2024 IR-4 Training Webinar

August 20, 2024

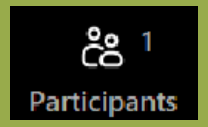
Please ensure your name displayed on Zoom is correct

- This will be the name that goes onto your training certificate – if we cannot figure out who you are, we cannot create a certificate!

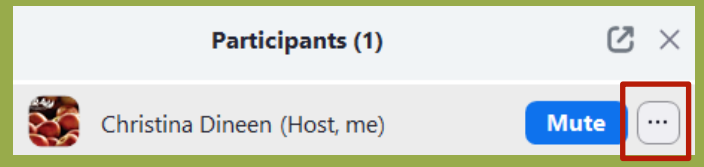
- If sharing a computer, please list any other attendee names in the chat.

To update your display name in Zoom:

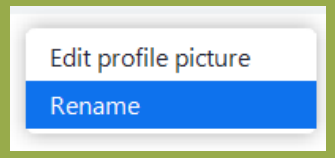
1. Click **Participants**.



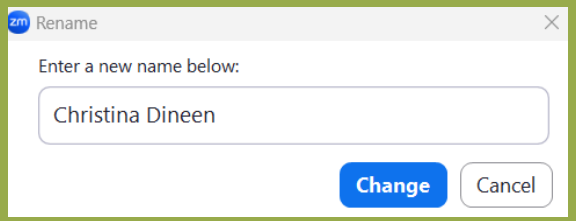
2. Hover mouse over your name, click three dots for more options.



3. Click **Rename**. A pop-up box will appear.



4. Enter display name in the pop-up box. Click **Change**.



Friendly Reminders

- Please type any questions in the chat to be addressed after presentations
- Please stay muted when you are not speaking
- This will be recorded and available on WR-IR4 Works page

Agenda

- **Completing Electronic FDB**
  Philip Moore
- **Discussion: eFDB Processes**
  Nathan Leach & Kari Arnold
- **Discussion: Comparing eFDB Hardware/Software**
  Cole Smith
- **eFDB Setup Examples**
  Kari Arnold
- **Sample Collection, Modifications & Shipment**
  Robert Welker & Christina Dineen

IR-4 Project

How to complete an electronic FDB

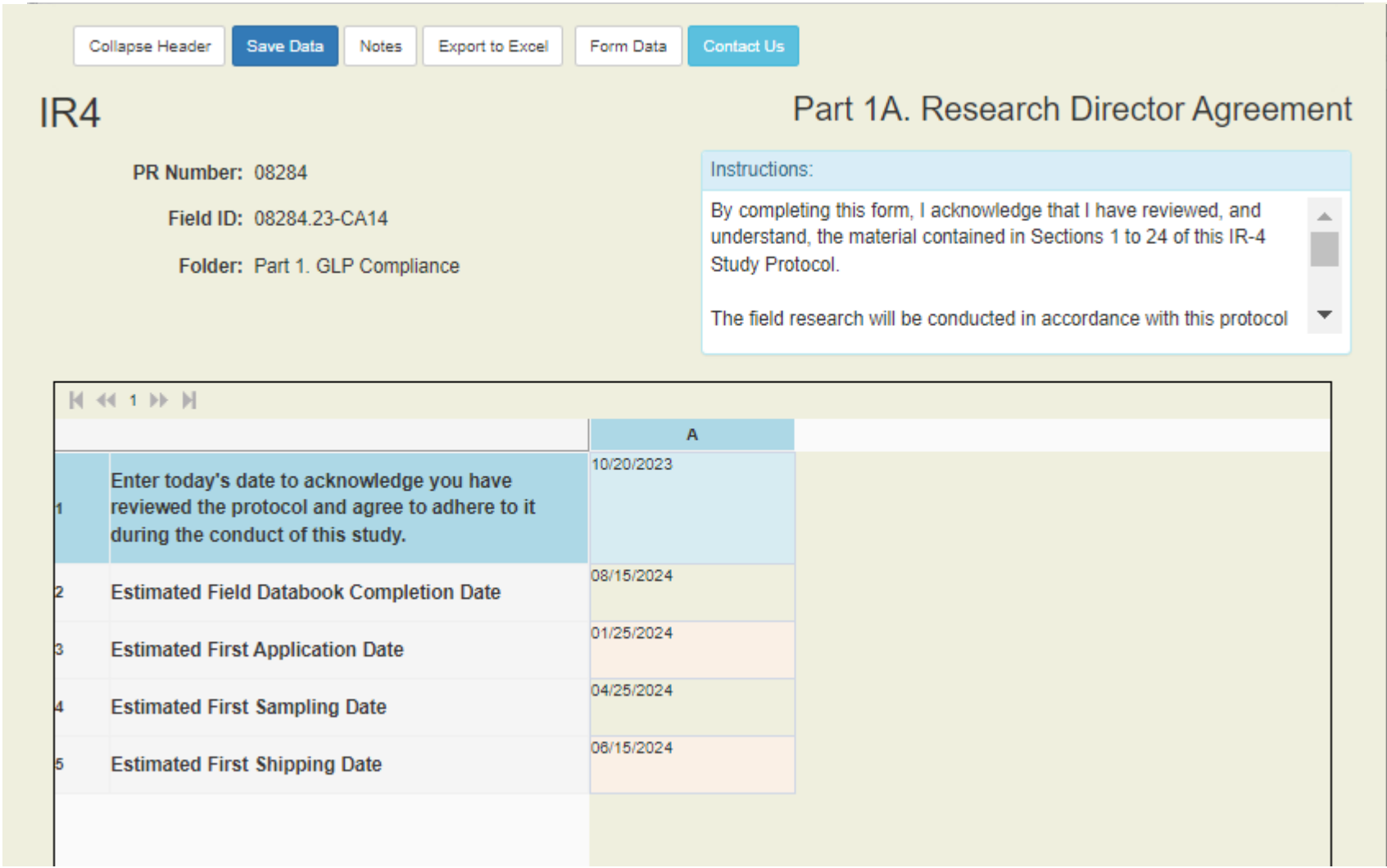
IR-4 Quarterly Field and Lab Training *August 2024*

Your Penultimate Lap

- You've collected and shipped the samples, now what?
- Ensure all (required) forms are completed and marked as complete
- Check that all required PDF documents have been properly uploaded
- E-mail your RFC, SD, and Philip that you are ready for a QC review
- Philip or another QC reviewer will respond with a list of suggested corrections to make

Ensure all forms are completed and marked as complete

- Part 4A+4E: Min/Max T.S. storage temp
- Part 1B: GLP Compliance
- Mark all forms as complete
- Use the Expand All/ Collapse All button
- Page icons- Form Data button



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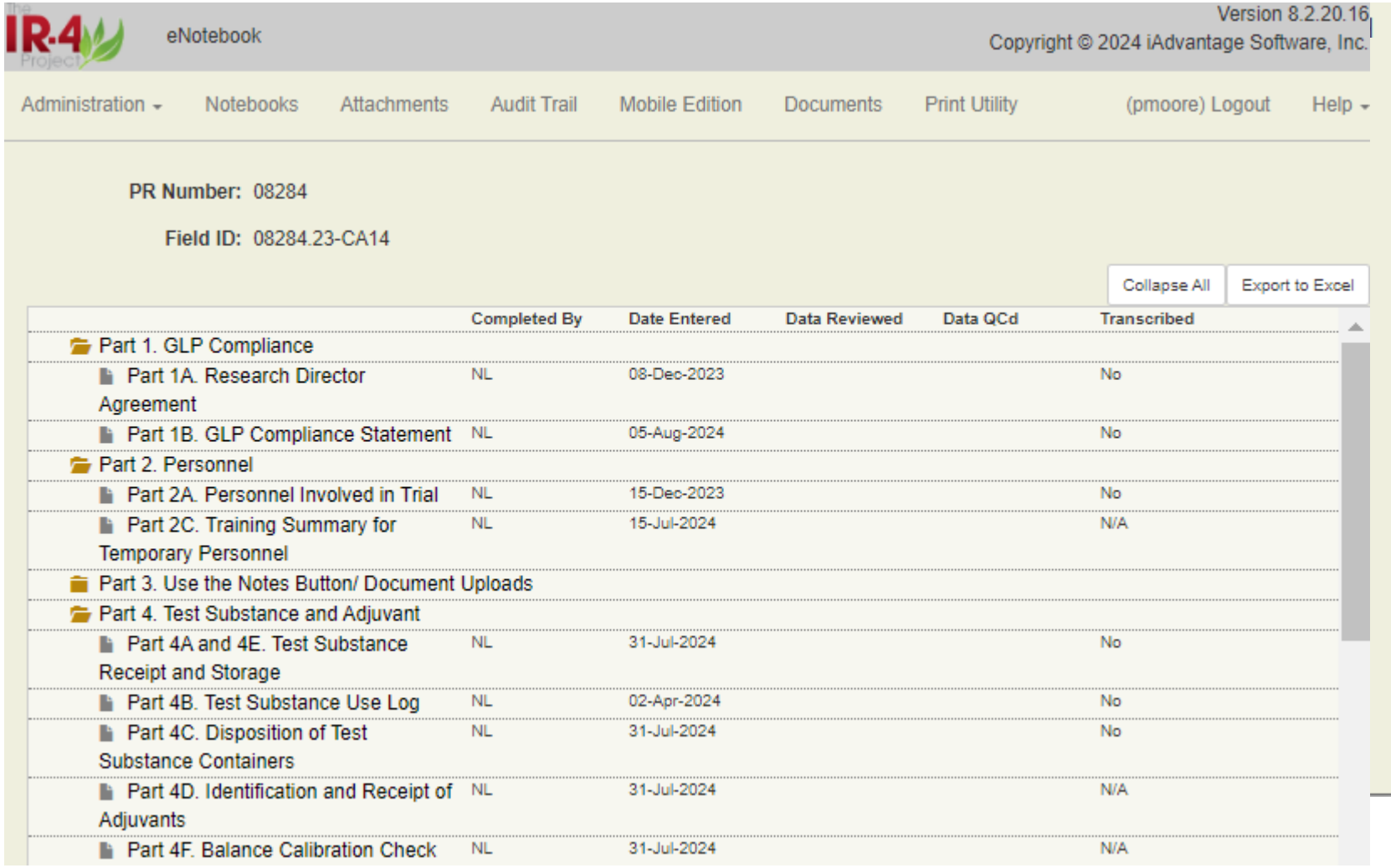

	Completed By	Date Entered	Data Reviewed	Data QCd	Transcribed
Part 1. GLP Compliance					
Part 1A. Research Director Agreement	NL	08-Dec-2023			No
Part 1B. GLP Compliance Statement	NL	05-Aug-2024			No
Part 2. Personnel					
Part 2A. Personnel Involved in Trial	NL	15-Dec-2023			No
Part 2C. Training Summary for Temporary Personnel	NL	15-Jul-2024			N/A
Part 3. Use the Notes Button/ Document Uploads					
Part 4. Test Substance and Adjuvant					
Part 4A and 4E. Test Substance Receipt and Storage	NL	31-Jul-2024			No
Part 4B. Test Substance Use Log	NL	02-Apr-2024			No
Part 4C. Disposition of Test Substance Containers	NL	31-Jul-2024			No
Part 4D. Identification and Receipt of Adjuvants	NL	31-Jul-2024			N/A
Part 4F. Balance Calibration Check	NL	31-Jul-2024			N/A

