NHRA-MVC Traceability Hub (RTH)

Technical Onboarding Guide (TOG)
For Serialization

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1   Introduction and Comments

Technical Onboarding

Reporting companies will need to complete the Technical Onboarding process to certify they are prepared to send the proper transactions to the NHRA-MVC Traceability Hub.

The reporting companies will send a series of information records (Transactions) to the NHRA-MVC Traceability Hub that represent actions that commonly occur in the manufacturing and shipping steps of the supply chain; commissioning of serialized medicines, aggregation of cartons to cases, then the cases to pallets, and shipping the products to Bahrain.

The NHRA-MVC Traceability Hub (RTH) is designed to allow companies to send information to the Traceability Hub using GS1 compliant messages. This document outlines the necessary information you will need to comply with the reporting requiremnts from the NHRA.

The manufacturing companies warrant that the data relating to the medicines for which it is reporting to the RTH have been registered with the NHRA correctly, fully, accurately and not misleadingly, and that such data will ensure the proper functioning of the RTH.

Reporting companies must cooperate in good faith with the NHRA-MVC in the development, testing, implementation, and operation of the technical interface and messages in accordance with the technical requirements documented in this Technical Onboarding Guide.

- Compliance with the technical considerations captured in this Technical Onboarding Guide are non-negotiable and must be followed by the companies or their IT providers sending information to the RTH.

- The reporting companies will ensure that their IT Software Provider will adhere to all requirements and constraints identified in this Technical Onboarding Guide published by the NHRA-MVC IT Technical Support organization.

- The technical requirements described in this Technical Onboarding Guide are fixed and will not be negotiated. No deviations are acceptable.

This Technical Onboarding Guide may need to be updated by the NHRA-MVC IT Technical Support organization to support new or modified features in the NHRA-MVC Traceability Hub. The reporting companies will ensure that their IT Software Provider will comply with all updates in a timely manner.

2 Communication and Connectivity

Connections will be established via an AS2 connection. This is a secure and robust way to verify that the structures and content are correctly formatted.

2.1 AS2 Information for TEST environment

Company Name	rfxcel Corporation
Support Number	+1 855-209-2238
Support Email Address	nhra-mvc-support@rfxcel.com
URL	https://rthtest.nhra-mvc.bh
IP	184.105.135.59
AS2 ID	nhramvctest
AS2 URL	https://rthtest.nhra-mvc.bh/as2/
Digital Signature	Sha256
Message Encryption	3des
Certificate	Files will be sent separately to the Technical Point of Contact
AS2 Version	1.2
MDN Delivery	Sync
File Name	Content-Disposition: filename="*Filename.ext*"

2.2 AS2 Information for PRODUCTION environment

Company Name	rfxcel Corporation
Support Number	+1 855-209-2238
Support Email Address	nhra-mvc-support@rfxcel.com
URL	https://rth.nhra-mvc.bh
IP	15.184.57.211
AS2 ID	nhramvc
AS2 URL	https://rth.nhra-mvc.bh/as2/
Digital Signature	Sha256
Message Encryption	3des
Certificate	Files will be sent separately to the Technical Point of Contact
AS2 Version	1.2
MDN Delivery	Sync
File Name	Content-Disposition: filename="*Filename.ext*"

3 EPCIS Event Requirements

3.1 Event Data

The following sections define the event data that must be submitted to meet NHRA-MVC serialization requirements. NHRA-MVC requires adherence to the structure, flow, and documented GS1 EPCIS 1.2 standards outlined in this Guide.

3.1.1 <u>Rules for Communicating Events to the Traceability Hub</u>

MOST IMPORTANT - The company that is physically shipping products to the Kingdom of Bahrain is required to report the commission, aggregation, and shipping information for all commissioned serial numbers; both SGTINS and SSCCs.

Serial number event data must be communicated to NHRA-MVC Traceability Hub (RTH) in the following manner.

1. Only shipments that are going directly to the Kingdom of Bahrain are to be reported to the NHRA-MVC Traceability Hub. If the shipment is not going directly to the Kingdom of Bahrain, the events should not be sent to the Traceability Hub. **See Diagram 1 and 2 below.**

2. Commission and aggregation events should only be sent when the shipment event is sent.

    a. Example if 10,000 cartons are commissioned, but only 4,000 are shipped to Bahrain, the commission and aggregation should only include the 4,000 serial numbers.

    b. If 2,000 additional cartons are shipped to Bahrain later, another set of commission and aggregation events must be sent containing the additional 2,000 serial numbers.

3. Sender must send commission events for all SGTINs and SSCCs identified in the shipment.

4. Related commission and aggregation events must be sent as one message file (envelope).

5. All EPCIS events within a message file (envelope) must be sorted in chronological order; with the oldest event appearing first.

6. Sender must ensure that all messages are sent in the correct chronological order with the oldest first

7. For events that pertain to the same physical objects and thus the same serial numbers, the first event time must be strictly less than the second event time. For example, a given Commission event must have an earlier event time than a given Packing event if one or more of the serial numbers in that Commission event is part of that Packing event. Likewise, a given Packing event must have an earlier event time than a given Ship event if one or more of the serial numbers in that Packing event is part of the Ship event.

8. All events must contain location identifiers (GLNs / SGLNs) that belong to the actual MAHs not the CMOs or 3PLs, etc.

    a. Example 1 - if commission / aggregation events are created by a CMO on behalf of an MAH the bizLocation fields must contain the MAH SGLN, not the CMO SGLN.

  b. Example 2 - if the commission/aggregation/ship EPCs are sent by a 3PL on behalf of an MAH;

    i. the bizLocation in the commission and agregation events must contain the MAH SGLN, not the 3PL SGLN.

    ii. the source owner / source location fields in the ship event must contain the MAH SGLN, not the 3PL SGLN.

Only the final shipping event that represents the actual shipment content should be sent for any shipment directly to the Kingdom of Bahrain.

1. Do not send intermediate OBSERVE events such as movement of serialized products within a warehouse for stocking purposes.

2. Do not send damaged or decommissioned serial number information for serial numbers not previously reported to the Traceability Hub.

All resent messages must be sent in their entirety. Fragmented or partial messages will be rejected.

