User manual
Domestic Procurement of Raw Material by Rail

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15/04/2020

Table of Contents

Scenario

1   Domestic Raw Material Procurement By Rail

Types of domestic raw material procured – Coking coal, IBRM, Flux (Limestone Lumps, Limestone Fines, Dolomite lumps, Dolomite fines, Quartzite), Ferro Alloys, Coke, Thermal coal.

Requirement is generated through Purchase Requisition by user Department and released as per DOA. After PR is released, RFQ is floated to vendor (not in sap) by the RMIL team and quotation comparison is done (not in sap). Considering technical and commercial recommendation, vendor is selected and NFA (note for approval) is created and send for approval in SAP. After approval of NFA, PO is created and released. Payment is done as per terms and conditions (LC/DPR).

Domestic Raw Material can arrive Plant via Road or Rail. Here in this process we are considering Rail case.

1.1   Purchase Requistion Creation

a)   Definition and Prerequisites

User department raises the requirement via Purchase Requisition
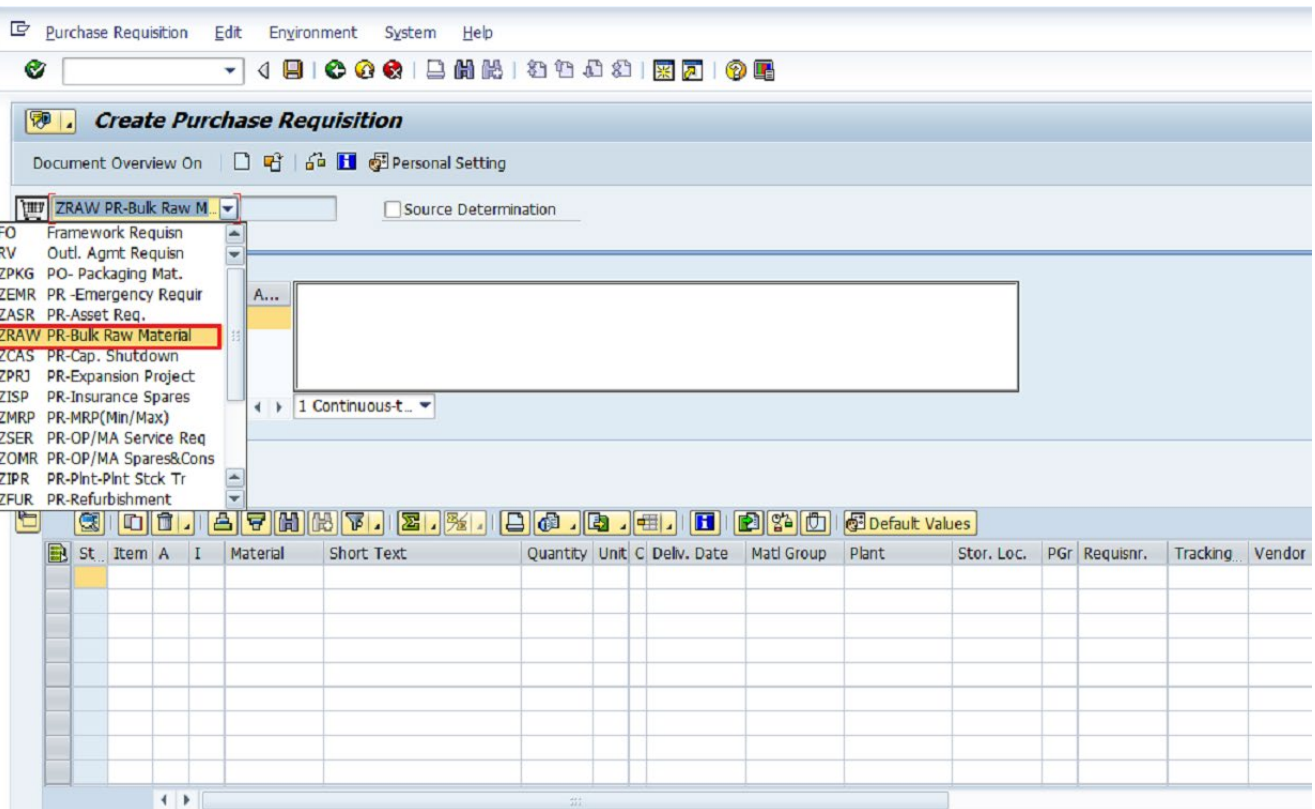
b)   Menu Path and Transaction code

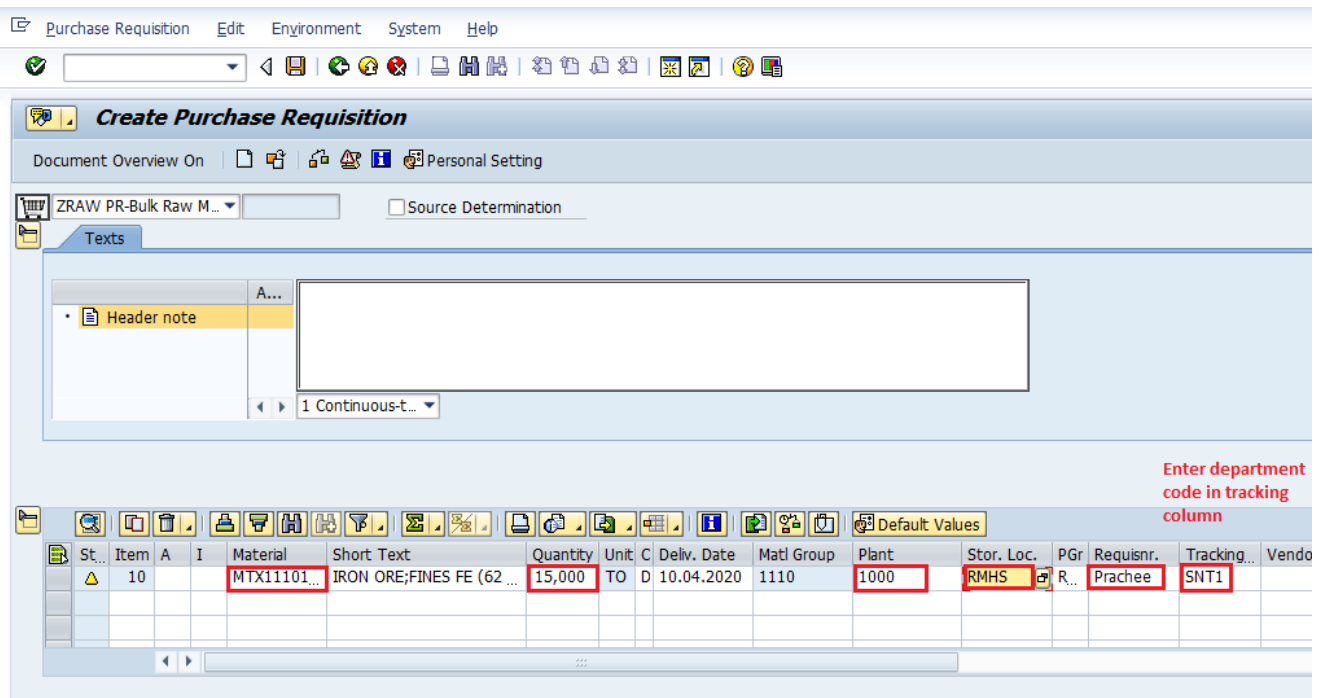| SAP S/4 HANA menu	SAP menu > Logistics > Materials Management > Purchasing > Purchase Requisition
Transaction Code	ME51N

c)   Responsibility

Department's user

d)   Screen Capture/ Process Steps

Step 1: Create PR with doc Type ZRAW and check the source determination box

Step 2: Enter material, quantity, plant, storage location, requisitioner and department code in tracking number column

