TABLE DR1. THERMOLUMINESCENCE AGE DATA FROM THIS STUDY FOR LOESS UNITS IN THE LOWER MISSISSIPPI VALLEY.

Sample No. Depth* (cm)	U† (ppm)	Th† (ppm)	K† (%)	CR§ (Gy/ka)	Dose rate# (Gy/ka ±CV)	T, TB** (°C)	T, PB†† (°C)	ED§§, TB (Gy±CV)	ED, PB (Gy±CV)	TLage TB## (ka, 2σ)	TL age PB†† (ka, 2σ)	Weighted Mean age (ka, 2σ)	Loess unit (No. on Fig. 9)
Mounds, Pulaski County, IL													
MMV-46 +585	5.2	8.8	1.64	0.2	5.0 ±0.2	370-450	N.D.###	120.4 ±4.2	N.D.###	24.1 ±2.7	N.D.###	N.A.###	middle Peoria (1)
MMV-43 +63	2.9	4.8	1.53	0.1	3.3 ±0.2	370-460	N.D.###	107.7 ±7.8	N.D.###	32.3 ±5.5	N.D.###	N.A.###	basal Peoria (2)
MMV-41 -147	2.5	6.2	1.21	0.1	3.1 ±0.1	370-440	N.D.###	172.9 ±4.0	N.D.###	56.2 ±5.7	N.D.###	N.A.###	basal Roxana (3)
Old River, Tipton County, TN													
MMV-14 -61	4.3 ±0.5	7.3 ±0.3	1.9 ±0.1	0.06	4.5 ±0.3	360-400	370-400	131.4 ±7.9	134.8 ±40.4	29.9 ±3.0	30.6 ±9.5	N.A.###	upper Roxana (4)
MMV-17 -500	2.9 ±0.4	7.0 ±0.3	1.6 ±0.1	0.03	2.6 ±0.7	360-390	N.D.###	577.1 ±68.7	N.D.###	219.8 ±28.8	N.D.###	N.A.###	Crowley's Ridge(?)
Wittsburg Quarry, Cross County, AR													
MMV-5 +170***	3.6 ±0.4	8.0 ±0.3	1.5 ±0.1	N.D.###	4.1 ± 0.3	330-350	N.D.###	94.3 ±5.3	N.D.###	23.2 ±2.3	N.D.###	N.A.###	lower Peoria (5)
MMV-6 +500†††	3.7 ±0.5	8.4 ±0.4	1.9 ±0.1	0.1	4.2 ± 0.3	380-410	N.D.###	142.9 ±4.4	N.D.###	33.9 ±2.9	N.D.###	N.A.###	Roxana (6)
MMV-7 -100§§§	3.3 ±0.5	10.9 ±0.4	1.4 ±0.7	N.D.###	4.1 ± 0.3	390-430	N.D.###	970.0 ±116.4	N.D.###	240.0 ±40.0	N.D.###	N.A.###	upper Loveland
MMV-9 -400§§§	3.0 ±0.4	8.6 ±0.3	1.8 ±0.7	0.06	4.1 ±0.3	410-430	410-440	790.0 ±126.4	644.0 ±253.0	190.0 ±30.0	156.7 ±73.7	N.D.###	lower Loveland
