SmallPond™ Operating and User Procedures

1. The SmallPond™ (SM) database will require a username and password that will be assigned by the SM Administrator.

2. Once successfully logged in, you will have access to all of the ponds that have been defined.

Ponds

1. In the SmallPond™ system, profiles from a given site can be organized into units called **Ponds**.
2. The Ponds used at the DESPP DSS are as follows;
    a. CT Convicted Offender Profiles
    b. Unknown Forensic Samples- Single Source
    c. Staff Elimination Database

Pools

1. In the SmallPond™ system, ponds can be grouped together into **Pools**. When ponds are grouped together into a pool, it signifies to the SmallPond™ matching service to cross-match the profile data in each on the ponds against the profile data in all of the other ponds in the same pool.
2. The Pools used at the DESPP DSS are as follows;
    a. Offender DB vs Unknown (SS)

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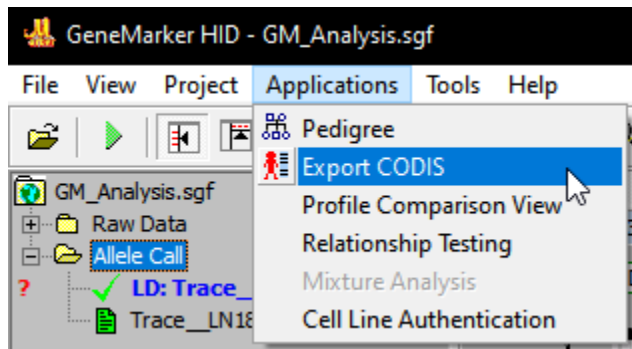
b. Unknown (SS) vs Staff

Stringency

1. The following base stringency is followed for match notifications.
    High – For a given locus, all alleles must match exactly between matching profiles.
2. In addition to the above rules being applied at every locus, the following conditions must also be met:
    a. If, for any locus, the allele values do not match according to the selected stringency then the profiles are excluded, that is, they do not match.
    b. If, at any locus, there is no allele data for either one of the profiles, then the locus is considered a match. It may be better to think of this as not being excluded.
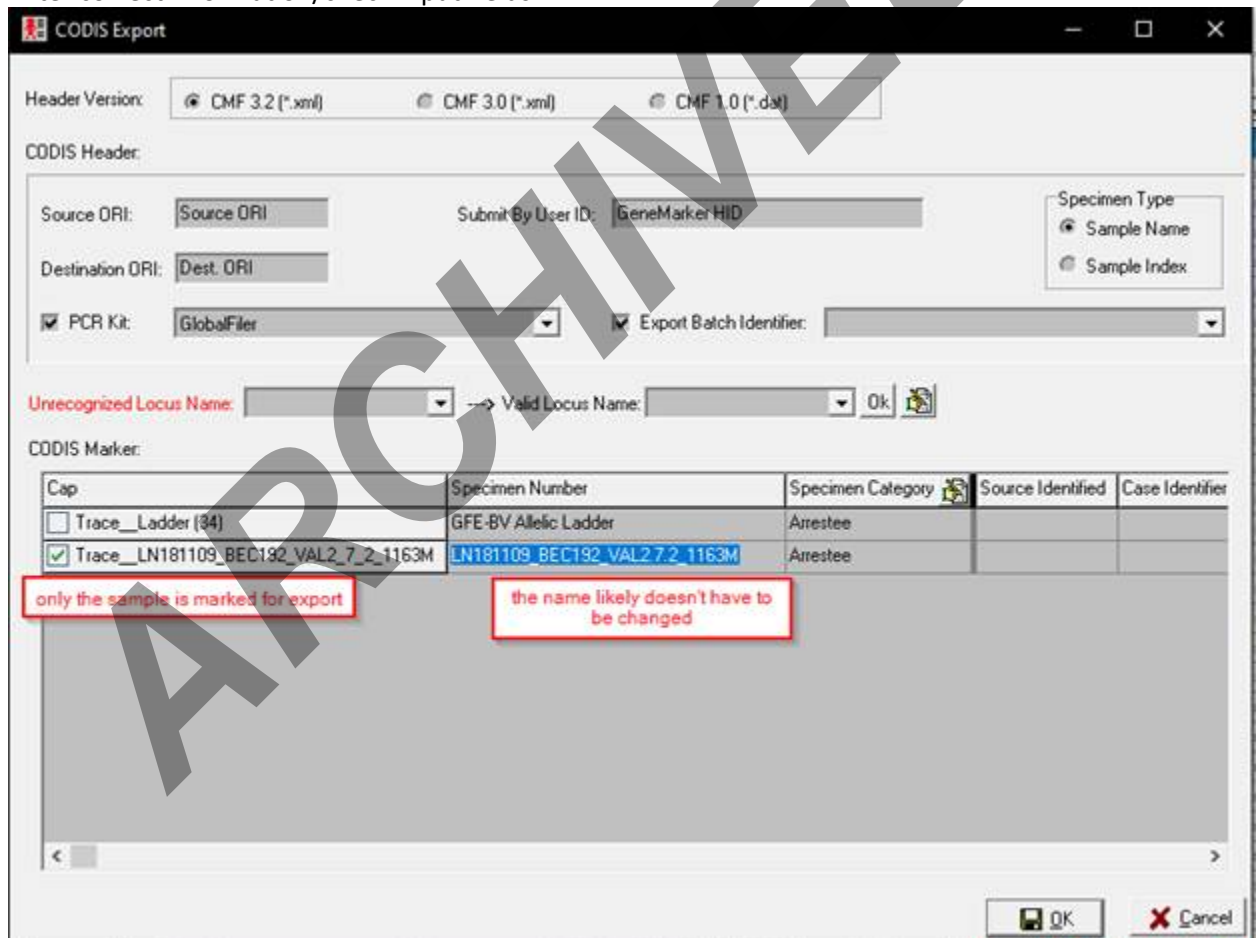   c.

