BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
PROPOSED AMENDMENTS TO CLEAN	)	R 2012-009B
CONSTRUCTION OR DEMOLITION	)	(Rulemaking – Land)
DEBRIS (CCDD) FILL OPERATIONS:	)	
PROPOSED AMENDMENTS TO 35 Ill.	)	
Adm. Code 1100	)	

NOTICE OF FILING

To: SEE ATTACHED SERVICE LIST

Please take notice that on the 1st day of August 2013, you were served with copies of the Response to Board Questions on Behalf of LRRA.

By: 

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Date: August 1, 2013

PROOF OF SERVICE

I do hereby certify that a copy of the Response to Board Questions on Behalf of LRRA was tendered via email on August 1, 2013, to the following:

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Response to Board Questions on Behalf of LRRA

Question # 8 Attachment A

Although Section 742.Appendix B, Table C (Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route (Class I Groundwater) does not address concentrations for pH Greater than 9.0, the only two constituents with Maximum Allowable Concentration (MAC) values that decrease as pH increases are Chromium (+6) and Selenium.

a. Would the Agency be able to propose MAC values for Chromium (+6) and Selenium for pH greater than 9.0 or even just for pH of 12.49? If so, please comment on including just these values for Chromium (+6) and Selenium solely in Part 1100, so as to not to require opening up Part 742 to make a revision? *See* Tr. at 61-62.

b. In light of concerns regarding loads being rejected based on pH values greater than 9.0 and because the Agency did not include an upper pH limit in its proposal please comment on the pH standard adopted by the Board and whether the pH range should be limited to 6.25 and 12.5 as suggested in James Huff's testimony, as opposed to 6.25 to 9.0 as adopted. *See*, Tr. at 78.

RESPONSE:

LRRA submits that the maximum allowable pH should be raised to 12.5 to allow for the disposal of soil containing limestone aggregate. Under the current rules, CCDD facilities are allowed to accept stone and concrete which often have pH values that exceed 9.0. However, there has been no explanation as to why these sites cannot accept the same stone and concrete when they are mixed with soil. Nor has there been an explanation as to why a limestone quarry site that has stone walls with a pH value of 12.0 cannot accept material with a pH value greater than 9.0.

The Board has stated that the pH limits were set at 9.0 because the pH table for inorganics does go above that number. LRRA submits that the pH adjusted table found in Section 742 Appendix B is based on the pH of the water which comes into contact with the metals within the soil. The pH of the soil, therefore, is only representative of the pH of the water which flows through it. Soil pH alone will not cause metals to go into solution without the presence of water with similar pH. As soil testing typically occurs on unsaturated soil, the soil pH is used for determining the limiting concentrations of the inorganics per Appendix B.

Virtually all CCDD and/or clean soil fill sites maintain NPDES permits for water that is collected within the depression area and discharged. These permits typically require pH testing with discharge standards between 6.5 and 9.0. CCDD facilities must maintain

soils within a pH range that complies with its NPDES permit. LRRA submits that it is reasonable to assume that the pH of the water collected and discharged from the site is representative of the water coming in contact with and flowing through the soil. Accordingly, LRRA requests that CCDD and/or clean soil fill sites, which are in compliance with their NPDES permits, be allowed to accept soil with a pH value up to 12.5.

Question # 13 Attachment A

13. Do any other states have regulations for a subset of construction and demolition debris, such as clean or uncontaminated debris? If yes, is groundwater monitoring required? *See,* Tr. at 155.

RESPONSE:

LRRA's research indicates that the state of Pennsylvania has rules applicable to CCDD material that are very similar to the rules currently in place in Illinois. Under the Pennsylvania rules, "clean soil" must be certified as "clean" based on a "MAC" table standard and the operator is required to keep records of the origin of the soil that is accepted. The "MAC" standards for Pennsylvania are similar to to the MAC table used in Illinois although they are slightly less stringent for PNAs and inorganics. It should be noted that Pennsylvania is similar in geographical composition to Illinois with a mix of both major urbanized, industrial and large rural areas.

In Pennsylvania, once soil is certified as "clean" there is no restriction with regard to where the soil can be placed nor is there any groundwater monitoring requirement for sites accepting such material. Attached to these responses are the Pennsylvania CCDD rules and applicable MAC tables.