Phillips Bayou, Phillips County, AR													
MMV-26a +500	2.8 ±0.4	6.0 ±0.2	1.4 ±0.1	N.D.###	3.8 ±0.3	350-400	350-380	161.2 ±4.6	162.3 ±15.4	42.4 ±4.2	42.7 ±12.4	N.D.###	basal Peoria (7)
MMV-26b +500	2.8 ±0.4	6.0 ±0.2	1.4 ±0.1	N.D.###	3.8 ±0.3	260-300	270-300	111.2 ±2.6	107.6 ±11.3	29.2 ±3.0	28.3 ±5.4	N.D.###	basal Peoria (8)
MMV-18 +90	3.5 ±0.4	6.8 ±0.3	1.5 ±0.1	N.D.###	3.7 ±0.4	360-400	380-400	97.7 ±3.2	76.5 ±12.2	26.3 ±2.3	20.6 ±3.7	24.7 ±1.9	basal Peoria (9)
MMV-19 -220	4.1 ±0.5	8.6 ±0.4	1.9 ±0.1	0.09	4.4 ±0.4	360-410	350-390	139.1 ±3.8	172.1 ±9.8	31.3 ±2.6	38.8 ±3.8	33.7 ±2.1	upper Roxana (10)
MMV-20 -473	3.9 ±0.5	8.6 ±0.4	1.9 ±0.1	0.07	4.4 ±0.4	350-420	350-430	190.5 ±7.2	218.6 ±13.1	43.7 ±3.9	50.1 ±5.0	46.1 ±3.0	lower Roxana (11)
MMV-21 -723	3.1 ±0.5	9.7 0.4	1.2 ±0.1	0.06	4.0 ±0.3	310-390	350-390	481.0 ±48.1	489.0 ±97.8	121.0 ±16.0	123.0 ±27.0	122.0 ±14.0	upper Loveland
MMV-22 -1256	3.3 ±0.4	8.5 ±0.4	1.9 ±0.1	0.04	4.1 ±0.3	430-450	420-440	798.0 ±151.6	715.0 ±171.6	194.0 ±40.0	174.0 ±43.0	184.0 ±29.0	Loveland
MMV-23 -1516	2.9 ±0.4	6.3 ±0.3	2.0 ±0.9	0.04	3.5 ±0.2	270-330	N.D.###	259.7 ±26.3	N.D.###	129.5 ±15.8	N.D.###	N.A.###	Loveland or Crowley's Ridge(?)
Yocona River, Panola County, MS													
MMV-28 -500	2.9 ±0.4	6.8 ±0.3	1.8 ±0.1	0.07	3.7 ±0.3	370-410	N.D.###	743.6 ±66.2	N.D.###	194.6 ±37.9	N.D.	N.A.###	middle Crowley's Ridge(?)
Sicily Island, Catahoula Parish, LA													
MMV-37 (3 m above lower contact)	3.1 ±.1	10.6 ±0.3	1.2 ±0.1	0.04	4.3 ±0.2	360-380	N.D.###	192.6 ±7.8	N.D.###	45.2 ±2.7	N.D.###	N.A.###	Sicily Island (12)

