #Aol       Group Test         #COLIFORM       Coliform MPN Group         #Q\$GC       GC QC Group         #Q\$ICPRAW       ICP QC Group         #QGOLD       QC Group for Gold         #QHG       Mercury QC Group         #QICP-PREP       ICP PREP QC         #QPH       pH QC Test Group         #QSILVER       LCS Recovery for Silver by GFAA         \$BLKV_GC       Blank Result Organics by GC         \$BLKV_ICP       Blank Result Metals by ICP         \$CCBV_ICP       CCV Result Metals by ICP         \$COLOR_RAW       Color         \$COLOR_RAW_BB       Color         \$COLOR_RAW_DUP       Color         \$COLOR_RAW_LEB       Color         \$COLOR_RAW_LEB       Color         \$COLOR_RAW_MB       Color	
Analysis Code       Analysis Name         #AOI       AOI Group Test         #COLIFORM       Coliform MPN Group         #Q\$GC       GC QC Group         #Q\$GDD       QC Group for Gold         #QHG       Mercury QC Group         #QPH       pH QC Test Group         #QSILVER       LCS Recovery for Silver by GFAA         \$BLKV_GC       Blank Result Organics by GC         \$BLKV_ICP       Blank Result Metals by ICP         \$COLOR_RAW_BB       Color         \$COLOR_RAW_BB       Color         \$COLOR_RAW_LEB       Color         \$COLOR_RAW_KEB       Color         \$COLOR_RAW_MB       Color         \$COLOR_RAW_MB       Color	
Analysis Code       Analysis Name         #AOI       AOI Group Test         #COLIFORM       Coliform MPN Group         #Q\$GC       GC QC Group         #QQGLD       QC Group for Gold         #QHG       Mercury QC Group         #QICP-PREP       ICP PREP QC         #QPH       pH QC Test Group         #QSILVER       LCS Recovery for Silver by GFAA         \$BLKV_GC       Blank Result Organics by GC         \$BLKV_ICP       Blank Result Metals by ICP         \$CCBV_ICP       CCV Result Metals by ICP         \$COLOR_RAW_BB       Color         \$COLOR_RAW_BB       Color         \$COLOR_RAW_LFB       Color         \$COLOR_RAW_LFB       Color         \$COLOR_RAW_MB       Color	
Analysis Code       Analysis Name         #AOI       AOI Group Test         #COLIFORM       Coliform MPN Group         #Q\$GC       GC QC Group         #Q\$GCDD       QC Group for Gold         #QGOLD       QC Group for Gold         #QHG       Mercury QC Group         #QICP-PREP       ICP PREP QC         #QPH       pH QC Test Group         #QSILVER       LCS Recovery for Silver by GFAA         \$BLKV_GC       Blank Result Organics by GC         \$BLKV_ICP       Blank Result Metals by ICP         \$CCBV_ICP       CCV Result Metals by ICP         \$COLOR_RAW       Color         \$COLOR_RAW_BB       Color         \$COLOR_RAW_LCV       Color         \$COLOR_RAW_LCV       Color         \$COLOR_RAW_LFB       Color         \$COLOR_RAW_MB       Color	
#AOIAOI Group Test#COLIFORMColiform MPN Group#Q\$GCGC QC Group#Q\$GDDQC Group for Gold#QGOLDQC Group for Gold#QHGMercury QC Group#QICP-PREPICP PREP QC#QPHpH QC Test Group#QSILVERLCS Recovery for Silver by GFAA\$BLKV_GCBlank Result Organics by GC\$BLKV_ICPBlank Result Metals by ICP\$CCBV_ICPCCV Result Metals by ICP\$COLOR_RAW_BBColor\$COLOR_RAW_EBColor\$COLOR_RAW_LFBColor\$COLOR_RAW_MBColor\$COLOR_RAW_MBColor	^
