DTCC

Important Notice
National Securities Clearing Corporation

A#:	8129
P&S#	7704
DATE:	DECEMBER 7, 2015
TO:	ALL PARTICIPANTS
ATTENTION:	MANAGING PARTNER/OFFICER; OPERATIONS PARTNER/OFFICER; MANAGER P&S DEPARTMENT; MANAGER DATA PROCESSING;CASHIER
FROM:	PRODUCT MANAGEMENT, EQUITIES CLEARANCE
SUBJECT:	ETF NEAR-REALTIME SUPPLEMENTAL FILE & ENHANCEMENTS

In response to feedback provided by ETF industry participants, NSCC is pleased to announce its intent to introduce expanded near real-time processing to support the ETF primary marketplace. Building upon the existing Enhanced Consolidated Portfolio Composition File (PCF) product, effective Friday, February 12, 2016, NSCC will introduce a suite of industry-requested enhancements, including expanded capacity to deliver updated ETF PCF's during its current Supplemental processing period through the introduction of the ETF Near-Real-time Supplemental Portfolio Composition Output MRO.

The current Supplemental processing period provides ETF Sponsors and Agents the capacity to disseminate new or updated ETF portfolio baskets to subscribers of the NSCC ETF PCF. These updated portfolios contain critical information that firms rely upon to support ETF primary market activity. Further, for ETF's that are eligible for creation and redemption processing via NSCC, the updated portfolio basket for a specific ETF will supersede any previously received portfolio basket for a specific Trade Date in NSCC's trade capture and clearing process. Today, this information is available immediately upon receipt using the ETF Browser interface on the DTCC Portal. Updated/Supplemental portfolios are provided to subscribers of the PCF MRO (AutoRoute 02261256) via batch at approximately 12:30 PM on Trade Date regardless of when they are received.

The new ETF Near-Real-time Supplemental Portfolio Composition Output MRO (AutoRoute 02262335) expands this capacity by making updated portfolio baskets available via MRO immediately upon receipt and processing by NSCC. This new optional file output is available to current subscribers in addition-to, not as a replacement-for the existing ETF PCF AutoRoute product. It will be offered in the existing Enhanced Portfolio Composition file format – see Appendix A below. NSCC Members are encouraged to subscribe to the new MRO and should contact their DTCC Relationship Manager for instructions. NSCC will provide participants the ability to test the new file formats and functionality in the Participant Services Environment (PSE) region beginning Monday, January 18, 2016. An Important Notice will be issued in January 2016 containing additional testing information.

Details of additional enhancements to be introduced on Friday, February 12, 2016 are included below. For questions, please contact your DTCC Relationship Manager or the undersigned at kkilroy@dtcc.com.

Kelly Kilroy, Equity Product Management

A	Changes impacting all ETF Agents and Authorized Participants

I. Corrections to ETF Browser Data Labels – To improve consistency between the ETF Browser on the DTCC Portal and the AutoRoute 02261256 file output, the following changes will be reflected on the ETF Browser:

Current Data Label on ETF Browser	New Data Label on ETF Browser
Net Asset Value/IR	Net Asset Value / ETF
Dividends Outstanding/IR	Dividends Outstanding/ETF
Share Quantity	Creation Unit Size
Prior Day's Portfolio	Carried Forward Portfolio
NSCC Ptflo ID	NSCC Portfolio ID
Cmpnt Cn	Component Count
P/T	Portfolio Type
S?	Process Cycle

II. Enhanced ETF Portfolio Subscription Options & Supplemental PCF Notification

   a) ETF Agents and Authorized Participants will have the option to customize their subscriptions specifically to those portfolio baskets distributed via one or more individual ETF Agents. This industry-requested feature enables firms to automatically receive newly available ETF portfolios, inclusive of both standard and custom baskets, as they become available from ETF Agents selected by the subscriber. Firms interested in receiving a more targeted list of ETF portfolios in the ETF Portfolio Composition File or via the ETF Browser on Portal will no longer need to manually subscribe to newly available ETF's on an individual basis.

   b) Subscribing firms have the option to enable email notifications to be sent whenever a Supplemental ETF portfolio basket becomes available. An enhanced notification message will be introduced detailing individual portfolios that have received updates. A hyperlink to the DTCC Portal will allow users to easily logon to the ETF Browser to view updated portfolios.