Ensure all forms are completed and marked as complete

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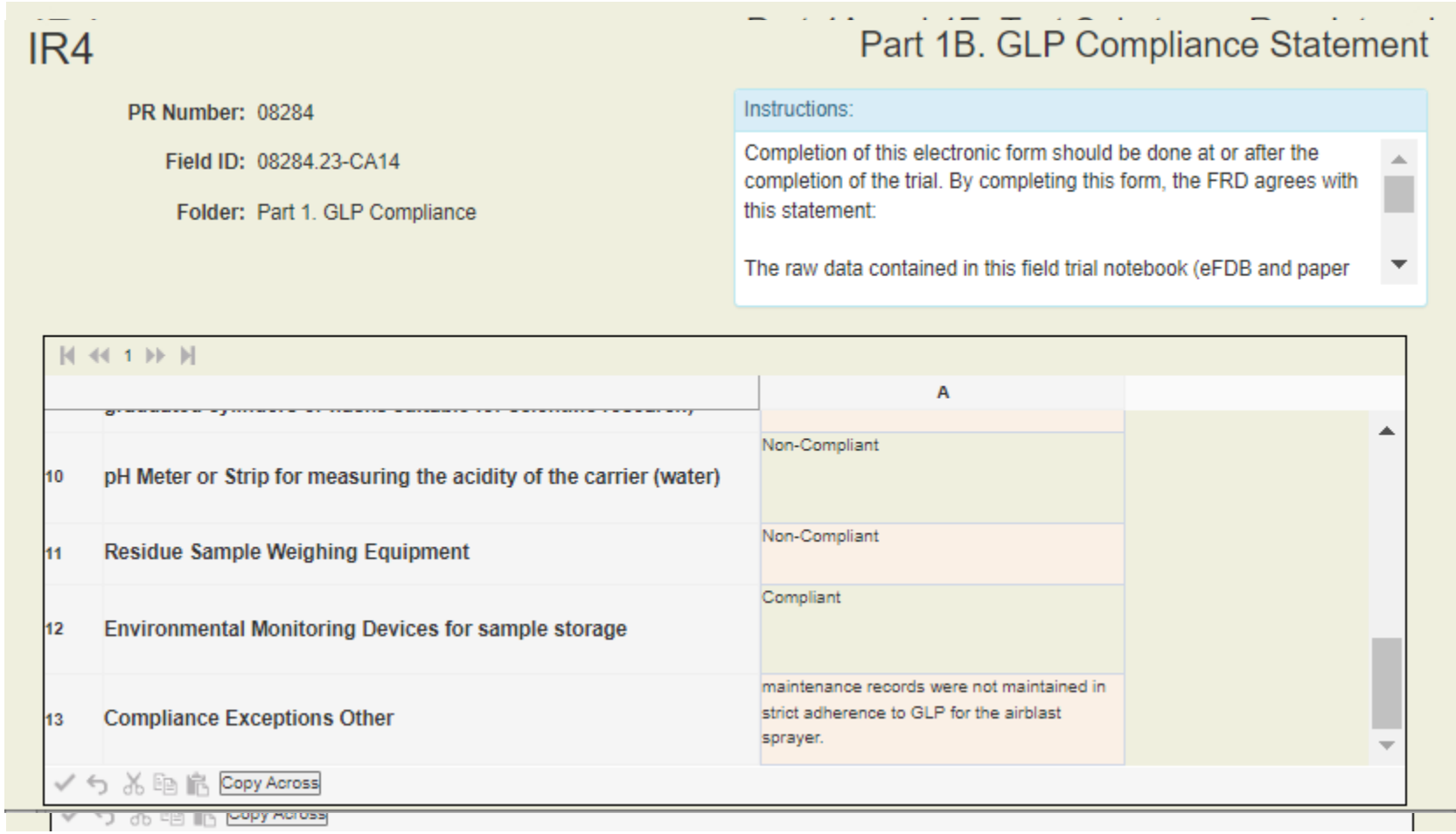

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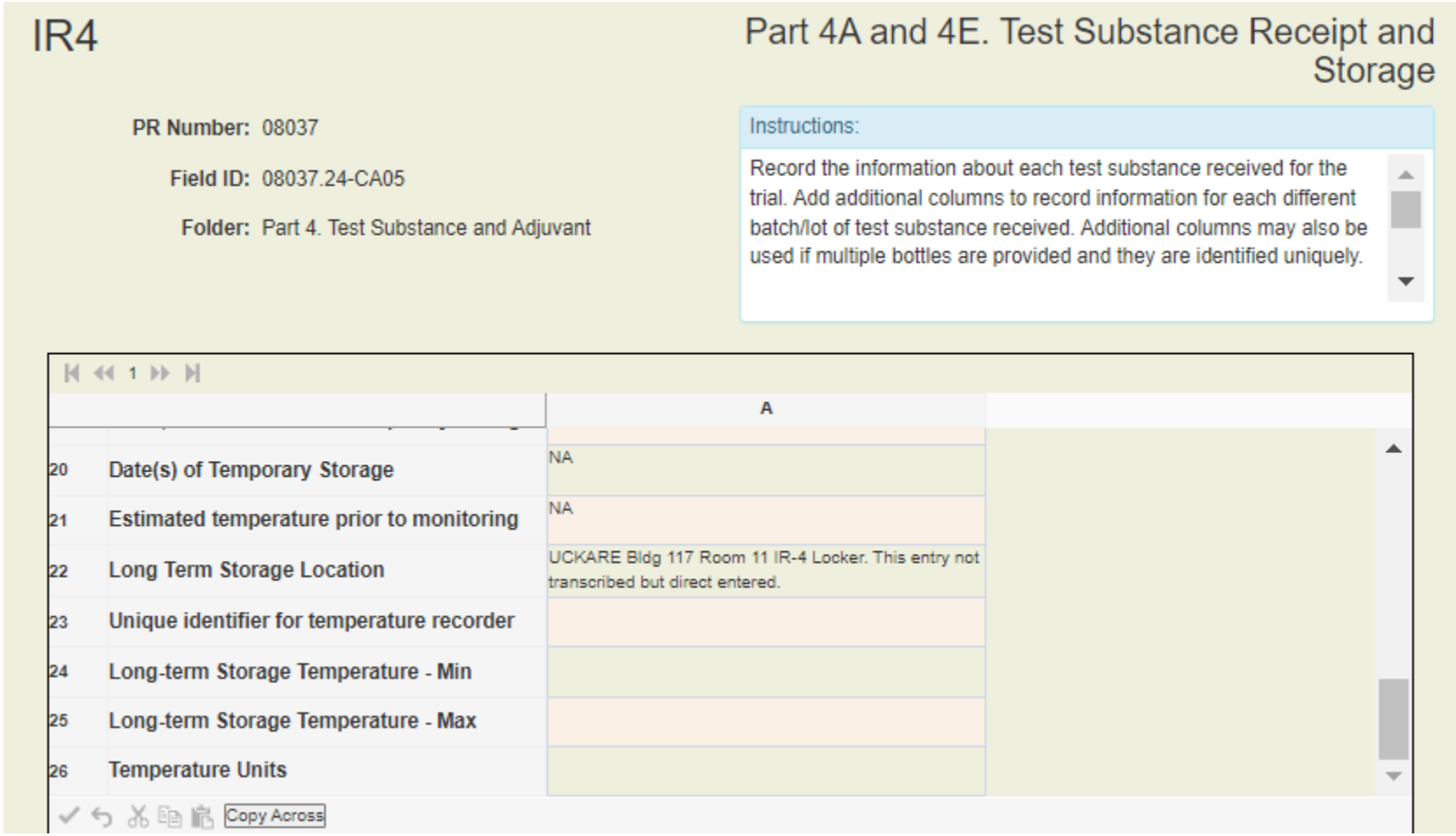
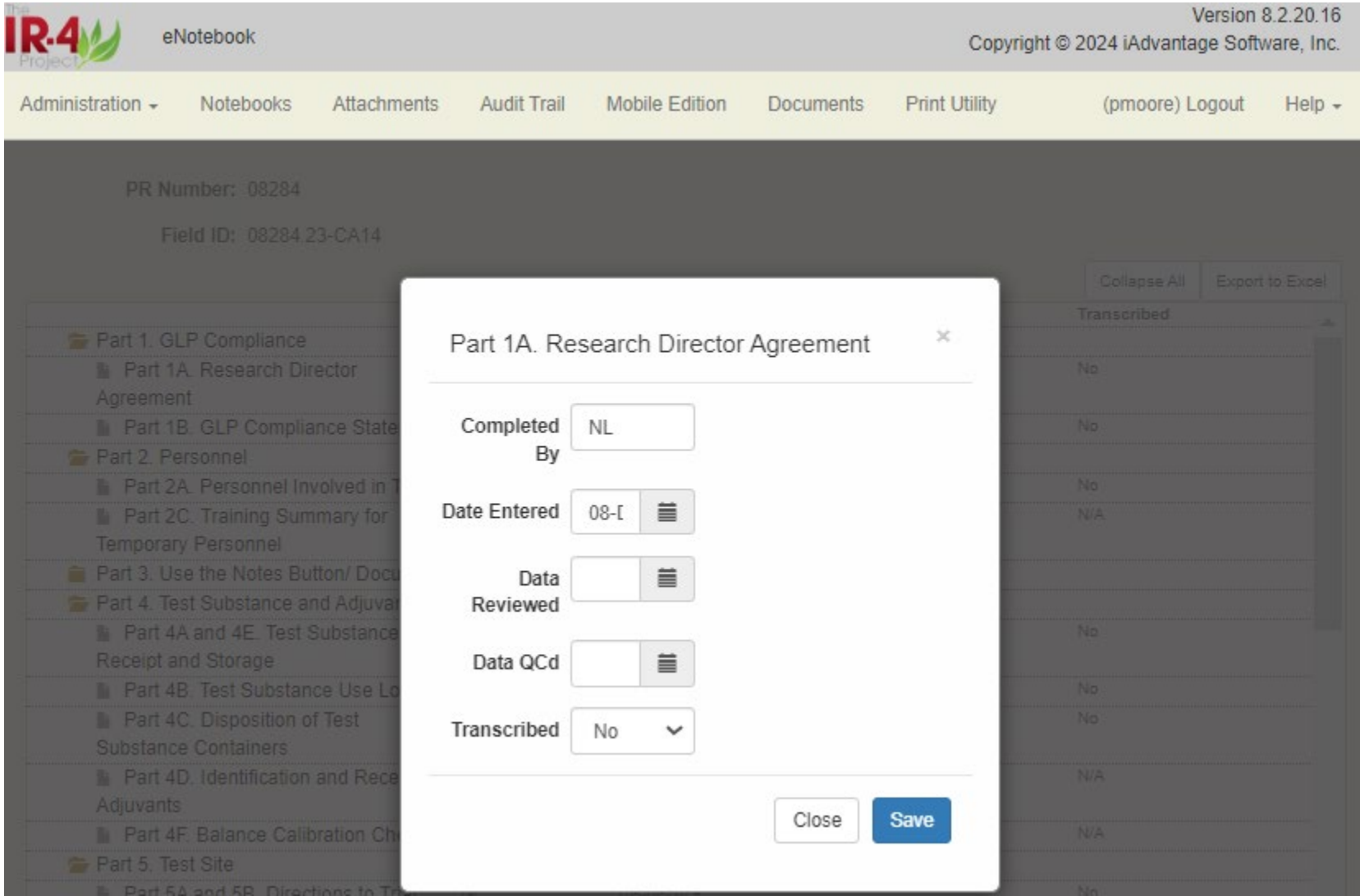
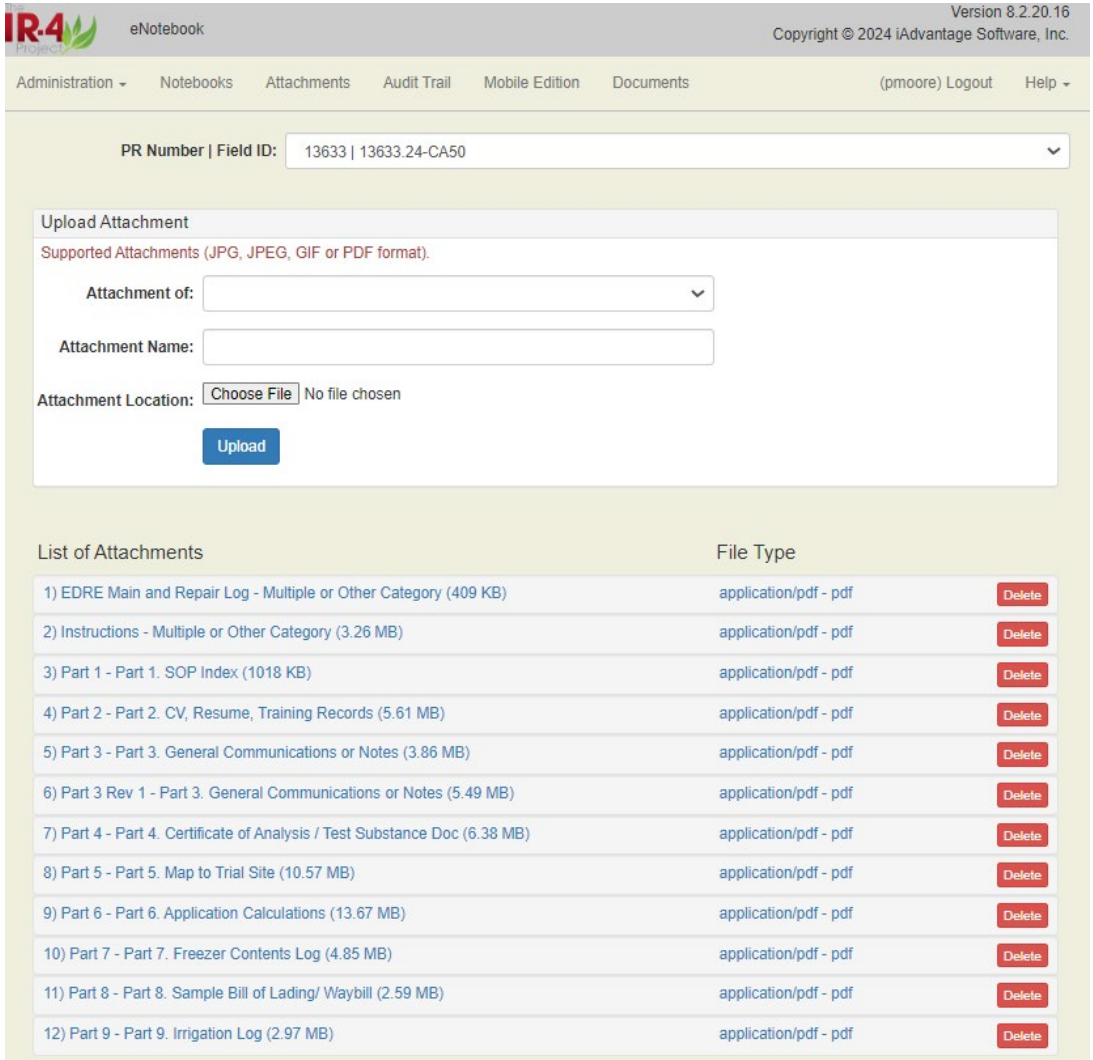