TABLE DR1. THERMOLUMINESCENCE AGE DATA FROM THIS STUDY FOR LOESS UNITS IN THE LOWER MISSISSIPPI VALLEY.

Sample No. Depth* (cm)	U† (ppm)	Th† (ppm)	K† (%)	CR§ (Gy/ka)	Dose rate# (Gy/ka ±CV)	T, TB** (°C)	T, PB†† (°C)	ED§§, TB (Gy±CV)	ED, PB (Gy±CV)	TLage TB## (ka, 2σ)	TL age PB†† (ka, 2σ)	Weighted Mean age (ka, 2σ)	Loess unit (No. on Fig. 9)

Note: Analyses from the U.S. Geological Survey (USGS) TL laboratory, Denver, Colorado. Data from Millard and Maat (1994), H.T. Millard (USGS, unpublished data, 1994–1996), and P.B. Maat (USGS, unpublished data, 1995). Most samples showed similar behavior, though the growth curves for younger samples show greater linearity. Samples, from the Roxana and Peoria produced consistent ED estimates across a wide range of temperatures (Millard and Maat, 1994). Samples taken from the Loveland, showed similar ED values at high temperatures only (Millard and Maat, 1994), suggesting that results from the older loesses may have improved with a higher temperature preheat treatment (Berger, 1994). The 122 ka TL MMV-21 age estimate is reasonable stratigraphically, but should be viewed as an estimate only. The 122 ka TL MMV-21 age estimate is reasonable stratigraphically, but should be viewed as an estimate only.

Abrreviations: U, uranium; Th, thorium; K, potassium; % percent; CR, Cosmic rate (equivalent dose); T, temperature; °C, degrees celsius; Gy, grays (1Gy=1 joule/kilogram); CV, coefficient of variation (ratio of standard deviation to the mean); ka, thousand years; ±, plus or minus; m, meter; cm, centimeter; σ, sigma.