By: _____
Brian Lansu
Land Reclamation & Recycling Association

Table FP-1a
Clean Fill Concentration Limits for Organics

		Clean Fill
PARAMETER	CASRN	Total Analysis
		mg/kg
ACENAPHTHENE	83-32-9	2700
ACENAPHTHYLENE	208-96-8	2500
ACEPHATE	30560-19-1	0.9
ACETALDEHYDE	75-07-0	0.23
ACETONE	67-64-1	41
ACETONITRILE	75-05-8	1.9
ACETOPHENONE	98-86-2	200
ACETYLAMINOFLUORENE, 2- (2AAF)	53-96-3	0.069
ACROLEIN	10-702-8	0.00062
ACRYLAMIDE	79-06-1	0.00057
ACRYLIC ACID	79-10-7	0.051
ACRYLONITRILE	107-13-1	0.0087
ALACHLOR	15972-60-8	0.077
ALDICARB	116-06-3	0.12
ALDRIN	309-00-2	0.10
ALLYL ALCOHOL	107-18-6	0.58
AMINOBIPHENYL, 4-	92-67-1	0.0012
AMITROLE	61-82-5	0.029
AMMONIA	7664-41-7	360
AMMONIUM SULPHAMATE	7773-06-0	24
ANILINE	62-53-3	0.16
ANTHRACENE	120-12-7	350
ATRAZINE	1912-24-9	0.13
BAYGON (PROPOXUR)	114-26-1	0.057
BENOMYL	17804-35-2	880.00
BENTAZON	25057-89-0	16
BENZENE	71-43-2	0.13
BENZIDINE	92-87-5	0.078
BENZO[A]ANTHRACENE	56-55-3	25
BENZO[A]PYRENE	50-32-8	2.5
BENZO[B]FLUORANTHENE	205-99-2	25
BENZO[GHI]PERYLENE	191-24-2	180
BENZO[K]FLUORANTHENE	207-08-9	250
BENZOIC ACID	65-85-0	2900
BENZOTRICHLORIDE	98-07-7	0.012
BENZYL ALCOHOL	100-51-6	400
BENZYL CHLORIDE	100-44-7	0.051
BHC, ALPHA-	319-84-6	0.046
BHC, BETA-	319-85-7	0.22
BHC, DELTA-	319-86-8	11
BHC, GAMMA (LINDANE)	58-89-9	0.072
BIPHENYL, 1,1-	92-52-4	790
BIS(2-CHLOROETHYL)ETHER	111-44-4	0.0039
BIS(2-CHLORO-ISOPROPYL)ETHER	108-60-1	8.0
BIS(CHLOROMETHYL)ETHER	542-88-1	0.00001
BIS[2-ETHYLHEXYL] PHTHALATE	117-81-7	130
BISPHENOL A	80-05-7	700
BROMACIL (BROMAX)	314-40-9	2
BROMOCHLOROMETHANE	74-97-5	1.6
BROMODICHLOROMETHANE	75-27-4	3.40
BROMOMETHANE	74-83-9	0.54
BROMOXYNIL	1689-84-5	63
BROMOXYNIL OCTANOATE	1689-99-2	360
BUTADIENE, 1,3-	106-99-0	0.0062
BUTYL ALCOHOL, N-	71-36-3	12.00
BUTYLATE	2008-41-5	51.0
BUTYLBENZENE, N-	104-51-8	950
BUTYLEBENZENE, SEC-	135-98-8	350
BUTYLEBENZENE, TERT-	98-06-6	270
BUTYLBENZYL PHTHALATE	85-68-7	10000
CAPTAN	133-06-2	12
CARBARYL	63-25-2	41
CARBAZOLE	86-74-8	21
CARBOFURAN	1563-66-2	0.87
CARBON DISULFIDE	75-15-0	160