Step 3: Enter Valuation price

Step 4: Enter Source Of Supply

Step 5: Save the PR
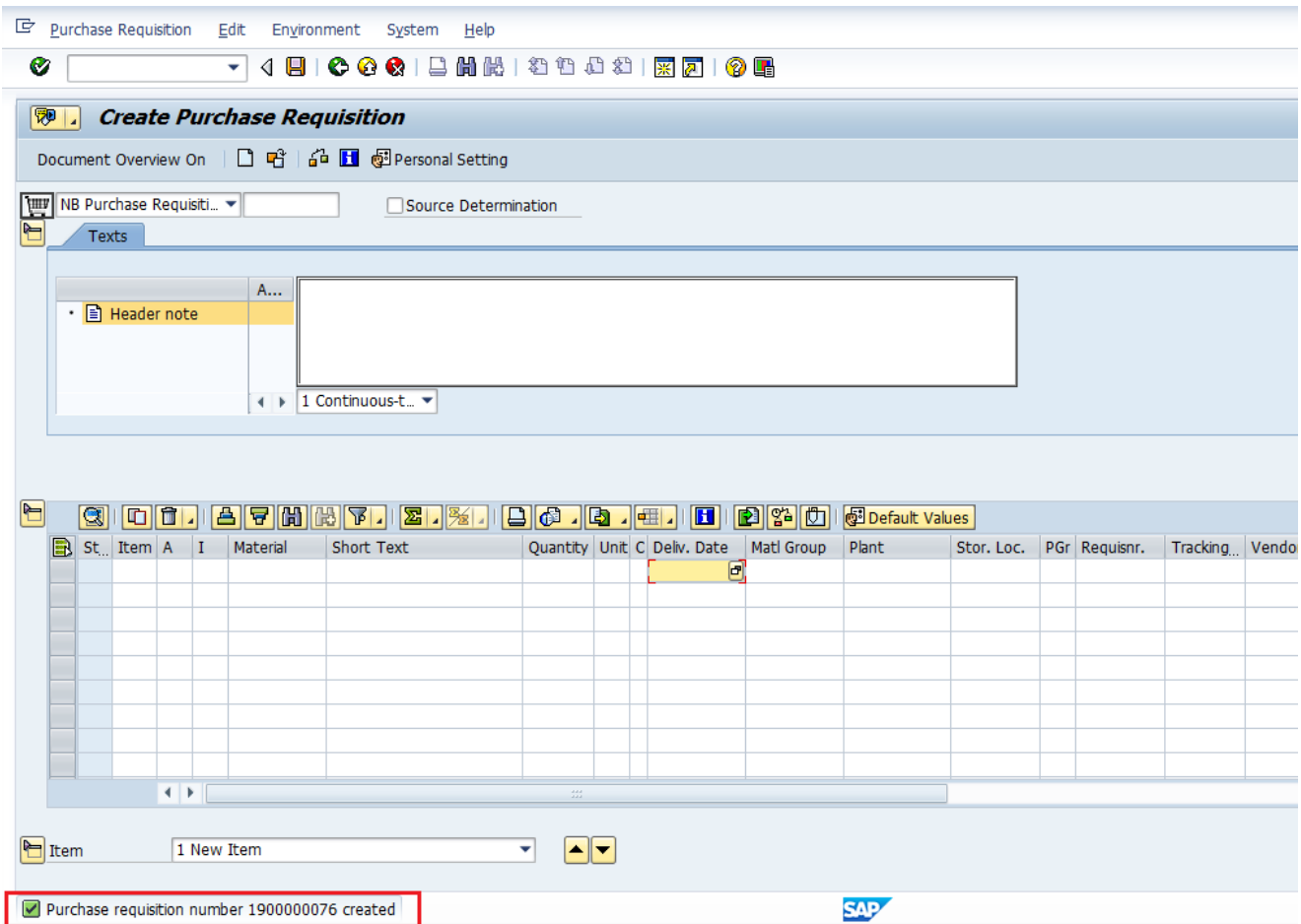
1.2   Purchase Requisition Release

a)   Definition and Prerequisites

PR will be released as per DOA

b)   Menu Path and Transaction code

SAP S/4 HANA menu	**SAP Menu**->Logistics->Materials Management->Purchasing->Purchase Requisition->Release->Individual Release
Transaction Code	ME54N

c)   Responsibility

DOA Approvers

d) Screen capture/ Process

Step 1: Click on other document and enter the purchase requisition to be released.
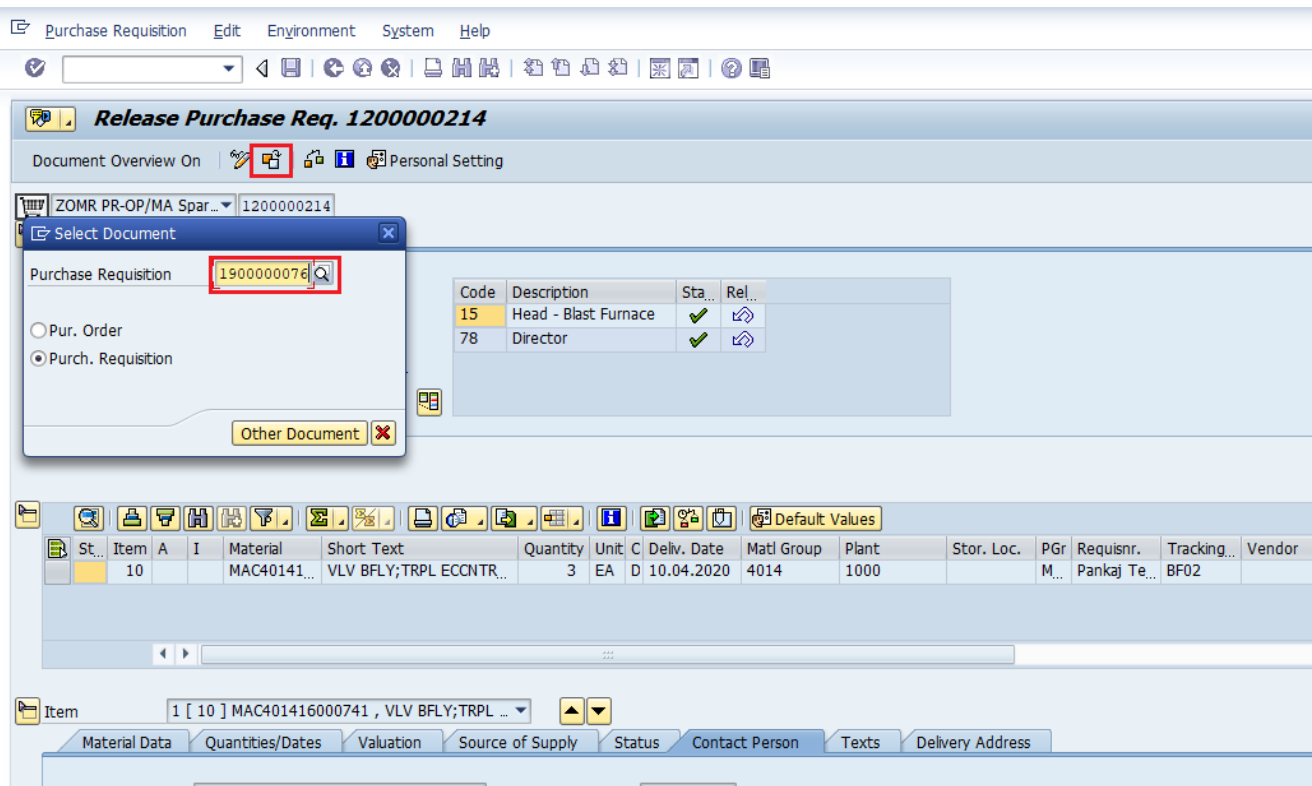

Step 2: Click on the release sign

Release Purchase Req. 1900000076

Purchase Requisition   Edit   Environment   System   Help

Document Overview On   Personal Setting

ZRAW PR-Bulk Raw M... ▾ 1900000076

Texts   Release strategy

| Release group | RI | Release overall |
| Release Strategy | G7 | SNT1-Any Value |

Code	Description	Sta...	Rel...
43	Head - Sinter	⚠	✔
78	Director		

Release Indicator   X   Blocked

St	Item	A	I	Material	Short Text	Quantity	Unit	C	Deliv. Date	Matl Group	Plant	Stor. Loc.	PGr	Requisnr.	Tracking...	Ven
	10			MTX11101...	IRON ORE;FINES FE (62 ...	15,000	TO	D	10.04.2020	1110	1000	RMHS	R...	Prachee	SNT1	

Item   1 [10] MTX111016010002 , IRON ORE;FINES...

Material Data   Quantities/Dates   Valuation   Source of Supply   Status   Contact Person   Texts   Delivery Address

Created by	MM_SUPPORT	Changed On	10.04.2020
Crea. ind.	R Realtime (manual)		
Requisitioner	Prachee	Dept. Code1	SNT1
Purch. Group	RM1 Raw Material (Dome	Telephone	

Release Purchase Req. 1900000076

Purchase Requisition   Edit   Environment   System   Help

Document Overview On   Personal Setting

ZRAW PR-Bulk Raw M... ▾ 1900000076

Texts   Release strategy

| Release group | RI | Release overall |
| Release Strategy | G7 | SNT1-Any Value |

Code	Description	Sta...	Rel...
43	Head - Sinter	✔	
78	Director	✔	

Release Indicator   2   RFQ/purchase order

St	Item	A	I	Material	Short Text	Quantity	Unit	C	Deliv. Date	Matl Group	Plant	Stor. Loc.	PGr	Requisnr.	Tracking...	V
	10			MTX11101...	IRON ORE;FINES FE (62 ...	15,000	TO	D	10.04.2020	1110	1000	RMHS	R...	Prachee	SNT1	

Item   1 [10] MTX111016010002 , IRON ORE;FINES...

Material Data   Quantities/Dates   Valuation   Source of Supply   Status   Contact Person   Texts   Delivery Address

Created by	MM_SUPPORT	Changed On	10.04.2020
Crea. ind.	R Realtime (manual)		
Requisitioner	Prachee	Dept. Code1	SNT1
Purch. Group	RM1 Raw Material (Dome	Telephone	