Ensure all (required) forms are completed and marked as complete

- Add Initials and current date
- Select Transcribed:
  - Yes: I recorded this data on paper first
  - No: I recorded in the eFDB first
  - N/A: I didn't use this form
- Ignore Date Reviewed/ Date QC'ed
- Click Save

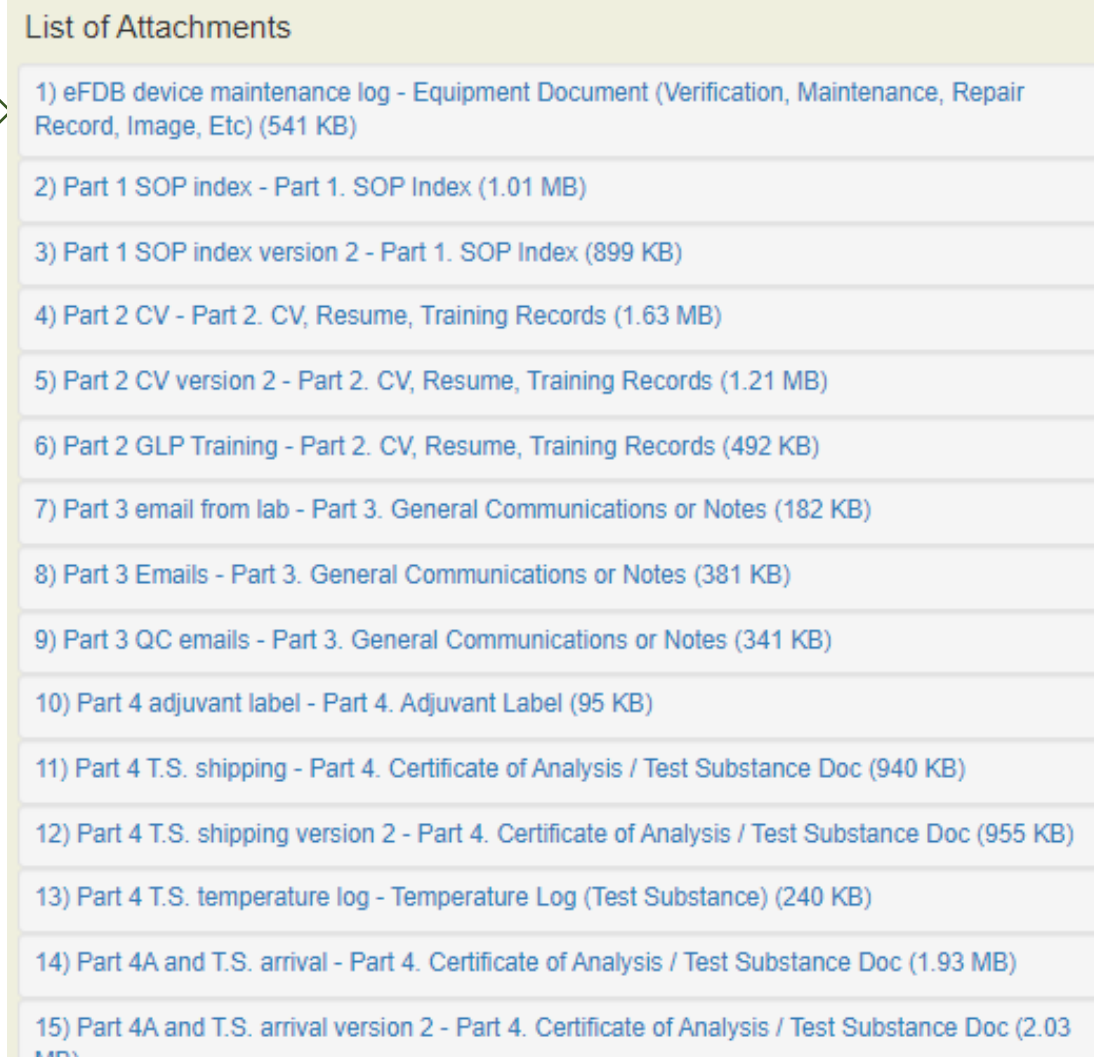


Check that all required PDF documents have been uploaded



Check that all required PDF documents have been uploaded

Scan of your eFDB maintenance log



Check that all required PDF documents have been uploaded

Scan of your eFDB maintenance log

Add a “version 2” of any file that lacks proper attribution

List of Attachments

1) eFDB device maintenance log - Equipment Document (Verification, Maintenance, Repair Record, Image, Etc) (541 KB)

2) Part 1 SOP index - Part 1. SOP Index (1.01 MB)

3) Part 1 SOP index version 2 - Part 1. SOP Index (899 KB)

4) Part 2 CV - Part 2. CV, Resume, Training Records (1.63 MB)

5) Part 2 CV version 2 - Part 2. CV, Resume, Training Records (1.21 MB)

13741.24-CA70 Mefentrifluconazole Broccoli

NATHAN C. LEACH
8565 Grove Ave.
Rancho Cucamonga, CA 91730
Cell:(951) 312-2834
nathan.leach@ucr.edu

NL 3-28-24

EDUCATION

The Pennsylvania State University, University Park, PA.
Bachelor of Science in Agricultural Systems Management, May 2005

EXACT COPY OF ORIGINAL DOCUMENT
UCR Ag Ops
Location of Original
NL 3-28-24
Initial/Date

CERTIFICATIONS

GLP Trained and Certified at the NAICC Conference in Reno, NV, January 2015

California Qualified Applicator Certificate (QAC) License, Renewed January 2015

WORK EXPERIENCE

University of California, Riverside, Agricultural Operations, Riverside CA 92507
January 2015-May 2015: Interim IR-4 Field Research Director FRD

This PDF is a true copy of the original.
The original is in IR-4 eFDB paper raw data for Trial No. 13633.24-CA50
Oxathiapiprolin Peach DJE 6/14/24

Oxathiapiprolin/Peach
ID No. 13633.24-CA50
Ennes

FIELD ID NO: _____

IR-4 FIELD DATA BOOK

PART 4. TEST SUBSTANCE RECORDS

A. RECEIPT, STORAGE AND DISPOSITION OF TEST SUBSTANCE (TS)--*INSTRUCTIONS:*
*Complete a separate form for **each different** batch/lot of test substance that has been received.*

PLEASE INSERT THE SHIPPING DOCUMENTS AND COA FOR TS AND ADJUVANT LABEL AFTER PART 4F.

NAME OF TEST SUBSTANCE ON CONTAINER LABEL *E.g. Darnitall 2 EC or GroundUp or XYZ8-0.*		A21008A oron d15	
BATCH/LOT NO.	TRR3B09F26	DATE OF RECEIPT	4-22-24
Provide the batch/lot number of the test substance as it appears on the test material container label		TEST SUBSTANCE EXPIRATION DATE	4-30-27

Do not assign an expiration date if none is provided with the test substance—contact the Study Director.

SOURCE OF EXPIRATION DATE	Test substance Container label

Note the source of the expiration date of the test substance (e.g., expiration date noted on test material container label, expiration date listed on documentation provided by manufacturer, expiration date obtained by IR-4 Headquarters)
Contact the Study Director if the anticipated last application date is after the expiration date of the test substance.

WILL THE TEST SUBSTANCE EXPIRE BEFORE THE ANTICIPATED LAST APPLICATION DATE? *If yes, contact the Study Director immediately.*	YES___ NO✓

GLP STATUS KNOWN AT TIME OF RECEIPT *(Check YES if the documentation provided by the*	YES✓ NO___

Check that all required PDF documents have been uploaded

Scan of your eFDB maintenance log

Add a “version 2” of any file that lacks proper attribution

Provide the e-mail from lab notifying of sample receipt

37) Part 8C Sample receipt - Part 8. Sample Shipment Chain of Custody (1.12 MB)

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2) Part 1 SOP index - Part 1. SOP Index (1.01 MB)

3) Part 1 SOP index version 2 - Part 1. SOP Index (899 KB)

4) Part 2 CV - Part 2. CV, Resume, Training Records (1.63 MB)

5) Part 2 CV version 2 - Part 2. CV, Resume, Training Records (1.21 MB)

6) Part 2 GLP Training - Part 2. CV, Resume, Training Records (492 KB)

7) Part 3 email from lab - Part 3. General Communications or Notes (182 KB)

8) Part 3 Emails - Part 3. General Communications or Notes (381 KB)

9) Part 3 QC emails - Part 3. General Communications or Notes (341 KB)

10) Part 4 adjuvant label - Part 4. Adjuvant Label (95 KB)

11) Part 4 T.S. shipping - Part 4. Certificate of Analysis / Test Substance Doc (940 KB)

12) Part 4 T.S. shipping version 2 - Part 4. Certificate of Analysis / Test Substance Doc (955 KB)

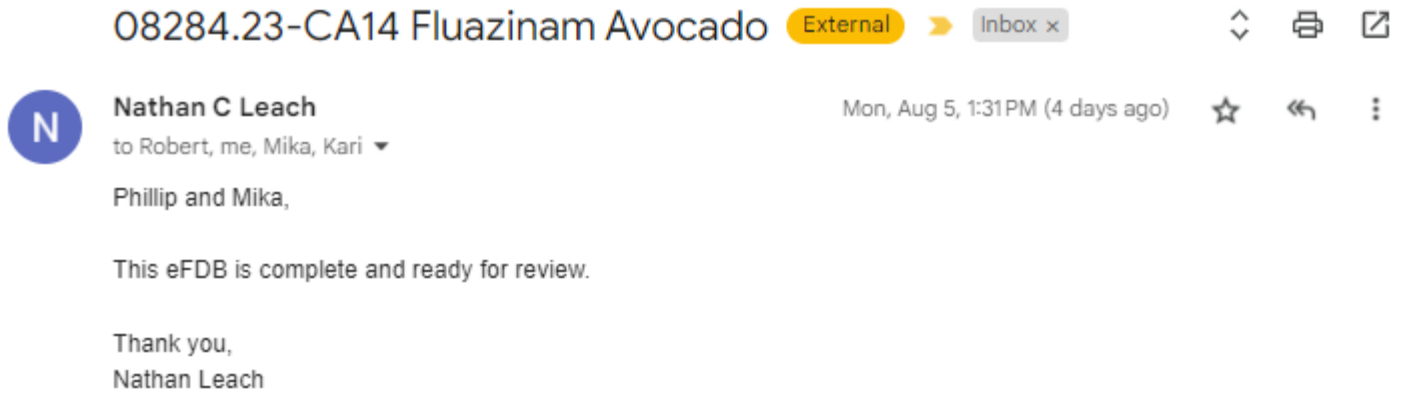
13) Part 4 T.S. temperature log - Temperature Log (Test Substance) (240 KB)

14) Part 4A and T.S. arrival - Part 4. Certificate of Analysis / Test Substance Doc (1.93 MB)

15) Part 4A and T.S. arrival version 2 - Part 4. Certificate of Analysis / Test Substance Doc (2.03

QC Review Before Shipping Notebook

- E-mail your RFC, SD, and Philip notifying that you are ready for a QC review
- Philip or another QC reviewer will respond with a list of suggested corrections to make
- You make the changes and respond to each with initial and date