Diagram 1 – Manufacturer that does not ship directly to the Kingdom of Bahrain.
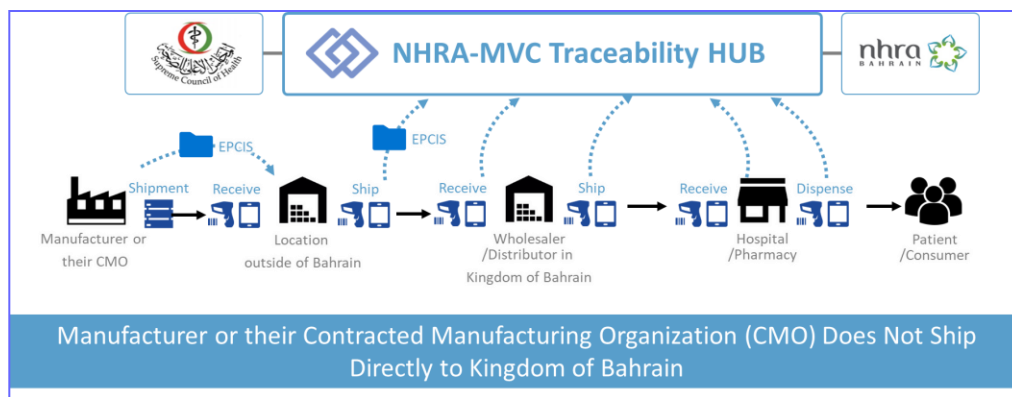
Diagram 2 – Manufacturer or their CMO that ships directly to the Kingdom of Bahrain.
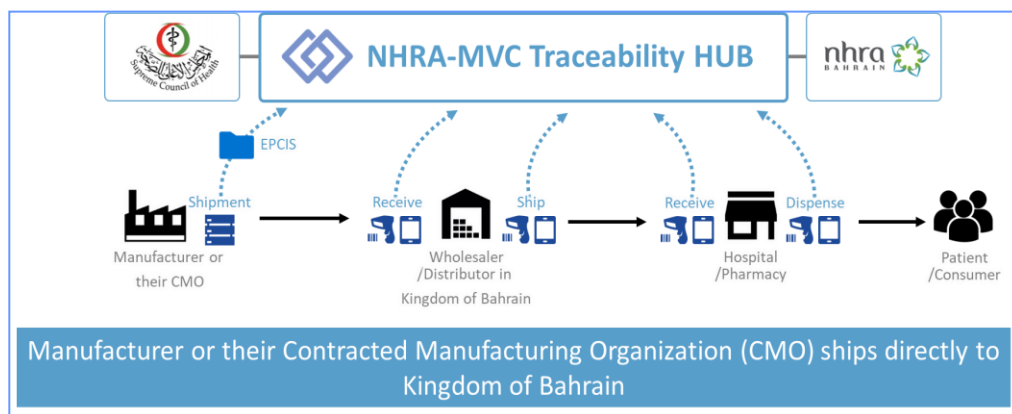
4   Performance Guidelines

To ensure all participants experience acceptable response times when reporting to the Traceability Hub, the NHRA-MVC Technical team has set these guidelines for sending events to the Traceability Hub.

If there are questions regarding the specifications, please contact the NHRA-MVC Technical team at nhra-mvc-support@rfxcel.com

4.1   Message Formats

Data Type	Format	Standards / Industry
Events	XML	Standard GS1 EPCIS 1.2

4.2   Data exchange Medium

Medium / Protocol	Supported file formats
AS2	XML

4.3   Parameters for Sending Events

Specification	Limits
File Size	15 MB
Events per minute	500
Events per EPCIS document	5000
Max Serial numbers in an event	50000
Max level of hierarchy	5
Interval between API calls	1 API call per 2 secs

4.4   Guidelines for Event Messages

4.4.1   Header

- Sender ID in the header should be available in rTS/rTH so that parallel processing can be managed
- Always send events in envelope format
- Use EPCIS in 1.2 schema

4.4.2   General Instructions:

- bizLocation must be provided to record the event location. Ship events should not have a bizlocation element.
- Event ID must be provided to ensure uniqueness.
- Ordering of events in the envelope must be in the same way it is performed in real-time i.e. commission, aggregate, ship
- Commission events must have earlier time stamps than the aggregation events that use those serial numbers (SGTINs and SSCCs).
- There must be at least a 1 millisecond between event timestamps

4.4.3   Commission Event:

- Each Commission event should only contain serial numbers belonging to only one product and one Lot combination
- Do not send one serial number per Commission event (unless that constitutes the entire batch being commissioned).
- Extensions such as Lot, ExpirationDate, etc. must use standard cbvmda prefix or formats recommended by GS1 for EPCIS 1.2

4.4.4   Aggregate Event:

All reporting companies must provide aggregation events as part of the data being sent to the Traceability Hub

You must provide explicit aggregate events for each level of packing that occurs.

- Aggregation can contain any combination of SGTINs and SSCCs in the parent-child creation. **See Diagram 3** [**Examples of Parent-Child Hierarchies**] below for examples.
- Aggregate events should start at the smallest unit (the individual carton) and aggregate up to each successive level
    - EXAMPLE - unit to bundle first, then bundle to case next, then finally case to pallet.

- o It is strongly recommended that different SSCC extension digits are used for different aggregation container types.

Diagram 3 – Examples of Parent-Child Hierarchies

Lowest Unit	Inner Pak / Bundle	Case	Partial Case	Pallet
SGTIN	SGTIN	SGTIN	SSCC	SSCC
SGTIN	SGTIN	SSCC	SSCC	SSCC
SGTIN	SSCC	SSCC	SSCC	SSCC

4.4.5 Disaggregate Event Not Required

- o The Shipping party will NOT need to send disaggregation events. Only the information related to the aggregated shipment should be sent to the Traceability Hub. This will be reconsidered at a later date, if necessary.

4.4.6 Ship Events

- o **Do not send aggregated packs and non-aggregated packs in same event.**
- o The Ship event MUST contain the
    - bizTransactionList containing the INVOICE NUMBER
    - Sender Owner (source/owning_party)
    - Sender Custodian (source/location)
    - Receiver Owner (destination/owning_party)
    - Receiver Custodian (destination/location)

4.4.7 Voiding Shipments

Voiding events is not a common practice and will only be allowed under very limited and restricited circumstances.

Access to this function requires authorization and security authorization. You will need to contact the NHRA-MVC Support team for assistance if events need to be voided.

4.5   EPCIS Message Requirements

The NHRA-MVC requires the company shipping the products to the Kingdom of Bahrain to capture the following events; to be sent, using the guidelines described above.

4.5.1   Standard Business Document Header Requirements

Standard Business Document Header Requirements			
HeaderVersion	1.0	Version of SBDH standard used. Set to "1.0"	<sbdh:HeaderVersion>1.0</sbdh:HeaderVersion>
Sender/Identifier	Mandatory GLN or SGLN	Identifies the sender of the document.	<sbdh:Sender> <sbdh:Identifier Authority="SGLN">urn:epc:id:sgln:8901149.00000.0 </sbdh:Identifier> </sbdh:Sender>
Receiver/ Identifier	Mandatory GLN or SGLN	Identifies the receiver of the document.	<sbdh:Receiver> <sbdh:Identifier Authority=" SGLN"> urn:epc:id:sgln:8901149.00000.0 </sbdh:Identifier> </sbdh:Receiver>
DocumentationIdentification		Describes the document.	<sbdh:DocumentIdentification> ... </sbdh:DocumentIdentification>
Standard	Mandatory EPCGlobal	EPCGlobal is used for all EPCIS Documents.	<sbdh:Standard>EPCGlobal</sbdh:Standard>

Standard Business Document Header Requirements			
TypeVersion	Mandatory 1.0	Constant value of 1.0 representing the current version that rfXcel supports.	`<sbdh:TypeVersion>1.0</sbdh:TypeVersion>`
InstanceIdentifier	Mandatory Unique identifier	Description which contains reference information which uniquely identifies this instance of the Standard Business Document (SBD) between the Sender and the Receiver. This identifier identifies this document as being distinct from others. It is a xs:string defined field.	`<sbdh:InstanceIdentifier>00072828992770024</sbdh:InstanceIdentifier>`
Type	Mandatory Events	Describes the kind of EPCIS documents. For the purpose of this document only "Events" is used, but future versions will make use of additional values: MasterData, QueryControl-Request, QueryControl-Response, Query.	`<sbdh:Type>Events</sbdh:Type>`
CreationDateAnd Time	Mandatory DateTime YYYY-MM-DDTHH:MM:SSZ	Date and time of the SBDH document creation. The value of the CreationDateAndTime element MUST be set to the date and time when the document's originating application" or the parser created the document. This value should be populated by the trading 3PL and will typically differ from the time stamping of the message by the communications software.	`<sbdh:CreationDateAndTime>` `2016-08-01T18:00:45Z` `</sbdh:CreationDateAndTime>`

4.5.2 Event Table

This table represents the various actions that will be taken against serial number by the company reporting the events to the Traceability Hub.