To access / view changes:

- Testing will be available in the Participant Services Environment (PSE) region beginning Monday, January 18, 2016.

B	Changes Impacting ETF Agents Only

III. Removal of the Final Transmission Indicator on the
DataTrak 11301 – Enhanced Consolidated Portfolio Composition Data Input File –

    a) Based on industry feedback, effective Friday, February 12, 2016, NSCC will remove the requirement that ETF Agents populate the Final Transmission indicator in the 99 record. See Appendix B.

        i. This change will be reflected on the production AutoRoute 02260421 End of Day Portfolio Composition (Receipt/Reject) Print Image Report as well as the test version of the file AutoRoute 02980421. The final transmission field will be removed from the trailer of the report. See Appendix A.

        ii. Error notifications and warnings currently generated by NSCC regarding failure to populate the final transmission indicator will cease upon implementation.

To access / view the enhanced format:

- Appendix A contains the End of Day Portfolio Composition (Receipt/Reject) Print Image Report (AutoRoute 02260421/ 02980421).
- Appendix B contains the updated layouts for the Consolidated PCF Input File Layout (DataTrak 11301 / 41301)

C	Optional Changes for all subscribers of the ETF PCF

IV. ETF Near-Real-time Supplemental Portfolio Composition Output MRO
(AutoRoute 02262335 / PSE 02982335)

    a) Requires that firms already be subscribed to receive the ETF Portfolio Composition File (AutoRoute 02261256) & have managed their ETF portfolio subscriptions via the ETF Browser on the DTCC Portal.

To access / view the enhanced format:

- Please see Appendix C for the updated record layout for the Enhanced Consolidated Portfolio Composition Output MRO (AutoRoute 02262335 / 02982335)

Appendix A
End of Day Portfolio Composition (Receipt/Reject) Print Image Report
  – AutoRoute 02260421/ 02980421

Current ETF Portfolio Receipt/Reject Report (See Trailer Section)

```
                        NATIONAL SECURITIES CLEARING CORPORATION                    PAGE:    1
                  ETF PORTFOLIO RECEIPT / REJECT REPORT FOR TRADE DATE 10/01/2015

ETF AGENT:                                           FILE ID:
NSCC DATE PROCESSED: 2015/10/01                      NSCC TIME PROCESSED: 11:35:44

HEADER WARNING:    HEADER PROCESSING DATE IS NOT CURRENT DATE
  NSCC                                                                          SUB VSN
PRTFOL ID               DESCRIPTION                STATUS          MESSAGE      NO  NO
-----------------------------------------------------------------------------------------
                                                   ACCEPT                       01  01
                                                   ACCEPT                       01  01
-----------------------------------------------------------------------------------------
FINAL TRANSMISSION:     RECORDS REPORTED:     353   RECORDS PROCESSED:     353       IN BALANCE
```

Revised ETF Portfolio Receipt/Reject Report (See Trailer Section)

```
                        NATIONAL SECURITIES CLEARING CORPORATION                    PAGE:    1
                  ETF PORTFOLIO RECEIPT / REJECT REPORT FOR TRADE DATE 10/01/2015

ETF AGENT:                                           FILE ID:
NSCC DATE PROCESSED: 2015/10/01                      NSCC TIME PROCESSED: 11:35:44

HEADER WARNING:    HEADER PROCESSING DATE IS NOT CURRENT DATE
  NSCC                                                                          SUB VSN
PRTFOL ID               DESCRIPTION                STATUS          MESSAGE      NO  NO
-----------------------------------------------------------------------------------------
(                                                  ACCEPT                       01  01
(                                                  ACCEPT                       01  01
-----------------------------------------------------------------------------------------
RECORDS REPORTED:         2        RECORDS PROCESSED:          2         IN BALANCE
```

Appendix B – Consolidated PCF Input File Layout (DataTrak 11301/41301) (R5)

The Final Transmission Indicator field has been removed from record 99.