Step 3: Click on save button
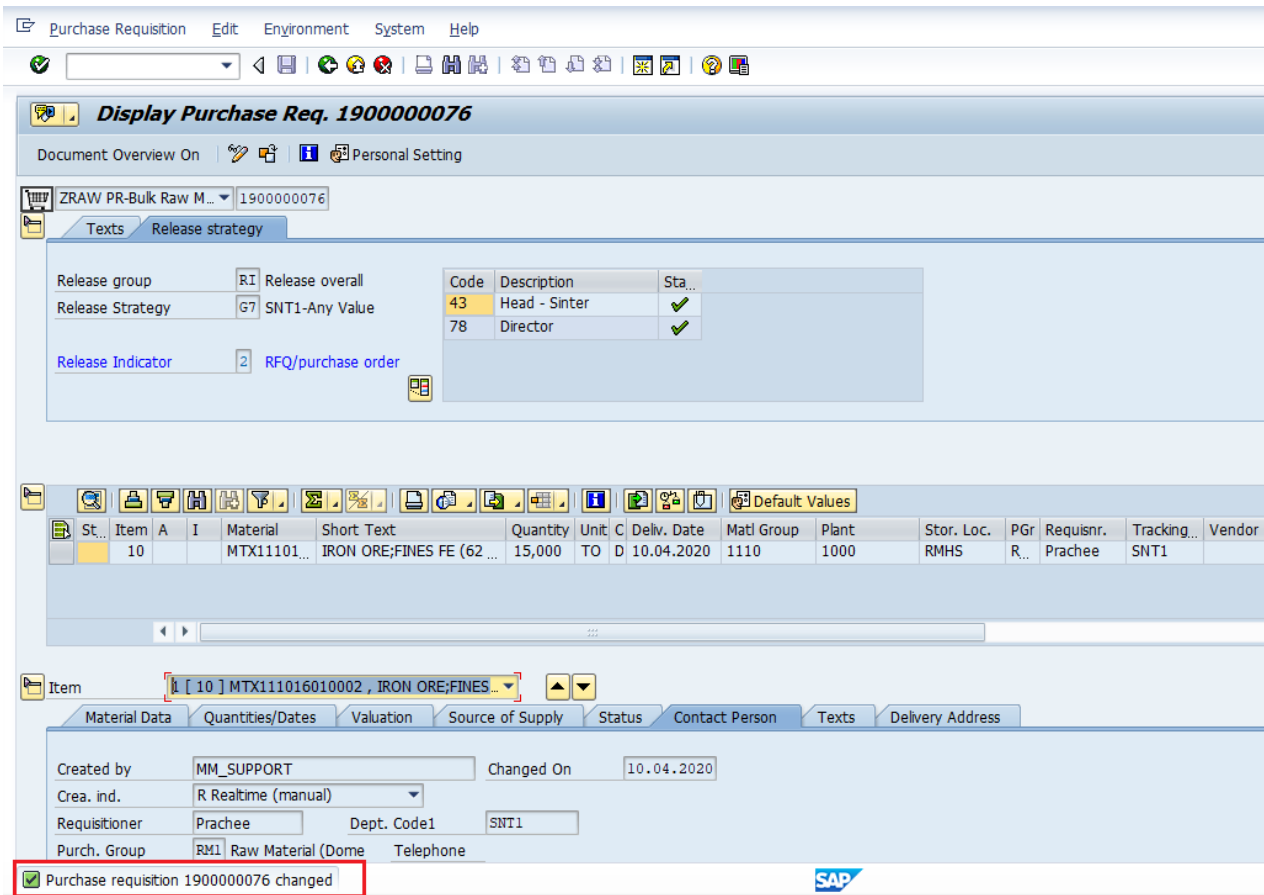
1.3 NFA Creation

a) Definition and Prerequisites

NFA is Note For Approval. Without NFA, no purchase can happen.

b) Menu Path and Transaction code

SAP S/4 HANA menu	N/A
Transaction Code	ZNFA

c) Responsibility

Purchase Department

d) Screen capture/ Process

Please refer the manual for NFA Creation and Approval

1.4   NFA Approval

a) Definition and Prerequisites

NFA will be approved as per DOA.

b) Menu Path and Transaction code

SAP S/4 HANA menu	N/A
Transaction Code	ZNFA_Approve

c) Responsibility

DOA Approvers

d) Screen capture/ Process

Please refer the manual for NFA Creation and Approval.

1.5   Purchase Order Creation

a) Definition and Prerequisites

Once the NFA has been approved, PO can be created either in reference to Purchase Requisition or in reference to the Contract.

If Contract exist and is missing in PR (under Source of Supply), then create PO in reference to the contract.

If Contract does not exist or exist in the Source of supply of PR, then create PO in reference to PR.

b) Menu Path and Transaction code

SAP S/4 HANA menu	**SAP Menu** > Logistics > Materials Management > Purchasing > Purchase Order > Create
Transaction Code	ME21N