Partner Actions Taken Against Allocated Serial Numbers		
Event	**Description**	**Expected from Partner**
Commissioning Items, Cases, Pallets	Occurs when a UID (e.g. SGTIN or SSCC) is physically applied or printed to an item or container.	All Item, case, and logistic container commissions will be sent to the Traceability Hub.
Packaging Aggregations	Occurs when items are placed inside a parent container.	Only the final aggregation reflecting hierarchy at time of shipment will be sent to the Traceability Hub.
Shipping	Occurs when items are physically shipped from Partner's location.	Ship Events containing top level parent UID will be sent to the Traceability Hub at the time of shipment.

4.6 Event Definitions

The structure of the required events are shown in the following sections. The example XML file in **Appendix A** contains comments to guide the user regarding the various events and required elements/tags.

4.6.1 Title Tag

Title tag holds the master data values for both trade item and location, and the attributes defined in this section are conditional upon inclusion of any attributes within the open/close Tag.

EPCIS Tag Name	Type	Description	Requirement
EPCISMasterData	String	Title Tag	Conditional
VocabularyList	String	Title Tag	Conditional

4.6.2 Trade item master data attributes – Section Removed Feb 01, 2021

All Product and Location Master Data must be uploaded via CSV or BrandSync. The Traceability Hub ignores master data specified in the EPCIS document header.

Removed the Table description from version 1.5 to align with the removal of the Trade Item Master Data attributes Feb 01, 2021.

4.6.5   Definition for Commission Attributes

The EPCIS will include the commission information of each UID. The following table indicates the EPCIS message structure for the commission events. Commissions will include SGTIN and SSCC.

Element	Requirement	Comments	Example
<eventTime>	Mandatory	Shall be formatted in ISO 8601 standard. This should represent the date and time that the event occurred.	2007-07-26T21:41:19Z 2007-07-26T22:41:19+01:00
<eventTimeZoneOffset>	Mandatory	Used to communicate the time zone offset value where the event physically occurred. Example +01:00 means CET	-05:00 +01:00
<epcList>	Mandatory	Use to communicate the UIDs (e.g. SGTINs or SSCCs) of items included in the event in URN format.	<epcList> <epc>urn:epc:id:sgtin:123456.0322111.1</epc> <epcList>
<action>	Mandatory	Fixed value	<action>**ADD**</action>
<bizStep>	Mandatory	Fixed value	<bizStep>urn:epcglobal:cbv:bizstep:**commissioning**</bizStep>
<disposition>	Mandatory	Fixed value	<disposition>urn:epcglobal:cbv:disp:**active**</disposition>
<readPoint>	Mandatory SGLN	Must be the SGLN corresponding to the location where the commissioning event occurred in URN format. Use SGLN Extensions to depict granular locations.	<readPoint> <id>urn:epc:id:sgln:123456.789101.0</id> </readPoint>
<bizLocation>	Mandatory	Business location must contain the MAH SGLN	<bizLocation> <id>urn:epc:id:sgln:123456.000000.0</id> </bizLocation>
<extension>	**MANDATORY** for SGTIN **Not used** for **SSCC**	Fixed value Identifies the use of extension elements in the EPCIS	

Element	Requirement	Comments	Example
<ilmd>	**MANDATORY** for SGTINs Will Include the **Lot Number** and the **Expiration Date** as **YYYY-MM-DD** **Not used for SSCCs**	This is the lot of batch number for all of the EPCs in the EPClist of the ObjectEvent. This is the expiration date for all of the EPCs in the EPClist of the ObjectEvent.	<ilmd> **<lotNumber>**LOT1234</lotNumber> < **itemExpirationDate**>2020-11-11</ itemExpirationDate> </ilmd>
< eventID>	Optional	Although this is an optional field, it is strongly advised to specify this field in each event. This must be a unique identifier for each event. If specified, it must be a UUID as recommended by GS1.	< eventID>urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6bf6</ eventID>

4.6.6   Definition for Aggregation Attributes

All reporting companies must provide aggregation events as part of the data being sent to the Traceability Hub

You must provide explicit aggregate events for each level of packing that occurs.

The EPCIS will include the aggregation information of each UID. The following table indicates the EPCIS message structure for the aggregation events. Aggregation will include SGTIN and SSCC information.

Element	Requirement	Comments	Example
<eventTime>	Mandatory	Shall be formatted in ISO 8601 standard. This should represent the date and time that the event occurred.	2007-07-26T21:41:19Z 2007-07-26T22:41:19+01:00

Element	Requirement	Comments	Example
<eventTimeZoneOffset>	Mandatory	Used to communicate the time zone offset value where the event physically occurred. Example +01:00 means CET	-05:00 +01:00
<parentID>	Mandatory	The parentID communicates the UID of the parent container for the following children.	<parentID>urn:epc:id:sgtin:031073 4.200562.1142710399</parentID
<childEPCs>	Mandatory	The childEPCs should communicate the UIDs of items being added to the parent in the parentID.	<childEPCs> <epc>urn:epc:id:sgtin:990 4321.000821.25P540M3B C93</epc> <epc>urn:epc:id:sgtin:990 4321.000821.N8YYC1Z7TB ZG</epc> <epc>urn:epc:id:sgtin:990 4321.000821.317D7HD55 KYP</epc> </childEPCs>
<action>	Mandatory	Fixed value	<action>**ADD**</action>
<bizStep>	Mandatory	Fixed value Used to communicate the activity taking place	<bizStep>urn:epcglobal:cbv:bizst ep:**packing**</bizStep>
<disposition>	Mandatory	Fixed value	<disposition>urn:epcglobal:cbv:di sp:**in_progress**</disposition>
<readPoint>	Mandatory	Use SGLN to indicate the location where the event took place.	<readPoint> <id>urn:epc:id:sgln:03009 3.000340.0</id> </readPoint>
<bizLocation>	Mandatory	Business location must contain the MAH SGLN	<bizLocation> <id>urn:epc:id:sgln:123456.0000 00.0</id> </bizLocation>
<eventID>	Optional	Although this is an optional field, it is strongly advised to specify this field in each event. This must be a unique identifier for each event. If specified, it must be a UUID as recommended by GS1.	<eventID>e04d494e-916b-11e6-ae22-56b6b6499611</eventID>

4.6.7   Definition for Shipping Attributes

The EPCIS Ship event will include the ship information of each UID. The following table indicates the EPCIS message structure for the ship event.