*Distance (cm) from top of Farmdale paleosol unless otherwise indicated

†Determined by portable gamma spectrometer

§CR, cosmic ray (equivalent) dose, measured in grays (Gy), calculated from sample elevation and depth. The equivalent dose is

Calculated value assumes alpha efficiency value of 0.10±0.03 and a moisture content of 20±5%

**TB, Total bleach method for determining ED.

††PB, Partial bleach method for determining ED.

§§ED, Equivalent dose estimates presented with CV.

##TL, thermoluminescence age estimates presented with CV.

***Distance above top of Farmdale paleosol on East wall

†††Approximate distance above Roxana Silt/Loveland loess unconformity at top of Sangamon paleosol; North side of quarry road

§§§Approximate distance below Roxana Silt/Loveland loess unconformity at top of Sangamon paleosol; North side of quarry road

###N.D. = not determined; N.A., N.A. = not applicable

TABLE DR2. PUBLISHED THERMOLUMINESCENCE AND INFRARED STIMULATED LUMINESCENCE DATA FOR THE LOWER MISSOURI AND MISSISSIPPI VALLEYS.

Loess unit and approximate thickness (m)	Stratigraphic position	TL age (ka)	IRSL age (ka)	Age method, Number on Fig.9
Loveland Type Section, Pottawattamie County, IA, (Site A, Fig. 3); Forman and others (1992), Forman and Pierson (2002)				
Roxana Silt (3) (in Farmdale Geosol)	upper	23 ± 3	35.1 ± 3.1	IRSL, 13
Roxana Silt (3)	middle	30 ± 3	46.3 ± 3.9	IRSL, 14
Loveland Silt (8-9)	middle	125 ± 25	146 ± 13	N.A.
Loveland Silt (8-9)	lower middle	140 ± 15	162 ± 3	N.A.
Loveland Silt (8-9)	lower	110 ± 15	165 ± 14	N.A.
Loveland Silt (8-9)	basal	165 ± 20	162 ± 13	N.A.
Pleasant Grove School, Madison County, IL (Site B, Fig. 3); Forman and others (1992), Forman and Pierson (2002)				
Roxana Silt (8)	upper	27 ± 5	28.6 ± 2.5	IRSL, 15
Roxana Silt (8)	middle	31 ± 4	30.4 ± 2.8	IRSL, 16
Teneriffe Silt (4.5-5)	middle	77 ± 8	89.1 ± 7.7 87.1 ± 6.1	IRSL, 17a IRSL, 17b
Teneriffe Silt (4.5-5)	lower middle	N.D.	98.6 ± 6.5 96.4 ± 8.1	IRSL, 18 IRSL, 19
Bonfils Quarry, St. Louis County, MO (Site C1, Fig. 3); Forman and Pierson (2002)				
Roxana Silt (4.75)	upper middle	N.D.	35.5 ± 3.0	IRSL, 20
Roxana Silt (4.75)	middle	N.D.	45.9 ± 3.8	IRSL, 21
Roxana Silt (4.75)	middle	N.D.	50.1 ± 4.2	IRSL, 22
Roxana Silt (4.75)	lower middle	N.D.	64.0 ± 5.8	IRSL, 23
Roxana Silt (4.75)	lower	45.3 ± 3.9	54.9 ± 4.6	IRSL, 24
Roxana Silt (4.75)	lower	62.2 ± 6.0	73.4 ± 6.0	IRSL, 25
Roxana Silt (4.75)	basal	76.8 ± 6.4	82.5 ± 6.8	IRSL, 26
Bonfils Quarry, St. Louis County, MO , (Site C2, Fig. 3); Forman and Pierson (2002)				
Loveland Silt (2.8)	lower middle	≥138 ± 11	≥126 ± 10	N.A.
Loveland Silt (2.8)	lower middle	≥181 ± 15	≥182 ± 15	N.A.
Loveland Silt (2.8)	basal	≥154 ± 13	≥157 ± 13	N.A.
Crowley's Ridge Silt (4)	lower	≥184 ± 15	≥218 ± 18	N.A.
Crowley's Ridge Silt (4)	lower	≥274 ± 22	≥264 ± 21	N.A.
Crowley's Ridge Silt (4)	lower	≥224 ± 18	≥159 ± 14	N.A.
Hornbeak Section, Obion County,TN, (Site D. Fig. 3); Rodbell and others (1997)				
Roxana Silt (3.2)	basal	53 ± 4.5	N.D.	TL, 27
Loveland 1 (1.2); (total Loveland, 3.0)	basal	127 ± 12.0	N.D.	N.A.
Meeman Shelby Section, Tipton County,TN, Site E; Rodbell and others (1997)*				
Roxana Silt (3.2)	lower middle	38.1 ± 3.5	N.D.	TL, 28
Loveland 3 (3.0); (total Loveland, 5.0)	middle	53 ± 4.0	N.D.	TL, 29
Loveland 2 (2.0); (total Loveland, 5.0)	basal	70 ± 6.0	N.D.	TL, 30
Loveland 2 (2.0); (total Loveland, 5.0)	basal	86 ± 8.0	N.D.	TL, 31
Section V1, Vicksburg, MS, (Site F, Fig. 3); Pye and Johnson (1988)				
Unit 3 (3.4) (Roxana equivalent)	upper	79.6 ± 5.4	N.D.	TL, 32
Unit 3 (3.4) (Roxana equivalent)	lower middle	76.1 ± 5.69	N.D.	TL, 33
Unit 3 (3.4) (Roxana equivalent)	basal	85.1 ± 5.86	N.D.	TL, 34
Unit 4 (3.2) (Loveland equivalent)	upper middle	122.6 ± 10.03	N.D.	N.A.
Unit 4 (3.2) (Loveland equivalent)	lower middle	>132.0	N.D.	N.A.
Section N1, Natchez, MS, (Site G, Fig. 3); Pye and Johnson (1988)				
Unit 3 (0.9) (Roxana equivalent)	middle	74.72 ± 5.67 74.44 ± 9.76 76.84 ± 6.34	N.D.	TL, 35 TL, 36 TL, 37
Unit 4 (3.2) (Loveland equivalent)	upper	117.2 ± 0.73	N.D.	N.A.