c) Responsibility

Purchase Department

d) Screen capture/ Process

Step 1: Select document type as ZDRW and click on document overview
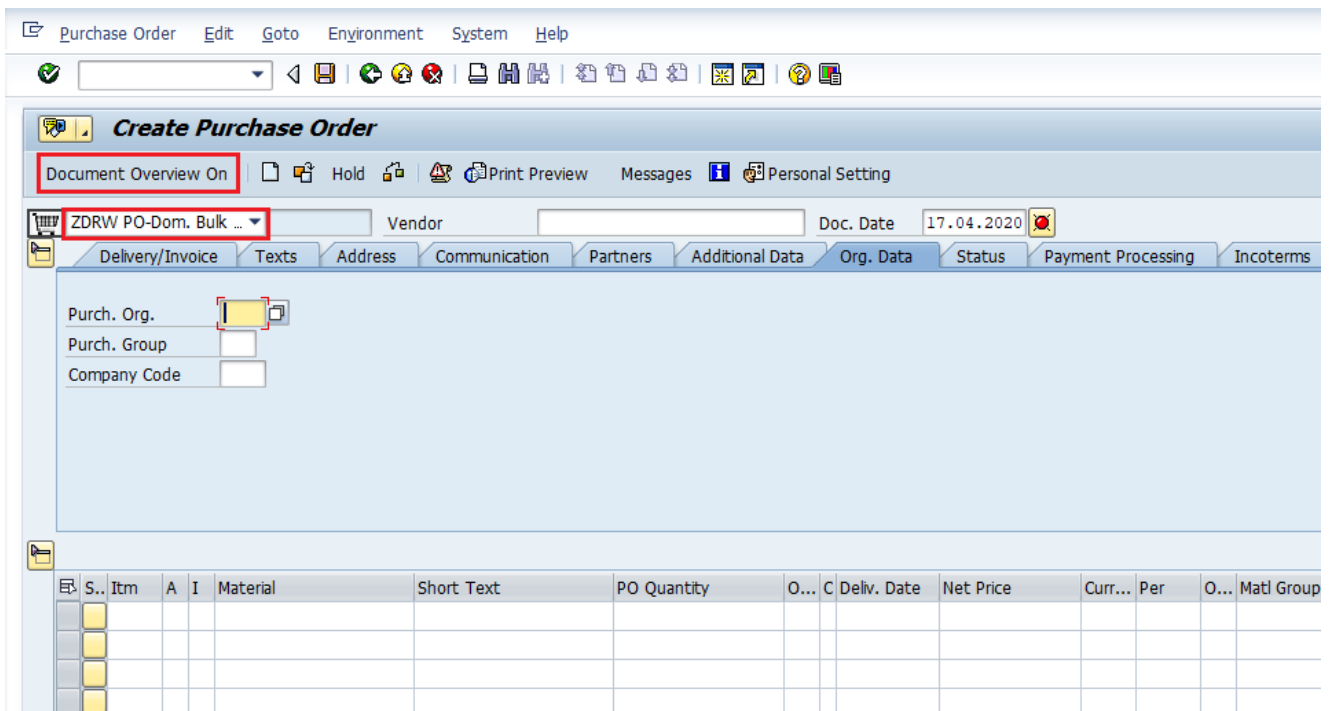
Step 2: Click on search button and enter the purchase requisition. Press Enter
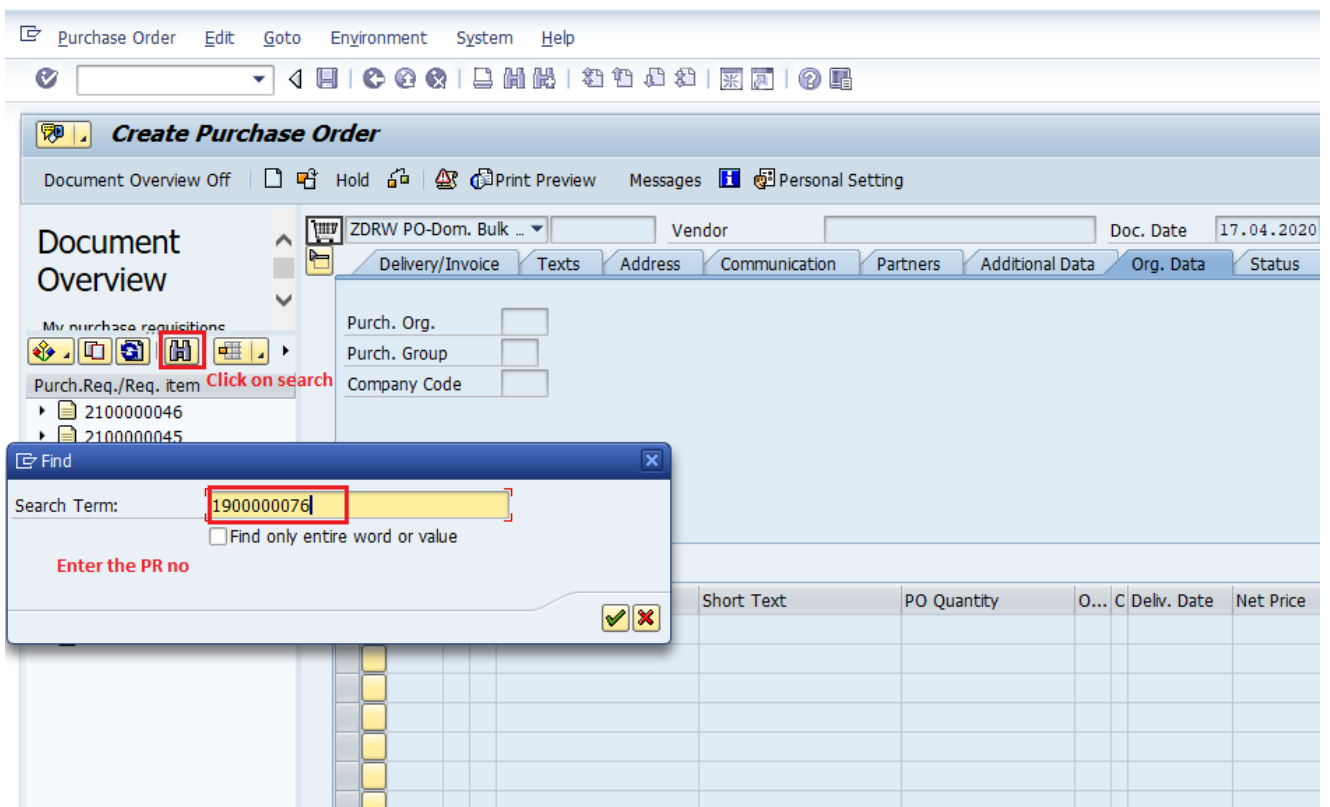
Step-3: Click on adopt and document overview off
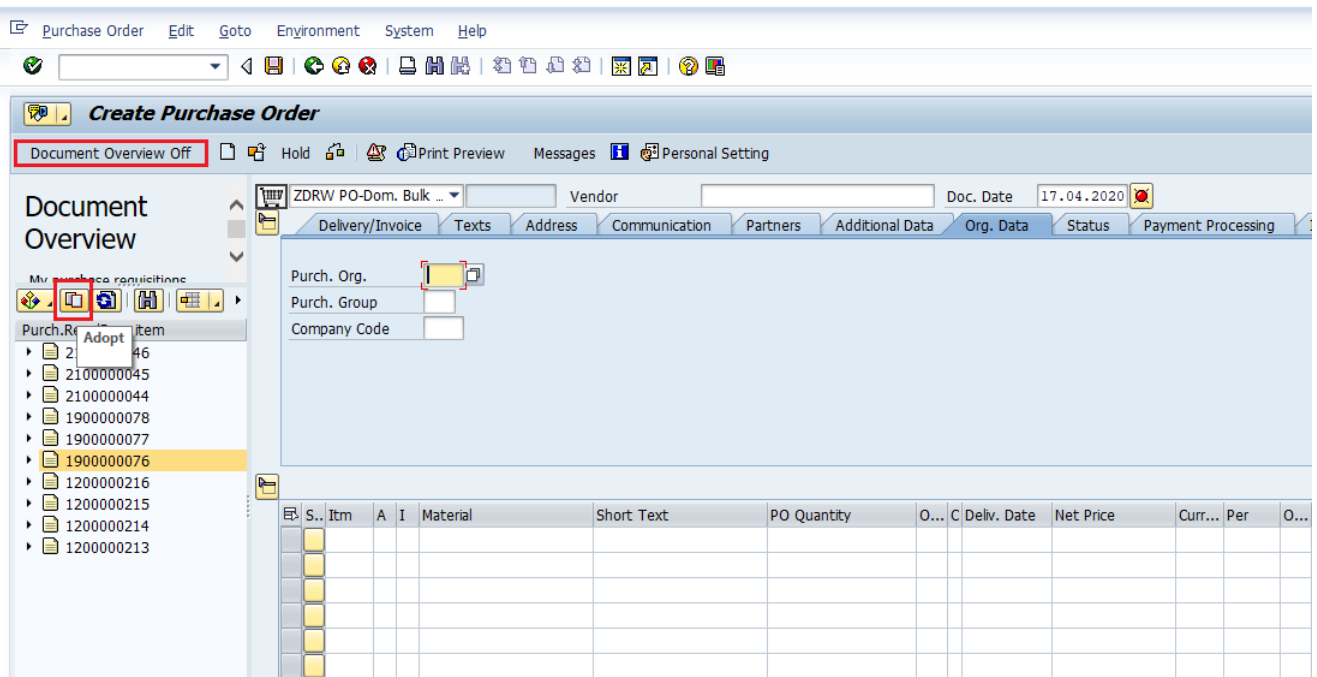
Step 4: Enter the purchasing org and vendor
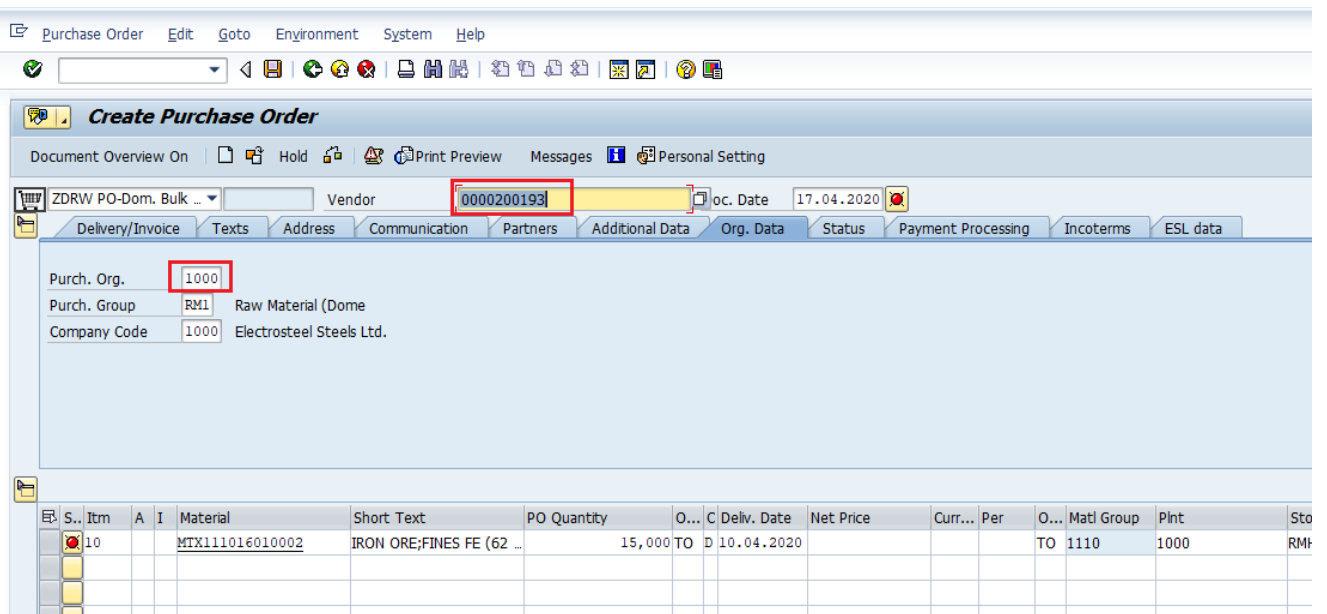
Step 5: Change the quantity if required

Step 6: Enter the contract details (if contact available)

Step 7: Enter the gross price

Step 8: Enter the delivery conditions

Select the condition to map the vendor and click on search button

Map the vendor for the same, press enter and click on back button

To add a condition type, click at the last blank space

Click the condition type required and press enter

To delete a condition, select it and press delete row

Step 9: Click on invoice tab and enter tax code.

Step-10: Click on the ESL tab to enter the NFA number

Step-11: Click on header tab ESL data. Enter GRN Indicator, mode of transport and transporter (single/multiple)

Step-12: Click on deliver/invoice under header tab to map payment condition

Step-13: Click on header text data to map the relevant information at the header level

Step-14: Click on header Incoterms tab to map the incoterm condition

Step 15 : Click on item detail text to provide relevant information line wise

Step 16 : Click on item detail text to provide incoterm information line wise

Step 17 : Click on save button

PO Document generated

1.6   Purchase Order Release

a) Definition and Prerequisites

PO will be released as per DOA

b) Menu Path and Transaction code

SAP S/4 HANA menu	SAP Menu->Logistics → Materials Management → Purchasing → Purchase Order → Release → Individual Release
Transaction code	ME29N

c) Responsibility

DOA Approvers

d) Screen capture/ Process

Step 1: Click on other document and enter the purchase order to be released.

Step 2: Click on the release sign

Step 3: Click on save button

1.7　Contract Creation

a) Definition and Prerequisites

The purchase department may enter into a long term contract with the approved supplier. Contract is an optional step.

b) Menu Path and Transaction code

SAP S/4 HANA menu	SAP **Menu** > Logistics > Material Management > Purchasing > Outline Agreement > Contract
Transaction Code	ME31K

c) Responsibility

Purchase Department

d) Screen capture/ Process

Step 1: Select Agreement type, vendor, purchasing org and purchasing grp. Press Enter

Step 2: Enter validity end date, payment terms (if applicable) and press enter

Step-3: Enter material, quantity, and net price. Press enter

Step-4: Enter the tax code, check the IR, GR-BasedIV and ERS (if applicable)

** Note for ERS, payment terms needs to be maintained

Step 5: Enter Payment terms

Step-6: Click on Save

Contract   Edit   Header   Item   Environment   System   Help

Create Contract : Item Overview

| Agreement | | Agreement Type | ZRMK | Agmt Date | 17.04.2020 |
| Vendor | 200193 | RUNGTA MINES LIMITED | | Currency | INR |

Outline Agreement Items

Item	I	A	Material	Short Text	Targ. Qty	O...	Net Price	Per	O...	Mat. Grp	Plnt	SLoc	D	Stock Segment	T...
10			MTX111016010002	IRON ORE;FINES FE (62 …	80,000	TO	2,000.00	1	TO	1110					
20															
30															
40															
50															
60															
70															
80															
90															
100															
110															
120															
130															
140															
150															
160															

Contract   Edit   Header   Item   Environment   System   Help

Create Contract : Item Overview

| Agreement | | Agreement Type | ZRMK | Agmt Date | 17.04.2020 |
| Vendor | 200193 | RUNGTA MINES LIMITED | | Currency | INR |

Outline Agreement Items

Item	I	A	Material	Short Text	Targ. Qty	O...	Net Price	Per	O...	Mat. Grp	Plnt	SLoc	D	Stock Segment	T...
10			MTX111016010002	IRON ORE;FINES FE (62 …	80,000	TO	2,000.00	1	TO	1110					
20															
30															
40															
50															
60															
70															
80															
90															
100															
110															
120															
130															
140															
150															
160															

Save Document

No message record could
be found for output of
message.