#COLIFORMColiform MPN Group#Q\$GCGC QC Group#Q\$ICPRAWICP QC Group#QGOLDQC Group for Gold#QHGMercury QC Group#QICP-PREPICP PREP QC#QPHpH QC Test Group#QSILVERLCS Recovery for Silver by GFAA\$BLKV_GCBlank Result Organics by GC\$BLKV_ICPBlank Result Metals by ICP\$CCVV_ICPCCB Result Metals by ICP\$CCVV_ICPCCV Result Metals by ICP\$COLOR_RAW_BBColor\$COLOR_RAW_DUPColor\$COLOR_RAW_IEBColor\$COLOR_RAW_IEBColor\$COLOR_RAW_IEBColor\$COLOR_RAW_IEBColor\$COLOR_RAW_IEBColor\$COLOR_RAW_IEBColor\$COLOR_RAW_IEBColor\$COLOR_RAW_IEBColor\$COLOR_RAW_IEBColor\$COLOR_RAW_IEBColor\$COLOR_RAW_MBColor	
#Q\$GCGC QC Group#Q\$ICPRAWICP QC Group#QGOLDQC Group for Gold#QHGMercury QC Group#QICP-PREPICP PREP QC#QPHpH QC Test Group#QSILVERLCS Recovery for Silver by GFAA\$BLKV_GCBlank Result Organics by GC\$BLKV_ICPBlank Result Metals by ICP\$CCBV_ICPCCB Result Metals by ICP\$CCVV_ICPCCV Result Metals by ICP\$COLOR_RAW_BBColor\$COLOR_RAW_DUPColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_LFBColor\$COLOR_RAW_MBColor	
#Q\$ICPRAWICP QC Group#QGOLDQC Group for Gold#QHGMercury QC Group#QICP-PREPICP PREP QC#QPHpH QC Test Group#QSILVERLCS Recovery for Silver by GFAA\$BLKV_GCBlank Result Organics by GC\$BLKV_ICPBlank Result Metals by ICP\$CCBV_ICPCCB Result Metals by ICP\$CCVV_ICPCCV Result Metals by ICP\$COLOR_RAW_BBColor\$COLOR_RAW_CCVColor\$COLOR_RAW_EBColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_MBColor\$COLOR_RAW_MBColor	
#QGOLDQC Group for Gold#QHGMercury QC Group#QICP-PREPICP PREP QC#QPHpH QC Test Group#QSILVERLCS Recovery for Silver by GFAA\$BLKV_GCBlank Result Organics by GC\$BLKV_ICPBlank Result Metals by ICP\$CCBV_ICPCCB Result Metals by ICP\$CCVV_ICPCCV Result Metals by ICP\$COLOR_RAW_BBColor\$COLOR_RAW_CCVColor\$COLOR_RAW_EBColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_IFBColor\$COLOR_RAW_MBColor	
#QHGMercury QC Group#QICP-PREPICP PREP QC#QPHpH QC Test Group#QSILVERLCS Recovery for Silver by GFAA\$BLKV_GCBlank Result Organics by GC\$BLKV_ICPBlank Result Metals by ICP\$CCBV_ICPCCB Result Metals by ICP\$CCVV_ICPCCV Result Metals by ICP\$COLOR_RAWColor\$COLOR_RAW_DUPColor\$COLOR_RAW_EBColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_IFBColor\$COLOR_RAW_MBColor\$COLOR_RAW_MBColor	
#QICP-PREPICP PREP QC#QPHpH QC Test Group#QSILVERLCS Recovery for Silver by GFAA\$BLKV_GCBlank Result Organics by GC\$BLKV_ICPBlank Result Metals by ICP\$CCBV_ICPCCB Result Metals by ICP\$CCUOR_RAWColor\$COLOR_RAW_BBColor\$COLOR_RAW_EBColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_ICVColor\$COLOR_RAW_IFBColor\$COLOR_RAW_MBColor\$COLOR_RAW_MBColor	
#QPH     pH QC Test Group       #QSILVER     LCS Recovery for Silver by GFAA       \$BLKV_GC     Blank Result Organics by GC       \$BLKV_ICP     Blank Result Metals by ICP       \$CCBV_ICP     CCB Result Metals by ICP       \$CCVV_ICP     CCV Result Metals by ICP       \$COLOR_RAW     Color       \$COLOR_RAW_DUP     Color       \$COLOR_RAW_EB     Color       \$COLOR_RAW_ICV     Color       \$COLOR_RAW_IFB     Color       \$COLOR_RAW_IFB     Color       \$COLOR_RAW_MB     Color	