	Type 1 - Header Record (required record type for all portfolios)			Record Length=250				
	Description	**Length**	**Start**	**Type**	**Comments**	**Required/Optional Field**		
1	Record Type	2	1	A/N	01 = Record Type 1	Required		
2	File Description	25	3	A/N	"Portfolio Composition"	Optional		
3	ETF Agent	8	28	N	NSCC Member Number Right Justified with leading zeros	Required		
4	File Identifier	8	36	A/N	Input File Number	Optional		
5	Processing Date	8	44	N	CCYYMMDD	Required		
6	Processing Time	6	52	N	HHMMSS	Optional		
7	Future Use	192	58					
	END OF RECORD							

Appendix B – Consolidated PCF Input File Layout (DataTrak 11301/41301) (R5) – Continued

	Type 2 - Portfolio Header Record (required record type for all portfolios)				Record Length=250		
	Description	**Len**	**Start**	**Type**	**Comments**	**Required /Optional Field**	
1	Record Type	2	1	A/N	02 = Record Type 2	Required	
2	NSCC Portfolio ID	9	3	A/N	NSCC assigned Portfolio ID of the basket	Required	
3	ETF Agent	8	12	N	NSCC Member Number Right Justified with leading zeros	Required	
4	Component Count	8	20	N	99,999,999	Required	
5	Estimated T-1 Cash Amount Per Creation Unit	14	28	N	999,999,999,999.99	Optional* *must be numeric	
6	Sign field for Estimated T-1 Cash Amount Per Creation Unit	1	42	A/N	"-" = Negative value Space= Positive value All other values treated as space (positive)	Optional	
7	Net Asset Value Per Creation Unit	17	43	N	999,999,999,999.99999	Optional* *must be numeric	
8	Sign field for Net Asset Value Per Creation Unit	1	60	A/N	"-" = Negative value Space= Positive value All other values treated as space (positive)	Optional	

Appendix B – Consolidated PCF Input File Layout (DataTrak 11301/41301) (R5) – Continued

	Type 2 - Portfolio Header Record (required record type for all portfolios)				Record Length=250			
	Description	**Len**	**Start**	**Type**	**Comments**	**Required/Optional Field**		
9	Estimated T-1 Cash Amount Per ETF	14	61	N	999,999,999,999.99	Optional* *must be numeric		
10	Sign field for Estimated T-1 Cash Amount Per ETF	1	75	A/N	"-" = Negative value Space= Positive value All other values treated as space (positive)	Optional		
11	Net Asset Value Per ETF	17	76	N	999,999,999,999.99999	Optional* *must be numeric		
12	Sign field for Net Asset Value Per ETF	1	93	A/N	"-" = Negative value Space= Positive value All other values treated as space (positive)	Optional		
13	Total Cash Amount Per Creation Unit	14	94	N	999,999,999,999.99	Optional* *must be numeric		

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Appendix B – Consolidated PCF Input File Layout (DataTrak 11301/41301) (R5) – Continued

	Description	Len	Start	Type	Comments	Required/Optional Field		
Type 2 - Portfolio Header Record (required record type for all portfolios)					**Record Length=250**			
14	Sign field for Total Cash Amount Per Creation Unit	1	108	A/N	"-" = Negative value Space= Positive value All other values treated as space (positive)	Optional		
15	Total Shares Outstanding Per ETF on T-1	12	109	N	999,999,999,999	Optional* *must be numeric		
16	Dividend Amount Per ETF on T-1	14	121	N	999,999,999,999.99	Optional* *must be numeric		
17	Sign field for Dividend Amount Per ETF on T-1	1	135	A/N	"-" = Negative value Space= Positive value All other values treated as space (positive)	Optional		
18	**Estimated value of Cash-in-lieu components per Creation Unit**	14	136	N	999,999,999,999.99	Optional* *must be numeric		
19	Cash Only Indicator	1	150	A/N	"Y" = Cash Only (create/redeem with Cash Only) space = No restrictions (any combination of cash or securities)	Optional		
20	**ETF Expense Ratio on T-1**	3	151	N	Expressed in Basis Points	Optional* *must be numeric		
21	**Total Asset Value of ETF Fund on T-1**	17	154	N	999,999,999,999.99999	Optional* *must be numeric		
22	Future Use	80	171		Spaces			
END OF RECORD								

Appendix B – Consolidated PCF Input File Layout (DataTrak 11301/41301) (R5) – Continued

