

TABLE 3.3-2f
MNA SCREENING PROCESS CALCULATIONS
Former York Naval Ordnance Plant
1425 Eden Road, Springettsbury Township, York, PA

Area	West Parking Lot Area								
	Location	MW-136A	MW-136A	MW-136A	MW-136A	MW-136A	MW-136A	MW-136A	
Open Interval FBGS		(356-356.5)	(356-356.5)	(434-443.5)	(434-443.5)	(434-443.5)	(434-443.5)	(434-443.5)	
Sample Type									
Sample Date		10/2/2013	10/23/14	10/1/13	10/1/13	10/1/13	10/22/14	10/22/14	
Analytical Parameters	USEPA Concentration Criteria/ Possible Points	Concentration in Well	Points Awarded	Concentration in Well	Points Awarded	Concentration in Well	Points Awarded	Concentration in Well	Points Awarded
Dissolved Oxygen	<0.5 (mg/L) / 3 >1 (mg/L) / -3	0	3	0	3	0	3	0	3
Nitrate	<1 (mg/L) / 2	1.8	0	NA	0	< 0.1	0	NA	0
Ferrous Iron	>1 (mg/L) / 3	< 0.05	0	NA	0	0.26 HF	0	NA	0
Sulfate	<20 (mg/L) / 2	29 B	0	NA	0	24 B	0	NA	0
Sulfide	>1 (mg/L) / 3	< 3	0	NA	0	< 3	0	NA	0
Methane	<0.5 (mg/L) / 0 >0.5 (mg/L) / 3	NA	0	NA	0	NA	0	NA	0
Ethene/Ethane	>0.01 (mg/L) / 2 >0.1 (mg/L) / 3	NA	0	NA	0	NA	0	NA	0
Alkalinity (2)	>2x background / 1	200 B	0	NA	0	170 B	0	NA	0
Chloride (2)	>2x background / 2	56	2	NA	0	36	0	NA	0
BTEX	>0.1 (mg/L) / 2	< 6.0	0	< 0.03	0	< 9.0	0	< 0.6	0
PCE	Material Released /0	8300	0	410	0	2400	0	100	0
TCE	Material Released or Daughter Product / 0/2	20000	0	1400	0	15000	0	2400	0
cis-1,2-DCE	Material Released or Daughter Product / 0/2	660 J	2	1100	2	2100	2	14000	2
VC	Material Released or Daughter Product / 0/2	1000 U	0	50 U	0	1500 U	0	100 U	0
TCA	Material Released /0	1000 U	0	58	0	1500 U	0	100 U	0
11 DCA	Material Released or Daughter Product / 0/2	1000 U	0	50 U	0	1500 U	0	100 U	0
Chlorethane	Daughter Product /2	< 1000	0	< 50	0	< 1500	0	< 100	0
ORP	<50 (mV) / 1 <-100 (mV) / 2	NA	0	-122	2	NA	0	-181	2
pH	5 < pH < 9 / 0 5 > pH > 9 / -2	7.47	0	7.53	0	6.72	0	7.61	0
Temperature	> 20 °C / 1	16.89	0	14.72	0	18.25	0	13.94	0
Total Points Awarded (Score)			7		7		5		7

Score	Evidence for Reductive Dechlorination
0 to 5	Inadequate
6 to 14	Limited
15 to 20	Adequate
> 20	Strong

Notes:
NA = Not available. J = Organics; estimated. Inorganics; blank contamination; B = Organics; blank contamination. Inorganics; estimated; HF = Hold time exceedance as analysis is a field method; R = Data Rejected
Material Released = Released at Site; Daughter Product = From reductive dechlorination.

(1) Concentration Criteria and Points Awarded are from Table 2.3 (Analytical Parameters and Weighting for Preliminary Screening for Anaerobic Biodegradation Processes) in the USEPA *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater* (EPA/600/R-981/28) dated September 1998.

(2) Published background concentrations for alkalinity and chloride obtained from *Groundwater Resources of the Lower Susquehanna River Basin, Pennsylvania*, 1986. 2X background concentrations for alkalinity and chloride in the Antietam Formation are 128 mg/L and 20 mg/L, respectively and in the Vintage Formation are 396 mg/L and 48 mg/L, respectively.