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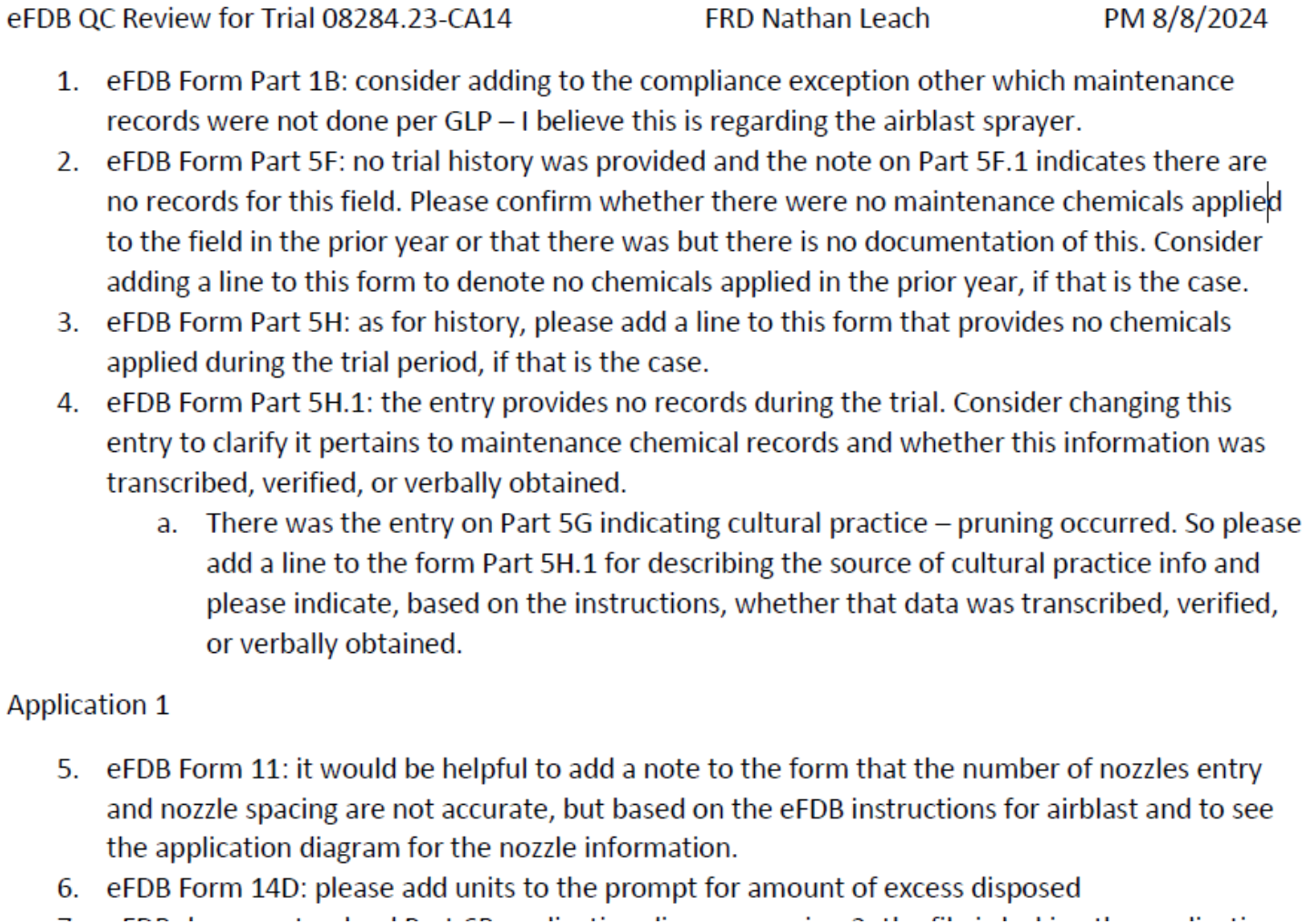

eFDB QC Review for Trial 08284.23-CA14 FRD Nathan Leach PM 8/8/2024

1. eFDB Form Part 1B: consider adding to the compliance exception other which maintenance records were not done per GLP – I believe this is regarding the airblast sprayer.
2. eFDB Form Part 5F: no trial history was provided and the note on Part 5F.1 indicates there are no records for this field. Please confirm whether there were no maintenance chemicals applied to the field in the prior year or that there was but there is no documentation of this. Consider adding a line to this form to denote no chemicals applied in the prior year, if that is the case.
3. eFDB Form Part 5H: as for history, please add a line to this form that provides no chemicals applied during the trial period, if that is the case.
4. eFDB Form Part 5H.1: the entry provides no records during the trial. Consider changing this entry to clarify it pertains to maintenance chemical records and whether this information was transcribed, verified, or verbally obtained.
    a. There was the entry on Part 5G indicating cultural practice – pruning occurred. So please add a line to the form Part 5H.1 for describing the source of cultural practice info and please indicate, based on the instructions, whether that data was transcribed, verified, or verbally obtained.

Application 1

5. eFDB Form 11: it would be helpful to add a note to the form that the number of nozzles entry and nozzle spacing are not accurate, but based on the eFDB instructions for airblast and to see the application diagram for the nozzle information.
6. eFDB Form 14D: please add units to the prompt for amount of excess disposed

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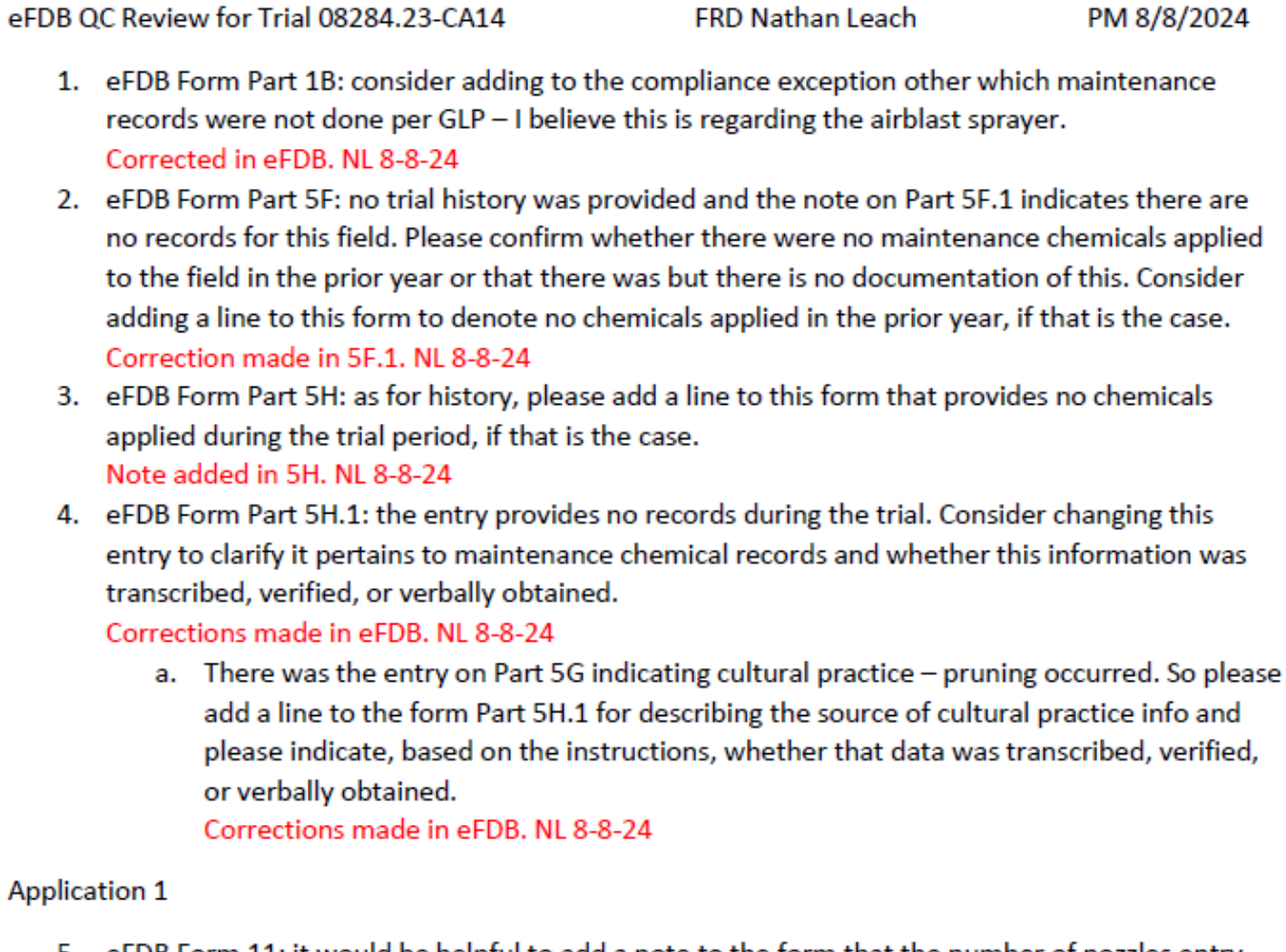

eFDB QC Review for Trial 08284.23-CA14 FRD Nathan Leach PM 8/8/2024

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   Corrected in eFDB. NL 8-8-24
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   Correction made in 5F.1. NL 8-8-24
3. eFDB Form Part 5H: as for history, please add a line to this form that provides no chemicals applied during the trial period, if that is the case.
   Note added in 5H. NL 8-8-24
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   Corrections made in eFDB. NL 8-8-24
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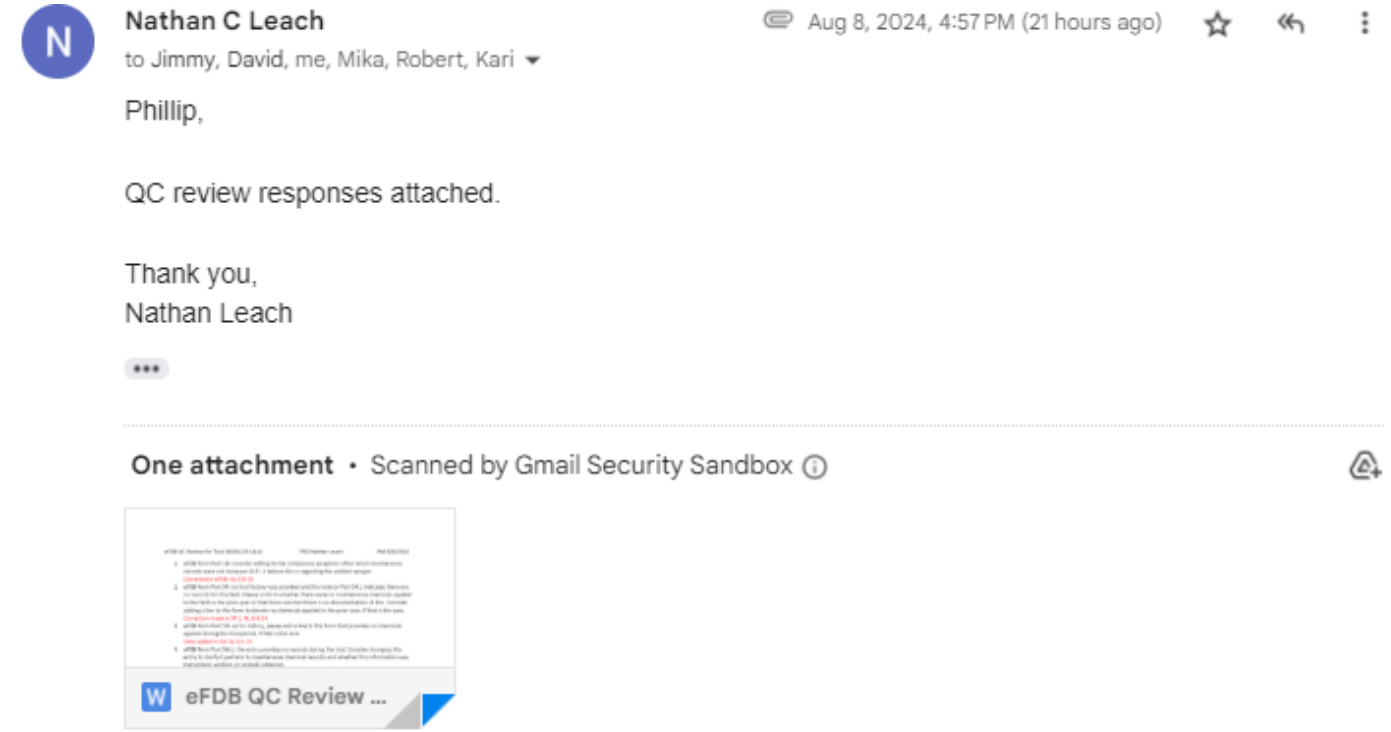
      Corrections made in eFDB. NL 8-8-24

Application 1

QC Review Before Shipping Notebook

- Philip or another QC reviewer will respond with confirmation you can ship the paper raw data
- Upload the QC findings with responses and e-mail chain
- Print first 7 pages of the Paper Raw Data Notebook Complete the Chain of Custody
- Scan a copy for your records before shipping
- Ship to HQ Attn: **David Schnatter**



Nathan C Leach Aug 8, 2024, 4:57 PM (21 hours ago)
to Jimmy, David, me, Mika, Robert, Kari

Phillip,

QC review responses attached.

Thank you,
Nathan Leach

One attachment • Scanned by Gmail Security Sandbox

eFDB QC Review ...

Philip Moore <pmoore@ncsu.edu> 9:33 AM (4 hours ago)
to Nathan, Mika, Robert, Kari, Jimmy, David

Hi Nathan,

I confirmed the corrections were completed and you are ready to prepare the paper raw data for shipment to Jimmy/David at HQ. Please upload this correspondence and the word file to the eFDB.