#QSILVER     LCS Recovery for Silver by GFAA       \$BLKV_GC     Blank Result Organics by GC       \$BLKV_ICP     Blank Result Metals by ICP       \$CCBV_ICP     CCB Result Metals by ICP       \$CCVV_ICP     CCV Result Metals by ICP       \$CCLOR_RAW     Color       \$COLOR_RAW_BB     Color       \$COLOR_RAW_DUP     Color       \$COLOR_RAW_EB     Color       \$COLOR_RAW_ICV     Color       \$COLOR_RAW_ICV     Color       \$COLOR_RAW_IFB     Color       \$COLOR_RAW_MB     Color	
\$BLKV_GC     Blank Result Organics by GC       \$BLKV_ICP     Blank Result Metals by ICP       \$CCBV_ICP     CCB Result Metals by ICP       \$CCVV_ICP     CCV Result Metals by ICP       \$COLOR_RAW     Color       \$COLOR_RAW_BB     Color       \$COLOR_RAW_DUP     Color       \$COLOR_RAW_EB     Color       \$COLOR_RAW_EB     Color       \$COLOR_RAW_ICV     Color       \$COLOR_RAW_ICV     Color       \$COLOR_RAW_IFB     Color       \$COLOR_RAW_MB     Color	
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\$CCBV_ICP       CCB Result Metals by ICP         \$CCVV_ICP       CCV Result Metals by ICP         \$COLOR_RAW       Color         \$COLOR_RAW_BB       Color         \$COLOR_RAW_CCV       Color         \$COLOR_RAW_DUP       Color         \$COLOR_RAW_EB       Color         \$COLOR_RAW_ICV       Color         \$COLOR_RAW_ICV       Color         \$COLOR_RAW_ICV       Color         \$COLOR_RAW_LFB       Color         \$COLOR_RAW_MB       Color	
\$CCVV_ICP     CCV Result Metals by ICP       \$COLOR_RAW     Color       \$COLOR_RAW_BB     Color       \$COLOR_RAW_CCV     Color       \$COLOR_RAW_DUP     Color       \$COLOR_RAW_EB     Color       \$COLOR_RAW_ICV     Color       \$COLOR_RAW_ICV     Color       \$COLOR_RAW_ICV     Color       \$COLOR_RAW_LFB     Color       \$COLOR_RAW_MB     Color	
\$COLOR_RAW     Color       \$COLOR_RAW_BB     Color       \$COLOR_RAW_CCV     Color       \$COLOR_RAW_DUP     Color       \$COLOR_RAW_EB     Color       \$COLOR_RAW_ICV     Color       \$COLOR_RAW_ICV     Color       \$COLOR_RAW_LFB     Color       \$COLOR_RAW_MB     Color	
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\$COLOR_RAW_CCV         Color           \$COLOR_RAW_DUP         Color           \$COLOR_RAW_EB         Color           \$COLOR_RAW_ICV         Color           \$COLOR_RAW_ICV         Color           \$COLOR_RAW_LFB         Color           \$COLOR_RAW_MB         Color           \$COLOR_RAW_MB         Color	
\$COLOR_RAW_DUP         Color           \$COLOR_RAW_EB         Color           \$COLOR_RAW_ICV         Color           \$COLOR_RAW_LFB         Color           \$COLOR_RAW_MB         Color	
\$COLOR_RAW_EB         Color           \$COLOR_RAW_ICV         Color           \$COLOR_RAW_LFB         Color           \$COLOR_RAW_MB         Color           \$COLOR_RAW_MB         Color	
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\$COLOR_RAW_LFB         Color           \$COLOR_RAW_MB         Color           \$COLOR_RAW_MB         Color	
\$COLOR_RAW_MB Color	
COLOR RAW CRK	
	*
OK Ca	ncel