	Type 3 – Detail Component Record (optional record type for Cash Only portfolios)				**Record Length=250**			
	Description	**Len**	**Start**	**Type**	**Comments**	**Required/ Optional Field ***		
1	Record Type	2	1	A/N	03 = Record Type 3 (one per component)	Required		
2	NSCC Portfolio ID	9	3	A/N	NSCC assigned Portfolio ID of the basket	Required		
3	**Component ID Code**	2	12	A/N	01=CUSIP 02=SEDOL 03=ISIN 04=ISIN/SEDOL 05=Bloomberg 06=Reuters 07=ICE / NYSE Life 99=Other	Required		
4	Component ID	25	14	A/N	This is defined by the value in Component ID Code field	Required		
	o CUSIP	9	14	A/N	Identifies Domestic component			
	o SEDOL	7	14	A/N	Official SEDOL number			
	o ISIN	12	14	A/N	Identifies Foreign or Domestic Component			
	o ISIN/SEDOL	19	14	A/N	Combination ISIN/SEDOL ***Recommended for non-US domiciled securities**			

* 'Required' field within an optional record type needs to be populated only if that record type is submitted

Appendix B – Consolidated PCF Input File Layout (DataTrak 11301/41301) (R5) – Continued

	Type 3 – Detail Component Record (optional record type for Cash Only portfolios)				Record Length=250			
	Description	**Len**	**Start**	**Type**	**Comments**	**Required /Optional Field ***		
	- ISIN	12	14	A/N				
	- SEDOL	7	26	A/N				
	o All other types	25	14	A/N	Free form field identifying other type of asset class			
5	Component Quantity	13	39	N	Quantity of component per creation unit (par value for fixed income securities)	Required		
6	**Sign Field for Component Quantity**	1	52	A/N	"-" indicates negative value (short position) space = positive All other values treated as space (positive) ** Note: a component with negative quantity (short component), can only be created/redeemed for cash	Optional		
7	**External Settlement Date**	8	53	N	ETF Agent provided settlement date for non-DTC settling components	Optional		

Appendix B – Consolidated PCF Input File Layout (DataTrak 11301/41301) (R5) – Continued

	Type 3 – Detail Component Record (optional record type for Cash Only portfolios)				Record Length=250		
	Description	**Len**	**Start**	**Type**	**Comments**	**Required/ Optional Field ***	
8	**New Security Indicator**	1	61	A/N	N = New component in Portfolio space = not new	Optional	
9	**Cash In Lieu Indicator**	1	62	A/N	Y= ETF agent provided indicator for component to be substituted for cash in a create/redeem; space=No substitution - - - - - - - - - - - - - - - - - - - **Note: CIL is set to X by NSCC if one of the following conditions is met for create / redeem eligible Portfolios:** **- Component is not eligible in NSCC Security Master Database** **- Portfolio is a cash only portfolio**	Optional	
10	**Component Description**	60	63	A/N	ETF Agent defined description	Optional	
11	Future Use	128	123		Spaces		
	END OF RECORD						

* 'Required' field within an optional record type needs to be populated only if that record type is submitted

Appendix B – Consolidated PCF Input File Layout (DataTrak 11301/41301) (R5) – Continued

Type 4 - Custom Distribution Record (Required for Custom Portfolios Only) Record Length = 250				
	Description	**Len**	**Start**	**Type**	**Comments**
1	Record Type	2	1	A/N	04= Record Type 4 - Required
2	NSCC Portfolio ID	9	3	A/N	NSCC assigned Portfolio ID of the basket - Required
3	Specified recipient	8	12	A/N	Clearing Number of Authorized Participant to receive this file or LIST = distribution of AP's associated with Index Agent - Required
4	Future Use	231	20		Spaces
	END OF RECORD				

* 'Required' field within an optional record type needs to be populated only if that record type is submitted

Type 99 - Trailer Record – Required record type for all portfolios. Record Length = 250				
	Description	**Len**	**Start**	**Type**	**Comments**
1	Record Type	2	1	A/N	99 = Trailer Record - one per file
2	Filler/Future Use**	1	3	A/N	
3	Record Count	13	4	N	Number of records in transmission (including trailer)
4	Future Use	234	17		Spaces
	END OF RECORD				