Element	Requirement	Comments	Example
<eventTime>	Mandatory	Shall be formatted in ISO 8601 standard. This should represent the date and time that the event occurred.	2007-07-26T21:41:19Z 2007-07-26T22:41:19+01:00
<eventTimeZoneOffset>	Mandatory	Used to communicate the time zone offset value where the event physically occurred. Example +01:00 means CET	-05:00 +01:00
<epcList>	Mandatory	epcList should communicate the top-level parent UIDs of items included in the shipment in urn format. For example, only the top-level pallet SSCC may be included.	<epcList> <epc>urn:epc:id:sscc:123456.71000000000</epc> </epcList>
<action>	Mandatory	Fixed value	<action>**OBSERVE**</action>
<bizstep>	Mandatory	Fixed value Used to communicate the activity taking place	<bizStep>urn:epcglobal:cbv:bizstep:**shipping**</bizStep>
<disposition>	Mandatory	Fixed value Indicates the state of the shipment	<disposition>urn:epcglobal:cbv:disp:**in_transit**</disposition>
<readpoint>	Mandatory	Used to indicate the location where the event took place.	<readPoint> <id>urn:epc:id:sgln:5036519.00001.0</id> </readPoint>

Element	Requirement	Comments	Example
<bizTransactionList>	**Mandatory** **GLN Number** **Transaction Number** **Invoice Number (as of 01, July 2023)**	This element will always contain at least the following: MANDATORY BEGINNING JULY 1, 2023 The NHRA makes it mandatory to include the Invoice Number that aligns with the DUR information. This should be the first • ***urn:epcglobal:cbv:btt:inv*** *Note: the business transaction types below, are also supported by nhra-mvc Hub and can be added to the bizTranscationList section* • ***urn:epcglobal:cbv:bt:[GLN]:[TransID]*** • ***urn:epcglobal:cbv:btt:desadv*** • ***urn:epcglobal:cbv:btt:po*** • ***urn:epcglobal:cbv:btt:rma***	<bizTransactionList> <bizTransaction type="urn:epcglobal:cbv:btt:inv">urn:epcglobal:cbv:bt:INV-1234-10</bizTransaction> </bizTransactionList> OR <bizTransactionList> <bizTransaction type="urn:epcglobal:cbv:btt:inv">urn:epcglobal:cbv:bt:INV-1234-10</bizTransaction> <bizTransaction type="**urn:epcglobal:cbv:btt:po**">urn:epcglobal:cbv:bt:2016A22</bizTransaction> </bizTransactionList>
<extension>	**Mandatory**	Fixed value	
<sourceList>	**Mandatory** **owning_party** and **location**	The Owning Party and the Location must equal the MAH SGLN Sourcetype is from epc global common business vocabulary list	<sourceList> <sourcetype="urn:epcglobal:cbv:sdt:**owning_party**">urn:epc:id:sgln:123456.000000.0</source> <sourcetype="urn:epcglobal:cbv:sdt:**location**"> urn:epc:id:sgln:123456.000000.0</source> </sourceList>
<destinationList>	**Mandatory** **owning_party** and **location**	Describes the intended receiving party for this shipment and is represented by SGLN data. Destinationtype is from epc global common business vocabulary list	<destinationList> <destinationtype="urn:epcglobal:cbv:sdt:**owning_party**">urn:epc:id:sgln:07722.0005001.0</destination> <destinationtype="urn:epcglobal:cbv:sdt:**location**">urn:epc:id:sgln:07722.0005001.0</destination> <destinationList>
</extension>			

Element	Requirement	Comments	Example
<eventID>	Optional	Although this is an optional field it is strongly recommended to specify this field in each event. This must be a unique identifier for each event. If specified, it must be a UUID as recommended by GS1.	<eventID>urn:uuid:e04d4ec6-916b-11e6-ae22-56b6b6499611</eventID>

4.6.8   Definition for disaggregation attributes – Removed Nov 6, 2020

The definition section for disaggregation events has been removed. Nov 6, 2020

5 Acceptance Criteria

NHRA-MVC Technical team will review the connection and all events being sent to the Traceability Hub. The Technical Point of Contact for your company will be informed of results as it progresses from the testing phase to determine certification for PRODUCTION. Connectivity will be approved based on the testing and verification output results.
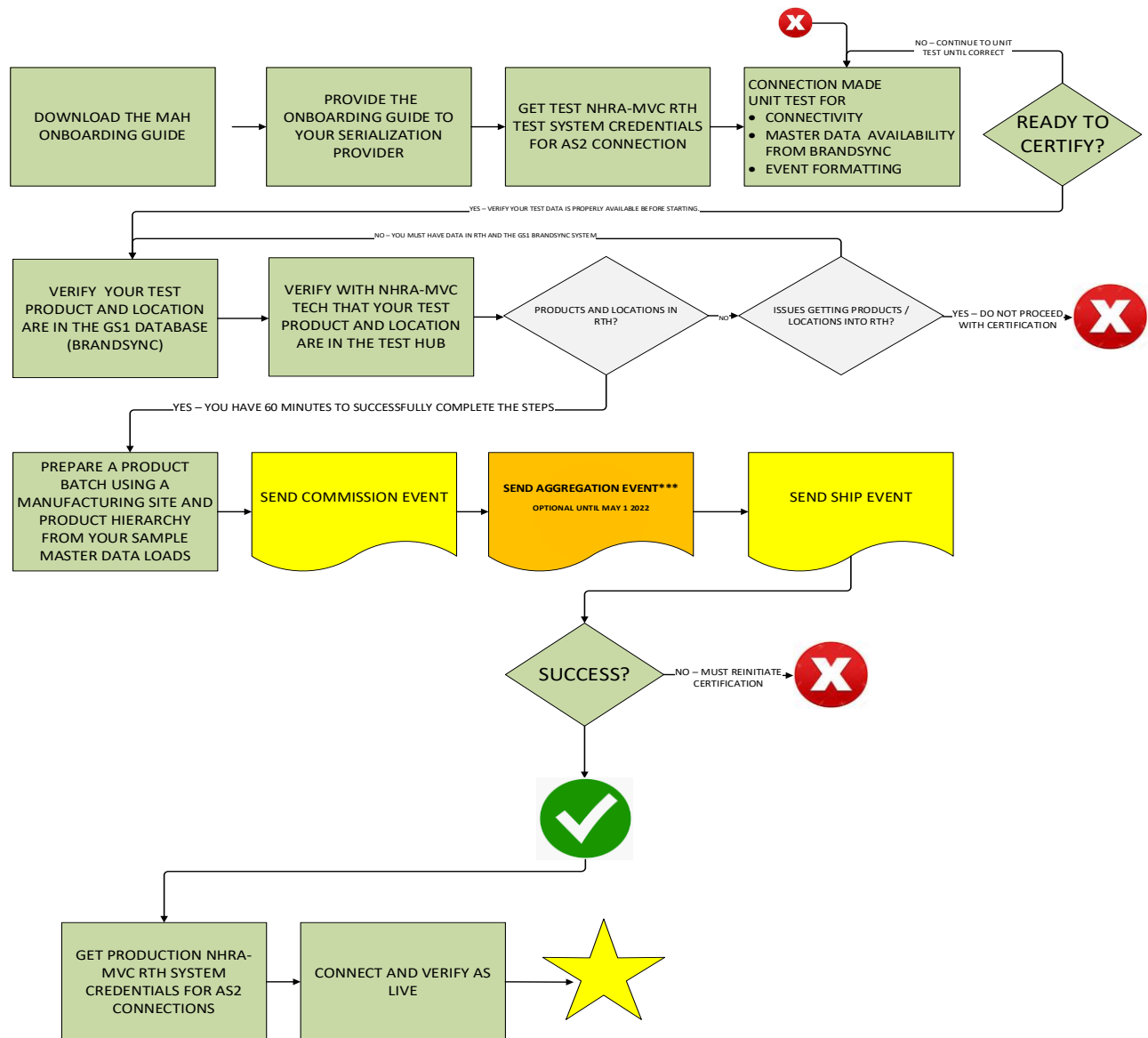
6   SAMPLE XML FILE: EPCIS 1.2 file formats

