

APPENDIX H SITE SPECIFIC IGW CALCULATION

APPENDIX H-1 NICKEL SPREADSHEET

NJDEP SPLP Spreadsheet, V2.0, 12/08

Case name/area of concern: PPG Site 16
 Case number:
 Sampling date: 12/20/2012

**CALCULATE
 SITE SPECIFIC
 IGW STANDARD**

Reset Spreadsheet

Contaminant: **Nickel**
 CAS No: 7440-02-0
 Water solubility (mg/L): -
 Aqueous reporting limit (µg/L): 4
 Soil reporting limit (mg/kg): 4
 Health-based GWQC (µg/L): 100
 DAF (13, or site-specific if approved): 13
 Leachate Criterion (µg/L): 1300
 Henry's law constant (dimensionless): -

NOTE:
USE ONE PAGE PER CONTAMINANT
Do not leave empty rows between samples
Do not enter samples with soil concentrations at or below the reporting limit.
Enter site-specific dilution-attenuation factor (DAF) if desired

 Data entry cells (do not skip rows)
 Optional data entry
 Calculated or locked cells
 Indicates that Alternative Remediation Standard needs to be recalculated

Sample ID	Soil sample weight (kg)	Leachate Volume (L)	Total Soil Concentration (mg/kg)	Leachate Concentration (µg/L)	Final pH of Leachate	Optional data				Kd (L/kg)	% Contaminant in Leachate	Need to adjust leachate concentration?	Adjusted leachate concentration (µg/L)	Pass or fail?
						Sampling Depth (ft)	Soil Type	Organic Carbon (mg/kg)	Organic Carbon (%)					
016_K007_4.0	0.1	2	149	4.1	10.02					36321.5	0.06	no	4.1	PASS
016_K007_4.0X	0.1	2	131	4.2	10.1					31170.5	0.06	no	4.2	PASS
016_F005_2.0	0.1	2	654	4.2	11.17					155694.3	0.01	no	4.2	PASS
016_F005_1.0	0.1	2	26.2	6.6	10.21					3949.7	0.50	no	6.6	PASS

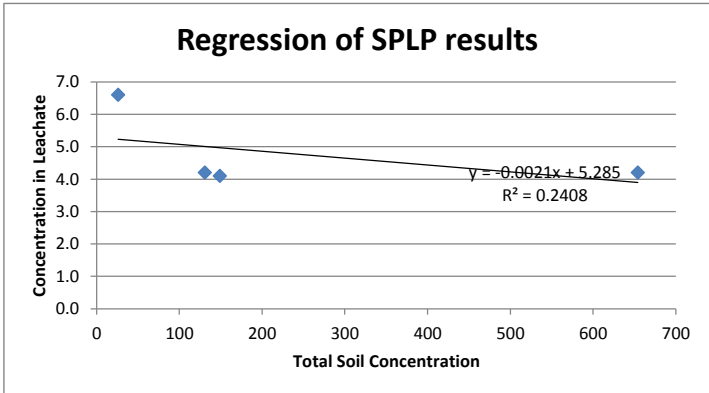
SPLP RESULTS for Nickel

OPTION 1a: All adjusted leachate concentrations are below the leachate criterion
 result before adjustment = 654.0 mg/kg
REMEDIATION STANDARD = 650 mg/kg

OPTION 1b: Simple inspection of tabulated results to find highest acceptable standard
 EVERYTHING PASSED, OPTION 1b NOT VALID

OPTION 2: Remediation standard using site-specific Kd value
 Kd ratio = 39.42, USE MINIMUM Kd
 Kd USED FOR CALCULATING STANDARD = 3949.7 L/kg
 result before adjustment = 5134.8054 mg/kg
REMEDIATION STANDARD = 650 mg/kg (controlled by maximum soil concentration)

OPTION 3: Remediation standard using linear regression
 Number of points = 4
 Soil concentration midrange = 340.1
 Number of points above midrange = 1
 Enough points above midrange? NO
 R-Square high enough? NO
 Leachate criterion within range of leachate concentrations? NO
 OPTION 3 NOT VALID