Save anyway?

[Yes]   [No]   [Cancel]

Item   10

Quantity Contract created.

1.8 Contract Release

a) Definition and Prerequisites

Contract needs to be released as per DOA

b) Menu Path and Transaction code

SAP S/4 HANA menu	**SAP** Menu > Logistics > Material Management > Purchasing > Outline **Agreement** > **Contract** > **Release**.
Transaction Code	ME35K

c) Responsibility

DOA Approvers

d) Screen capture/ Process

Step-1: Enter the release code assigned to approver for first level release

Step 2: Select the agreement that needs to be released and click on the release button

Step 3: Click on save button

Release Purchasing Documents with Release Code 07

Release | Cancel Release | Release Strat. | Release + Save | Print Preview | Individual Release

```
Contract   Type Supplier  Name                        PGp Agmt Date
Release Strategy          Release Indicator    Release Option
3000000002 ZRMK 300010    BRIZO GLOBAL LOGISTICS PV XYZ    RM1 10.04.2020
Agreement Start10.04.2020 Agreement End 30.04.2021
RG/Y8 DOPO > 5 Cr.        B Blocked, changeable wRelease possible
3000000006 ZRMK 200193    RUNGTA MINES LIMITED            RM1 17.04.2020
Agreement Start17.04.2020 Agreement End 30.04.2021
RG/Y8 DOPO > 5 Cr.        B Blocked, changeable wRelease Set
3400000004 ZSER 300011    FLYJAC LOGISTICS PVT. LTD       S01 07.04.2020
Agreement Start07.04.2020 Agreement End 30.04.2020
Tgt Value       1,000,000.00  INR    Open      1,000,000.00 INR   100.00 %
RG/Y7 DOPO <= 5 Cr.       B Blocked, changeable wRelease possible
```

☑ Release effected with release code 07

Release (Approve) Purchasing Documents

| Release Code | 07 🔍 |
| Release Group | | to | | → |

☑ Set Release
☐ Cancel Release
☑ Release Prerequisite Fulfilled
☐ List with Items

Scope of List	RAHM
Purchasing Document Category	K	to		→
Purchasing Organization		to		→
Document Number		to		→
Document Type		to		→
Purchasing Group		to		→
Supplier		to		→
Supplying Plant		to		→
Document Date		to		→

☑ Releases saved   SAP

Step 4: Enter the release code assigned to approver for second level release

Step 5: Select the agreement that needs to be released and click on the release button

Step 6: Click on save button

List   Edit   Goto   Environment   System   Help

Release Purchasing Documents with Release Code 40

Release   Cancel Release   Release Strat.   Release + Save   Print Preview   Individual Release

```
Contract    Type Supplier    Name                        PGp Agmt Date
Release Strategy              Release Indicator    Release Option
3000000006  ZRMK 200193      RUNGTA MINES LIMITED        RM1 17.04.2020
Agreement Start17.04.2020 Agreement End 30.04.2021
RG/Y8 DOPO > 5 Cr.           G Released           wRelease Set
```

☑ Release effected with release code 40
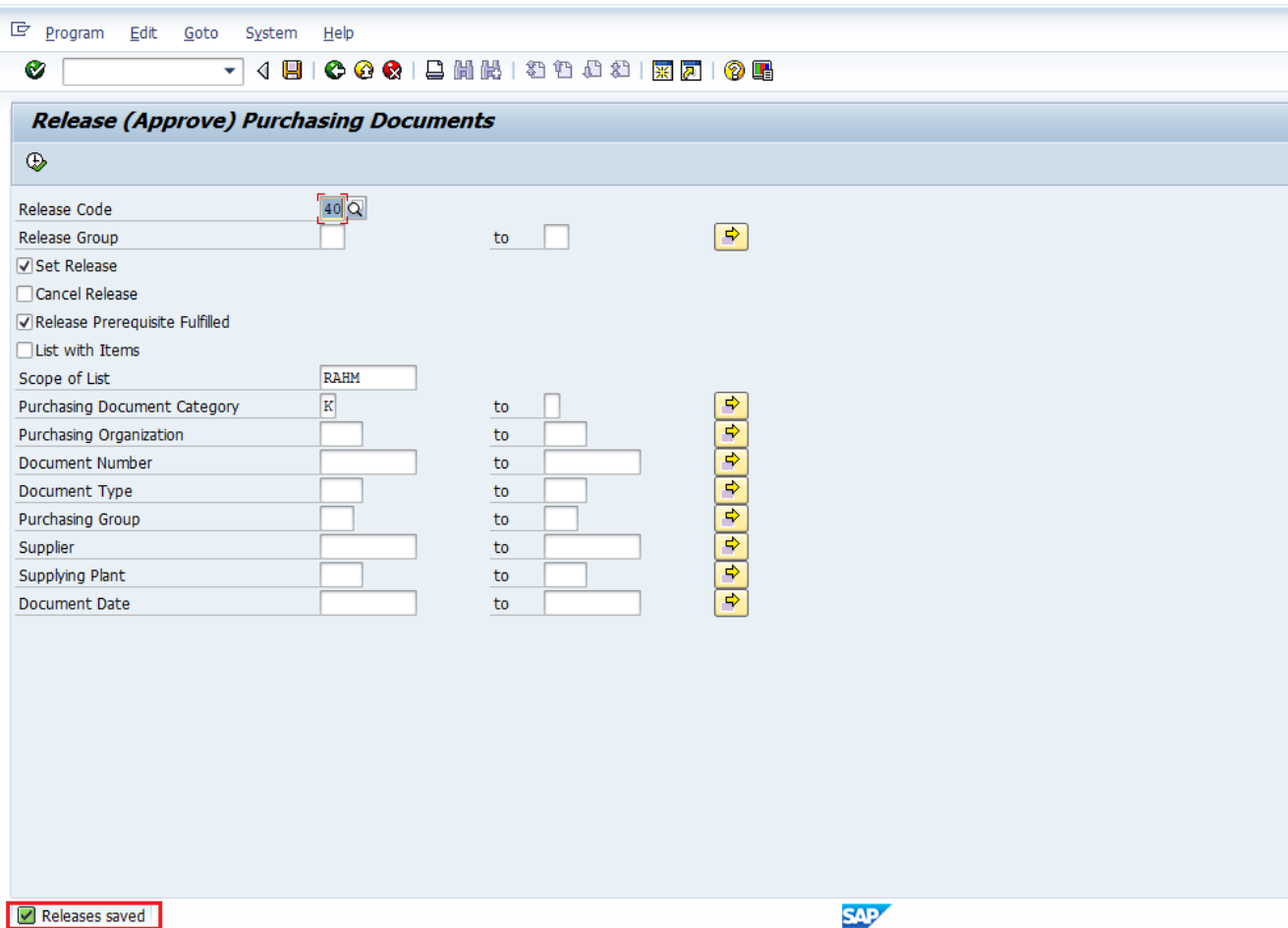
1.9 Goods Receipt at Bandhidh and auto STO creation from Bandhidh to plant

a) Definition and Prerequisites

Once the goods are issued from supplying plant, good receipt at issuing plant (BDIH) is done

b) Menu Path and Transaction code

SAP S/4 HANA menu	N/A
Transaction Code	ZSTO_AUTO

c) Responsibility

Raw Material – GRN team

d) Screen capture/ Process

Step 1: Enter the PO no in purchasing document field and line item no. Press Enter

Program   Edit   Goto   System   Help

Automatic STO creation

Purchase order deatils:

Purchasing Document	6800000035	**1. Enter the PO no against which GRN to be done at BDIH**
Item	10	**2. Enter the line item no**

Step 2: Click on create tab

Program   Edit   Goto   System   Help

Automatic STO creation

Purchase order deatils:

Purchasing Document	6800000035
Item	10

Update or create

Transaction number	

CREATE	DISPLAY	UPDATE

Step 3: Enter the RR date, rake number (the one created in electroway), loading siding (Compulsory fields)

System   Help

Create GRN STO

Rake information

Transaction ID		RR rate			Loading Siding	JSPX
PO number	6800000035	RR Chrg. Qty.		TO	Actual Chall. Qty.	TO
PO item	10	RR Quantity		TO	Prov. Chall. Qty.	TO
RR number		Rake Number	IOF/12			
RR date	12.04.2020	No. of Wagons				

Execution date	Execution Time	
17.04.2020	13:18:59	Create GR at Badhidi & STO (Bandhidi-Plant)

Enter the RR number, RR rate. RR Chrg qty, no of wagons etc (if information available)

System   Help

Create GRN STO

Rake information

Transaction ID		RR rate			Loading Siding	JSPX
PO number	6800000035	RR Chrg. Qty.		TO	Actual Chall. Qty.	TO
PO item	10	RR Quantity		TO	Prov. Chall. Qty.	TO
RR number		Rake Number	IOF/12			
RR date	12.04.2020	No. of Wagons				