** The Final Transmission Indicator field has been removed from record 99 (formerly character 3 in the Type 99 Trailer Record)

*Appendix C – Near Real time Supplemental PCF MRO File Layout
(AutoRoute 02262335 / PSE 02982335)*

Type 1 - Header Record						
Description	**Length**	**Start**	**Type**	**Comments**		
1 Record Type	2	1	A/N	01 = Header Record - one per file		
2 File Description	25	3	A/N	"Portfolio Composition"		
3 NSCC Member Number	8	28	N	NSCC Member Number – Right justified with leading zeroes.		
4 File Identifier	8	36	A/N	Unique File Number. The first byte will identify whether the input file was from the Primary (P) or Supplemental (S) process. Examples: S0000001, P0000001, etc.		
5 NSCC Processing Date	8	44	N	CCYYMMDD		
6 NSCC Processing Time	6	52	N	HHMMSS		
7 Future Use	343	58				

END OF RECORD

Appendix C - Near Real time Supplemental PCF MRO File Layout (AutoRoute 02262335 / PSE 02982335) - Continued

Type 2 - Portfolio Header Record – Record Length = 400

	Description	Length	Start	Type	Comments		
1	Record Type	2	1	A/N	02= Record Type 2 (one per Portfolio)		
2	ETF Trading Cusip	9	3	A/N	S&P Assigned		
3	ETF Trading ISIN	12	12	A/N			
4	NSCC Portfolio ID	9	24	A/N	NSCC assigned Portfolio ID of the basket		
5	ETF Description	60	33	A/N	From NSCC Security Master if found, otherwise ETF Agent supplied description is used		
6	Portfolio Trade Date	8	93	N	CCYYMMDD		
7	ETF Agent	8	101	N	NSCC Member Number		
8	Component Count	8	109	N	99,999,999		
9	Estimated T-1 Cash Amount Per Creation Unit	14	117	N	999,999,999,999.99		
10	Sign field for Estimated T-1 Cash Amount Per Creation Unit	1	131	A/N	"-" indicates negative value Space = Positive Value		
11	Net Asset Value Per Creation Unit	17	132	N	999,999,999,999.99999		
12	Sign field for Net Asset Value Per Creation Unit	1	149	A/N	"-" indicates negative value Space = Positive Value		
13	Estimated T-1 Cash Amount Per ETF	14	150	N	999,999,999,999.99		
14	Sign field for Estimated T-1 Cash Amount Per ETF	1	164	A/N	"-" indicates negative value Space = Positive Value		
15	Net Asset Value Per ETF	17	165	N	999,999,999,999.99999		
16	Sign field for Net Asset Value Per ETF	1	182	A/N	"-" indicates negative value Space = Positive Value		
17	Total Cash Amount Per Creation Unit	14	183	N	999,999,999,999.99		
18	Sign field for Total Cash Amount Per Creation Unit	1	197	A/N	"-" indicates negative value Space = Positive Value		

Appendix C – Near Real time Supplemental PCF MRO File Layout (AutoRoute 02262335 / PSE 02982335) - Continued

	Description	Length	Start	Type	Comments		
19	Total Shares Outstanding Per ETF on T-1	12	198	N	999,999,999,999		
20	Dividend Amount Per ETF on T-1	14	210	N	999,999,999,999.99		
21	Sign field for Dividend Amount Per ETF on T-1	1	224	A/N	"-" indicates negative value Space = Positive Value		
22	Estimated Value of cash-in-lieu Components per Creation Unit	14	225	N	999,999,999,999.99		
23	Cash Only Indicator	1	239	A/N	"Y" = Cash Only (create/redeem with Cash Only) Space = No restrictions (any combination of cash or securities)		
24	ETF Expense Ratio on T-1	3	240	N	Expressed in Basis Points		
25	Total Asset Value of ETF Fund on T-1	17	243	N	999,999,999,999.99999		
26	ETF Shares Per Create/Redeem Units	9	260	N	999,999,999 - from NSCC Security Master Database		
27	ETF Symbol	15	269	A/N	from NSCC Security Master Database		
28	CNS Eligibility Indicator	1	284	A/N	from NSCC Security Master Database		
29	ETF Create Redeem Identifier	1	285	A/N	Y - Basket can be created or redeemed N- Basket cannot be created or redeemed		
30	Prior Day's Portfolio being used	1	286	A/N	space - Today's portfolio being used Y - Prior day's portfolio being used		
31	Custom or Standard	1	287	A/N	C = Custom S = Standard		
32	Foreign or Domestic	1	288	A/N	D = Domestic F = Foreign		
33	NSCC New Portfolio	1	289	A/N	Y = New portfolio Space = Existing Portfolio		
34	ETF Classification Code	6	290	A/N			
35	Future Use	105	296				