Table FP-1a
Clean Fill Concentration Limits for Organics

		Clean Fill
PARAMETER	CASRN	Total Analysis
		mg/kg
CARBON TETRACHLORIDE	56-23-5	0.26
CARBOXIN	5234-68-4	53
CHLORAMBEN	133-90-4	1.6
CHLORDANE	57-74-9	49
CHLORO-1, 1-DIFLUOROETHANE, 1-	75-68-3	2300
CHLORO-1-PROPENE, 3- (ALLYL CHLORIDE)	107-05-1	0.065
CHLOROACETOPHENONE, 2-	532-27-4	0.0093
CHLOROANILINE, P-	106-47-8	19.00
CHLOROBENZENE	108-90-7	6.1
CHLOROBENZILATE	510-15-6	1.60
CHLORBUTANE, 1-	109-69-3	2300
CHLORODIBROMOMETHANE	124-48-1	3.20
CHLORODIFLUOROMETHANE	75-45-6	2.6
CHLOROETHANE	75-00-3	5.00
CHLOROFORM	67-66-3	2.50
CHLORONAPHTHALENE, 2-	91-58-7	6200
CHLORO[DI]NITROBENZENE, [2-]P-	100-00-5	4.9
CHLOROPHENOL, 2-	95-57-8	4.40
CHLOROPRENE	126-99-8	0.45
CHLROPROPANE, 2-	75-29-6	21
CHLOROTHALONIL	1897-45-6	15
CHLOROTOLUENE, O-	95-49-8	20
CHLORPYRIFOS	2921-88-2	23
CHLORSULFURON	64902-72-3	25
CHLORTHAL-DIMETHYL (DACTHAL) (DCPA)	1861-32-1	650
CHRYSENE	218-01-9	230
CRESOL(S)	1319-77-3	3.1
CRESOL, O-(METHYLPHENOL, 2-)	95-48-7	64
CRESOL, M-(METHYLPHENOL, 3-)	108-39-4	36
CRESOL, P-(METHYLPHENOL, 4-)	106-44-5	4.2
CRESOL, P-CHLORO-M-	59-50-7	37
CROTONALDEHYDE	4170-30-3	0.00099
CROTONALDEHYDE, TRANS-	123-73-9	0.00099
CUMENE (ISOPROPYL BENZENE)*	98-82-8	780
CYCLOHEXANONE	108-94-1	1400
CYFLUTHRIN	68359-37-5	33
CYROMAZINE	66215-27-8	84
DDD, 4,4'-	72-54-8	6.8
DDE, 4,4'-	72-55-9	41
DDT, 4,4'-	50-29-3	53
DI(2-ETHYLHEXYL)ADIPATE	103-23-1	10000
DIALLATE	2303-16-4	0.15
DIAMINOTOLUENE, 2,4-	95-80-7	0.0042
DIAZINON	333-41-5	0.082
DIBENZO[A,H]ANTHRACENE	53-70-3	2.50
DIBROMO-3-CHLOROPROPANE, 1,2-	96-12-8	0.0092
DIBROMOBENZENE, 1,4-	106-37-6	150
DIBROMOETHANE, 1,2- (ETHYLENE DIBROMIDE)	106-93-4	0.0012
DIBROMOMETHANE	74-95-3	3.7
DI-N-BUTYLPHTHALATE, N-	84-74-2	1500
DICHOLOR-2-B[Y]UTENE, 1,4-	764-41-0	0.0009
DICHLOROBENZENE, 1,2-	95-50-1	59
DICHLOROBENZENE, 1,3-	541-73-1	61
DICHLOROBENZENE, P-	106-46-7	10
DICHLOROBENZIDINE, 3,3'-	91-94-1	8.3
DICHLORODIFLUOROMETHANE (FREON 12)	75-71-8	100
DICHLOROETHANE, 1,1-	75-34-3	0.65
DICHLOROETHANE, 1,2-	107-06-2	0.10
DICHLOROETHYLENE, 1,1-	75-35-4	0.19
DICHLOROETHYLENE, CIS-1,2-*	156-59-2	1.6
DICHLOROETHYLENE, TRANS-1,2-	156-60-5	2.3
DICHLOROMETHANE (METHYLENE CHLORIDE)	75-09-2	0.076
DICHLOROPHENOL, 2,4-	120-83-2	1
DICHLOROPHENOXYACETIC ACID, 2,4- (2,4-D)	94-75-7	1.8

Table FP-1a
Clean Fill Concentration Limits for Organics

		Clean Fill
PARAMETER	CASRN	Total Analysis
		mg/kg
DICHLOROPROPANE, 1,2-	78-87-5	0.11
DICHLOROPROPENE, 1,3-	542-75-6	0.12
DICHLOROPROPIONIC ACID (DALAPON), 2,2-	75-99-0	5.30
DICHLORVOS	62-73-7	0.012
DICYCLOPENTADIENE	77-73-6	0.12
DIELDRIN	60-57-1	0.11
DIETHYL PHTHALATE	84-66-2	160
DIFLUBENZIRON	35367-38-5	52
DIMETHOATE	60-51-5	0.28
DIMETHOXYBENZIDINE, 3,3-	119-90-4	16
DIMETHYLAMINOAZOBENZENE, P-	60-11-7	0.037
DIMETHYLANILINE, N,N-	121-69-7	4.1
DIMETHYLBENZIDINE, 3,3-	119-93-7	0.4
DIMETHYLPHENOL, 2,4-	105-67-9	32
DINITROBENZENE, 1,3-	99-65-0	0.049
DINITROPHENOL, 2,4-	51-28-5	0.21
DINITROTOLUENE, 2,4-	121-14-2	0.050
DINITROTOLUENE, 2, 6,- (2,6-DNT)	606-20-2	1.10
DINOSEB	88-85-7	0.290
DIOXANE, 1,4-	123-91-1	0.073
DIPHENAMID	957-51-7	12
DIPHENYLAMINE	122-39-4	12
DIPHENYLHYDRAZINE, 1,2-	122-66-7	0.15
DIQUAT	85-00-7	0.24
DISULFOTON	298-04-4	0.078
DIURON	330-54-1	0.86
ENDOSULFAN	115-29-7	30.00
ENDOSULFAN I (ALPHA)	959-98-8	110
ENDOSULFAN II (BETA)	33213-65-9	130
ENDOSULFAN SULFATE	1031-07-8	70
ENDOTHALL	145-73-3	4.1
ENDRIN	72-20-8	5.5
EPICHLOROHYDRIN	106-89-8	0.056
ETHEPHON	16672-87-0	2.1
ETHION	563-12-2	39
ETHOXYETHANOL, 2- (EGEE)	110-80-5	7.80
ETHYL ACETATE	141-78-6	220
ETHYL ACRYLATE	140-88-5	0.12
ETHYL BENZENE	100-41-4	46
ETHYL DIPROPYL THIOCARBAMATE, S- (EPTC)	759-94-4	65
ETHYL ETHER	60-29-7	53
ETHYLMETHACRYLATE	97-63-2	14
ETHYLENE GLYCOL	107-21-1	170
ETHYLENE THIOUREA (ETU)	96-45-7	0.034
ETHYL P-NITROPHENYL PHENYLPHOSPHOROTHIOATE	2104-64-5	0.12
FENAMIPHOS	22224-92-6	0.17
FENVALERATE (PYDRIN)	51630-58-1	94
FLUOMETURON (FLUORNETRON IN EPA FEB 96)	2164-17-2	2.5
FLUORANTHENE	206-44-0	3200
FLUORENE	86-73-7	3000
FLUOROTROCHLOROMETHANE (FREON 11)	75-69-4	87
FONOFOS	944-22-9	2.9
FORMALDEHYDE	50-00-0	12
FORMIC ACID	64-18-6	210
FOSETYL-AL	039148-24-8	9700
FURAN	110-00-9	0.42
FURFURAL	98-01-1	1.4
GLYPHOSATE	1071-83-6	620
HEPTACHLOR	76-44-8	0.68
HEPTACHLOR EPOXIDE	1024-57-3	1.1
HEXACHLOROBENZENE	118-74-1	0.96
HEXACHLOROBUTADIENE	87-68-3	1.20
HEXACHLOROCYCLOPENTADIENE	77-47-4	91
HEXACHLOROETHANE	67-72-1	0.560

