

3/15/67  
A.I.D.S.

C#2843  
S#2012

Core Description

Armco Steel Corporation *Permit No. 4*  
Waste Disposal Well No. 1  
Butler County, Ohio *Lemon Township, Section 8*

By

American Industrial Disposal Systems, Inc.

<u>Core Run #1</u>	<u>2858-2881 feet</u>	<u>Cap Rock - 23 feet</u>
2858-2859	Sandstone, light gray, medium grained, glauconitic	
2859-2860	Sandstone, light grayish pink, glauconitic with wavy shale partings	
2860-2860.5	Sandstone, gray, relatively pure, slightly glauconitic	
2860.5-2870.5	Interbedded shale and sandstone sequence, wavy contacts, ss pinkish gray; shale greenish gray, glauconitic	
2870.5-2873.5	Sandstone, gray and pinkish gray, glauconitic	
2873.5-2881	Shale with glauconitic sand, dense, dark green in color, relatively good cap rock	
<u>Core Run #2</u>	<u>2975-3025</u>	<u>Mt. Simon Sandstone</u>
	<u>Full Recovery</u>	
2975-2979	Sandstone, dull red (maroon), fine grained	
2979-2981.5	Sandstone, light gray, fine grained, friable	
2981.5-2982	Shale, dark green to black	
2982-2984	Sandstone, light tan, fine grained, with green, wavy shale partings.	
2984-3024	Predominantly grayish red sandstone, with some grayish pink sandstone; fine to coarse grained; red ss more friable and less hard, loosely cemented; no shale partings	
3024-3025	Sandstone, grayish pink, fine grained, friable	
<u>Core Run #3</u>	<u>3025-3075</u>	<u>Mt. Simon Sandstone</u>
	Cored 50 feet recovered 35.8 feet (3025-3060.8)	
	Predominantly grayish red, medium grained, friable sandstone; soft and loosely cemented.	

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Core Description (Continued) 2

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3026-3027 Sandstone, grayish red to red, fine grained  
3027-3031 Sandstone, light red to red, medium to coarse  
grained  
3031-3033 Sandstone, pinkish gray, fine grained  
3033-3034 Sandstone, grayish red, medium grained with shale  
laminae  
3034-3039 Sandstone, grayish red, medium to coarse grained  
3039-3041 Sandstone, reddish gray, fine to medium grained  
with a 4" shale bed  
3041-3042 5" sandstone, reddish gray, fine grained; 3"  
sandstone, gray, coarse grained; 4" sandstone,  
grayish red, fine grained  
3042-3044 Sandstone, grayish pink, fine to coarse grained  
3044-3045 Sandstone, grayish red, fine grained  
3045-3058 Sandstone, grayish red, coarse grained, with pit  
marks on the surface  
3058-3060.8 Sandstone, grayish red, fine grained with red,  
very thin beds (4") of silty shale

Core Run #4

3150-3200

Mt. Simon Sandstone

Cored 50 feet recovered 44 feet (3150-3194)

3150-3151 Sandstone, grayish red, medium coarse grained,  
with pit marks  
3151-3153 Sandstone and shale, fine grained pinkish gray  
sandstone with maroon shale  
3153-3156 Sandstone, pinkish gray, fine grained, strongly  
cemented  
Sandstone, light gray to pink, fine grained, with  
laminae of green and maroon shale  
3160-3169 Sandstone, grayish pink, fine to medium grained  
3169-3173 Sandstone and shale sequence; sandstone, grayish  
pink, fine to medium coarse grained; shale,  
maroon thin bedded  
3173-3174 Sandstone, very hematitic, soft, friable, medium  
to coarse grained  
3174-3175 Sandstone, pinkish gray, fine grained  
3175-3177 Sandstone, greenish gray and pinkish gray, medium  
to coarse grained with laminae of red silty shale

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Core Description (Continued)3

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3177-3179	Sandstone, pinkish gray to grayish red, medium to coarse grained, somewhat conglomeratic; some red shale
3179-3182	Sandstone and shale; sandstone light gray, fine grained, hard; shale, maroon and laminated
3182-3188	Sandstone, pinkish gray, fine to coarse grained, strongly cemented, hard, with laminae of red shale
3188-3189.5	Shale, red, laminated
3189.5-3194	Sandstone, pinkish to greenish gray, fine to coarse grained, strongly cemented, hard, slightly arkosic at the bottom

Total footage cored 173 feet

Total footage recovered 153 feet

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GEOLOGICAL SURVEY OF OHIO

CORE RECORD

Permit No. 4  
Sample No. 2012

County Butler Twp. Lemon Quad. Monroe  
 Lot          Quarter NW Tract          Section 8  
 Measured 1054.6 Ft. From N line and 64.7 Ft. from W line of NW of Sec. 8

Property owner Armco Steel Corp.  
 Hole No. 1 Purpose of core To evaluate Industrial Waste Disposal into the Cambrian Mt. Simon For  
 Driller           
 Drilling company Armco Steel Corp.  
 Drilled for           
 Logged by Schlumberger Date 3-12-67  
 Elev. 685.6 G, 666.6 KB Datum for elevation          Diam. of core 3 1/2" O.D.  
 Direction of hole: Vertical Angle          Started 2-23-67 Completed 3-12-67  
 Elev. of ground water          Samples: Washed          Dry          Other           
 No. of core boxes          Disposition of core Stored in Dublin Road Warehouse

Remarks Cambrian Shady Formation Core #1 2858'-2881'. Cut 23', Recovered 23'

TOP	BOTTOM	THICKNESS	DESCRIPTION
2858'	2859'	1'	Sandstone- Quartz- fine grained - angular to sub-angular - light gray to pinkish gray- abundant disseminated glauconite flakes and blebs throughout - slightly calcareous - wavy continuous & discontinuous hairline carbonaceous partings. Traces of good intergranular porosity.
2859'	2860'	1'	Sandstone - as above but with traces of biotite flakes (weathered) and very slight traces of disseminated pyrite.
2860'	2861'	1'	Sandstone - as above with scattered medium grained - frosted quartz grains.
2861'	2862'	1'	Sandstone - Quartz - fine grained - rounded to sub-rounded - gray with slight trace of pink color - most grains clear and slightly frosted - only scattered flecks of glauconite - calcareous matrix.
2862'	2863'	1'	Sandstone - Quartz - fine grained - angular to rounded pinkish gray - glauconitic - occasional medium sized clear - slightly frosted quartz grains - more abundant hairline carbonaceous shale partings - calcareous matrix.
2863'	2864'	1'	Sandstone - Quartz - very fine grained - angular - pink-slight to fair amount of disseminated glauconite and biotite - calcareous matrix.
2864'	2865'	1'	Sandstone - as above with abundant hairline carbonaceous partings.
2865'	2866'	1'	Sandstone - as above - pinkish gray with very slight trace of glauconite.

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4/12/67  
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Armco Steel Corporation

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Corrected Log Tops

	<u>Top</u>	<u>Sub Sea</u>	<u>Thickness</u>
Cynthiana Limestone	536	+131	102
Trenton Limestone	638	+ 29	28
Black River Group	666	+ 1	294
Chazy Limestone	960	-293	192
St. Peter Sandstone	1152	-485	20
Chepultepec dolomite	1172	-505	464
Copper Ridge dolomite	1632	-965	732
Maynardville dolomite	2364	-1697	59
Conasauga shale	2423	-1756	85
Rome formation	2508	-1841	338
Shady dolomite	2846	-2179	108
Mt. Simon Sandstone	2954	-2287	274
Basal Arkose	3228	-2561	8
Pre-Cambrian Basement	3236	-2569	

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