Appendix C – Near Real time Supplemental *PCF MRO File Layout*
(AutoRoute 02262335 / PSE 02982335) – Continued

	Type 3 - Detail Component Record – Record Length = 400						
	Description	**Length**	**Start**	**Type**	**Comments**		
1	Record Type	2	1	A/N	03 = Record Type 3		
2	ETF Trading CUSIP	9	3	A/N	S&P Assigned		
3	ETF Trading ISIN	12	12	A/N			
4	NSCC Portfolio ID	9	24	A/N	NSCC assigned Portfolio ID of the basket		
5	Portfolio Trade Date	8	33	N	CCYYMMDD		
6	Component ID Code	2	41	A/N	01=CUSIP 02=SEDOL 03=ISIN 04=ISIN/SEDOL 05=Bloomberg 06 - Reuters 07 - NYSE Life 99=Other		
7	Component ID	25	43	A/N	This is defined by the value in Component ID Code field		
	o CUSIP Number	9	43	A/N	Identifies Domestic component		
	o SEDOL	7	43	A/N	Official SEDOL number		
	o ISIN/SEDOL	19	43	A/N	Combination ISIN/ SEDOL Number **Recommended for non-US domiciled securities**		
	- ISIN Number	12	43	A/N			
	- SEDOL Number	7	55	A/N			
	o All other types	25	43	A/N	Free form field identifying other type of asset class		
8	Component Quantity	13	68	N	Number of shares of this stock per creation unit		
9	Sign Field for Component Quantity	1	81	A/N	"-" indicates negative value (short position) space = positive ** Note: if any component is short, then it can only be created/redeemed for cash.		
10	New Security Indicator	1	82	A/N	N = New component in Portfolio as per ETF Agent Space = not new		

Appendix C – Near Real time Supplemental PCF MRO File Layout
(AutoRoute 02262335 / PSE 02982335)- Continued

	Description	Length	Start	Type	Comments		
11	Cash In Lieu Indicator	1	83	A/N	Y= ETF agent provided indicator for component to be substituted for cash in a create/redeem; X= NSCC applied indicator for component to be substituted for cash in a create and redeem (per below mentioned rules) space = No substitution - Note: CIL is set to X if one of the following is met: - Component is not eligible in NSCC Security Master Database - Portfolio is a cash only portfolio.		
12	Component Symbol	15	84	A/N	Trading Symbol of Component		
13	Component WI Indicator	1	99		WI indicator of Domestic Component		
14	Component undergoing corporate action	1	100	A/N	Space = No corporate action M = Mandatory Corporate Action V = Voluntary Corporate Action		
15	Component NSCC eligibility indicator	1	101	A/N	Y = NSCC eligible N = Not NSCC eligible		
16	Component CNS Indicator	1	102	A/N	Y = CNS eligible N = Not CNS eligible		
17	External Settlement Date	8	103	N	ETF Agent provided settlement date for non-DTC settling components		
18	Component Description	60	111	A/N	Override input if found in NSCC Security Master Database		
19	Future Use	230	171				

Appendix C – Near Real time Supplemental PCF MRO File Layout
(AutoRoute 02262335 / PSE 02982335)- Continued

	Type 99 - Trailer Record						
	Description	**Length**	**Start**	**Type**	**Comments**		
1	Record Type	2	1	A/N	99 = Trailer Record – one per file		
2	Processing Date	8	3	N	CCYYMMDD		
3	Primary Transmission or Supplement	1	11	A/N	P = Primary Transmission S = Supplemental Transmission		
4	Record Count	13	12	N	Number of records in transmission (including trailer)		
5	Future Use	376	25	A/N	Spaces		
	END OF RECORD						