Abbreviations: N.D., no data; N.A., not applicable

TABLE DR3. BERYLLIUM-10 DATA FOR PRE-PEORIA LOESS UNITS, PHILLIPS BAYOU, PHILLIPS COUNTY, ARKANSAS AND YOCONA RIVER, PANOLA COUNTY, MISSISSIPPI

Pedo-lithostratigraphy	Dpth-Intvl_field* (cm)	Hzn-desig _field*	Thk _field*	Texture _field*	Conc* (atom g^{-1} x 10^{6})	Conc_crrct* (atom g^{-1} x 10^{6})	Calc_den* (g cm^{-3})	Hzn_invn* (atom cm^{-2} x 10^{9})
Phillips Bayou, Phillips County, Arkansas								
Farmdale	0-17	2A1	17	Silt loam	*255*	***72***	1.4	1.7
Farmdale	17-43	2A2	26	Silt loam	299	***116***	1.4	4.2
Farmdale	43-62	2A3	19	Silt loam	241	***58***	1.4	1.5
Roxana	62-85	2A4	23	Silt loam	*242*	***59***	1.4	1.9
Roxana	85-96	2A5	11	Silt loam	*242*	***59***	1.4	0.9
Roxana	96-140	2Bt1	44	Silt loam	242	***59***	1.4	3.6
Roxana	140-184	2Bt1	44	Silt loam	*248*	***65***	1.4	4.0
Roxana	184-218	2Bt2	34	Silt loam	254	***71***	1.4	3.4
Roxana	218-252	2Bt2	34	Silt loam	*219*	***36***	1.4	1.7
Roxana	252-285	2Bt2	33	Silt loam	*219*	***36***	1.4	1.7
Roxana	285-322	2Bt3	37	Silt loam	**183**	***0***	1.4	0.0
Roxana	322-359	2Bt3	37	Silt loam	*202*	***19***	1.4	1.0
Roxana	359-387	2Bt4	28	Silt	221	***38***	1.4	1.5
Roxana	387-415	2Bt4	28	Silt	*229*	***46***	1.4	1.8
Roxana	415-454	2Bt5	39	Silt	236	***53***	1.4	2.9
Roxana	454-493	2Bt5	39	Silt	*267*	***152***	1.5	8.9
Roxana	493-532	2Bt5	39	Silt	*267*	***152***	1.5	8.9
unnamed paleosol	532-568	2At	36	Silt loam	298	***183***	1.5	9.9
unnamed paleosol	568-594	2At	26	Silt loam	334	***219***	1.5	8.5
unnamed paleosol	594-623	2ABt	29	Silt loam	449	***334***	1.5	14.5
Sangamon	623-656	3Bt1	33	Silt loam	482	***367***	1.5	18.2
Sangamon	656-680	3Bt2	24	Silty clay loam	472	***357***	1.5	12.9
Sangamon	680-703	3Bt2	23	Silty clay	407	***292***	1.5	10.1
Sangamon	703-732	3Bt3	29	Silt loam	301	***186***	1.5	8.1
Sangamon	732-761	3Bt3	29	Silt loam	306	***191***	1.5	8.3
Sangamon	761-796	3Bt4	29	Silt loam	*258*	***143***	1.5	6.2
Sangamon	796-820	3Bt5	24	Silt loam	*258*	***143***	1.5	5.2
Sangamon	820-843	3Bt5	23	Silt loam	*258*	***143***	1.5	4.9
Sangamon	843-877	3BCt	34	Silt	209	***94***	1.5	4.8
Sangamon	877-911	3BCt	34	Silt	*204*	***90***	1.5	4.6
Sangamon	911-946	3BCt	37	Silt	*204*	***90***	1.5	5.0
Loveland	946-977	3C1	31	Silt	198	***83***	1.5	3.9
Loveland	977-1008	3C1	31	Silt	*157*	***42***	1.5	2.0
Loveland	1008-1039	3C1	31	Silt	*157*	***42***	1.5	2.0
Loveland	1039-1069	3C1	30	Silt	*157*	***42***	1.5	1.9
Loveland	1069-1099	3C2	30	Silt	**115**	***0***	1.5	0.0
Loveland	1099-1128	3C2	29	Silt	*167*	***52***	1.5	2.3
Loveland	1128-1155	3C3	27	Silt	*167*	***52***	1.5	2.1
Loveland	1155-1182	3C3	27	Silt	*167*	***52***	1.5	2.1
Loveland	1182-1209	3C3	27	Silt	*167*	***52***	1.5	2.1
Loveland	1209-1236	3C3	27	Silt	*167*	***52***	1.5	2.1
Loveland	1236-1266	3C4	30	Silt	*167*	***52***	1.5	2.3
Loveland	1266-1295	3C4	29	Silt	*167*	***52***	1.5	2.3
Loveland	1295-1325	3C5	30	Silt	218	***113***	1.5	5.1
Loveland	1325-1355	3C5	30	Silt	*176*	***61***	1.5	2.8
Loveland	1355-1386	3C5	31	Silt	*176*	***61***	1.5	2.8
unnamed paleosol	1386-1423	4A	37	Silt	133	***49***	1.6	2.9
LL or CR(?)	1423-1459	4C	36	Silt	131	***47***	1.6	2.7
LL or CR(?)	1459-1496	4C	29	Silt	*153*	***69***	1.6	3.2
LL or CR(?)	1496-1525	4Ct1	33	Silt	174	***90***	1.6	4.8
LL or CR(?)	1525-1554	4Ct1	29	Silt	*189*	***105***	1.6	4.9
LL or CR(?)	1554-1581	4Ct2	27	Loam	204	***120***	1.6	5.2
LL or CR(?)	1581-1607	4Ct2	26	Loam	*205*	***121***	1.7	5.4
CR(?) equiv or unnamed sand	1607-1631	5Ct	24	Fine sandy loam	205	***121***	1.7	4.9
CR(?) equiv or unnamed sand	1631-1656	5Ct	25	Fine sandy loam	*145*	***61***	1.7	2.6

