BP Alert Natcom High Suspicious Numbers

This is a Daily alert from Natcom for their numbers that we blocked for high suspicious activity. However from their side when they checked the numbers they responded back that the numbers are normal subscribers or here are the bypass ones. Below are the scripts and steps followed to investigate them and take proper action regarding them.

SCRIPTs:

```sql
        /*----------- Summary table for Natcom BP Detection ----------*/
SELECT *
  FROM TB_NATCOM_BP_DETECTION_SUMMARY
 WHERE MSISDN IN
        ('42906927',
'32021571',
'32023063')


/********Script to determine which numbers are suspected from the list*****/

  SELECT /*+ parallel(DWHMO,4) */
        DWHMO.CALL_TYPE AS CALL_TYPE,
         MIN (DWHMO.DATE_CODE) AS FIRSTCALLSTARTDATE,
         MIN (DWHMO.TIME_CODE) AS FIRSTCALLSTARTTIME,
         MAX (DWHMO.TIME_FOR_CHARGE_STOP) AS LASTCALLENDDATE,
         '509' || SUBSTR (DWHMO.CALLINGPARTYNUMBER, -8) AMSISDN,
         COUNT (DWHMO.DATE_CODE) AS TOTAL_CALLS,
         COUNT (DISTINCT DWHMO.CALLEDPARTYNUMBER) AS UNIQUE_B,
         (COUNT (DISTINCT DWHMO.CALLEDPARTYNUMBER)) / COUNT (DWHMO.DATE_CODE)
            AS DIVERSITY,
         SUM (DWHMO.CHARGEABLEDURATION) / 60 AS TOTAL_MINUTES,
         AVG (DWHMO.CHARGEABLEDURATION) / 60 AS ALOC,
         CASE
            WHEN MOCALL.OB_TOTAL_CALLS IS NULL THEN 0
            ELSE MOCALL.OB_TOTAL_CALLS
         END
            AS RECEIVEDCALL,
         CASE
            WHEN MOCALL.OB_TOTAL_MINUTES IS NULL THEN 0
            ELSE MOCALL.OB_TOTAL_MINUTES
         END
            AS RECEIVEDMOU,
         SYSDATE,
         'NATCOM 1'
    FROM    CDRMSC.ST_CDRMSC_IMPORT@exadata_ln      /* partition(P20130125)
*/
                                                    DWHMO
         LEFT OUTER JOIN
            (  SELECT /*+ parallel(DWHMO,4) */
                     '509' || SUBSTR (DWHMO.CALLEDPARTYNUMBER, -8)
                        AS CALLEDPARTY_S,
```

```sql
                    COUNT (DWHMO.DATE_CODE) AS OB_TOTAL_CALLS,
                    SUM (DWHMO.CHARGEABLEDURATION) / 60 AS OB_TOTAL_MINUTES
            FROM CDRMSC.ST_CDRMSC_IMPORT@exadata_ln
/*partition(P20130125)*/
                                                DWHMO
         WHERE     DWHMO.CALL_TYPE = 'MOBORIG'
               AND DWHMO.DATE_CODE BETWEEN TO_CHAR (SYSDATE - 15,
                                                    'YYYYMMDD')
                                   AND TO_CHAR (SYSDATE,
'YYYYMMDD')
               AND CASE
                      WHEN SUBSTR (CALLEDPARTYNUMBER, -11) LIKE '509%'
                      THEN
                         CASE
                            WHEN SUBSTR (SUBSTR (CALLEDPARTYNUMBER, -
11),
                                         1,
                                         5) IN
                                     ('50920',
                                      '50922',
                                      '50923',
                                      '50930',
                                      '50932',
                                      '50933',
                                      '50940',
                                      '50942',
                                      '50943',
                                      '50941',
                                      '50935',
                                      '50926')
                            THEN
                               'NATCOM'
                            ELSE
                               'Other'
                         END
                      WHEN    CALLEDPARTYNUMBER LIKE '3_____'
                           OR CALLEDPARTYNUMBER LIKE '4_____'
                           OR CALLEDPARTYNUMBER LIKE '2_____'
                      THEN
                         CASE
                            WHEN SUBSTR (CALLEDPARTYNUMBER, 1, 2) IN
                                     ('20',
                                      '22',
                                      '23',
                                      '30',
                                      '32',
                                      '33',
                                      '40',
                                      '42',
                                      '43',
                                      '41',
                                      '35',
                                      '26')
                            THEN
                               'NATCOM'
                            ELSE
                               'Other'
```

```sql
                                END
                            ELSE
                                'Other'
                          END = 'NATCOM'
                GROUP BY '509' || SUBSTR (DWHMO.CALLEDPARTYNUMBER, -8)) MOCALL
          ON SUBSTR (DWHMO.CALLINGPARTYNUMBER, -8) =
             SUBSTR (MOCALL.CALLEDPARTY_S, -8)
 WHERE      DWHMO.CALL_TYPE = 'MOBTRAN'
        AND INCOMINGROUTE LIKE 'NATCO%'
        AND CALLEDPARTYNUMBER <> '50937000000'
        AND OUTGOINGROUTE LIKE '%GRI%'
        AND DWHMO.DATE_CODE BETWEEN TO_CHAR (SYSDATE - 15, 'YYYYMMDD')
                                AND TO_CHAR (SYSDATE + 1, 'YYYYMMDD')
        AND CASE
               WHEN SUBSTR (CALLINGPARTYNUMBER, -11) LIKE '509%'
               THEN
                  CASE
                     WHEN SUBSTR (SUBSTR (CALLINGPARTYNUMBER, -11), 1, 5) IN
                              ('50920',
                               '50922',
                               '50923',
                               '50930',
                               '50932',
                               '50933',
                               '50940',
                               '50942',
                               '50943',
                               '50941',
                               '50935',
                               '50926')
                     THEN
                        'NATCOM'
                     ELSE
                        'Other'
                  END
               WHEN    CALLINGPARTYNUMBER LIKE '3_____'
                    OR CALLINGPARTYNUMBER LIKE '4_____'
                    OR CALLINGPARTYNUMBER LIKE '2_____'
               THEN
                  CASE
                     WHEN SUBSTR (CALLINGPARTYNUMBER, 1, 2) IN
                              ('20',
                               '22',
                               '23',
                               '30',
                               '32',
                               '33',
                               '40',
                               '42',
                               '43',
                               '41',
                               '35',
                               '26')
                     THEN
                        'NATCOM'
                     ELSE
                        'Other'
```

```
            END
        ELSE
            'Other'
        END = 'NATCOM'
    AND '509' || SUBSTR (DWHMO.CALLINGPARTYNUMBER, -8) IN
            ('42906927',
'32021571',
'32023063')
```

STEPS:

1- **Once we receive those numbers, first we use the template excel file to treat by checking them on the summary Natcom detection table by using the first script. Secondly we checked if there are suspicious for last 15, 7, 3, 1 days and today.**
2- **We excluded the ones found suspicious and after that we unblocked the ones that were found blocked in the summary Natcom detection table by using the below procedure**

```
BEGIN
    INSERT INTO TB_NATCOM_UNBLOCK_REQUEST (MSISDN, REPORTED_DATE)
        VALUES (40246208, SYSDATE);

    COMMIT;
    END;
```

3- **Now the ones that were found already unblocked or were not found in this table** `TB_NATCOM_BP_DETECTION_SUMMARY`**, we follow up with the MSC guys to ublocked them manually from their side for us.**
4- **At the end we have to verify the numbers that unblock using the procedure in step 2 are well unbloked in this table** `TB_NATCOM_UNBLOCK_REQUEST`**.**