Choose the Analysis Code you would like to load results for (in this case, \$ICPRAW):

		Result File				Sample ID		Analysis Code	Dil	Factor	Date Analyzed	Result Type		Rename
icts Found:	0 Resolved: 0 Remainin	g: 0						1	Auto Ma	stch	Add Files to List	) Clear List		Find Samp Accept Ch
Sample ID	Analysis Code	Duplicate As Replicate	Select	Location Code	Analysis Due Date	Save	Dil. Factor	Actual/Normalize	Review	Violation		Result F	ile	
A00495	SICPRAW			WATER	12/08/2015 12:00			A	7					
A00639	SICPRAW			WATER	04/28/2016 12:00			A	7		·····			
A00640	\$ICPRAW			WATER	04/28/2016 12:00			A	7					
400641	SICPRAW			WATER	04/28/2016 12:00			A	7					
	SICPRAW			WATER	08/16/2016 12:00	Π		A	7		A			
A00774		3		WATER	08/16/2016 12:00			A	7					
AA00774 AA00775	SICPRAW													

The bottom of the application shows the pending samples. If we choose 'Add Files to List' we can then pick our Results File:

vailable Result File Types	Multicomponent Result File Selection	
ABWORKS PR6 GII MC Example	Drives C: [OS] C: [OS] C: [OS] C: [OS] AgilentICPExpertMC AgilentICPExpertSC CodeExamples LWINST_EXAMPLE LWINST_EXAMPLE LWINGIIChlorophyllOCFL LWNGIIChlorophyllOCFL LWNGIIChloroPhyllOCFL LWNGIIColorOCFL68 LWNGIIColorOCFL68 LWNGIIColorOCFL68 LWNGIIMassHunterMass LWNGIIMassHunterMass LWNGIIMCMass LWNGIIMCMass LWNGIIMCMass LWNGIIWinlab LWNGIIWinlabPlant LWNGIIWinlabPlant LWNGIIWinlabUSI Output Paul	Result File Types
		File Name
	C: WGII  Rename Result Files After Saving	C: WGIT WC_NGITEXample2.csv

This will add the parsed files to the 'File Selection' list at the top of the window:

								76 551 55 101				
		Result File				Sample ID	Ana	alysis Code	Dil. Factor	Date Analyzed	Result Type	Rename
VGII\MC_NG	IIExample2.csv				A	400495	\$ICPRAW		1	10/09/2017 11:19	NGII MC Example	No
VGII\MC_NG	IIExample2.csv				A	400639	\$ICPRAW		1	10/09/2017 11:21	NGII MC Example	No
								[	Auto Match	Add Files to List	Gear List	Find San
icts Found: 0	) Resolved: 0 Remaining	F 0							Auto Match	Add Files to List	Oear List	Find San
icts Found: 0 Sample ID	) Resolved: 0 Remaining Analysis Code	: 0 Duplicate As Replicate	Select	Location Code	Analysis Due Dat	s Save	Dill. Factor Act	tual/Normalize	Auto Match Review Viola	Add Files to List	Oear List	Find San
cts Found: 0 Sample ID \A00495	) Resolved: 0 Remaining Analysis Code SICPRAW	: 0 Duplicate As Replicate	Select	Location Code WATER	Analysis Due Dat 12/08/2015 12:00	s Save	Dil. Factor Aci	tual/Normalize	Auto Match Review Viola 7	Add Files to List	Clear List Result File	Accept C
cts Found: 0 Sample ID \AD0495 \AD0639	Presolved: 0 Remaining Analysis Code SICPRAW SICPRAW	: 0 Duplicate As Replicate	Select	Location Code WATER WATER	Analysis Due Dat 12/08/2015 12:00 04/28/2016 12:00	s Save	Dil. Factor Act	tual/Normalize	Auto Match Review Viola 7 7	Add Files to List	Clear List	Accept C
cts Found: 0 Sample ID (A00495 (A00639 (A00640	) Resolved: 0 Remaining Analysis Code SICPRAW SICPRAW SICPRAW	: 0 Duplicate As Replicate	Select	Location Code WATER WATER WATER	Analysis Due Dat 12/08/2015 12:00 04/28/2016 12:00 04/28/2016 12:00	s Save	Dil. Factor Act A A A A	tual/Normalize	Auto Match Review Viola 7 7 7 7	Add Files to List	Clear List	Find San
icts Found: 0 Sample ID AA00495 AA00640 AA00640 AA00641	Resolved: 0 Remaining Analysis Code SICPRAW SICPRAW SICPRAW	Duplicate As Replicate	Select	Location Code WATER WATER WATER WATER	Analysis Due Dat 12/08/2015 12:00 04/28/2016 12:00 04/28/2016 12:00 04/28/2016 12:00	s Save S	Dil. Factor Ac A A A A A	tual/Normalize	Auto Match Review Viola 7 7 7 7 7 7	Add Files to List	Clear List Result File	Accept C
cts Found: 0 Sample ID \A00495 \A00639 \A00630 \A00640 \A00641 \A00774	Pesolved: 0 Remaining Analysis Code SICPRAW SICPRAW SICPRAW SICPRAW SICPRAW	: 0 Duplicate As Replicate	Select	Location Code WATER WATER WATER WATER WATER	Analysis Due Dat 12/08/2015 12:00 04/28/2016 12:00 04/28/2016 12:00 08/16/2016 12:00 08/16/2016 12:00	Save	Dil. Factor Act A A A A A A A	tuel/Normalize	Auto Match	Add Files to List	Ceer List	Accept C