Table FP-1a
Clean Fill Concentration Limits for Organics

		Clean Fill
PARAMETER	CASRN	Total Analysis
		mg/kg
HEXANE	110-54-3	500
HEXYTHIAZOX (SAVEY)	78587-05-0	820
HYDRAZINE/HYDRAZINE SULFATE	302-01-2	0.000098
HYDROQUINONE	123-31-9	20
INDENO[1,2,3-CD]PYRENE	193-39-5	25
IPRODIONE	36734-19-7	430
ISOBUTYL ALCOHOL	78-83-1	76
ISOPHORONE	78-59-1	1.90
KEPONE	143-50-0	0.56
MALATHION	121-75-5	34
MALEIC HYDRAZIDE	123-33-1	47
MANEB	12427-38-2	2
MERPHOS OXIDE	78-48-8	6.6
METHACRYLONITRILE	126-98-7	0.031
METHAMIDOPHOS	10265-92-6	0.022
METHANOL	67-56-1	58.00
METHOMYL	16752-77-5	3.20
METHOXYCHLOR	72-43-5	630
METHOXYETHANOL, 2-	109-86-4	0.41
METHYL ACETATE	79-20-9	690
METHYL ACRYLATE	96-33-3	27
METHYL CHLORIDE	74-87-3	0.038
METHYL ETHYL KETONE (2-BUTANONE)	78-93-3	54
METHYL ISOBUTYL KETONE	108-10-1	2.90
METHYL METHACRYLATE	80-62-6	26.0
METHYL METHANESULFONATE	66-27-3	0.083
METHYL PARATHION	298-00-0	0.42
METHYL STYRENE (MIXED ISOMERS)	25013-15-4	120
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	0.28
METHYLENE BIS(2-CHLOROANILINE), 4,4'-	101-14-4	3.9
METHYLNAPHTHALENE, 2-	91-57-6	2900
METHYLSTYRENE, ALPHA	98-83-9	120
NAPHTHALENE*	91-20-3	25
NAPHTHYLAMINE, 1-	134-32-7	0.30
NAPHTHYLAMINE, 2-	91-59-8	0.01
NAPROPAMIDE	15299-99-7	860
NITROANILINE, M-	99-09-2	0.033
NITROANILINE, O-	88-74-4	0.038
NITROANILINE, P-	100-01-6	0.031
NITROBENZENE	98-95-3	0.79
NITROPHENOL, 2-	88-75-5	5.90
NITROPHENOL, 4-	100-02-7	4.1
NITROPROPANE, 2-	79-46-9	0.000260
NITROSODIETHYLAMINE, N-	55-18-5	0.000018
NITROSODIMETHYLAMINE, N-	62-75-9	0.000041
NITROSO-DI-N-BUTYLAMINE, N-	924-16-3	0.0033
NITROSODI-N-PROPYLAMINE, N-	621-64-7	0.0013
NITROSODIPHENYLAMINE, N-	86-30-6	20.00
NITROSO-N-ETHYLUREA, N-	759-73-9	0.000054
OCTYL PHTHALATE, DI-N-	117-84-0	4400
OXAMYL (VYDATE)	23135-22-0	2.60
PARATHION	56-38-2	130
PCB-1016 (AROCLOR)	12674-11-2	15
PCB-1221 (AROCLOR)	11104-28-2	0.63
PCB-1232 (AROCLOR)	11141-16-5	0.50
PCB-1242 (AROCLOR)	53469-21-9	16
PCB-1248 (AROCLOR)	12672-29-6	9.90
PCB-1254 (AROCLOR)	11097-69-1	4.40
PCB-1260 (AROCLOR)	11096-82-5	30
PEBULATE	1114-71-2	300
PENTACHLOROBENZENE	608-93-5	180
PENTACHLORONITROBENZENE	82-68-8	5.00
PENTACHLOROPHENOL	87-86-5	5.00
PHENACETIN	62-44-2	12.00