6.1 EPCIS Event Example with Aggregation (Units to Cases – Cases to Pallets)

```xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<ns3:EPCISDocument xmlns:cbvmda="urn:epcglobal:cbv:mda" creationDate="2017-05-03T12:35:33.650+05:30"
schemaVersion="1.2" xmlns:ns2="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader"
xmlns:ns3="urn:epcglobal:epcis:xsd:1" >

    <EPCISHeader>

        <ns2:StandardBusinessDocumentHeader>

            <ns2:HeaderVersion>1.0</ns2:HeaderVersion>

            <ns2:Sender>

                <ns2:Identifier Authority="GLN">8928998989899</ns2:Identifier>

            </ns2:Sender>

            <ns2:Receiver>

                <ns2:Identifier Authority="GLN">7848798734738</ns2:Identifier>

            </ns2:Receiver>

            <ns2:DocumentIdentification>

                <ns2:Standard>EPCglobal</ns2:Standard>

                <ns2:TypeVersion>1.0</ns2:TypeVersion>

                <ns2:InstanceIdentifier>urn:uuid:26196612-f969-4afa-bc00-
7274955267c3</ns2:InstanceIdentifier>

                <ns2:Type>Events</ns2:Type>

                <ns2:CreationDateAndTime>2017-05-03T12:35:33.650+05:30</ns2:CreationDateAndTime>

            </ns2:DocumentIdentification>

        </ns2:StandardBusinessDocumentHeader>

    </EPCISHeader>

    <EPCISBody>


        <EventList>

            <!-- COMMISSION EVENT -->

            <!-- COMMISSION EVENT FOR PALLET -->
```

```
<ObjectEvent>
        <eventTime>2017-07-14T08:10:27Z</eventTime>
        <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
        <baseExtension>
                <eventID>urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6ba1</eventID>
        </baseExtension>
        <epcList>
                <epc>urn:epc:id:sscc:1506777.71000703990</epc>
        </epcList>
        <action>ADD</action>
        <bizStep>urn:epcglobal:cbv:bizstep:commissioning</bizStep>
        <disposition>urn:epcglobal:cbv:disp:active</disposition>
        <!-- Partner  SGLN value -->
        <readPoint>
                <id>urn:epc:id:sgln:1506777.00001.0</id>
        </readPoint>
        <!-- Partner  SGLN value must contain location identifiers (GLNs / SGLNs) that belong to the
actual MAHs not the CMOs or 3PLs, etc -->
        <bizLocation>
                <id>urn:epc:id:sgln:1506777.00001.0</id>
        </bizLocation>
</ObjectEvent>

<!-- COMMISSION EVENT FOR FULL SHIPPER CASE -->
<ObjectEvent>
        <eventTime>2017-07-14T08:20:27Z</eventTime>
        <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
        <baseExtension>
                <eventID>urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6bb2</eventID>
        </baseExtension>
        <epcList>
                <epc>urn:epc:id:sgtin:1506777.000018.Y4QOQBH0VVW1</epc>
```

```xml
            <epc>urn:epc:id:sgtin:1506777.000018.A4QIY780KL6M</epc>

            <epc>urn:epc:id:sgtin:1506777.000018.PQMB7TYWB899</epc>

        </epcList>

        <action>ADD</action>

        <bizStep>urn:epcglobal:cbv:bizstep:commissioning</bizStep>

        <disposition>urn:epcglobal:cbv:disp:active</disposition>

        <readPoint>

            <id>urn:epc:id:sgln:1506777.00001.0</id>

        </readPoint>

        <!-- Partner  SGLN value must contain location identifiers (GLNs / SGLNs) that belong to the
actual MAHs not the CMOs or 3PLs, etc -->

        <bizLocation>

            <id>urn:epc:id:sgln:1506777.00001.0</id>

        </bizLocation>

        <extension>

            <ilmd>

                <cbvmda:lotNumber>TEST123</cbvmda:lotNumber>

                <cbvmda:itemExpirationDate>2019-05-28</cbvmda:itemExpirationDate>

            </ilmd>

        </extension>

    </ObjectEvent>


    <!-- COMMISSION EVENT FOR PARTIAL CASE -->

    <ObjectEvent>

        <eventTime>2017-07-14T08:21:27Z</eventTime>

        <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>

        <baseExtension>

            <eventID>urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6bc3</eventID>

        </baseExtension>

        <epcList>

            <epc>urn:epc:id:sscc:1506777.51000703990</epc>

        </epcList>
```

```
<action>ADD</action>

<bizStep>urn:epcglobal:cbv:bizstep:commissioning</bizStep>

<disposition>urn:epcglobal:cbv:disp:active</disposition>

<!-- Partner  SGLN value -->

<readPoint>

        <id>urn:epc:id:sgln:1506777.00001.0</id>

</readPoint>

<!-- Partner  SGLN value must contain location identifiers (GLNs / SGLNs) that belong to the actual MAHs not the CMOs or 3PLs, etc -->

        <bizLocation>

                <id>urn:epc:id:sgln:1506777.00001.0</id>

        </bizLocation>

</ObjectEvent>


<!-- COMMISSION EVENT FOR 28 PRODUCTS -->

<ObjectEvent>

        <eventTime>2017-07-14T08:25:27Z</eventTime>

        <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>

        <baseExtension>

                <eventID>urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6bd4</eventID>

        </baseExtension>

        <epcList>

                <epc>urn:epc:id:sgtin:1506777.000018.01QA00001TY</epc>

                <epc>urn:epc:id:sgtin:1506777.000018.011ABRG0001</epc>

                <epc>urn:epc:id:sgtin:1506777.000018.01ASAS000Q1</epc>

                <epc>urn:epc:id:sgtin:1506777.000018.01TDFFSF5RE</epc>

                <epc>urn:epc:id:sgtin:1506777.000018.01GDGDGDG34</epc>

                <epc>urn:epc:id:sgtin:1506777.000018.01100000003</epc>

                <epc>urn:epc:id:sgtin:1506777.000018.01YUTTYYEQF</epc>

                <epc>urn:epc:id:sgtin:1506777.000018.014545RF98F</epc>

                <epc>urn:epc:id:sgtin:1506777.000018.01TYEWEW56E</epc>

                <epc>urn:epc:id:sgtin:1506777.000018.01HNCEFGT33</epc>
```

```