TABLE DR3. BERYLLIUM-10 DATA FOR PRE-PEORIA LOESS UNITS, PHILLIPS BAYOU, PHILLIPS COUNTY, ARKANSAS AND YOCONA RIVER, PANOLA COUNTY, MISSISSIPPI

Pedo-lithostratigraphy	Dpth-Intvl_field* (cm)	Hzn-desig _field*	Thk _field*	Texture _field*	Conc* (atom g^{-1} x $10^{6)}$	Conc_crrct* (atom g^{-1} x 10^{6})	Calc_den* (g cm^{-3})	Hzn_invn* (atom cm^{-2} x 10^{9})
CR(?) equiv or unnamed sand	1656-1686	6C	30	Fine sand	*145*	***61***	1.7	3.1
CR(?) equiv or unnamed sand	1686-1716	6C	30	Fine sand	**84**	***0***	1.7	0.0
Yocona River, Panola County, Mississippi								
Peoria Loess	0-5	Ap	5	Silt loam	136	***15***	1.5	0.11
modern soil	5 to 21	Bt1	16	Silty clay loam	138	***17***	1.5	0.41
modern soil	21-55	Bt2	34	Silt loam	136	***15***	1.5	0.77
modern soil	55-65	E/B	10	Silt	150	***29***	1.5	0.44
modern soil	65-85	B't1	20	Silt loam	157	***36***	1.47	1.08
modern soil	85-101	Bt2'	16	Silt loam	123	***2***	1.52	0.05
modern soil	101-122	BC	21	Silt	**121**	***0***	1.46	0
Peoria Loess	122-147	C1	25	Silt	141	***20***	1.35	0.7
Peoria Loess	147-171	C1	24	Silt	152	***31***	1.4	1.04
Peoria Loess	171-201	C2	30	Silt	136	***15***	1.4	0.63
Peoria Loess	201-232	C3	31	Silt	134	***13***	1.29	0.52
Peoria Loess	232-263	C3	31	Silt	179	***58***	1.3	2.34
Peoria Loess	263-295	C3	32	Silt	194	***73***	1.2	2.8
Peoria Loess	295-317	C4	22	Silt	239	***118***	1.23	3.12
Farmdale †	317-337	2Ab1	20	Silt	**319**	***190***	1.38	5.24
Farmdale †	337-357	2Ab2	20	Silt	490	***361***	1.4	10.11
Farmdale †	357-383	2Eb1	26	Silt	457	***328***	1.4	11.94
Farmdale †	383-410	2Eb2	27	Silt	468	***339***	1.4	12.81
Farmdale †	410-432	2Bwb	22	Silt loam	471	***342***	1.5	11.29
Sangamon †	432-465	3Bt1b	33	Silty clay loam	455	***326***	1.58	17.21
Sangamon †	465-491	3Bt2b	26	Silty clay loam	400	***271***	1.6	11.27
Sangamon †	491-525	3Bt3b	34	Silty clay loam	313	***184***	1.65	10.64
Sangamon †	525-556	3Bt4	31	Silty clay loam	210	***81***	1.6	4.02
Sangamon †	556-578	3Bt5	22	Silt loam	203	***74***	1.5	2.44
Sangamon †	578-603	3BCb	25	Sandy loam	**129**	***0***	1.44	0
unnamed paleosol	603-623	4E/Bb	20	Silt loam	155	***8***	1.4	0.22
unnamed paleosol	623-643	4Btb1	20	Silt loam	211	***64***	1.44	1.84
unnamed paleosol	643-679	4Bbt2	36	Silt loam	175	***28***	1.4	1.41
unnamed paleosol	679-718	4Btb31	39	Silt loam	200	***53***	1.39	2.89
unnamed paleosol	718-757	4Btb3	39	Silt loam	218	***71***	1.4	3.88
unnamed paleosol	757-798	4Btb4	41	Silt loam	213	***66***	1.35	3.78
LL or CR(?)	798-844	4C11	46	Silt	187	***40***	1.37	2.58
LL or CR(?)	844-893	4C12	49	Silt	**147**	***0***	1.4	0
LL or CR(?)	893-929	4C13	36	Silt	200	***53***	1.4	2.67
LL or CR(?)	929-954	4C2	25	Silt	241	***94***	1.4	3.29
CR(?)	954-984	5C1	30	Loam	290	***103***	1.58	4.94
CR(?)	984-1010	5C	26	Sandy loam	268	***81***	1.5	3.16
CR(?) equiv or unnamed sand	1010-1035	6Eb	25	Loamy sand	**187**	***0***	1.5	0

