B

M P I :

D A

I   , I

. I   EJ   . I
EJ   .   , I   EJ
,   ,   ,   ,
EJ   . I
,   -
. I
.

CIAL   E   E   LIC I   LE   E   A I

,   ,   ,   -
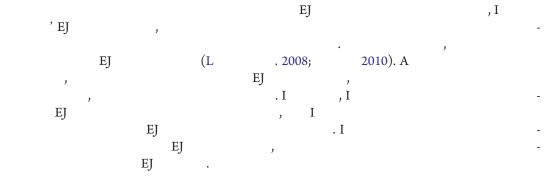.   ,   ,   -
,   -   ,   ,   ,   ,   ,
,   (A   1998; A
1999; A   2001; A   E   2004; B   2000; E   M C
2004; J   1995; M   2004; O   J   2000; P   C   1977; R
1998;   M   1999;   A   2004;   1998).
F   P   ' (1966)   ,   G   (1975)
,   ,
'
(M   R   1977).
,
-   -
.   (. .,   -
; B   2000; L   2012; R   -D   1999;   1985;
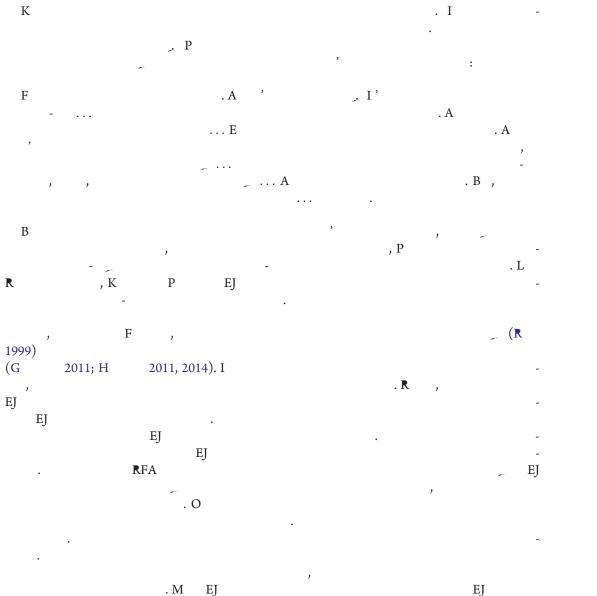1998). O   '
(J   G   2001:131;   . 2009). O
(B   2005;   M G   1997),   (M

EJ   , I
' EJ   ,   -
                                                            .   ,
            EJ   (L   . 2008;   2010). A
    ,   EJ   ,
        ,   . I   , I   -
    EJ   ,   I   -
                        EJ   . I   -
                EJ   ,   -
                EJ   .

CA E A D E H D

I   -
                . EJ   -
    EJ   (F   M C   2001). A   EJ
                    ' EJ   ,   '   EJ   . EJ
                            ,   ,   -
    EJ   ,   EJ
(M C   . 1991).
    I   : C   E
P   A   (C EPA) EJ   G   P   (93   2005   2015),
    F   EJ G   P   (55   2001   2010), N   EJ
C   I   G   P   (121   2006   2013),   ▪. E
P   A   (▪. EPA) EJ   G   P   (1,345   1994
2013),   ▪. EPA EJ C   P   -   (CP) C   A   P
(51   2003   2014).   ▪
                            :   ;   EJ
        ;   -   ,   (
        -                            );   -
                ;   (. .,
).
    M $15,000 $30,000,   EPA CP $100,000
$120,000. P
                    ,   (
        ,   ,   ).

'   ;   ,   I

I   ?' N

 ⌐ (O   2013). A   ,   -EJ   -

I   ' EJ

                                                      :   (

 B   1987; H   2011).

H   ,   -

         ,   EJ

K   . I   -
                                                                  .
                    ⁀ P
               ⁀   :

F   . A   ’   ⁀ I ’
      -    …   . A
                                    … E   . A
     ,   ,
                              ⁀ …   -
      ,   ,   ⁀ … A   . B ,
                              …   .

   B   ,   ,   ⁀
                    ,   , P   -
             -    ⁀   -   . L
R   , K   P   EJ   -
                  -                                    .

          ,   F   ,   ⁀ (**R**
1999)
(G   2011; H   2011, 2014). I   -
     ,   . **R**   ,   -
   EJ   -
   EJ   .

                              EJ   .   -
                         EJ   -
   .   **R**FA   ⁀   EJ
                  ⁀ . O   ,
                                        .
   .   -
   .
                                               ,
                    . M   EJ   EJ
          33.9(47.5.5(E 001   )-312(   )/   1)-376. 278   2   3(1(.8(-3 (   )-(.500

C   '   EJ
              EJ   .

C   CL   I

C   ,   . 1995. P   E   M   E   J
    M   g   15(4):419-42.
C EPA. 2013. E   J   G   A   I   : 2013 G   C   C
    E   P   A   ,   , CA.
C   ,   M. 1993.   E   J   'F   : A C   D   A
    P   40(1):5-24.
C   , L   F   . 2001. F   G   : E   R   R   E   J
    M   . N   : N   P   .

R , N . 1999. P , F : R g P g . N : C P .

, P D M . 1980. I P P : A F A P

J .