Execution date	Execution Time	
17.04.2020	13:18:59	Create GR at Badhidi & STO (Bandhidi-Plant)

Step 4: Enter the Actual Challan Qty i.e RR Actual Qty

Step 5: Click on create GR at Bandhidh & STO (Bandhidh-Plant)

Material document posted

Log display

Icon	ID	Message	
⦿⦿▣		Mat Doc 5000001025 for year 2020 created.	**1. GRN Mat doc no**
⦿⦿▣		STO number 4400000039 created.	**2. STO from BDIH to plant**
⦿⦿▣		Transaction number 1000000018 created.	**3. Transaction no**

Note: When actual challan Qty is not known (Step 1, 2, 3 remain same)

Step 4: Enter the Provisional Challan Qty (must be taken on lower side than Actual Qty)

Create GRN STO

Rake information

Transaction ID		RR rate			Loading Siding	JSPX	
PO number	6800000035	RR Chrg. Qty.		TO	Actual Chall. Qty.		TO
PO item	10	RR Quantity		TO	Prov. Chall. Qty.	3000	TO
RR number		Rake Number	IOF/13				
RR date	13.04.2020	No. of Wagons					

Execution date	Execution Time	
17.04.2020	13:25:26	Create GR at Badhidi & STO (Bandhidi-Plant)

Step 5: Click on create GR at Bandhidh & STO (Bandhidh-Plant)

Create GRN STO

Rake information

Transaction ID		RR rate		Loading Siding	JSPX
PO number	6800000035	RR Chrg. Qty.	TO	Actual Chall. Qty.	TO
PO item	10	RR Quantity	TO	Prov. Chall. Qty.	3000 TO
RR number		Rake Number	IOF/13		
RR date	13.04.2020	No. of Wagons			

Execution date	Execution Time	
17.04.2020	13:25:26	Create GR at Badhidi & STO (Bandhidi-Plant)

Material Document posted

Log display

Icon	ID	Message	
○○□		Mat Doc 5000001026 for year 2020 created.	**1. GRN Mat doc no**
○○□		STO number 4400000040 created.	**2. STO no from BDH to plant**
○○□		Transaction number 1000000019 created.	**3. Transaction no**

Step 6: Once the actual qty is known, click on transaction zsto_auto. Enter the STO no and line item no. Press Enter
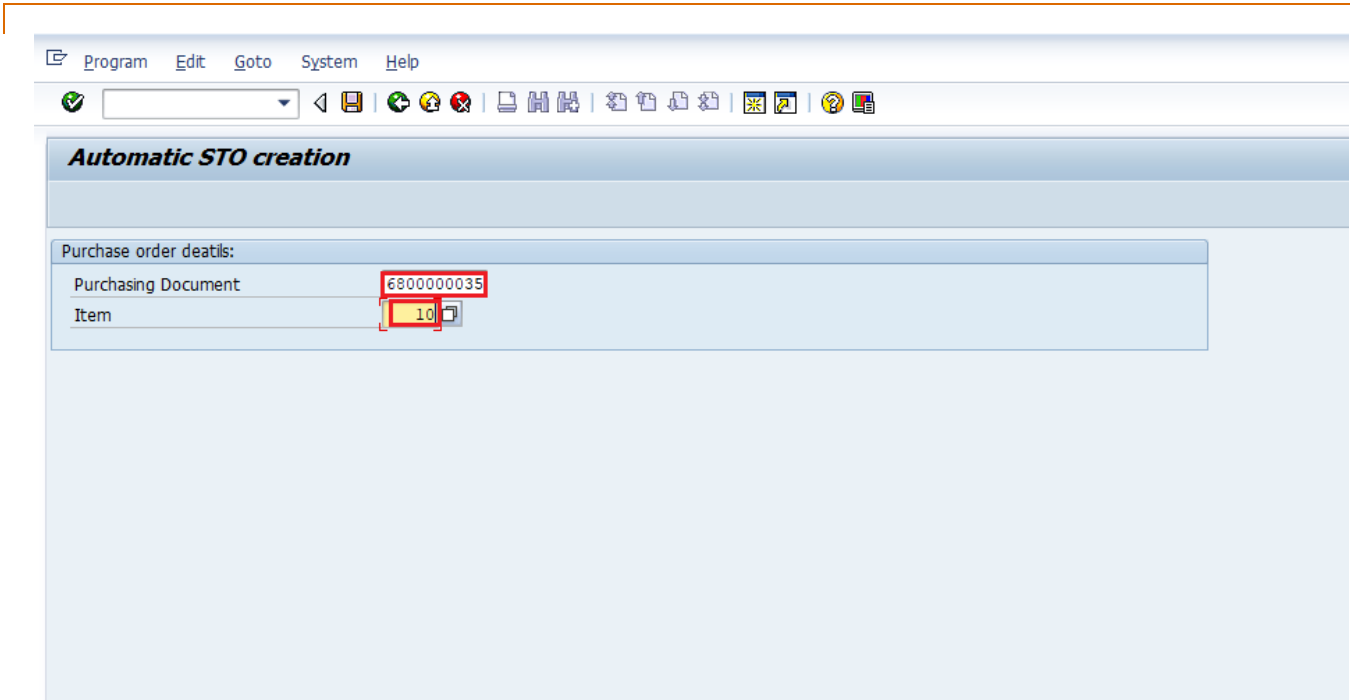
Step 7: Enter the transaction no and click on update
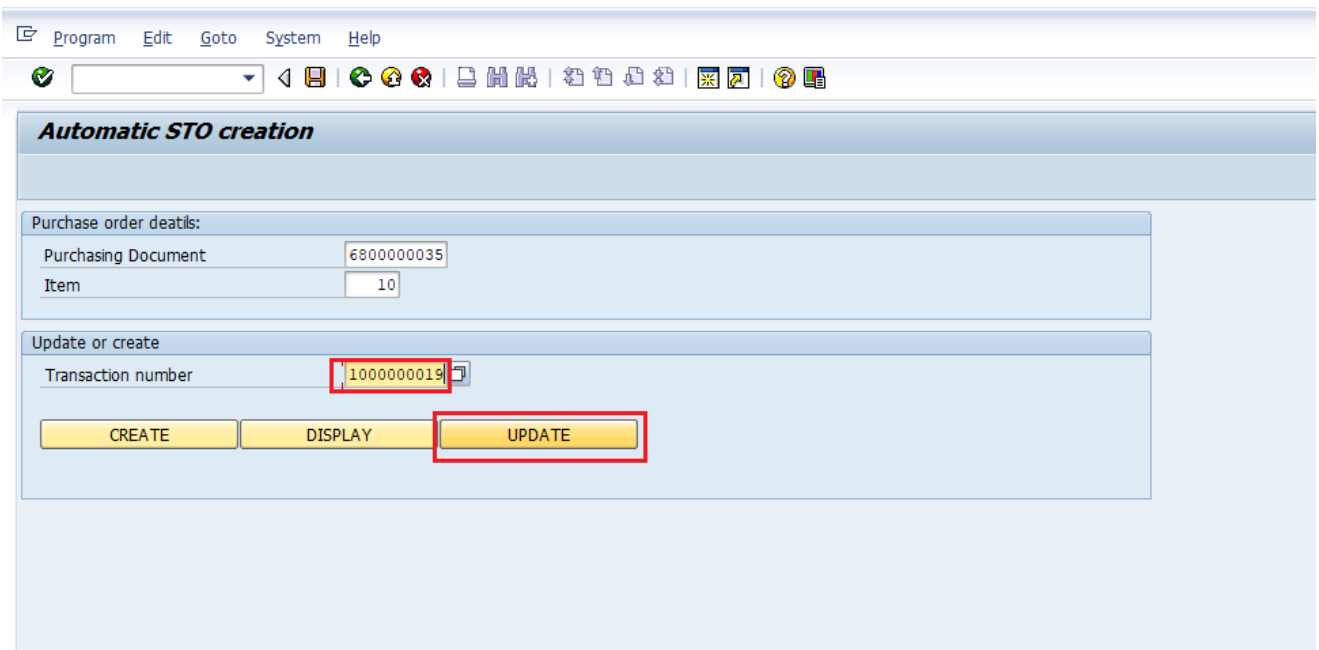
Step 8: Enter the actual challan qty

Step 9: Click on create GR at Bandhidh & STO (Bandhidh-Plant)

Material document posted

Icon	ID	Message	
⊙⊙⊡		Mat Doc 5000001027 for year 2020 created.	**1. GRN for additional 700 qty material doc no**
⊙⊙⊡		STO number 4400000040 updated.	**2. STO no updated with second line item of 700 qty**
⊙⊙⊡		Transaction 1000000019 updated.	**3. Transaction no updated**

** Note: The actual qty can be updated only once

1.10 Rake Master creation

a) Definition and Prerequisites
Once GRN is done and auto STO created, rake master will be created in Electroway.

b) Menu Path and Transaction code
This will be created in Electroway

c) Responsibility
Raw Material – GRN team

d) Screen capture/ Process
Please refer to RFID manual.

1.11 RFID Integration

a) Definition and Prerequisites
Once Rake master is created in Electroway, RFID process will take place.

b) Menu Path and Transaction code
This will be created in Electroway

c) Responsibility

d)Screen capture/ Process
Please refer to RFID manual.