Thank you,

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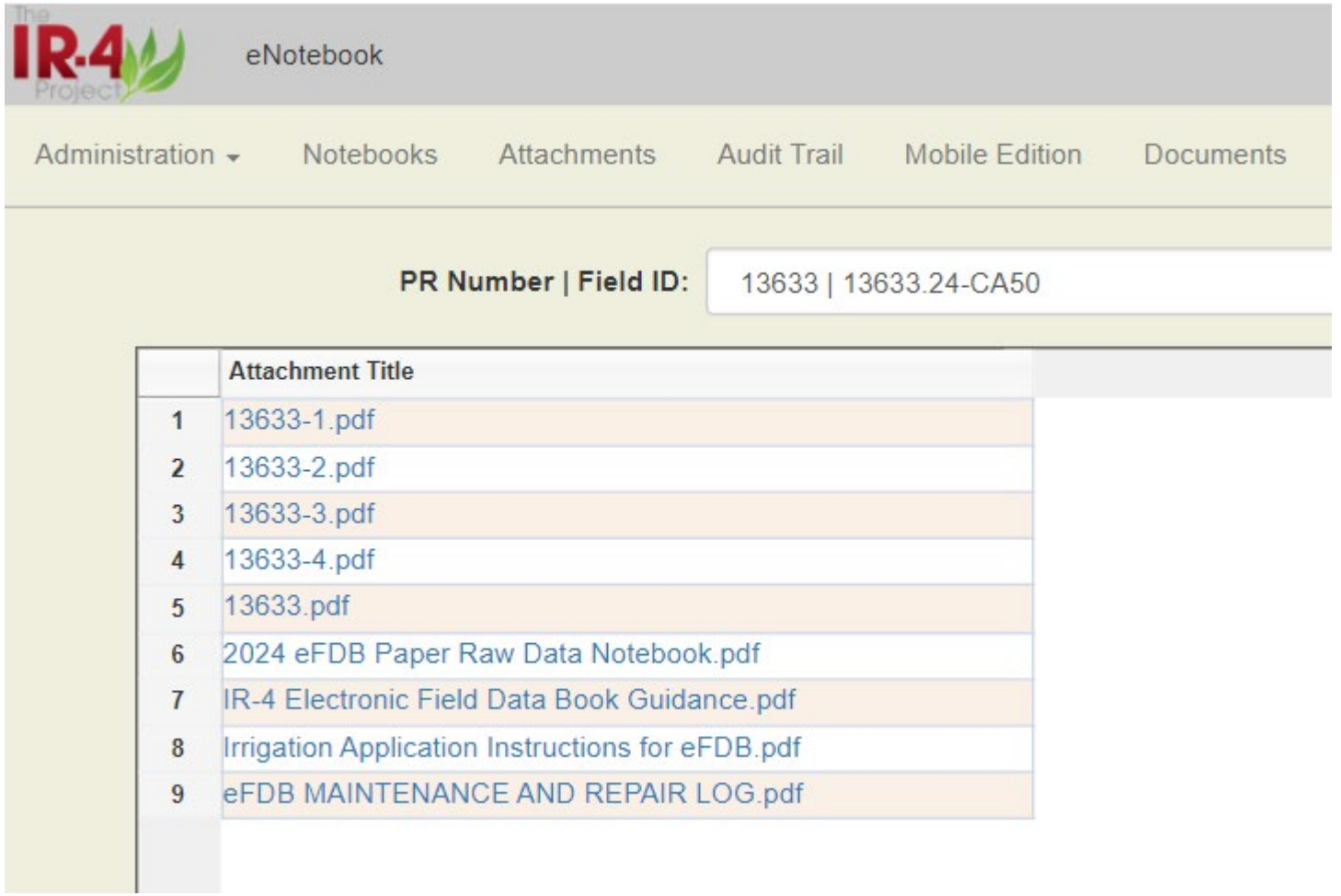

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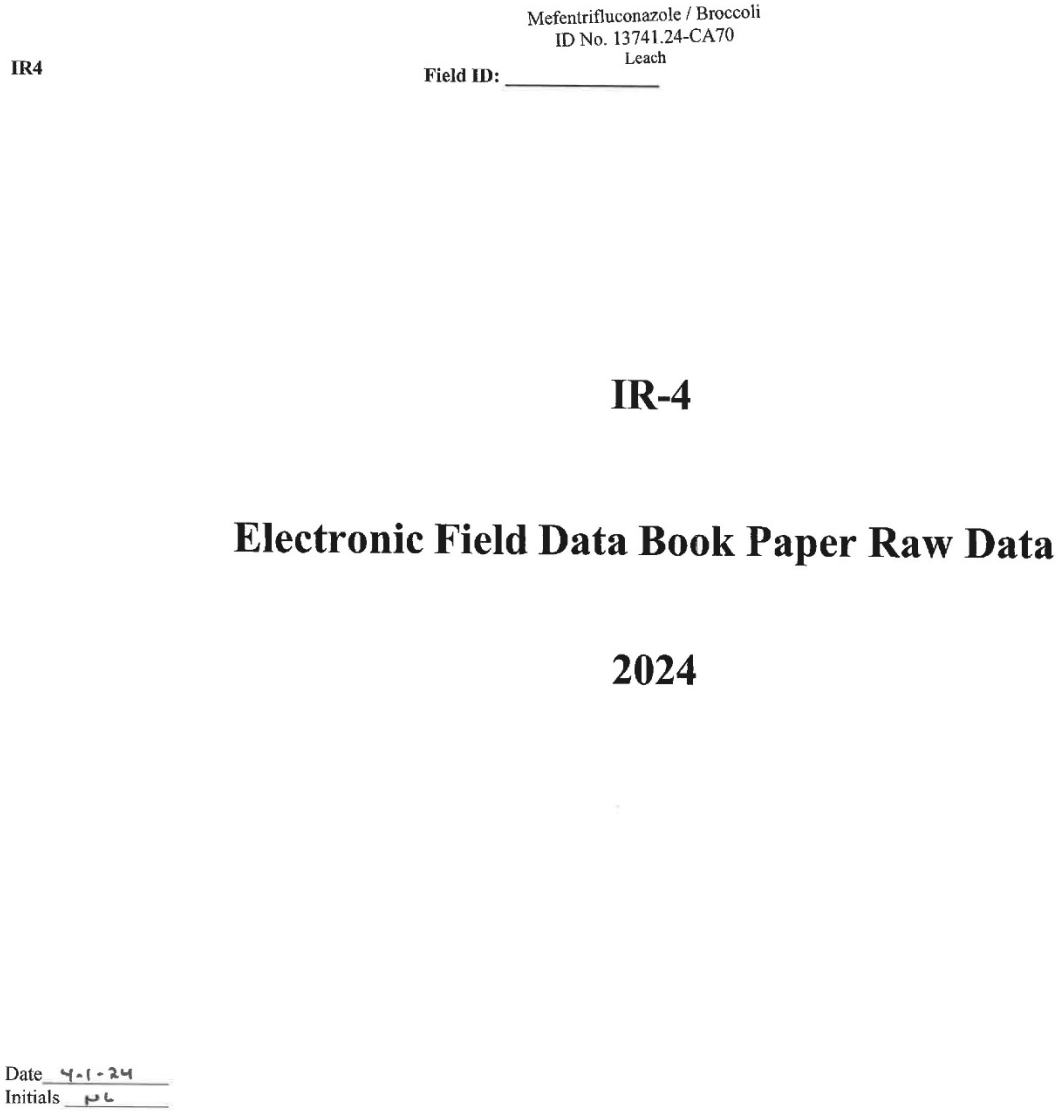

Mefentrifluconazole / Broccoli
ID No. 13741.24-CA70
Leach

IR4

Field ID: _____

IR-4

Electronic Field Data Book Paper Raw Data

2024

Date 4-1-24
Initials PL

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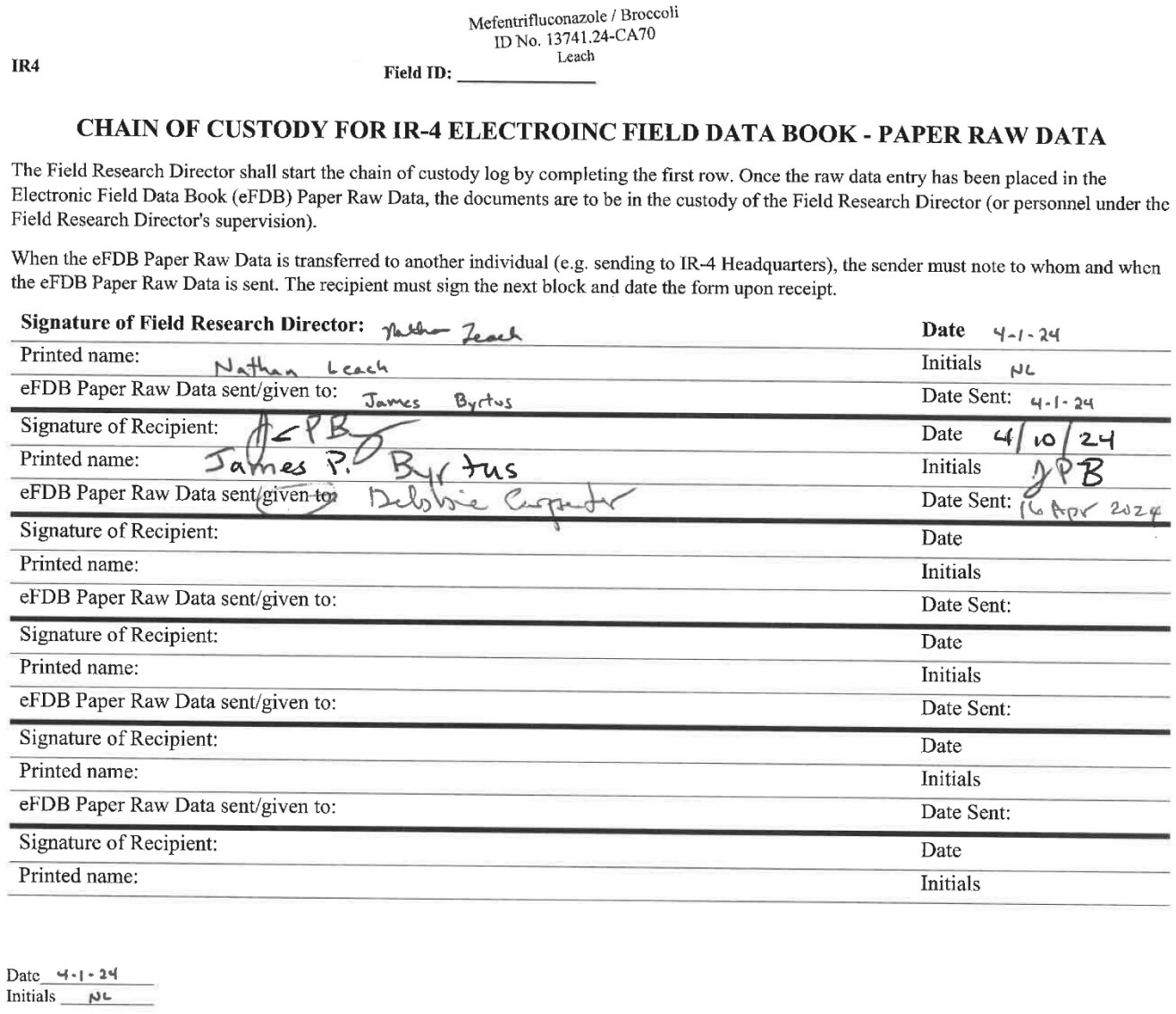

Mefentrifluconazole / Broccoli
ID No. 13741.24-CA70
Leach

IR4 Field ID: _____

CHAIN OF CUSTODY FOR IR-4 ELECTROINC FIELD DATA BOOK - PAPER RAW DATA

The Field Research Director shall start the chain of custody log by completing the first row. Once the raw data entry has been placed in the Electronic Field Data Book (eFDB) Paper Raw Data, the documents are to be in the custody of the Field Research Director (or personnel under the Field Research Director's supervision).

When the eFDB Paper Raw Data is transferred to another individual (e.g. sending to IR-4 Headquarters), the sender must note to whom and when the eFDB Paper Raw Data is sent. The recipient must sign the next block and date the form upon receipt.

Signature of Field Research Director: Nathan Leach	**Date** 4-1-24
Printed name: Nathan Leach	Initials NL
eFDB Paper Raw Data sent/given to: James Byrtus	Date Sent: 4-1-24
Signature of Recipient: JPB	Date 4/10/24
Printed name: James P. Byrtus	Initials JPB
eFDB Paper Raw Data sent/given to: Debbie Carpenter	Date Sent: 16 Apr 2024
Signature of Recipient:	Date
Printed name:	Initials
eFDB Paper Raw Data sent/given to:	Date Sent:
Signature of Recipient:	Date
Printed name:	Initials
eFDB Paper Raw Data sent/given to:	Date Sent:
Signature of Recipient:	Date
Printed name:	Initials
eFDB Paper Raw Data sent/given to:	Date Sent:
Signature of Recipient:	Date
Printed name:	Initials