        <epc>urn:epc:id:sgtin:1506777.000018.01YIQWQWWG6</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01RQYURTBHR</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01RFFWEW557</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01JFGSDFBNJ</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01TRFDFFSDF</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01TEFFEREFV</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01DGDFDFDFF</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01WEYDSHDJJ</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01FDFDFGDGV</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01WERVFD5FG</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01FGDFGDG34</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01FDFDFDFF4</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01FFDFDF567</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01BDBFGFG45</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01QDIVHUI79</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01BIQQGFG5J</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01BCDQGFG45</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01AYQQDQGFG</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01FDFDFDF37</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01FFDFDF674</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01BDBFGFDY7</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01QDIVHU749</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01BIQQGF838</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01BCDQGFDH7</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01AYQQDQ38H</epc>
    </epcList>
    <action>ADD</action>
    <bizStep>urn:epcglobal:cbv:bizstep:commissioning</bizStep>
    <disposition>urn:epcglobal:cbv:disp:active</disposition>
    <readPoint>
        <!-- Partner  SGLN value -->
```

```xml
                    <id>urn:epc:id:sgln:1506777.00001.0</id>
                </readPoint>
                <!-- Partner  SGLN value must contain location identifiers (GLNs / SGLNs) that belong to the
actual MAHs not the CMOs or 3PLs, etc -->
                <bizLocation>
                    <id>urn:epc:id:sgln:1506777.00001.0</id>
                </bizLocation>
                <extension>
                    <ilmd>
                        <cbvmda:lotNumber>TEST123</cbvmda:lotNumber>
                        <cbvmda:itemExpirationDate>2019-05-28</cbvmda:itemExpirationDate>
                    </ilmd>
                </extension>
            </ObjectEvent>


            <!-- AGGREGATION EVENT -->


            <!-- AGGREGATION OF 8 CARTONS INTO FULL CASE 01-->
            <AggregationEvent>
                <eventTime>2018-07-14T15:45:06Z</eventTime>
                <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
                <baseExtension>
                    <eventID>urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6be5</eventID>
                </baseExtension>
                <parentID>urn:epc:id:sgtin:1506777.000018.Y4QOQBH0VVW1</parentID>
                <childEPCs>
                    <epc>urn:epc:id:sgtin:1506777.000018.01GDGDGDG34</epc>
                    <epc>urn:epc:id:sgtin:1506777.000018.01100000003</epc>
                    <epc>urn:epc:id:sgtin:1506777.000018.01YUTTYYEQF</epc>
                    <epc>urn:epc:id:sgtin:1506777.000018.014545RF98F</epc>
                    <epc>urn:epc:id:sgtin:1506777.000018.01TYEWEW56E</epc>
                    <epc>urn:epc:id:sgtin:1506777.000018.01HNCEFGT33</epc>
```

```
<epc>urn:epc:id:sgtin:1506777.000018.01YIQWQWWG6</epc>

<epc>urn:epc:id:sgtin:1506777.000018.01RQYURTBHR</epc>

</childEPCs>

<action>ADD</action>

<bizStep>urn:epcglobal:cbv:bizstep:packing</bizStep>

<disposition>urn:epcglobal:cbv:disp:in_progress</disposition>

<readPoint>

        <!-- Partner  SGLN value -->

        <id>urn:epc:id:sgln:1506777.00001.0</id>

</readPoint>

<!-- Partner  SGLN value must contain location identifiers (GLNs / SGLNs) that belong to the
actual MAHs not the CMOs or 3PLs, etc -->

<bizLocation>

        <id>urn:epc:id:sgln:1506777.00001.0</id>

</bizLocation>

</AggregationEvent>


<!-- AGGREGATION OF 8 CARTONS INTO FULL CASE 02-->

<AggregationEvent>

<eventTime>2018-07-14T16:00:06Z</eventTime>

<eventTimeZoneOffset>+05:30</eventTimeZoneOffset>

<baseExtension>

        <eventID>urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6bg7</eventID>

</baseExtension>

<parentID>urn:epc:id:sgtin:1506777.000018.A4QIY780KL6M</parentID>

<childEPCs>

        <epc>urn:epc:id:sgtin:1506777.000018.01RFFWEW557</epc>

        <epc>urn:epc:id:sgtin:1506777.000018.01JFGSDFBNJ</epc>

        <epc>urn:epc:id:sgtin:1506777.000018.01TRFDFFSDF</epc>

        <epc>urn:epc:id:sgtin:1506777.000018.01TEFFEREFV</epc>

        <epc>urn:epc:id:sgtin:1506777.000018.01DGDFDFDFF</epc>

        <epc>urn:epc:id:sgtin:1506777.000018.01WEYDSHDJJ</epc>
```

```
            <epc>urn:epc:id:sgtin:1506777.000018.01FDFDFGDGV</epc>

            <epc>urn:epc:id:sgtin:1506777.000018.01WERVFD5FG</epc>

        </childEPCs>

        <action>ADD</action>

        <bizStep>urn:epcglobal:cbv:bizstep:packing</bizStep>

        <disposition>urn:epcglobal:cbv:disp:in_progress</disposition>

        <readPoint>

            <!-- Partner  SGLN value -->

            <id>urn:epc:id:sgln:1506777.00001.0</id>

        </readPoint>

        <!-- Partner  SGLN value must contain location identifiers (GLNs / SGLNs) that belong to the
actual MAHs not the CMOs or 3PLs, etc -->

        <bizLocation>

            <id>urn:epc:id:sgln:1506777.00001.0</id>

        </bizLocation>

    </AggregationEvent>


    <!-- AGGREGATION OF 8 CARTONS INTO FULL  CASE 03-->

    <AggregationEvent>

        <eventTime>2018-07-14T18:00:06Z</eventTime>

        <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>

        <baseExtension>

            <eventID>urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6be8</eventID>

        </baseExtension>

        <parentID>urn:epc:id:sgtin:1506777.000018.PQMB7TYWB899</parentID>

        <childEPCs>

            <epc>urn:epc:id:sgtin:1506777.000018.01FGDFGDG34</epc>