Table FP-1a
Clean Fill Concentration Limits for Organics

		Clean Fill
PARAMETER	CASRN	Total Analysis
		mg/kg
PHENANTHRENE	85-01-8	10000
PHENOL	108-95-2	66.00
PHENYLENEDIAMINE, M-	108-45-2	3.10
PHENYLPHENOL, 2-	90-43-7	490
PHORATE	298-02-2	0.41
PHTHALIC ANHYDRIDE	85-44-9	2300
PICLORAM	1918-02-1	7.4
PRONAMIDE	23950-58-5	3.1
PROPANIL	709-98-8	9.2
PROPHAM	122-42-9	17
PROPYLBENZENE, N-	103-65-1	290
PROPYLENE OXIDE	75-56-9	0.049
PYRENE	129-00-0	2200
PYRIDINE	110-86-1	0.11
QUINOLINE	91-22-5	0.018
QUIZALOFOP (ASSURE)	76578-14-8	47
RONNEL	299-84-3	280
SIMAZINE	122-34-9	0.15
STRYCHNINE	57-24-9	0.89
STYRENE	100-42-5	24
TEBUTHIURON	34014-18-1	83
TERBACIL	5902-51-2	2.2
TERBUFOS	13071-79-9	0.12
TETRACHLOROBENZENE, 1,2,4,5-	95-94-3	5.1
TETRACHLORODIBENZO-P-DIOXIN, 2,3,7,8- (TCDD)	1746-01-6	0.00012
TETRACHLOROETHANE, 1,1,1,2-	630-20-6	18
TETRACHLOROETHANE, 1,1,2,2-	79-34-5	0.0093
TETRACHLOROETHYLENE (PCE)	127-18-4	0.43
TETRACHLOROPHENOL, 2,3,4,6-	58-90-2	450.00
TETRAETHYL LEAD	78-00-2	0.0046
TETRAETHYLDITHIOPYROPHOSPHATE	3689-24-5	0.73
THIOFANOX	39196-18-4	0.12
THIRAM	137-26-8	47
TOLUENE	108-88-3	44
TOLUIDINE, M-	108-44-1	0.13
TOLUIDINE, O-	95-53-4	0.32
TOLUIDINE, P-	106-49-0	0.32
TOXAPHENE	8001-35-2	1.20
TRIALLATE	2303-17-5	240
TRIBROMOMETHANE (BROMOFORM)	75-25-2	4.4
TRICHLORO- 1,2,2-TRIFLUOROETHANE, 1,1,2-	76-13-1	26000
TRICHLOROBENZENE, 1,2,4-	120-82-1	27
TRICHLOROBENZENE, 1,3,5-	108-70-3	31
TRICHLOROETHANE, 1,1,1-	71-55-6	7.20
TRICHLOROETHANE, 1,1,2-	79-00-5	0.15
TRICHLOROETHYLENE (TCE)	79-01-6	0.17
TRICHLOROPHENOL, 2,4,5-	95-95-4	2300
TRICHLOROPHENOL, 2,4,6-	88-06-2	3.1
TRICHLOROPHENOXYACETIC ACID, 2,4,5- (2,4,5-T)	93-76-5	1.50
TRICHLOROPHENOXYPROPIONIC ACID, 2,4,5- (2,4,5-TP)(SILV	93-72-1	22
TRICHLOROPROPANE, 1,1,2-	598-77-6	3.1
TRICHLOROPROPANE, 1,2,3-	96-18-4	1.6
TRICHLOROPROPENE, 1,2,3-	96-19-5	11
TRIFLURALIN	1582-09-8	0.96
TRIMEHTYLBENZENE, 1,3,4- (TRIMETHYLBENZENE, 1,2,4-)	95-63-6	9
TRIMETHYLBENZENE, 1,3,5-	108-67-8	2.8
TRINITROTOLUENE, 2,4,6-	118-96-7	0.023
VINYL ACETATE	108-05-4	6.50
VINYL BROMIDE (BROMOMETHANE)	593-60-2	0.068
VINYL CHLORIDE	75-01-4	0.03
WARFARIN	81-81-2	2.60
XYLENES (TOTAL)	1330-20-7	990
ZINEB	12122-67-7	29

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Waste Management

DOCUMENT NUMBER: 258-2182-773

INTERIM FINAL EFFECTIVE DATE: August 7, 2010

TITLE: Management of Fill

AUTHORITY: This document is established in accordance with the Act of July 7, 1980, as amended, 35 P.S. §§ 6018.101 *et seq.*, known as the Solid Waste Management Act (SWMA); the Act of June 22, 1937, as amended, 35 P.S. §§ 691.1 *et seq*., known as the Clean Streams Law; the Act of April 9, 1929, Section 1917-A of the Administrative Code, 71 P.S. § 510-17; the Act of July 18, 1995, 35 P.S. §§ 6026.101 *et seq.*, known as the Land Recycling and Environmental Remediation Standards Act.