Importing Sample

1. There are two methods for entering new Profiles into a pond:
    a. **Manual Entry** – Profile information and individual locus allele values for a single profile are entered manually by the user. To add a profile manually, click on the **Profiles | Add Profile** menu item on the function bar at the top of every page.
    b. **Import from File** – Profile information and individual locus allele values for multiple profiles are defined in a CODIS CMF file (or another file format) and are imported as a batch operation. To add profiles from a file, click on the **Profiles | Import Profiles** menu item the function bar at the top of every page.
2. Regardless of the method chosen to add a profile, whenever a profile is added to a pond the SmallPond™ system will automatically search it against all of the other Profiles in the pond using the pond's configured match stringency settings as well as the stringency settings defined for any pools of which the pond is a member.

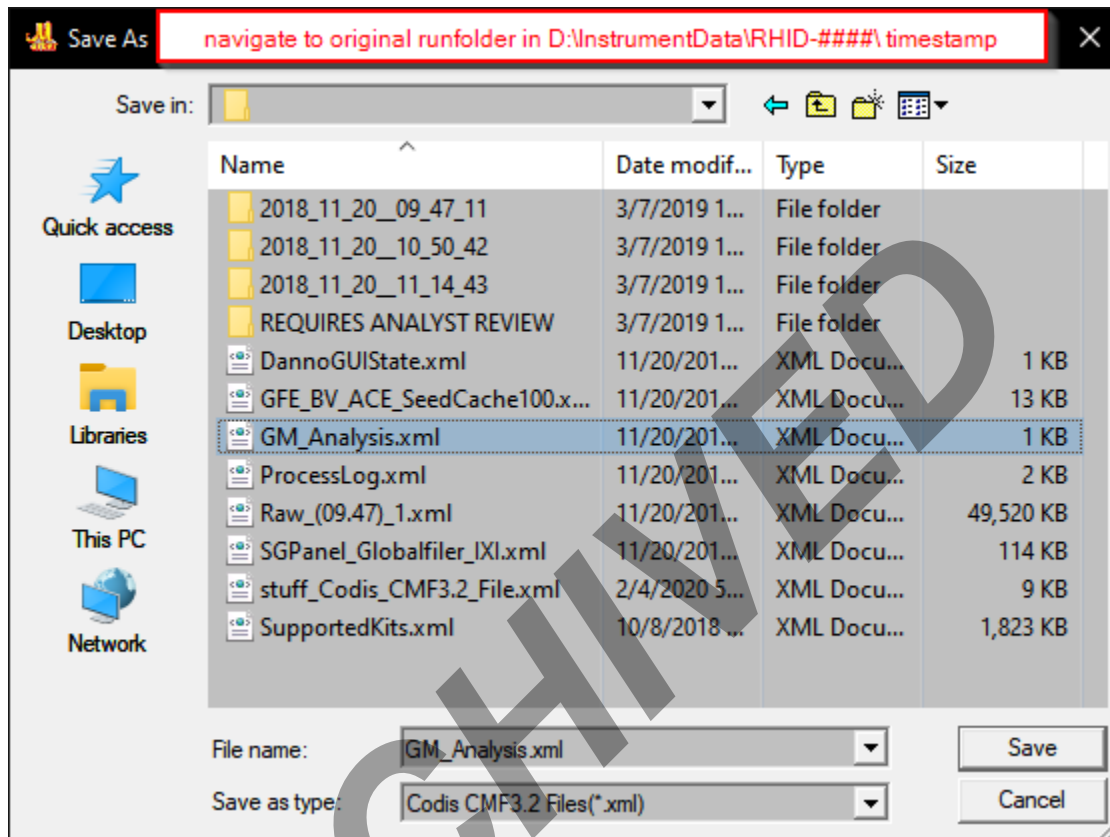## Manually Importing a Sample from RapidHit Software through GeneMarker HID

1. Clear call flags (Yellow/Red), by editing/deleting/confirming alleles (See RDNA SOP-02)
2. After clearing flags, in GeneMarker, go to Applications → Export CODIS

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3. Enter correct information/check input fields

4. Navigate to the original runfolder and over-write the GM_Analysis.xml

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5. Log into Smallpond and navigate to Import Profiles. You can drag/drop the GM_Analysis.xml to upload into appropriate pond which most likely will be the Unknown Forensic Samples- Single Source (Unknown folder).
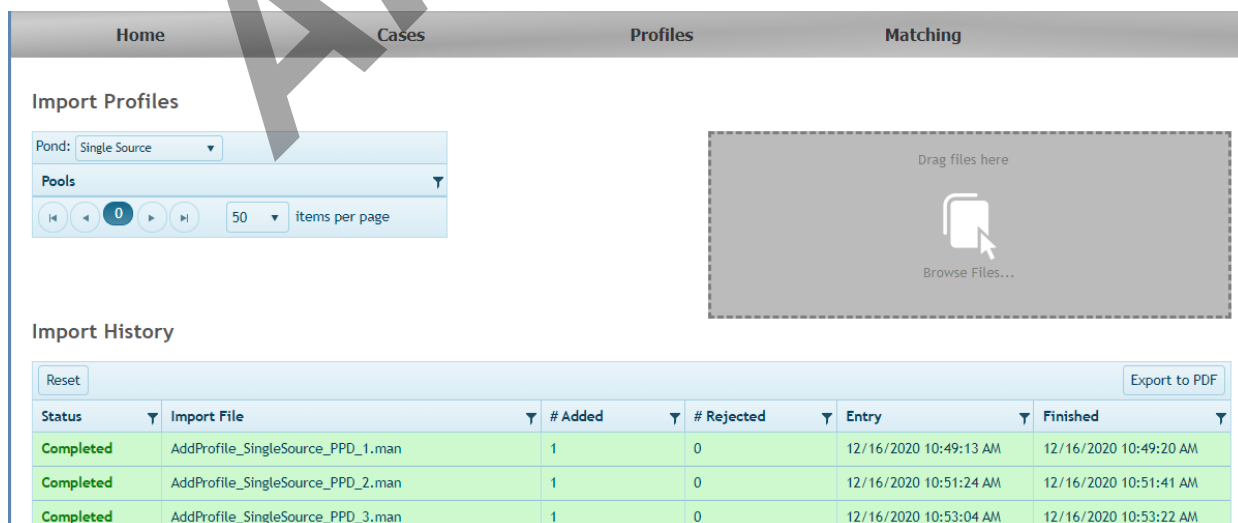
6. When a match occurs, the system will automatically notify users of the pond based on their individual notification settings. Matches can also be reviewed at any time by going to the **Match History** page.