Date 4-1-24
Initials NL

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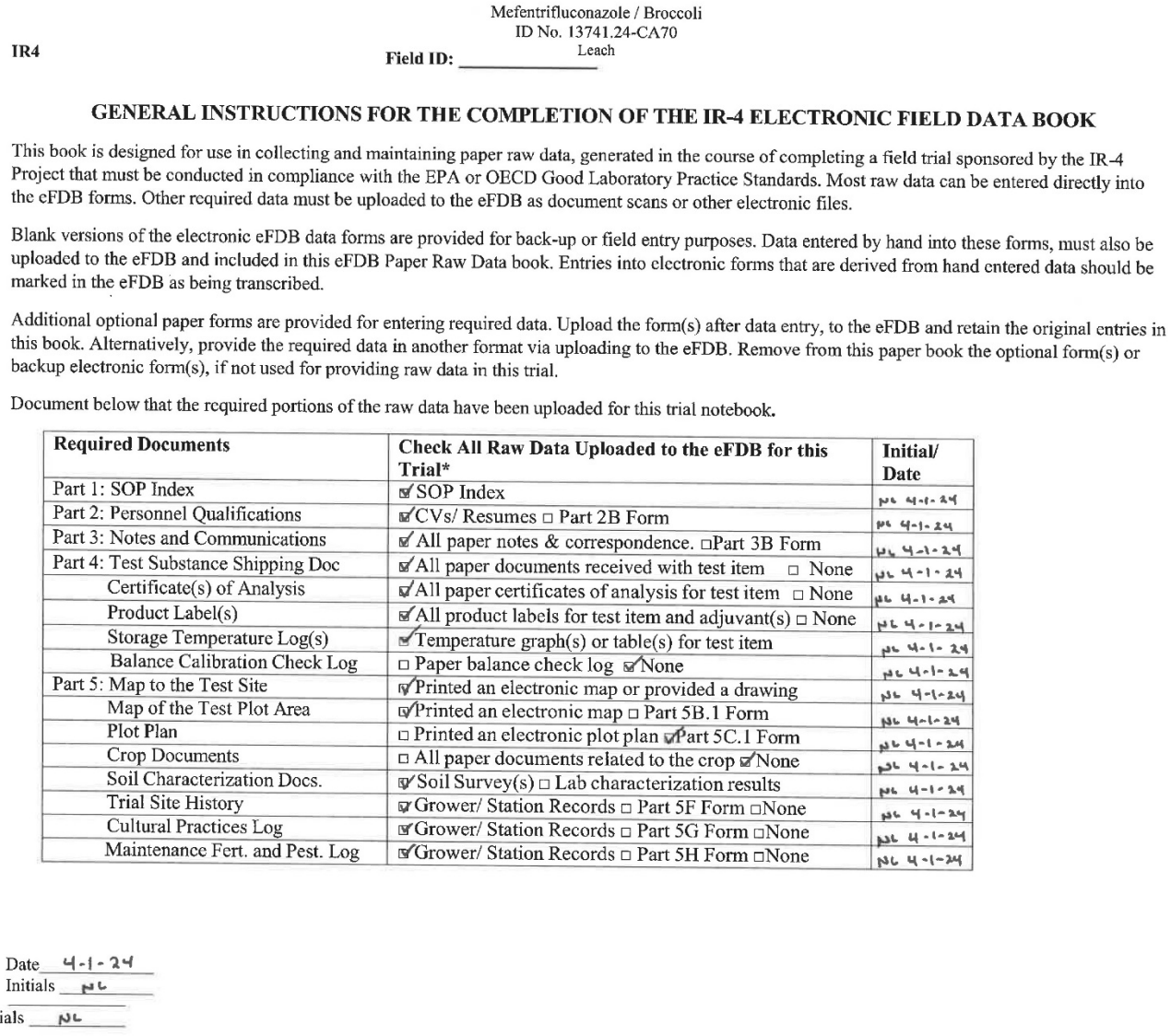

Mefentrifluconazole / Broccoli
ID No. 13741.24-CA70
Leach

IR4

Field ID: _____

GENERAL INSTRUCTIONS FOR THE COMPLETION OF THE IR-4 ELECTRONIC FIELD DATA BOOK

This book is designed for use in collecting and maintaining paper raw data, generated in the course of completing a field trial sponsored by the IR-4 Project that must be conducted in compliance with the EPA or OECD Good Laboratory Practice Standards. Most raw data can be entered directly into the eFDB forms. Other required data must be uploaded to the eFDB as document scans or other electronic files.

Blank versions of the electronic eFDB data forms are provided for back-up or field entry purposes. Data entered by hand into these forms, must also be uploaded to the eFDB and included in this eFDB Paper Raw Data book. Entries into electronic forms that are derived from hand entered data should be marked in the eFDB as being transcribed.

Additional optional paper forms are provided for entering required data. Upload the form(s) after data entry, to the eFDB and retain the original entries in this book. Alternatively, provide the required data in another format via uploading to the eFDB. Remove from this paper book the optional form(s) or backup electronic form(s), if not used for providing raw data in this trial.

Document below that the required portions of the raw data have been uploaded for this trial notebook.

Required Documents	Check All Raw Data Uploaded to the eFDB for this Trial*	Initial/ Date
Part 1: SOP Index	☑ SOP Index	
Part 2: Personnel Qualifications	☑ CVs/ Resumes □ Part 2B Form	
Part 3: Notes and Communications	☑ All paper notes & correspondence. □ Part 3B Form	
Part 4: Test Substance Shipping Doc	☑ All paper documents received with test item □ None	
Certificate(s) of Analysis	☑ All paper certificates of analysis for test item □ None	
Product Label(s)	☑ All product labels for test item and adjuvant(s) □ None	
Storage Temperature Log(s)	☑ Temperature graph(s) or table(s) for test item	
Balance Calibration Check Log	□ Paper balance check log ☑ None	
Part 5: Map to the Test Site	☑ Printed an electronic map or provided a drawing	
Map of the Test Plot Area	☑ Printed an electronic map □ Part 5B.1 Form	
Plot Plan	□ Printed an electronic plot plan ☑ Part 5C.1 Form	
Crop Documents	□ All paper documents related to the crop ☑ None	
Soil Characterization Docs.	☑ Soil Survey(s) □ Lab characterization results	
Trial Site History	☑ Grower/ Station Records □ Part 5F Form □ None	
Cultural Practices Log	☑ Grower/ Station Records □ Part 5G Form □ None	
Maintenance Fert. and Pest. Log	☑ Grower/ Station Records □ Part 5H Form □ None	

Date 4-1-24
Initials _____

Initials _____

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Your Final Lap

- HQ receives the paper raw data notebook and assigns a QA auditor
- You receive an e-mail from eQA when the audit findings are available
- Sign in and open the FRDA packet

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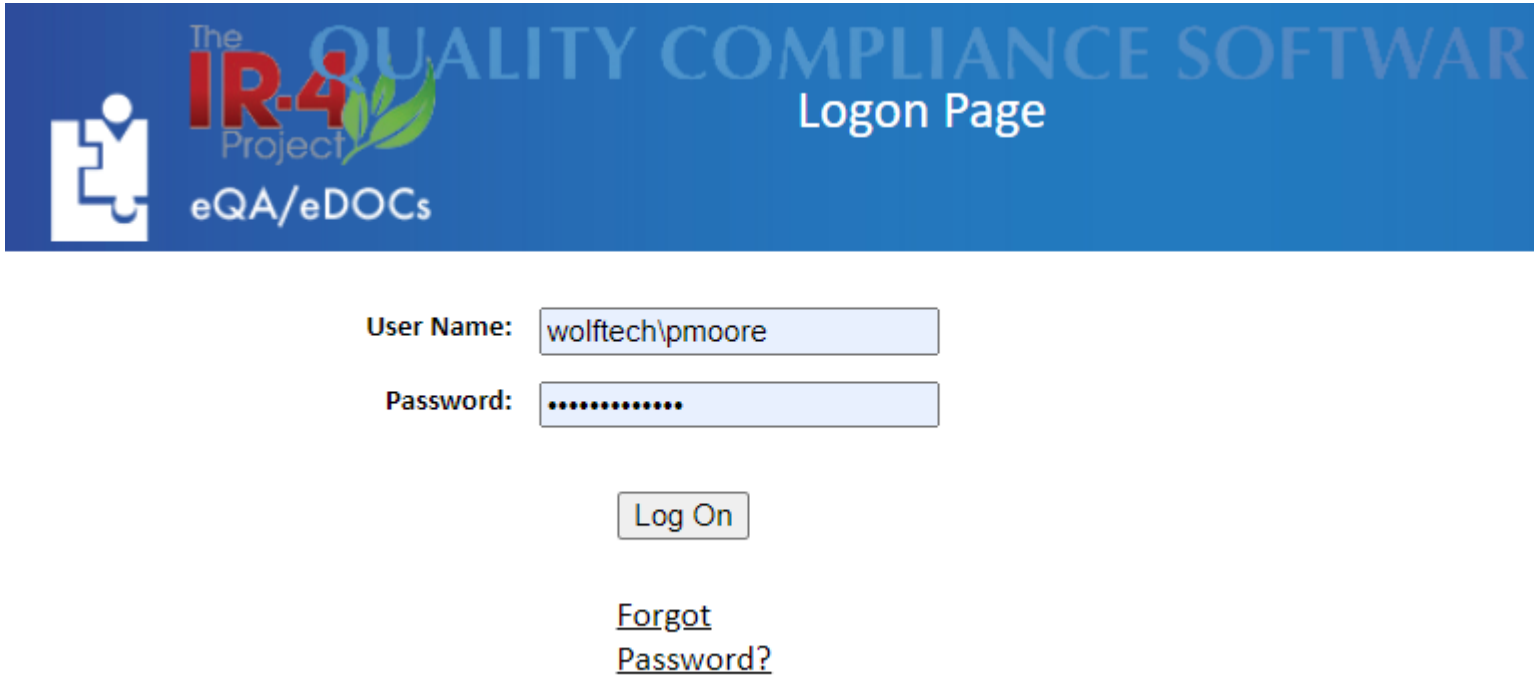

Your Final Lap

- HQ receives the paper raw data notebook and assigns a QA auditor
- You receive an e-mail from eQA when the audit findings are available
- Sign in and open the FRDA packet

Records: 1 - 7 of 7

+/-	Due Date	Activity For	Recv'd	Comp'd	Activity Type	Document / Form	Title	File Type	Recip. Notes
	5/30/2024 View	Philip Moore	☐	☐	Please see QA findings and add responses	ASRA-010885 FA WF	ASRA Flutianil/Hemp/12834.20-CAR11		N/A
	5/30/2024 View	Philip Moore	☐	☐	Please see QA findings and add responses	ARDA-010886 FA WF	ARDA Flutianil/Hemp/12834.20-CAR11		N/A
	5/30/2024 View	Philip Moore	☐	☐	Please see findings and add responses	FRDA-010856 FA WF	FRDA Fenpyroximate/Hemp/13033.23-CA21		N/A
	7/18/2024 View	Philip Moore	☐	☐	Please see QA findings and add responses	ARDA-010999 FA WF	ARDA Quizalofop/Hemp/13017-21-CAR16		N/A
	7/18/2024 View	Philip Moore	☐	☐	Please see QA findings and add responses	ASRA-011001 FA WF	ASRA Quizalofop/Hemp/13017.21-CAR16		N/A
	8/25/2024 View	Philip Moore	☐	☐	Please see findings and add responses	FRDA-011022 FA WF	FRDA Quizalofop/Hemp/13017.23-OH231		N/A
	8/25/2024 View	Philip Moore	☐	☐	Please see findings and add responses	FRDA-011028 FA WF	FRDA Cyazofamid/Hemp/13058.23-OH233		N/A

1

Your Final Lap

- Click the pencil to open the text editor
- Follow the instructions in the packet, responding to each finding
- Make your corrections in the eFDB forms
- Upload a scan of corrected pages to the eQA packet and eFDB
- Send corrected paper pages to IR-4 HQ QA

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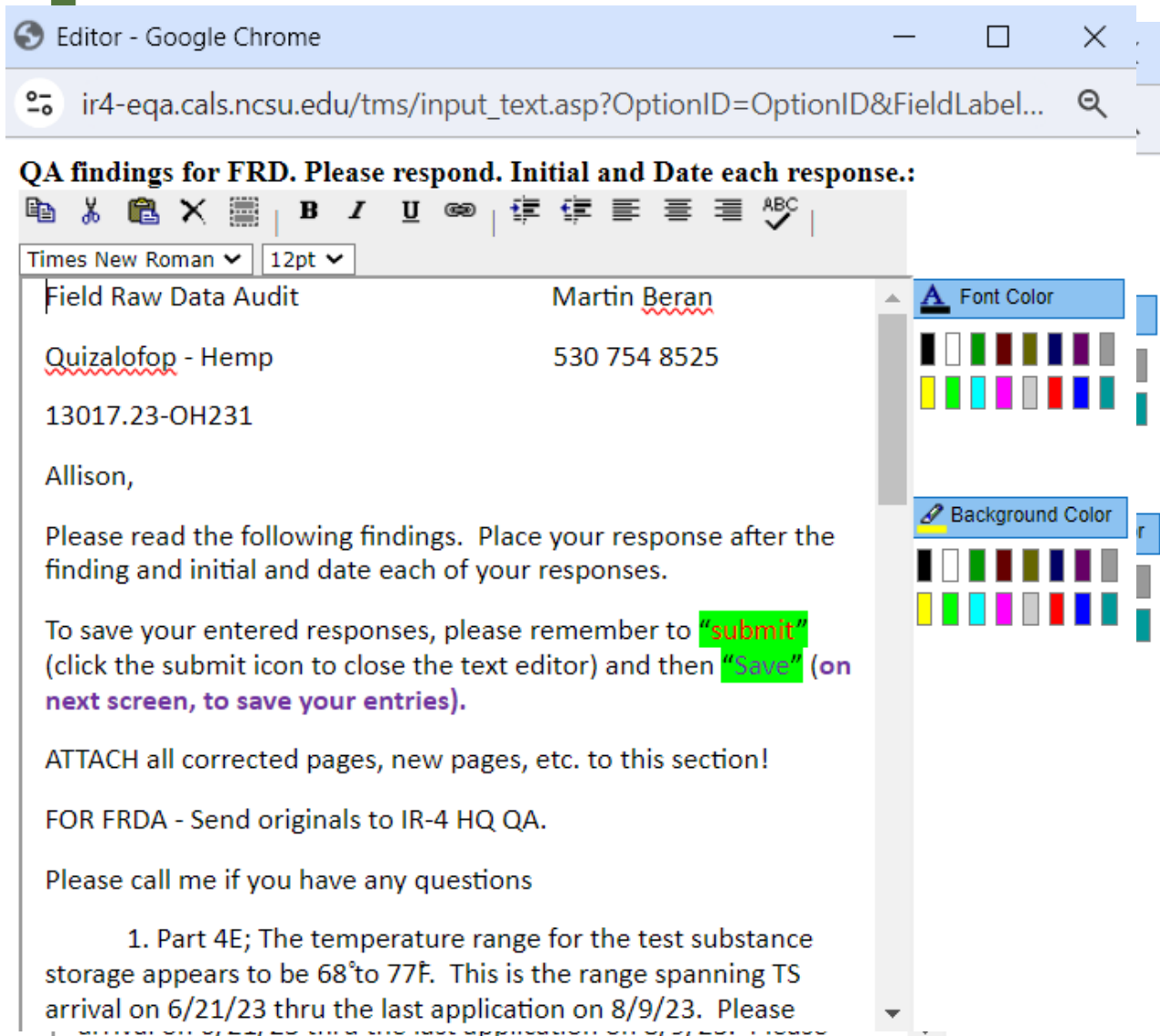