POLICY: This policy is designed to replace the Department's existing Clean Fill Policy dated February 29, 1996.

PURPOSE: This policy provides DEP's procedures for determining whether material is clean fill or regulated fill. Regulated fill may not be used unless a SWMA permit is secured by the individual or entity using the regulated fill.

APPLICABILITY: This policy shall be used to evaluate whether material qualifies as clean fill or regulated fill. This policy does not apply to mine land reclamation activities subject to a permit. Excavation, movement or reuse of fill material within a project area or right-of-way of a project is not an activity that requires a SWMA permit.

DISCLAIMER: The policies and procedures outlined in this guidance document are intended to supplement existing requirements. Nothing in the policies or procedures shall affect regulatory requirements. The policies and procedures herein are not an adjudication or a regulation. There is no intent on the part of the DEP to give the rules in these policies that weight or deference. This document establishes the framework within which DEP will exercise its administrative discretion in the future. DEP reserves the discretion to deviate from this policy statement if circumstances warrant.

PAGE LENGTH: 10 pages

LOCATION: Volume 6, Tab 40(b)

DEFINITIONS:

Act 2 - The Land Recycling and Environmental Remediation Standards Act, Act of May 18, 1995 (P.L. 4, No. 1995-2), 35 P.S. §§ 6026.101 et seq.

Clean fill - Uncontaminated, nonwater-soluble, nondecomposable inert solid material. The term includes soil, rock, stone, dredged material, used asphalt, and brick, block or concrete from construction and demolition activities that is separate from other waste and recognizable as such. (25 Pa. Code §§ 271.101 and 287.101) The term does not include materials placed in or on the waters of the Commonwealth unless otherwise authorized.

Environmental due diligence - Investigative techniques, including, but not limited to, visual property inspections, electronic data base searches, review of ownership and use history of property, Sanborn maps, environmental questionnaires, transaction screens, analytical testing, environmental assessments or audits.

Historic fill - Material (excluding landfills, waste piles and impoundments) used to bring an area to grade prior to 1988 that is a conglomeration of soil and residuals, such as ashes from the residential burning of wood and coal, incinerator ash, coal ash, slag, dredged material and construction and demolition waste. The term does not include iron or steel slag that is separate from residuals if it meets the coproduct definition and the requirements of 25 Pa. Code § 287.8. The term does not include coal ash that is separate from residuals if it is beneficially used in accordance with 25 Pa. Code § 287.661 - 287.666.

Regulated fill - Soil, rock, stone, dredged material, used asphalt, historic fill, and brick, block or concrete from construction and demolition activities that is separate from other waste and recognizable as such that has been affected by a spill or release of a regulated substance and the concentrations of regulated substances exceed the values in Table FP-1a and b.

Regulated substance - The term shall include hazardous substances and contaminants regulated under the Hazardous Sites Cleanup Act, and substances covered by the Clean Streams Law, the Air Pollution Control Act, the Solid Waste Management Act, the Infectious and Chemotherapeutic Waste Law, and the Storage Tank and Spill Prevention Act.

Release - Spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing of a regulated substance into the environment in a manner not authorized by the Department of Environmental Protection. The term includes the abandonment or discarding of barrels, containers, vessels and other receptacles containing a regulated substance.

Uncontaminated material - Material unaffected by a spill or release of a regulated substance, or if affected by a spill or release, the concentrations of regulated substances are below the concentrations specified in Table FP-1a and b.

REFERENCES:

25 Pa. Code Chapters 287 to 299 (residual waste regulations)
25 Pa. Code Chapters 271 to 285 (municipal waste regulations)
Solid Waste Management Act, 35 P.S. §§ 6018.101 *et seq.*
Land Recycling and Environmental Remediation Standards Act, 35 P.S. §§ 6026.101 *et seq.*

TECHNICAL GUIDANCE:

FILL DETERMINATION

1) To determine whether fill is clean or regulated, a person must perform environmental due diligence.[1]

   a) If due diligence shows no evidence of a release of a regulated substance, the material may be managed as clean fill under this policy.

   b) If due diligence shows evidence of a release, the material must be tested to determine if it qualifies as clean fill. Testing must be performed in accordance with Appendix A.

      i) If testing reveals that the material contains concentrations of regulated substances that are below the residential limits in Table FP-1a and b, the material must be managed as clean fill.

      ii) If testing reveals that the material contains concentrations of regulated substances that exceed the limits in Table FP-1a and b, the material must be managed as regulated fill.

2) A person may not blend or mix materials to become clean fill. Materials that contain regulated substances that are intentionally released may not be managed under this policy.