Note: Locations of Phillips Bayou and Yocona River are on Figure 1C. In column 1, paleosols identified in the field are *italicized*. Shaded entries are samples run for ^{10}Be analysis; other values are interpolated. Minimum and corrected concentration values for ^{10}Be are in bold.

Abbreviations: Dpth-intvl, depth interval; cm, centimeters; Hzn-desig, horizon designation; Thk, thickness; Conc_crrct, corrected concentration; Calc-den, density used for calculations; Hzn_invn, horizon inventory; g, gram.; LL, Loveland loess; CR(?), Crowley's Ridge(?) loess.

*_field, based on field descriptions;

†The *Farmdale and Sangamon paleosols* are welded creating uncertainty about the background concentration of ^{10}Be in the Roxana at Yocona River. We use the 3BCb value of 129 x 10^{6} atom g^{-1} to calculate the corrected concentrations of ^{10}Be in the Farmdale, and thus the age range of the *Farmdale* and subjacent units.

TABLE DR4. ESTIMATED RELATIVE PERCENTAGES OF CLAY MINERALS FOR PALEOSOL/LOESS COMPLEXES IN THE LOWER MISSISSIPPI VALLEY

Pedo- and lithostratigraphy	Hzn-desig_field	Total clay (% <2µm)	Depth (cm)*	Expandable	Illite	Kaolinite
Moses Pit (Mounds), Pulaski County, Illinois						
Farmdale	*2Bwb1*	*17.9*	730-760	94	T	6
Farmdale	*2Bwb2*	*19.4*	760-788	93	T	7
Farmdale	*2Bwb3*	*18.9*	788-813	91	3	6
Farmdale	*2Bwb3*	*17.2*	813-838	92	T	8
Farmdale	*2Bwb4*	*16.6*	838-860	85	4	11
Farmdale	*2Bwb5*	*15.9*	860-900	83	T	13
Sangamon	*3BEb*	*22.6*	900-915	71	7	22
Sangamon	*3Btb1*	*40.2*	915-954	49	15	36
Sangamon	*3Btb2*	*31.5*	954-989	57	21	22
Sangamon	*3Btb3*	*19.3*	989-1030	50	33	17
Loveland	*3Btb4*	*23.1*	1030-1055	67	15	18
Loveland loess	*3Btb5*	*25.6*	1055-1087	60	18	22
Loveland loess	*3Btb6*	*25.0*	1087-1111	53	26	21
Loveland loess	*3Btb7*	*24.5*	1111-1118	63	20	17
Loveland loess	*3Btb8*	*17.0*	1118-1132	58	17	24
Old River, Tipton County, Tennessee, Section 1						
Farmdale	*2A1*	*13.7*	1000-1021	82	15	3
Farmdale	*2A2*	*15.7*	1021-1040	77	19	4
Farmdale	*2Bw1*	*16.1*	1040-1078	80	16	4
Farmdale	*2Bw2*	*17.3*	1078-1104	71	15	14
Farmdale	*2Bw2*	*17.2*	1104-1130	82	13	5
Roxana Silt	2C1	16.9	1130-1154	79	16	5
Roxana Silt	2C1	16.6	1154-1177	78	15	7
Roxana Silt	2C2	16.6	1177-1204	73	19	8
Roxana Silt	2C2	17.0	1204-1231	74	17	9
Sangamon	*3Bt1*	*24.0*	1231-1243	62	27	11
Sangamon	*3Bt2*	*33.3*	1243-1267	T	64	36
Sangamon	*3Bt3*	*32.4*	1267-1294	T	72	28
Sangamon	*3Bt4*	*30.4*	1294-1321	T	62	38
Sangamon	*3Bt5*	*23.2*	1321-1352	T	69	31