            <epc>urn:epc:id:sgtin:1506777.000018.01FDFDFDFF4</epc>

            <epc>urn:epc:id:sgtin:1506777.000018.01FFDFDF567</epc>

            <epc>urn:epc:id:sgtin:1506777.000018.01BDBFGFG45</epc>

            <epc>urn:epc:id:sgtin:1506777.000018.01QDIVHUI79</epc>

            <epc>urn:epc:id:sgtin:1506777.000018.01BIQQGFG5J</epc>
```

```xml
            <epc>urn:epc:id:sgtin:1506777.000018.01BCDQGFG45</epc>

            <epc>urn:epc:id:sgtin:1506777.000018.01AYQQDQGFG</epc>

        </childEPCs>

        <action>ADD</action>

        <bizStep>urn:epcglobal:cbv:bizstep:packing</bizStep>

        <disposition>urn:epcglobal:cbv:disp:in_progress</disposition>

        <readPoint>

                <!-- Partner  SGLN value -->

                <id>urn:epc:id:sgln:1506777.00001.0</id>

        </readPoint>

        <!-- Partner  SGLN value must contain location identifiers (GLNs / SGLNs) that belong to the
actual MAHs not the CMOs or 3PLs, etc-->

        <bizLocation>

                <id>urn:epc:id:sgln:1506777.00001.0</id>

        </bizLocation>

    </AggregationEvent>


    <!-- AGGREGATION OF 6 CARTONS INTO PARTIAL CASE 04-->

    <AggregationEvent>

        <eventTime>2018-07-14T18:01:06Z</eventTime>

        <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>

        <baseExtension>

                <eventID>urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6ba9</eventID>

        </baseExtension>

        <parentID>urn:epc:id:sscc:1506777.51000703990</parentID>

        <childEPCs>

                <epc>urn:epc:id:sgtin:1506777.000018.01FDFDFDF37</epc>

                <epc>urn:epc:id:sgtin:1506777.000018.01FFDFDF674</epc>

                <epc>urn:epc:id:sgtin:1506777.000018.01BDBFGFDY7</epc>

                <epc>urn:epc:id:sgtin:1506777.000018.01QDIVHU749</epc>

                <epc>urn:epc:id:sgtin:1506777.000018.01BIQQGF838</epc>

                <epc>urn:epc:id:sgtin:1506777.000018.01BCDQGFDH7</epc>
```

```
            <epc>urn:epc:id:sgtin:1506777.000018.01AYQQDQ38H</epc>
        </childEPCs>
        <action>ADD</action>
        <bizStep>urn:epcglobal:cbv:bizstep:packing</bizStep>
        <disposition>urn:epcglobal:cbv:disp:in_progress</disposition>
        <readPoint>
            <!-- Partner  SGLN value -->
            <id>urn:epc:id:sgln:1506777.00001.0</id>
        </readPoint>
        <!-- Partner  SGLN value must contain location identifiers (GLNs / SGLNs) that belong to the
actual MAHs not the CMOs or 3PLs, etc-->
        <bizLocation>
            <id>urn:epc:id:sgln:1506777.00001.0</id>
        </bizLocation>
    </AggregationEvent>


    <!-- AGGREGATION OF 3 FULL CASE INTO A PALLET-->
    <AggregationEvent>
        <eventTime>2018-07-14T19:45:06Z</eventTime>
        <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
        <baseExtension>
            <eventID>urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6bb0</eventID>
        </baseExtension>
        <parentID>urn:epc:id:sscc:1506777.71000703990</parentID>
        <childEPCs>
            <epc>urn:epc:id:sgtin:1506777.000018.Y4QOQBH0VVW1</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.A4QIY780KL6M</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.PQMB7TYWB899</epc>
            <epc>urn:epc:id:sscc:1506777.51000703990</epc>
        </childEPCs>
        <action>ADD</action>
        <bizStep>urn:epcglobal:cbv:bizstep:packing</bizStep>
```

```
<disposition>urn:epcglobal:cbv:disp:in_progress</disposition>

<readPoint>

        <!-- Partner  SGLN value -->

        <id>urn:epc:id:sgln:1506777.00001.0</id>

</readPoint>

<!-- Partner  SGLN value must contain location identifiers (GLNs / SGLNs) that belong to the
actual MAHs not the CMOs or 3PLs, etc-->

<bizLocation>

        <id>urn:epc:id:sgln:1506777.00001.0</id>

</bizLocation>

</AggregationEvent>


<!-- SHIP from Location outside of the Kingdom of Bahrain to a location Inside of the Kingdom of
Bahrain -->

<ObjectEvent>

    <eventTime>2018-07-14T22:30:30Z</eventTime>

    <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>

    <baseExtension>

        <eventID>urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6bc6</eventID>

    </baseExtension>

    <epcList>

        <epc>urn:epc:id:sscc:1506777.71000703990</epc>

    </epcList>

    <action>OBSERVE</action>

    <bizStep>urn:epcglobal:cbv:bizstep:shipping</bizStep>

    <disposition>urn:epcglobal:cbv:disp:in_transit</disposition>

    <!-- Partner  SGLN value -->

    <readPoint>

        <id>urn:epc:id:sgln:1506777.00001.0</id>

    </readPoint>

    <bizTransactionList>

        <!--Biz Transaction INVOICE number -->
```

```
                    <bizTransaction type="urn:epcglobal:cbv:btt:inv">urn:epcglobal:cbv:bt:JUL-205-
12</bizTransaction>
                </bizTransactionList>
            <extension>
                <sourceList>
                    <!-- Sender Owner SGLN value  must contain location identifiers (GLNs / SGLNs)
that belong to the actual MAHs not the CMOs or 3PLs, etc  -->
                    <source
type="urn:epcglobal:cbv:sdt:owning_party">urn:epc:id:sgln:1506777.00001.0</source>
                    <!-- Sender Facility\Location SGLN value  must contain location identifiers (GLNs /
SGLNs) that belong to the actual MAHs not the CMOs or 3PLs, etc -->
                    <source
type="urn:epcglobal:cbv:sdt:location">urn:epc:id:sgln:1506777.00001.0</source>
                </sourceList>
                <destinationList>
                    <!-- Receiver Owner SGLN Value-->
                    <destination
type="urn:epcglobal:cbv:sdt:owning_party">urn:epc:id:sgln:5853212.89898.0</destination>
                    <!-- Receiver Facility\Location SGLN value -->
                    <destination
type="urn:epcglobal:cbv:sdt:location">urn:epc:id:sgln:5853212.89898.0</destination>
                </destinationList>
            </extension>
        </ObjectEvent>
    </EventList>
  </EPCISBody>
</ns3:EPCISDocument>
```