MANAGEMENT OF REGULATED FILL

1) Materials identified as regulated fill are waste and must be managed in accordance with the Department's municipal or residual waste regulations, whichever is applicable, based on 25 Pa. Code §§ 287.2 or 271.2. Regulated fill may be beneficially used under General Permit WMGR096 (proposed) if the materials and the proposed activities for the fill meet the conditions of that permit. A person may apply for an industry-wide beneficial use general permit for the beneficial use of regulated fill in lieu of this general permit.

2) Regulated fill may not be placed on a greenfield property not planned for development, or on a property currently in residential use or planned for residential use unless otherwise authorized.

3) Fill containing concentrations of regulated substances that exceed the values in Table GP-1 a and b may not be managed under the provisions of this policy or General Permit WMGR096, but must be otherwise managed in accordance with the provisions of the Department's municipal or residual waste regulations.

4) A general permit is not required for remediation activities undertaken entirely on an Act 2 site pursuant to the requirements of Section 902 of the Land Recycling and Environmental Remediation Standards Act. A general permit is also not required if regulated fill from an Act 2 site is used as construction material at a receiving site that is being remediated to attain an Act 2 standard as long as the procedural and substantive requirements of Act 2 are met. Regulated

[1] Analytical assessment, testing or sampling is only required if visual inspection or reviews of historic property use indicates evidence of a release of a regulated substance.

substances contained in the regulated fill must be incorporated into the notice of intent to remediate and the final report. Movement of regulated fill between Act 2 sites must be documented in both the sending and receiving sites' cleanup plans and final reports. Placement of the regulated fill may not cause the receiving site undergoing remediation to exceed the selected Act 2 standard.

MANAGEMENT OF CLEAN FILL

1) Use of material as clean fill does not require a permit under the Solid Waste Management Act and regulations, and it may be used in an unrestricted or unregulated manner under this Act and its regulations. The use of materials as clean fill is still regulated under other environmental laws and regulations. A person using materials as clean fill under the policy is still subject to and must comply with all applicable requirements governing the placement or use of material as clean fill, such as Chapter 102 (Erosion and Sediment Control) and Chapter 105 (Dam Safety and Waterway Management).

2) Any person placing clean fill which has been affected by a release of a regulated substance on a property must certify the origin of the fill material and results of analytical testing to qualify the material as clean fill on Form FP-001. Form FP-001 must be retained by the owner of the property receiving the fill.

3) Best management practices (BMP) must be followed prior to demolition activities to remove materials like lead-based paint surface, friable asbestos and hazardous materials such as mercury switches, PCB ballasts and fluorescent light bulbs from a building if the brick, block, or concrete is used as clean fill.

4) Clean fill may not contain any free liquids based on visual inspection, and shall not create public nuisances (for example objectionable odors) to users of the receiving property or adjacent properties.

Appendix A

Sampling and Analyses for Regulated Material to be Used as Fill:

Sampling of regulated material proposed to be used as fill shall be done either by composite samples or by discrete samples. Sampling in either case shall be random and representative of the fill material being sampled. Sampling shall be in accordance with the most current version of the EPA RCRA Manual, SW-846 *(Test Methods for Evaluating Solid Waste, Physical/Chemical Methods. Office of Solid Waste and Emergency Response).*

(a) Sampling based on composite sampling procedures shall include the following:

(i) For volumes of material equal to or less than 125 cubic yards, a total of eight samples shall be collected and analyzed as follows:

(A) For analysis of all substances other than volatile organic compounds (VOCs), the samples shall be analyzed in two composites of four samples each, in accordance with the most current version of the USEPA Manual, SW-846 *(Test Methods for Evaluating Solid Waste, Physical/Chemical Methods. Office of Solid Waste and Emergency Response).*

(B) Two samples shall be selected from the 8 samples for analysis of VOCs. The samples shall be based on field screening of the eight samples to select those samples that are most likely to contain the highest concentrations of VOCs.

(C) Two grab samples shall be taken from the same areas in the material from which the two samples used for field screening of VOCs were taken, in accordance with Method 5035 from the most current version of the USEPA Manual, SW-846 *(Test Methods for Evaluating Solid Waste, Physical/Chemical Methods. Office of Solid Waste and Emergency Response).*

(ii) For volumes of material greater than 125 cubic yards and less than or equal to 3,000 cubic yards, a total of 12 samples shall be collected and analyzed as follows:

(A) For analysis of all substances other than VOCs, the samples shall be analyzed in three composites of four samples each.

(B) Three samples shall be selected from the 12 samples for analysis of VOCs. The samples shall be based on field screening of the 12 samples to select those samples that are most likely to contain the highest concentrations of VOCs.

(C) Three grab samples shall be taken from the same areas in the material from which the three samples used for field screening of VOCs were taken, in accordance with EPA Method 5035, referenced in subparagraph (i)(C).

(iii) For each additional 3,000 cubic yards of material or part thereof over the initial 3,000 cubic yards, 12 additional samples shall be collected and analyzed as follows:

(A) For analysis of all substances other than VOCs, the samples shall be analyzed in three composites of four samples each.