1.12 Gate Entry in SAP

a) Definition and Prerequisites

Corresponding to a rake master, weighment details get captured in Electroway. Raw material team will make a single entry in SAP for the trucks received in a day.

b) Menu Path and Transaction code

SAP S/4 HANA menu	N/A
Transaction Code	ZM023

c) Responsibility

Raw Material – GRN team

d) Screen capture/ Process

Step 1: Click on gate entry
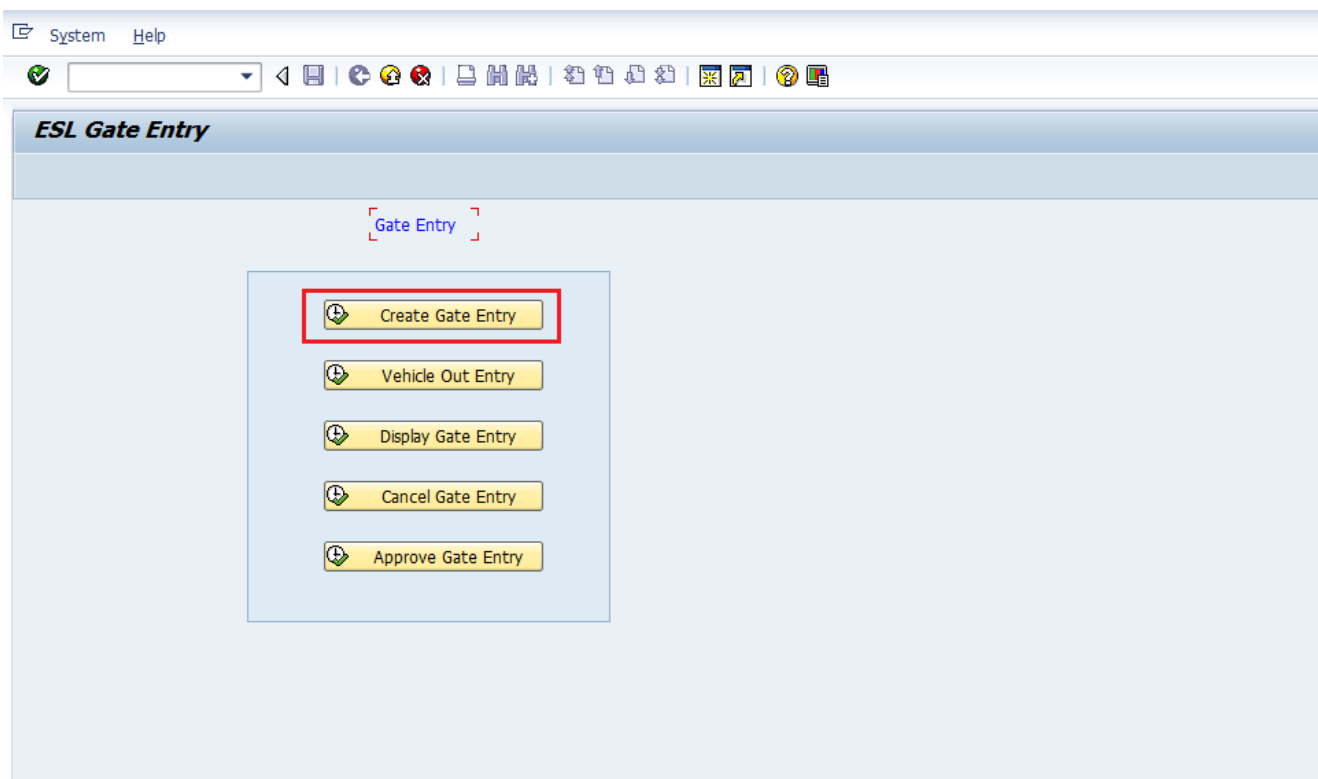
Step 2: Enter challan no, challan date, plant gate no, mode of transport, vehicle no, rake no (same created in rake master in electroway), tax invoice, test certificate, DFT Copy, guarantee certificate and vendor code.

Step 3: Press F4 to display the STO number. Select the STO number and press enter

Step 4: Press Enter to display the STO details

Step 5: Enter the Challan qty

Step 6: Click on save button

Gate Entry number generated

** Note: The same gate entry number will be updated in electroway. Once this is done, electroway data will be fetched into SAP.

1.13 Auto GRN program

a) Definition and Prerequisites

Once gate entry is done in SAP, auto GRN program will be run

b) Menu Path and Transaction code

SSAP S/4 HANA menu	N/A
Transaction Code	ZGRN_AUTO

c) Responsibility

Raw Material – GRN team

d) Screen capture/ Process

Step 1: Enter the gate entry date

Step 2: Click on execute

Post GRN for the Gate Entry

Gate entry date   17.04.2020   to
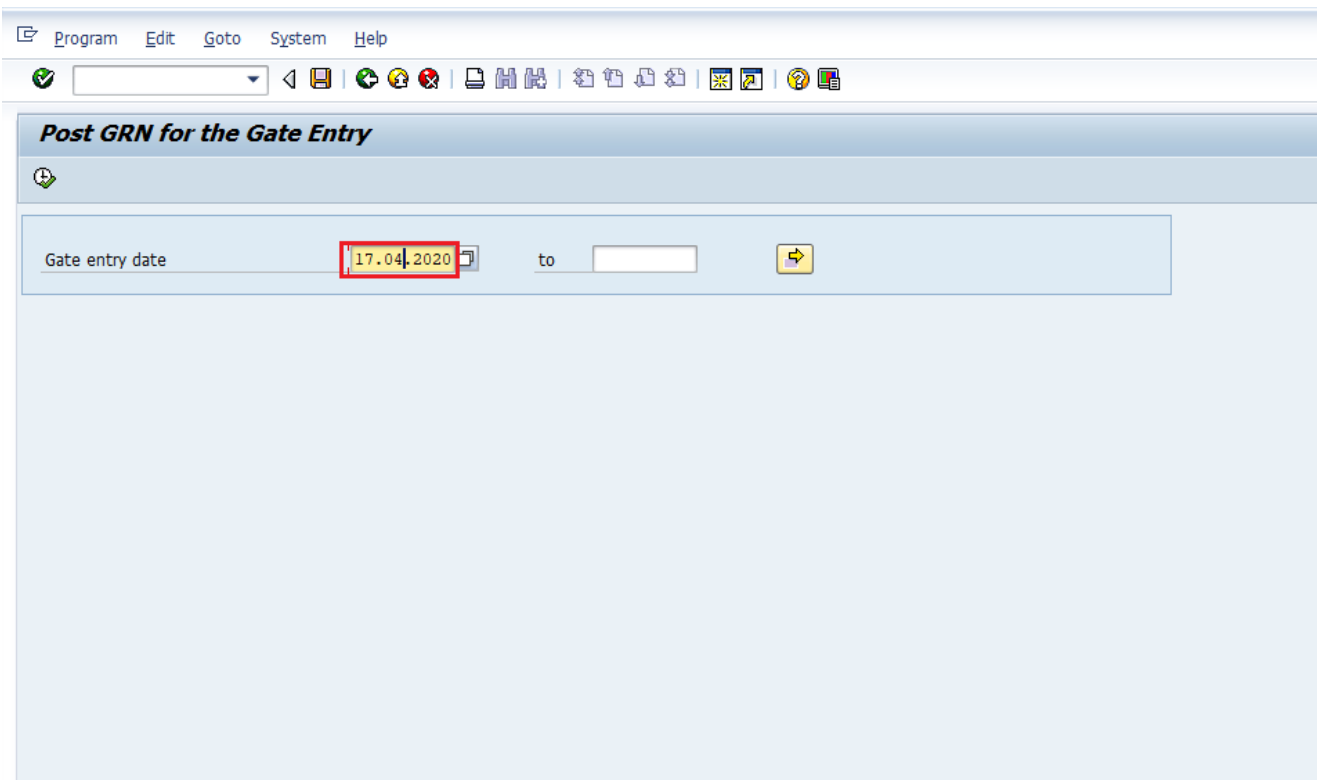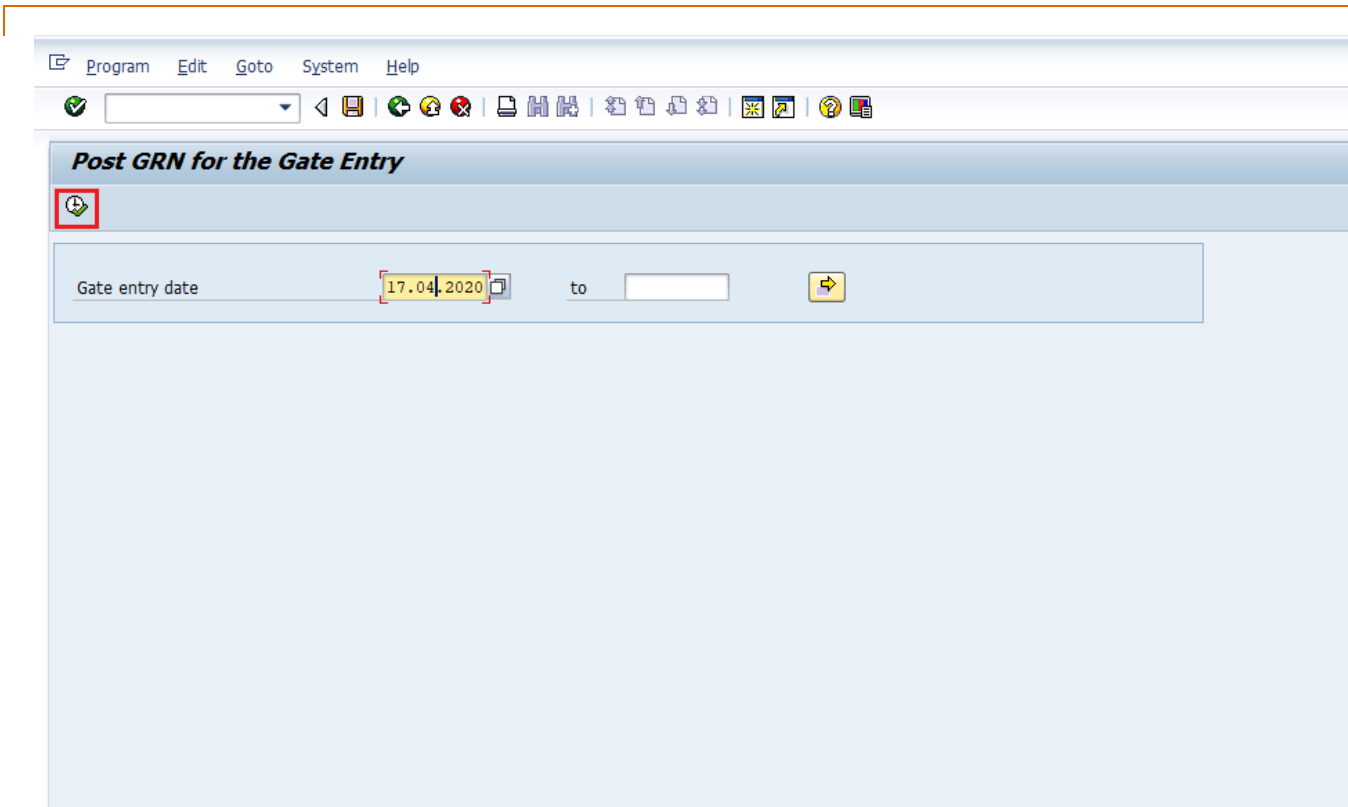
Material document posted