APPENDIX H-2 SPLP LOG

METALS BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-48787-1

SDG No.: _____

Batch Number: 141218 Batch Start Date: 12/26/12 14:00 Batch Analyst: Hu, Youhao

Batch Method: 1312 Batch End Date: 12/27/12 09:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	EFD_InitialpH	InitialRoomTemp	FinalRoomTemp	VesselNumber
LB 460-141218/1		1312, 3010A, 6020			2000 mL	4.25	22 Celsius	21.5 Celsius	SP011
460-48787-A-1	016_F005_1.0	1312, 3010A, 6020	E	100.03 g	2000 mL		22 Celsius	21.5 Celsius	EH31
460-48787-A-2	016_F005_2.0	1312, 3010A, 6020	E	100.16 g	2000 mL		22 Celsius	21.5 Celsius	EH36
460-48787-A-3	016_K007_4.0	1312, 3010A, 6020	E	100.09 g	2000 mL		22 Celsius	21.5 Celsius	EH34
460-48787-A-4	016_K007_4.0X	1312, 3010A, 6020	E	100.14 g	2000 mL		22 Celsius	21.5 Celsius	EH32
460-48787-A-9	016_K013_2.0	1312, 3010A, 6020	E	100.07 g	2000 mL		22 Celsius	21.5 Celsius	EH23
460-48787-A-10	016_K013_2.0X	1312, 3010A, 6020	E	100.13 g	2000 mL		22 Celsius	21.5 Celsius	TA8

Lab Sample ID	Client Sample ID	Method Chain	Basis	FiltCompDate	FiltCompTime	LeachatepH	ExtractFluid	AnalysisComment
LB 460-141218/1		1312, 3010A, 6020		122712	1045	4.26	SP1121912	SPLP Fluid #1 prep on 12/19/12; Exp 6/19/13; pH measured on 12/27/12 @ 1100
460-48787-A-1	016_F005_1.0	1312, 3010A, 6020	E	122712	1105	10.21	SP1121912	SPLP Fluid #1 prep on 12/19/12; Exp 6/19/13; pH measured on 12/27/12 @1120
460-48787-A-2	016_F005_2.0	1312, 3010A, 6020	E	122712	1110	11.17	SP1121912	SPLP Fluid #1 prep on 12/19/12; Exp 6/19/13; pH measured on 12/27/12 @1125
460-48787-A-3	016_K007_4.0	1312, 3010A, 6020	E	122712	1115	10.02	SP1121912	SPLP Fluid #1 prep on 12/19/12; Exp 6/19/13; pH measured on 12/27/12 @1130

METALS BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-48787-1

SDG No.: _____

Batch Number: 141218 Batch Start Date: 12/26/12 14:00 Batch Analyst: Hu, Youhao

Batch Method: 1312 Batch End Date: 12/27/12 09:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	FiltCompDate	FiltCompTime	LeachatepH	ExtractFluid	AnalysisComment
460-48787-A-4	016_K007_4.0X	1312, 3010A, 6020	E	122712	1120	10.10	SP1121912	SPLP Fluid #1 prep on 12/19/12; Exp 6/19/13; pH measured on 12/27/12 @1135
460-48787-A-9	016_K013_2.0	1312, 3010A, 6020	E	122712	1125	9.89	SP1121912	SPLP Fluid #1 prep on 12/19/12; Exp 6/19/13; pH measured on 12/27/12 @1140
460-48787-A-10	016_K013_2.0X	1312, 3010A, 6020	E	122712	1130	10.28	SP1121912	SPLP Fluid #1 prep on 12/19/12; Exp 6/19/13; pH measured on 12/27/12 @1145

Batch Notes	
Balance ID	13
Batch Comment	min temp = 20.8C max temp =21.6C
pH Meter ID	F
Room Temperature Thermometer ID	7958
SPLP Solution Lot #	SP1121912 prep: 12/19/12 exp: 06/19/12
Tumbler Rotations per Minute	29

Basis	Basis Description
E	SPLP East