#### LABWORKS LIMS SWM Interface

#### You may then 'Drag and Drop' the selected result file with the corresponding Backlog sample:

licts Found: 0	) Resolved: 0 Remainin	g: 0	Salact	Location Code	Analysis Due Date	Sava	Dil Eactor	Actual/Normalize	Paviau	Violation	<> Accept Chang
	SICPRAW	Duplicate As Replicate	Select	WATER	12/08/2015 12:00	Jave	1		7	violation	
AA00639	SICPRAW			WATER	04/28/2016 12:00		1	A	7		C:\NGII\MC_NGIIExample2.csv
AA00640	\$ICPRAW			WATER	04/28/2016 12:00			A	7		
AA00641	SICPRAW			WATER	04/28/2016 12:00			A	7		v
AA00774	\$ICPRAW			WATER	08/16/2016 12:00			A	7		
AA00775	SICPRAW			WATER	08/16/2016 12:00			A	7		

You may click on the 'Review' number for each sample to review the loaded results:

alysis information						
ample Id A/	A00495	Location Cod	e WATER		Analysis Name	Metals by ICP
nalysis Code \$1	CPRAW	Unit			Analyst	
tart Date Time 10	/ 9/2017 ~ 11:	19 🚖 End Date Tim	ne 11/ 7/2017	∨ 16:20 🚖	Dilution Factor	1
Result Options			Key Action			
Actual	Normalized		Right	O Down		
eguit Review Tast	Comment Complet	t				
esult Review Test	t Comment Sample C	Comment				
esult Review Test	t Comment Sample C	Comment	MDL	Manage Replic	ates	
esult Review Test Component Name Chromium	t Comment Sample C	Comment Result 0.562717	MDL	Manage Replic Manage Replica	ates	
esult Review Test Component Name Chromium Copper	t Comment Sample C	Comment Result 0.562717 1.351520	MDL	Manage Replic Manage Replica Manage Replica	ates ates	
esult Review Test Component Name Chromium Copper Lead	t Comment Sample C	Comment Result 0.562717 1.351520 69.442200	MDL	Manage Replica Manage Replica Manage Replica Manage Replica	ates ates ates	
esult Review Test Component Name Chromium Copper Lead Nickel	t Comment Sample C	Comment Result 0.562717 1.351520 69.442200 70.877000	MDL	Manage Replica Manage Replica Manage Replica Manage Replica Manage Replica	ates ates ates ates ates ates	
esult Review Test Component Name Chromium Copper Lead Nickel Zinc	t Comment Sample C	Comment Result 0.562717 1.351520 69.442200 70.877000 4.533080	MDL	Manage Replica Manage Replica Manage Replica Manage Replica Manage Replica Manage Replica	ates ates ates ates ates ates ates	
esult Review Test Component Name Chromium Copper Lead Nickel Zinc Sulfur	t Comment Sample C	Result         0.562717           1.351520         69.442200           70.877000         4.533080           4.617000         4.617000	MDL	Manage Replica Manage Replica Manage Replica Manage Replica Manage Replica Manage Replica Manage Replica	ates ates ates ates ates ates ates ates	

Clicking on 'Save Results' will then commit these results to the database.

# Field List for NGII Parsing

The following table shows the list of supported fields that may be parsed by an NGII interface:

LABWORKS Field Abbreviation	Description
SIDN	LABWORKS Sample Number
ACODE	LABWORKS Analysis Code
ASTD	Analysis Start Date
ASTT	Analysis Start Time
AEND	Analysis End Date
AENT	Analysis End Time
APRC	Analysis Price
ACMT	Analysis Comment
ANUM	Analysis Number
ANLNAME	Analyte Name
RLT	Result
RLT2	Secondary Result
RQUAL	Qualifier
RRAW	Raw Result
RDLF	Dilution Factor
RMDL	Analyte MDL
RPQL	Analyte PQL
RUNT	Analyte Unit
RSTD	Analyte Start Date
RSTT	Analyst Start Time
REND	Analyte End Date
RENT	Analyte End Time
RANALYST	Analyte Analyst
RNUM	Analyte Number
RRLTSRC	Analyte RLTSource
ANALYST	Analysis Analyst
AVALUSER	Analysis Validation User
AVALDATE	Analysis Validation Date
REPNO	Replicate Number