6.2 EPCIS Event Example Without Aggregation

Note that this format is not accepted without specific permission from the NHRA and only for a limited period of time.

```xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<ns3:EPCISDocument xmlns:cbvmda="urn:epcglobal:cbv:mda" creationDate="2017-05-03T12:35:33.650+05:30"
schemaVersion="1.2" xmlns:ns2="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader"
xmlns:ns3="urn:epcglobal:epcis:xsd:1" >

    <EPCISHeader>

        <ns2:StandardBusinessDocumentHeader>

            <ns2:HeaderVersion>1.0</ns2:HeaderVersion>

            <ns2:Sender>

                <ns2:Identifier Authority="GLN">8928998989899</ns2:Identifier>

            </ns2:Sender>

            <ns2:Receiver>

                <ns2:Identifier Authority="GLN">7848798734738</ns2:Identifier>

            </ns2:Receiver>

            <ns2:DocumentIdentification>

                <ns2:Standard>EPCglobal</ns2:Standard>

                <ns2:TypeVersion>1.0</ns2:TypeVersion>

                <ns2:InstanceIdentifier>urn:uuid:26196612-f969-4afa-bc00-
7274955267c3</ns2:InstanceIdentifier>

                <ns2:Type>Events</ns2:Type>

                <ns2:CreationDateAndTime>2017-05-03T12:35:33.650+05:30</ns2:CreationDateAndTime>

            </ns2:DocumentIdentification>

        </ns2:StandardBusinessDocumentHeader>

    </EPCISHeader>

    <EPCISBody>

        <EventList>

            <ObjectEvent>

                <eventTime>2017-07-14T08:25:27Z</eventTime>

                <eventTimeZoneOffset>+05:30</eventTimeZoneOffset>

                <baseExtension>
```

```xml
            <eventID>urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6bd4</eventID>
        </baseExtension>
        <epcList>
            <epc>urn:epc:id:sgtin:1506777.000018.01QA00001TY</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.011ABRG0001</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01ASAS000Q1</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01TDFFSF5RE</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01GDGDGDG34</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01100000003</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01YUTTYYEQF</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.014545RF98F</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01TYEWEW56E</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01HNCEFGT33</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01YIQWQWWG6</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01RQYURTBHR</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01RFFWEW557</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01JFGSDFBNJ</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01TRFDFFSDF</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01TEFFEREFV</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01DGDFDFDFF</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01WEYDSHDJJ</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01FDFDFGDGV</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01WERVFD5FG</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01FGDFGDG34</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01FDFDFDFF4</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01FFDFDF567</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01BDBFGFG45</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01QDIVHUI79</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01BIQQGFG5J</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01BCDQGFG45</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01AYQQDQGFG</epc>
```

```
<epc>urn:epc:id:sgtin:1506777.000018.01FDFDFDF37</epc>

<epc>urn:epc:id:sgtin:1506777.000018.01FFDFDF674</epc>

<epc>urn:epc:id:sgtin:1506777.000018.01BDBFGFDY7</epc>

<epc>urn:epc:id:sgtin:1506777.000018.01QDIVHU749</epc>

<epc>urn:epc:id:sgtin:1506777.000018.01BIQQGF838</epc>

<epc>urn:epc:id:sgtin:1506777.000018.01BCDQGFDH7</epc>

<epc>urn:epc:id:sgtin:1506777.000018.01AYQQDQ38H</epc>

</epcList>

<action>ADD</action>

<bizStep>urn:epcglobal:cbv:bizstep:commissioning</bizStep>

<disposition>urn:epcglobal:cbv:disp:active</disposition>

<readPoint>

        <!-- Partner  SGLN value -->

        <id>urn:epc:id:sgln:1506777.00001.0</id>

</readPoint>

<!-- Partner  SGLN value must contain location identifiers (GLNs / SGLNs) that belong to the
actual MAHs not the CMOs or 3PLs, etc -->

<bizLocation>

        <id>urn:epc:id:sgln:1506777.00001.0</id>

</bizLocation>

<extension>

        <ilmd>

                <cbvmda:lotNumber>TEST123</cbvmda:lotNumber>

                <cbvmda:itemExpirationDate>2019-05-28</cbvmda:itemExpirationDate>

        </ilmd>

</extension>

</ObjectEvent>


<!-- SHIP from Location outside of the Kingdom of Bahrain to a location Inside of the Kingdom of
Bahrain -->

<ObjectEvent>

        <eventTime>2018-07-14T22:30:30Z</eventTime>
```

```xml
<eventTimeZoneOffset>+05:30</eventTimeZoneOffset>
<baseExtension>
        <eventID>urn:uuid:f81d4fae-7dec-11d0-a765-00a0c91e6bc6</eventID>
</baseExtension>
<epcList>
        <epc>urn:epc:id:sgtin:1506777.000018.01QA00001TY</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.011ABRG0001</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01ASAS000Q1</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01TDFFSF5RE</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01GDGDGDG34</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01100000003</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01YUTTYYEQF</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.014545RF98F</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01TYEWEW56E</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01HNCEFGT33</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01YIQWQWWG6</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01RQYURTBHR</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01RFFWEW557</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01JFGSDFBNJ</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01TRFDFFSDF</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01TEFFEREFV</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01DGDFDFDFF</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01WEYDSHDJJ</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01FDFDFGDGV</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01WERVFD5FG</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01FGDFGDG34</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01FDFDFDFF4</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01FFDFDF567</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01BDBFGFG45</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01QDIVHUI79</epc>
        <epc>urn:epc:id:sgtin:1506777.000018.01BIQQGFG5J</epc>
```

```
            <epc>urn:epc:id:sgtin:1506777.000018.01BCDQGFG45</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01AYQQDQGFG</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01FDFDFDF37</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01FFDFDF674</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01BDBFGFDY7</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01QDIVHU749</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01BIQQGF838</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01BCDQGFDH7</epc>
            <epc>urn:epc:id:sgtin:1506777.000018.01AYQQDQ38H</epc>
        </epcList>
        <action>OBSERVE</action>
        <bizStep>urn:epcglobal:cbv:bizstep:shipping</bizStep>
        <disposition>urn:epcglobal:cbv:disp:in_transit</disposition>
        <!-- Partner  SGLN value -->
        <readPoint>
            <id>urn:epc:id:sgln:1506777.00001.0</id>
        </readPoint>
        <bizTransactionList>
            <!--Biz Transaction INVOICE number -->
            <bizTransaction type="urn:epcglobal:cbv:btt:inv">urn:epcglobal:cbv:bt:JUL-205-12</bizTransaction>
        </bizTransactionList>
        <extension>
            <sourceList>
                <!-- Sender Owner SGLN value  must contain location identifiers (GLNs / SGLNs) that belong to the actual MAHs not the CMOs or 3PLs, etc  -->
                <source type="urn:epcglobal:cbv:sdt:owning_party">urn:epc:id:sgln:1506777.00001.0</source>
                <!-- Sender Facility\Location SGLN value  must contain location identifiers (GLNs / SGLNs) that belong to the actual MAHs not the CMOs or 3PLs, etc -->
                <source type="urn:epcglobal:cbv:sdt:location">urn:epc:id:sgln:1506777.00001.0</source>
            </sourceList>
```

```xml
<destinationList>
    <!-- Receiver Owner SGLN Value-->
    <destination type="urn:epcglobal:cbv:sdt:owning_party">urn:epc:id:sgln:5853212.89898.0</destination>
    <!-- Receiver Facility\Location SGLN value -->
    <destination type="urn:epcglobal:cbv:sdt:location">urn:epc:id:sgln:5853212.89898.0</destination>
</destinationList>
                    </extension>
                </ObjectEvent>
            </EventList>
        </EPCISBody>
    </ns3:EPCISDocument>
```

7 Change History

The Change History provides a guide to all significant modifications to the document that will influence the data exchange.

Date	Change
November 5, 2020 Rev 1.1	Section 3.1.1 Added clarification - Commission and aggregation events should only be sent when the shipment event is sent. Added information related to tmestamps on events based on GS1 1.2 expectations Section 4.3 Adjusted the settings in the Parameters for Sending Events Originally EVENTS PER **HOUR** = 500 • Corrected to EVENTS PER **MINUTE** = 500 Originally Events per File = 500 • Corrected to Events per EPCIS Document = 5000 Section 4.4.2 Removed restriction Event time shall only be in UTC. Section 4.4.3 Clarified the statements for Commission events for EPCIS1.2 4.4.5. Removed the Disaggregation Event. This EPCIS events is not required at this time. 4.4.6 Clarified the contents of the Source and Destination elements in the ship event • The Ship event MUST contain the o Sender Owner (source/owning_party) o Sender Custodian (source/location) o Receiver Owner (destination/owning_party) o Receiver Custodian (destination/location) 4.6.8 Removed the Definition of the disaggregation event Appendix A is renamed to Section 6. The example of the disaggregation has been removed from the sample file.

Date	Change
December 8, 2020 Rev 1.2	Section 3.1.1 Added point # 8 for clarification regarding information to be provided in the location identifiers (GLNs / SGLNs). Section 4.6.5 Added additional comments to clarify the use of the EventID for the Commission events Section 4.6.6 Added additional comments to clarify the use of the EventID for the Aggregation events Section 4.6.7 Corrected the typo in the urn statement for the *Biztransaction (btt is now bt)* • **Original** - urn:epcglobal:cbv:btt:[GLN]:[TransID] • **New** - urn:epcglobal:cbv:bt:[GLN]:[TransID] *Added another supported Biztransaction type* • ***urn:epcglobal:cbv:btt:inv*** Section 6 Adjusted the sample file in the ship event section showing the *Biztransaction list to align with change in section 4.6.7*
Rev 1.3 January 26, 2021	Updated AS2 tables in Section 2.1 for TEST and 2.2 for PROD to reflect the new URLs and IP addresses for Kingdom of Bahrain. Added section 4.4.7 Voiding Events.
Rev 1.4 February 1, 2021	Removed the duplicate comment in section 4.4.3-Commission Event. Removed section 4.6.2 - Trade item master data attributes. Removed the EPCISMasterData section from the Example xml file in Section 6 Removed ***urn:epcglobal:cbv:btt:dn*** from the list of acceptable Biztransaction values in the SHIP event. This is not a standard GS1 EPCIS value.

Date	Change
Rev 1.5 May 15, 2021	Updated the IP addresss for the PRODUCTION Instance of the NHRA-MVC Traceability Hub in Section 2.2 Updated the language in 3.1.1.8b for clarity regarding EPCs sent by a 3PL on behalf of the MAH. Minor adjustments to the sample xml in Section 6.1. Added a non-aggregated sample xml file in Section 6.2
Rev 1.6 March 15, 2023	Effective July 01, 2023 NHRA is making it mandatory to include the Invoice Number in the EPCIS events from the Invoicing Companies. Updated Section 4.6.7 comments and examples to include the use of the urn:epcglobal:cbv:btt:inv in the EPCIS event. Other options may also be included but the Invoice Number must be first. Updated Section 4.4.4 with references to aggregation - All reporting companies must provide aggregation events as part of the data being sent t the Traceability Hub. This has been mandatory since May 01, 2022 You must provide explicit aggregate events for each level of packing that occurs.