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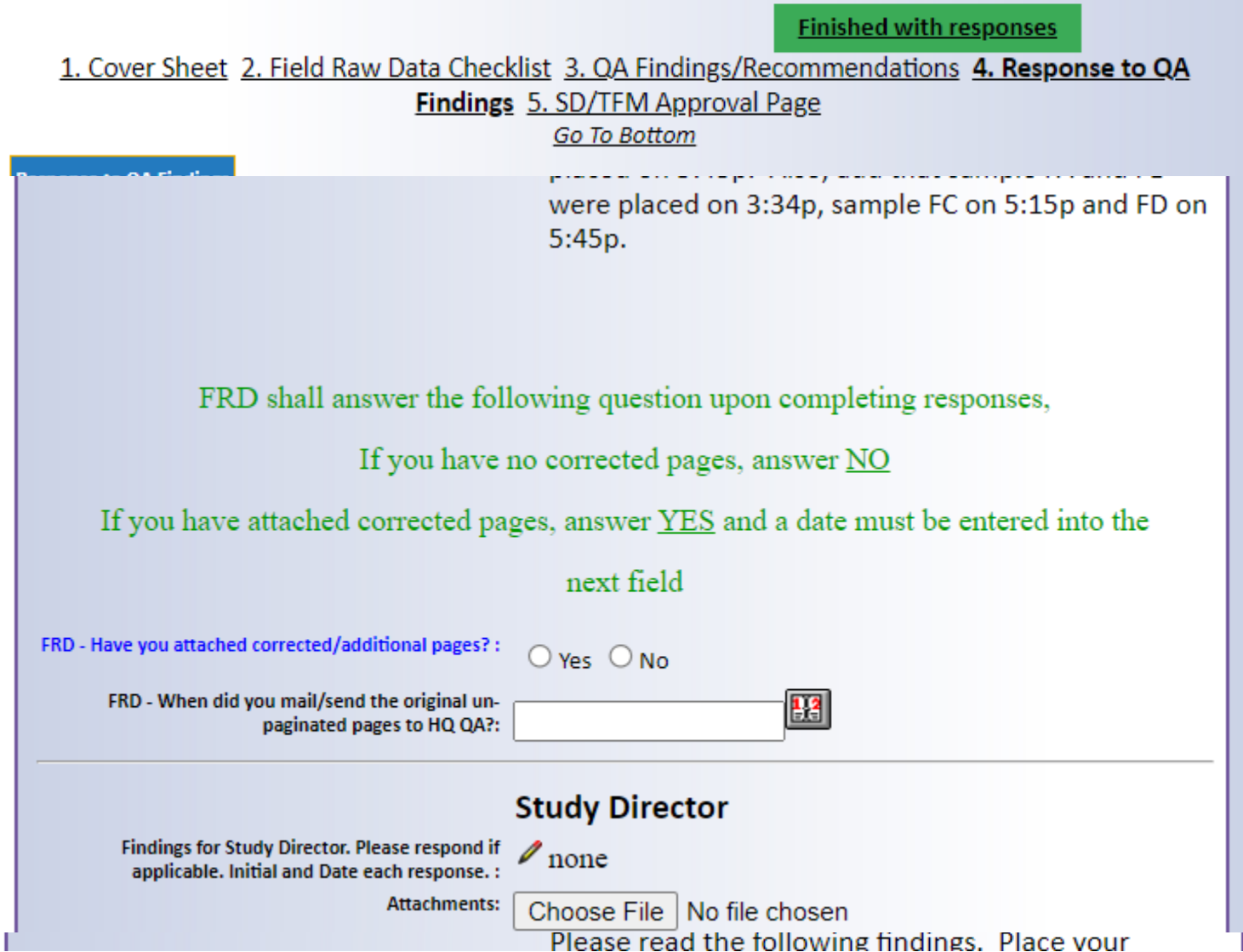


Questions?

Reach out to me or Jimmy anytime:

Philip Moore
615-423-6175 (call or text)
pmoore@ncsu.edu

Jimmy Byrtus
919-515-3017 (office)
jpbyrtus@ncsu.edu

Discussion: eFDB Processes

Nathan Leach & Kari Arnold

Discussion: Comparing eFDB Hardware/Software

Cole Smith

eFDB Setup Examples

Compiled by Christina Dineen
Presented by Kari Arnold

From Dan Heider, WI:

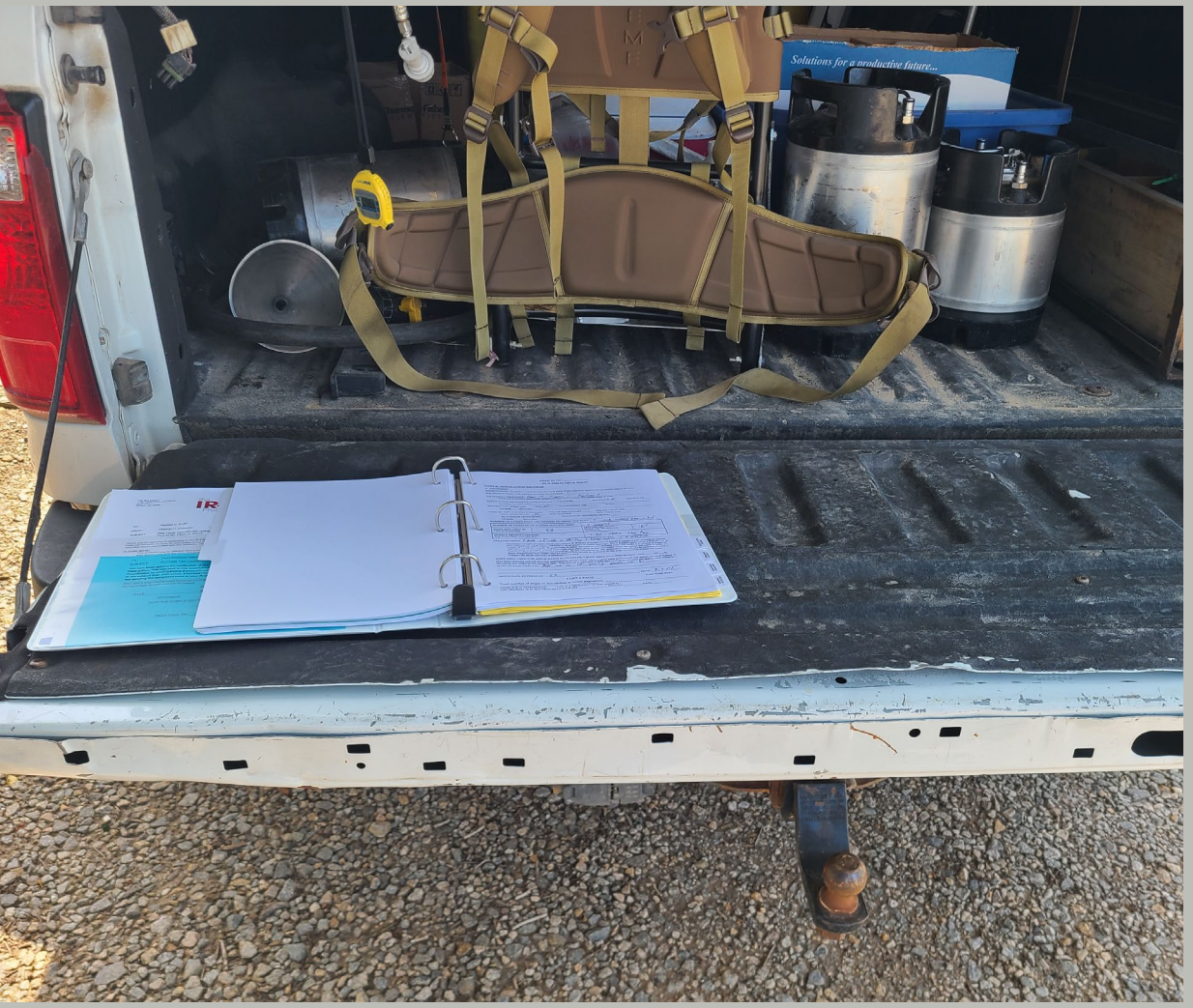
“It works fantastic! About 5 seconds to tighten on the rail and my computer is away from the pesticide mixing/loading area of the truck. Numerous makes available on Amazon for $30-50.”

Dan is using a **Dell Lattitude 7330 Rugged Extreme Notebook**. It was about $4000 with how he had it customized. It is heavy with a built in handle which makes it convenient to grab and go. He confirmed that when you turn it up, there is no difficulty viewing it in full sunlight. The specs on this model state that the Dell Lattitude 7330 “meets stringent MIL-STD-810H testing standards, ensuring it can survive drops, spills, vibrations, extreme temperatures, and even hazardous environments.” Also, it has technology to protect against dust, dirt, and water ingress.

Celeste Wheeler & Amber DeVisser – MI
iPad with case and strap

From Cole Smith, NC:

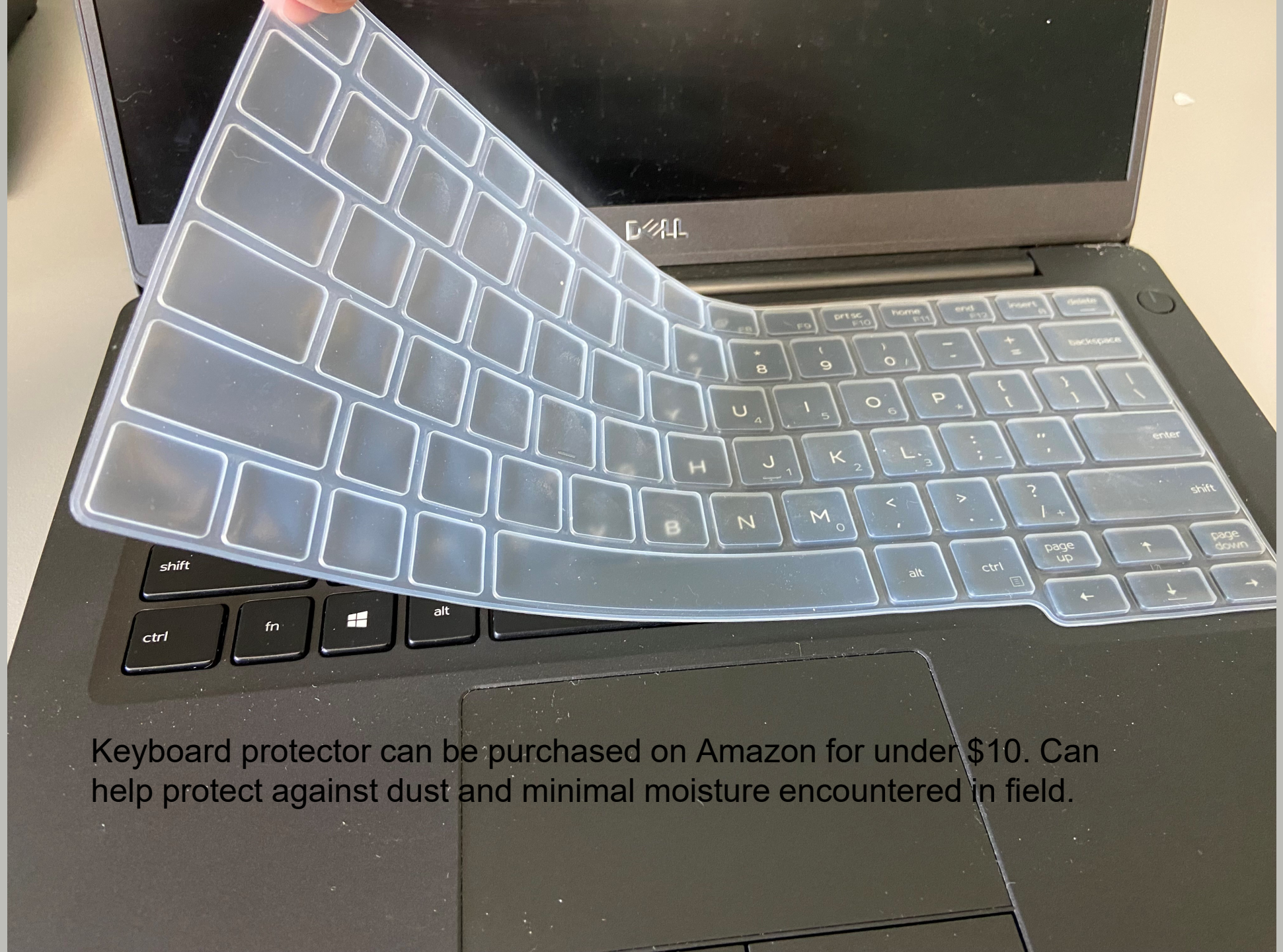
Life before eFDB



Life with eFDB

“With the transition to electronic I have put a lot of time and effort into optimizing my setup. I have included two pictures: the first is my old outdated setup that I used for paper books, the second is my new and improved setup tailored towards electronic data collection.”