Matches

You can review all matches that have been found for your Pond on this page.

· The system will automatically search for a match whenever a new DNA Profile is added. It uses the Pond's Match Stringency parameters when performing the match. Notifications are automatically sent when new matches are made.

		Match Date	Searched Profile	Found Pond	Found Profile ▲	Stringency	Status
☐	🔍	5/30/2019	2	Test Annotations	1	[Low]	New
☐	🔍	5/30/2019	2	Known Reference	10	New Pool [High]	New
☐	🔍	5/30/2019	2	Known Reference	11	New Pool [High]	New
☐	🔍	5/30/2019	2	Known Reference	12	New Pool [High]	New
☐	🔍	5/30/2019	2	Known Reference	13	New Pool [High]	New
☐	🔍	5/30/2019	2	Known Reference	14	New Pool [High]	New
☐	🔍	5/30/2019	2	Known Reference	15	New Pool [High]	New
☐	🔍	5/30/2019	2	Known Reference	16	New Pool [High]	New

Pond: Test Annotations ▼ | Show Closed Matches: Yes ▼ | Reset | New ▼ | Update Selected Statuses | Export to PDF | Export to CSV

Match Report

1. Navigate to the Match Report page by clicking the **Matching | Match Report** link in the function bar on the top of every page.
2. Enter the specimen id of the desired profile.
3. Click the **Search** button.
4. The following match report is shown as an example. The match report shows all matches made to the selected profile including the ponds and pools searched as well as the stringencies used in performing the search. A separate page will be generated for each match.

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Match Date: 4/16/2013 5:02:49 PM

Locus	Target Pond: Clark PD - Knowns Specimen Id: 1234 Unknown	Candidate Pond: Clark PD - Knowns Specimen Id: 1234d579-fcd8- 4a3b-b230-850ac4330992 Unknown	Match Quality
D8S1179	12,14	12,14	Exact
D21S11	27.2,36.3	27.2,36.3	Exact
D7S820	8,11.1	8,11.1	Exact
CSF1PO	6,11	6,11	Exact
D3S1358	14.3,18	14.3,18	Exact
TH01	6,6.1	6,6.1	Exact
D13S317	14,17	14,17	Exact
D16S539	14,14.3	14,14.3	Exact
D2S1338	18,23.3	18,23.3	Exact
D19S433	11,17.2	11,17.2	Exact
vWA	22,23	22,23	Exact
TPOX	5,6	5,6	Exact
D18S51	13.1,15.3	13.1,15.3	Exact
AMELOGENIN	X	X	Exact
D5S818	14,16	14,16	Exact
FGA	27.2,42.1	27.2,42.1	Exact

Source ID:	No	No
Partial Profile:	No	No
Mixture:	No	No

Match Detail:
16 Loci Match
Search Program: SmallPond
Maximum number of candidates to return from search: ALL

Searched Ponds:

Pond	Stringency	Profiles Searched
Clark PD - Knowns	Must match ALL loci Mixtures included: Yes Exact match required: Yes	520037
Total		520037

Searched Pools:

Pool	Stringency	Ponds	Profiles Searched
Clark PD Pool	Must match ALL loci Mixtures included: Yes Exact match required: Yes	Clark PD - Unknowns Clark PD - Knowns	531047
Total			531047

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Standard CMF

SmallPond™ supports the CODIS Interface Specification (CMF 3.2) Revision 9 published by the CODIS Operations and Maintenance Support Services of the Federal Bureau of Investigations.

References

SmallPond™ User's Guide Version 3.0.0

SmallPond Technical Training_CT 2021

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