Sangamon	*3BCt*	*16.9*	1352-1389	T	67	33
Sangamon	*3Ct*	*17.4*	1389-1429	T	67	33
Old River, Tipton County, Tennessee, Section 2						
*Farmdale (*MMV-14a)	N.D.	N.D.	45	74	19	7
Farmdale (MMV-14)	N.D.	N.D.	60	76	18	6
*Farmdale (*MMV-14b)	N.D.	N.D.	75	70	24	6
Farmdale (MMV-13)	N.D.	N.D.	91	64	28	8
Sangamon (MMV-15a)	N.D.	N.D.	18	53	31	16
Sangamon (MMV-15)	N.D.	N.D.	43	31	47	22
Sangamon (MMV-15b)	N.D.	N.D.	94	39	32	29
Loveland loess (MMV-16)	N.D.	N.D.	1465	41	54	5
Wittsburg Quarry, Cross County, Arkansas						
Roxana (MMV-6)	N.D.	N.D.	~500 above base	69	26	5
Sangamon (MMV-7)	N.D.	N.D.	50-100	45	44	11
Sangamon (MMV-7a)	N.D.	N.D.	~125	51	39	10
Sangamon (MMV-7b)	N.D.	N.D.	~150	51	39	10
Loveland loess (MMV-9)	N.D.	N.D.	~250	62	35	3
Loveland loess (MMV-3)	N.D.	N.D.	117 above base	75	19	6
Crowley's Ridge(?) loess (MMV-11)	N.D.	N.D.	83	33	35	32

TABLE DR4. ESTIMATED RELATIVE PERCENTAGES OF CLAY MINERALS FOR PALEOSOL/LOESS COMPLEXES IN THE LOWER MISSISSIPPI VALLEY

Pedo- and lithostratigraphy	Hzn-desig_field	Total clay (% <2µm)	Depth (cm)*	Expandable	Illite	Kaolinite
Meeman Shelby, Shelby County, Tennessee						
Farmdale	N.D.	N.D.	625	75	21	3
Roxana Silt	N.D.	N.D.	850	81	15	4
Roxana Silt	N.D.	N.D.	1000	81	13	6
Sangamon	N.D.	N.D.	1200	nd	70	30
Sangamon	N.D.	N.D.	1350	T	88	12
Loveland loess	N.D.	N.D.	1500	39	50	11

Note: Estimated percentages of clay minerals from XRD traces, Cu radiation, ethylene glycol treated, <2µm fraction (U.S. Geological Survey mineralogy laboratory, Reston, VA, 1992-1994). In column 1, paleosols identified in the field are *italicized*. MMV samples were taken while sampling for TL age analyses to be used as supplementary data. Depths were taken to stratigraphically place a sample for age analyses. Therefore, samples were not tied directly to a measured section or to a pedologic description. Data are included here to show intra-site variation within a paleosol/loess complex as well as inter-site vatiation between paleosol/loess complexes.

Abbreviations: Hzn-desig_field, horizon designation based on field descriptions; %, percent; N.D., no data; T, trace; Expandable, 1.6-1.75 nm; illite, 1.0 nm; kaolinite, 0.72 nm.

*Depth: Moses Pit (Mounds), from ground surface; Old River Section 1, from top of exposure; Old RiverSection 2, as indicated from top of paleosol with a sample interval about 5 cm thick; Meeman Shelby, from top of exposure with a sample interval about 5 cm thick; Wittsburg Quarry, from top of unit unless noted otherwise.