(B) Three samples for analysis of VOCs shall be selected from the 12 samples for analysis of VOCs. The samples shall be based on field screening of the 12 samples to select those samples that are most likely to contain the highest concentrations of VOCs.

(C) Three grab samples shall be taken from the same areas in material from which the three samples used for field screening of VOCs were taken, in accordance with EPA Method 5035, referenced in subparagraph (i)(C).

(b) Sampling based on discrete sampling procedures shall include the following:

(i) For volumes of material equal to or less than 125 cubic yards, a minimum of eight samples shall be collected and analyzed. For volumes of material greater than 125 cubic yards and less than or equal to 3,000 cubic yards, a minimum of 12 samples shall be collected and analyzed. For each additional 3,000 cubic yards of material or part thereof over the initial 3,000 cubic yards, a minimum of 12 additional samples shall be collected and analyzed.

(ii) For VOCs analysis, grab sampling procedures shall be the procedures described in subsection (a), for the equivalent volumes of material sampled.

(c) Analyses of results:

(i) For a composite sample taken in accordance with subsection (a), the measured numeric value for a parameter shall be less than or equal to the concentration limit listed in Table FP-1a or b for that parameter in order for the material to qualify as clean fill, or in Table GP-1a or b for that parameter in order for the fill material to qualify as regulated fill.

(ii) For a grab sample, taken in accordance with subsections (a) and (b), the measured numeric value for a parameter shall be less than or equal to the concentration limit listed in Table FP-1a or b for that parameter in order for the material to qualify as clean fill, or in Table GP-1a or b for that parameter for the fill material to qualify as regulated fill.

(iii) For discrete samples required in subsection (b), the measured numeric values for a substance in 75% of the discrete samples shall be equal to or less than the concentration limit listed in Table FP-1a or b, or in Table GP-1a or b for that parameter with no single sample exceeding more than twice the concentration limit for a parameter.

(d) In lieu of subsection (c), a person may use 95% Upper Confidence Limit (UCL) of the arithmetic mean to determine whether a fill material meets the appropriate concentration limits for use as clean or regulated fill. The calculated 95% UCL of the arithmetic mean must be below the appropriate concentration limit for clean or regulated fill. Sampling shall be random and

representative of the material being sampled. The minimum number of samples shall be determined in accordance with EPA approved methods on statistical analysis of environmental data, as identified in 25 PA. Code, §250.707(e) (relating to statistical tests). The application of the 95% UCL of the arithmetic mean shall comply with the following performance standards:

(i) The null hypotheses (Ho) shall be that the true fill arithmetic average concentration is at or above the regulated fill appropriate concentration limit, and the alternative hypothesis (Ha) shall be that the true fill arithmetic average concentration is below the regulated fill appropriate concentration limit.

(ii) The underlying assumptions of the statistical method shall be met, such as data distribution.

(iii) Compositing cannot be used for volatile organic compounds.

(iv) The censoring level for each nondetect shall be the assigned value randomly generated that is between zero and the limit related to the PQL.

(v) Tests shall account for spatial variability, unless otherwise approved by the Department.

(vi) Statistical testing shall be done individually for each parameter present in the fill.

(vii) Where a fill has distinct physical, chemical or biological characteristics, or originates from different areas, the statistical testing shall be done separately.

(viii) The following information shall be documented:

(A) A description of the original areas of the fill, and physical, chemical and biological characteristics of the fill.

(B) A description of the underlying assumptions of the statistical method.

(C) Documentation showing that the sample data set meets the underlying assumptions of the statistical method.

(D) Documentation of input and output data for the statistical test, presented in tables or figures, or both, as appropriate.

(E) An interpretation and conclusion of the statistical test.

(e) The Synthetic Precipitation Leaching Procedure (SPLP, per *Technical Guidance Manual*, 253-0300-100/ May 4, 2002 /Page II-26-27), is listed below:

The value for the SPLP is the concentration of a regulated substance in soil at the site that does not produce a leachate in which the concentration of the regulated substance exceeds the groundwater MSC. Since this test must be conducted on the actual site soil, no values for the SPLP could be published in the tables of MSCs in the regulations. The following procedure should be used to determine the alternative soil-to-groundwater value based upon the SPLP:

(i) During characterization, the remediator should obtain a minimum of ten samples from within the impacted soil area. The four samples with the highest total concentration of the regulated substance should be submitted for SPLP analysis. Samples obtained will be representative of the soil type and horizon impacted by the release of the regulated substance.

(ii) Determine the lowest total concentration (TC) that generates a failing SPLP result. The alternative soil-to-groundwater standard will be the next lowest TC.

(iii) If all samples result in a passing SPLP level, the alternative soil-to-groundwater standard will be the TC corresponding to the highest SPLP result. The remediator has the option of obtaining additional samples.

(iv) If none of the samples generates a passing SPLP, the remediator can obtain additional samples and perform concurrent TC/SPLP analyses to satisfy the above requirements for establishing an alternative soil-to-groundwater standard.