1.14 Heap Transfer

a) Definition and Prerequisites

Once GRN is done, batch to batch i.e. heap transfer will be done in system.

b) Menu Path and Transaction code

SAP S/4 HANA menu	SAP Menu->Logistics > MM > Inventory Management > Goods Movement > MIGO
Transaction Code	MIGO

c) Responsibility

Department's User

d) Screen capture/ Process

Step 1: Select transfer posting
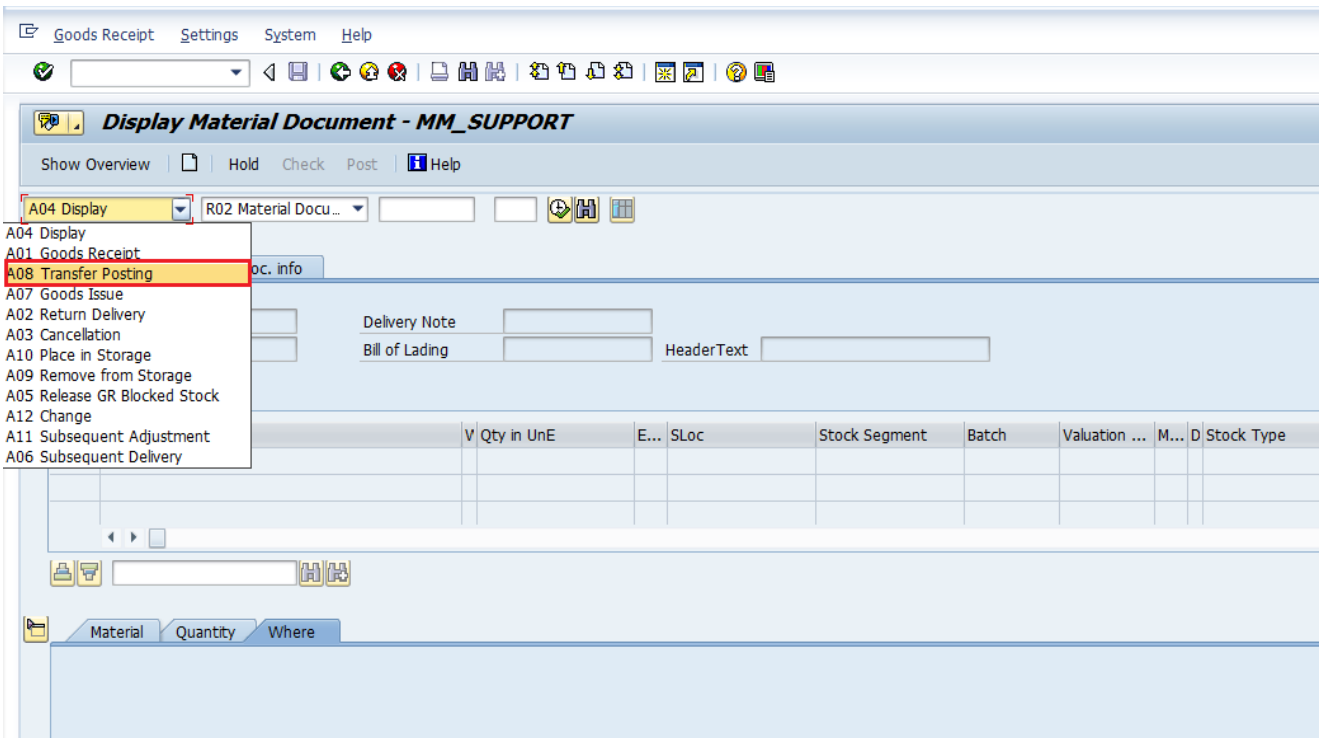
Step 2: Select other
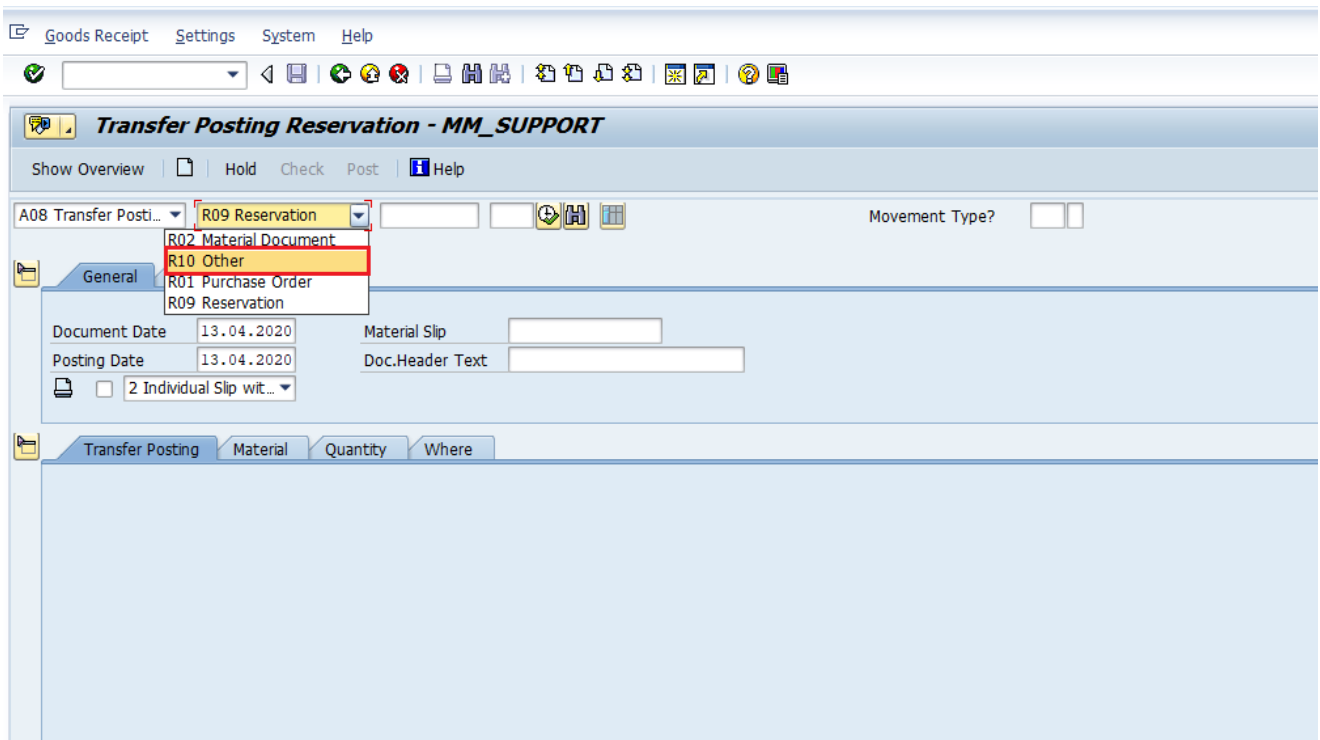
Step 3: Enter mvmt type as 311. Press Enter

Step 4: Enter Material and press enter

Step 5: Enter from plant, storage loc and dest stor. Loc. Press enter

Step 6: Enter batch and valuation type in from and dest

Step 7: Enter quantity

Step 8: Enter material slip and doc header text if required

Step 9: Click on check if the document is OK.

Step 10: Click on post

Material document posted

Material document 4900033480 posted

1.15 Invoice Receipt

a) Definition and Prerequisites
Once the GRN is done and bill is handed over, invoice receipt is done.

b) Menu Path and Transaction code

SAP S/4 HANA menu	SAP Menu->Logistics > MM >Logistic Invoice verification > document entry > MIRO
Transaction Code	MIRO

c) Responsibility
Finance Department

d) Screen capture/ Process
Please refer to the Manual of Invoice Receipt.