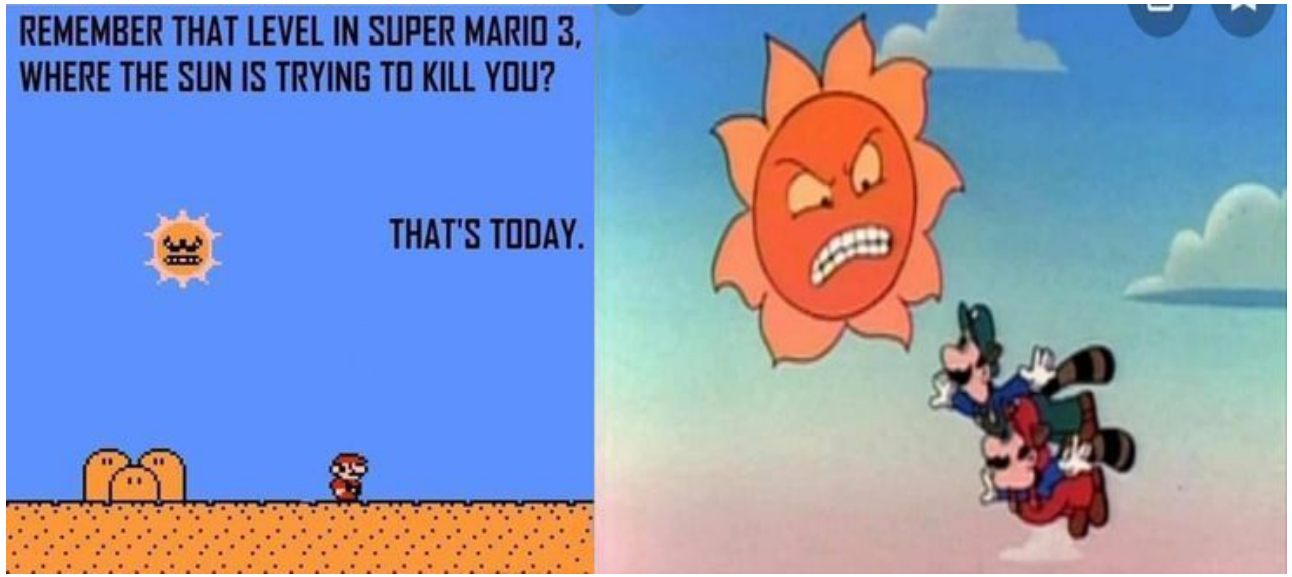
Holster setup for iPad/tablet



Keyboard protector can be purchased on Amazon for under $10. Can help protect against dust and minimal moisture encountered in field.

Idaho, Lexi and Will

2 iPads, 2 logins, helps with entering data from one form into another



Items to keep in mind:

1. Heat! Have had FRD iPads shutdown due to overheating when out in the field.
2. Being able to see your screen – sun/glare, sweat, dust, etc. can make it difficult to see your screen.

Denise Wright:

Electronics in the field are not easy! LOL I currently set mine on the front or back seat of the pickup truck (does this constitute a set-up?). Depending upon how bright the sun is that day and if it's just hot or hotter'n than HOT, I decide whether or not I'm going to bring my laptop to the field or not...a lot of times, it is absolutely necessary to record the data on paper, and then transcribe into the eFTN. I can't tell you how many times I've entered data in the sun and come back in to see that the numbers are apparently not correct or entered into the wrong spot (thank goodness for my photographic memory). Here in Louisiana, we sweat, even the ladies...no glowing or perspiring, we down right sweat, so sweat, sun glare, and dust can make it awful difficult to see what you're doing on a laptop.

Harvest/Sample Collection, Modifications & Shipment

Protocol language & documentation, samples to freezer, laboratory considerations

Robert Welker & Christina Dineen

Sample Collection

Follow The Protocol and Document

Follow protocol instructions for harvest & sampling; if something looks off during draft protocol review, say something!!

Be sure and document:
-Harvested crop growth stage – “commercially mature cantaloupe” vs “fruit”
-Actual number of plants and locations on plants collected.
-Cleaning procedures – dirt, stem removal, leaf removal
-Modification procedures – DOCUMENT where and how samples were modified before collection
-How was harvested crop/samples moved from field to freezer. Document all steps
-Cleaning and contamination prevention measures

Remember the goal is to document everything so the study could be recreated EXACTLY as it was done – auditors and reviewers look for that.

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Sample Modifications

Why Modify Samples?

- Overall sample size reduction (too much weight)
- Individual crop parts too big (DANGEROUS to try and grind a large frozen sample)
- To remove non-edible parts (i.e. pits or leaves – see green book)

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Sample Modifications

Get samples into freezer as soon as possible after any modifications – Why?

Enzymatic activity can have an impact on residues. As soon as samples are cut, enzymes are released. EU and other countries look at this and expect samples to be frozen after modifications, so export tolerances can be impacted. Possible these standards also move to US.

- Recently added protocol language regarding sample modifications

- *If samples are cut, and the cut samples cannot be placed in a freezer within one hour, then it may be best to do the cutting at the facility where the freezers are located or use an appropriate method of cooling and temperature-monitoring samples in order to maintain integrity*

- Good habit to use a min/max thermometer when transport from field to freezer (current protocol says after 1 hour) and cool samples where possible

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Shipping to Analytical Labs

- Remember why we do what we do –
  - Make applications, grow crops, analyze for residues
  - **Result**: tolerance/MRL/registration so growers have access to more tools!

- Field portion is only half the battle

How to make transition from field to lab seamless?

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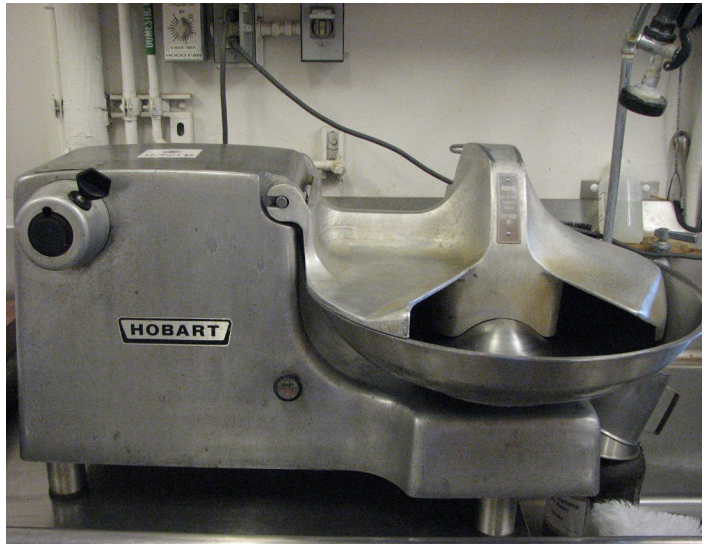
Why are Sample Modifications Necessary?

- The labs have to finely ground/chop/homogenize the samples




Homogenization Equipment



Samples are homogenized using a chopper/food processor such as Hobart or Robot Coupe.

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Homogenization Process

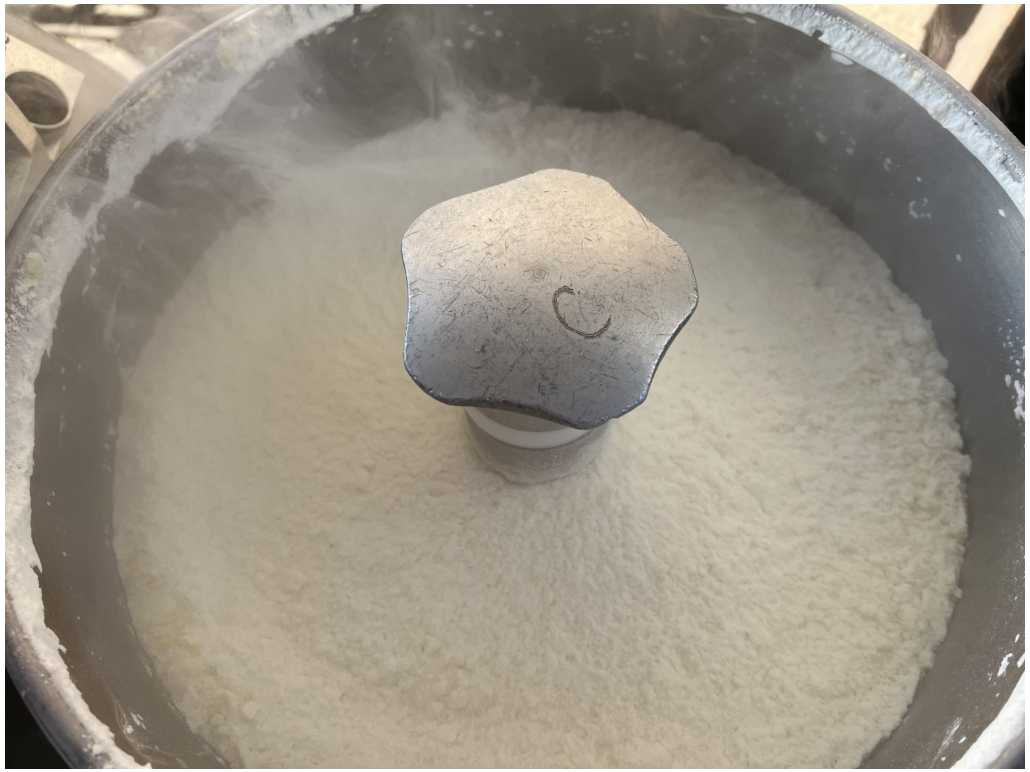
Source of cooling

Cooling the bowl

Loading the sample

Mustang in action

Homogenization Process



Pulverized squash

Sample transferring

Homogenization Process

- Knives, cleavers, hammers, rubber mallets, electric knives, etc. are needed to get **frozen** samples ready to go into processors.

- “It is so nice when things come quartered/sliced and then we don’t have to work so hard to reduce the pieces in order to have them fit and easily homogenize.”

Examples of Difficulties

- Cantaloupe
- Barley straw → Had to be pre-chopped or it would wrap around spinning blades
- Whole baking type potatoes (some the size of eggplants)
- Sugar beets → So much water content – trying to chop these down frozen is very difficult
- Sweet corn
- Lemons

Sweet Corn

Whole cobs received from field

Cobs reduced by ½ from field

Cobs after lab chopping before Robot Coupe

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Sweet Corn

Corn stover

Corn forage

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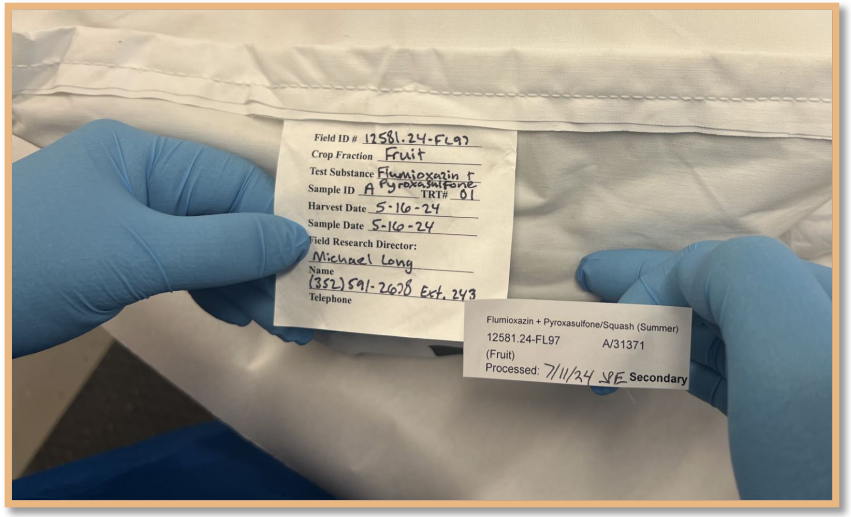
Other Items to Consider/Avoid

Dirty samples	Require extra communication/ documentation, extra clean up before chopping
Unsecured sample bags	Can cause cross-contamination/ loss of samples
Sending lab incorrect field trial(s)	Increases paperwork, communication, and shipping costs

Other Items to Consider or Avoid



Overly large or small sample size	(*Large*) Consider: is it possible to subsample? (*Small*) Consider: is this really representative?
Over-dried samples (i.e. hops/hemp)	Can act differently with analytical method
Square knots on sample bags	

Our Labs Thank You!

If you ever are unsure, communicate with Study Director and LRDs!

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Thank you for attending!

- *Please send ideas for future training to **your RFC** or Christina Dineen*
- *Please send updated contacts for future training to Christina Dineen*
- *Next Webinar: November 12*

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