## Use this form to report installation of monitoring or water wells. Original copy must be submitted to Division of Water within 30 days of completion. See instructions on reverse of form. Do not write in shaded areas. Record must be typed or neatly printed or it will be returned to the driller as unacceptable. One copy to Division of Water, one copy to owner, one copy to driller's files. I. Kentucky Well ID (AKGWA) Number United States Department of Energy 8 | 5 0 0 5 6 3 5. Owner MW-421 Shallow 5600 Hobbs Road Well ID# addres 3. Attachments 8. Zip 7. State 6. City 42053 West Paducah KY Required 1. Site plan or sketch map If site name and address differ from owner name and address: 2. Well location On topographic map, OR Obtained by GPS unit Paducah Gaseous Diffusion Plant C-400 Building 9. Site name Conditionally Required Well diagram (monitoring well) Coliform analysis (if applicable) 10. Site 5600 Hobbs Road addre 5. Signed variance (if applicable) 12. State KY 13. Zip Optional 6. Other laboratory analysis report 11. City 42053 West Paducah 31, Work 04 2009 Jun CERCLA Solid Waste ☐ Drinking Water 14. Agency 15. Facility type start date Day Interest C RCRA UST 3059 & 04 2009 Jun 32, Work (AI) JB ID Number Year nd date Month Day Number Please report depths in feet below surface, not as relative elevations 17. Site 16. Owner phon 75.33 33. Total depth (ft) 18. USGS topo map Heath 22. Physiographic Region Ohio River Alluvium 34. Depth to bedrock (ft) Bluegrass Mccracken 19. County W. Coal Field E. Coal Field 50.00 21. Elevation determined by GPS Map Prior report Survey Prior well log 35. Static water level (ft) 20. Surface Miss. Plateau Jackson Purchase 36. Casing height above surface (in) 33.00 381.00 elevation (ft) 25. Well status WATER WELLS ONLY 24. Drilling method 23. Well Use Active ☐ Agriculture ☐ Geotherma Auger - HS Jet wash 37. Estimated well yield Auger - SS Push/probe ☐ Inactive ☐ Heat pump □ Commercial gpm gph gpd Rotary - air Auger - bucket Unsuitable for □HVAC 38. Well service \_\_\_\_\_ # of people served □ Domestic Auger - hand Rotary - mud intended use ☐ Injection ☐ Industrial Cable tool Rotary - reverse 39. Disinfectant amount 40. Type 26. Wellhead Monitoring / Ambient Monitori Mining Core Sand point ☐ Bleach Flush Locking Remed Driven casing Sonic Well cap oz qts cups □ Нуро-Excavation ☐ Unknown Unused Sanitary seal ☐lbs ☐ gal Combined – HS auger & air rotary 41. Pitless adapter installed 🔲 Yes 🔲 No 28. Annulus fill and sea 27. Well completion: Casing and screens 42. Pump installed: Material Casing type Submersible Jet Turbine Bailer or bucket Hand No pump Submersible 57.0 Bentonite 1.0 71.0 8 2 **PVC** 0.0 59.0 Bentonite pellets 71.0 73.0 8 2 PVC screen 0.010 57.0 43. Depth to intake (ft) 8 2 PVC 59.0 87.42 Sand 73.0 75.33 44. Apparent quality and odor: Clear Cloudy 30. Sketch map □ □ □ Iron 29. Lithologic log (if more space is needed, continue on separate page) Muddy From To Description (include any show of water and indicate apparent quality) Sulfur Turbid depth, ft. depth, ft. □ □ □ Salt 19.4 Silt 0.0 COLIFORM TEST 25.5 Gravely Sand 19.4 25.5 26.0 Clay 46. Coliform test results 29.3 Silt to Very Fine Sand 26.0 □ 0 or <1.0 □ TNTC □ Confluent Fine to Coarse Sand 29.3 35.1 # colonies per 100 ml or 35.1 36.0 Silt 47. Date 40.8 Fine Sand With Gravel 36.0 Day Sampled 40.8 54.6 Fine Sand With Clay 48. Date Analyzed Day 59.3 Fine Sand 54.6 ow well location and distances from permaners with the control of 59.3 87.5 Sandy Gravel 37.11590 Latitude 49. Comments One of 3 nested wells completed in a common 8-inch borehole as MW-421. 4'X4'X12" concrete pad, 8-inch Sch 40 steel locking cover, 4 steel bollards. Decima 88.810715 Lat/Long method VINT GPS SUR vision, and this report is true and correct to the best of my knowledge quantity encountered while drilling or completing this well. 50. Affirmation: The work described above was done under my supervision, and this Note: the driller is not responsible for a furnitural groundwater quality or quantity encour REP 2009 JUL 1 3 2009 Jun Signature of Date Day signed Month

UNIFORM KENTUCKY WELL CONSTRUCTION RECORD

ertified driller

0344-0454-00

Certification

Drilling

company Chase Environmental Group, Inc.

rev 04/11/2008

## UNIFORM KENTUCKY WELL CONSTRUCTION RECORD

Use this form to report installation of monitoring or water wells.

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See instructions on reverse of form. Do not write in shaded areas.

Record must be typed or neatly printed or it will be returned to the driller as unacce.

One copy to Division of Water, one copy to owner, one copy to driller's files.

8002-3016



4. Owner name	Unit	United States Department of Energy								0002	- 997		13		
5. Owner addre	<sub>ss</sub> 560	0 Hob	bs Ro	ad						2. Owner Well ID	" MW-4	121 In	termed	100 miles	
6. City	Wes	st Pad	ucah			7. 8	State KY		8. Zip 42053	3. Attachme	ents				
If site n	ame and	address	differ f	rom owne	r name an	d address	:			1. Site	olan or sketch location	map			
9. Site Paducah Gaseous Diffusion Plant C-400 Building										On topographic map, <u>OR</u> U Obtained by GPS unit					
10. Site	ss 5600 Hobbs Road									Conditiona 3. Well	Illy Required diagram (mor orm analysis (	! nitoring we	d) •		
11. City	Wes	est Paducah 12. Sta						te KY 13. Zip 42053			Signed variance (if applicable)      Optional     Cother laboratory analysis report				
14. Agend	:у			15. Facilit	y type	CERCI	LA 🔲 Soli	d Waste	Drinking Water	31. Work start date	Jun	04	2009	1	
Interest (A1) 3059 Number RCRA ID Number				US	□ UST			Jun Month	04 Day	2009 Year					
16. Owne	r			L		17. Site				end date	report depths in	feet belov	v surface,		
phone	topo map	Hoat	h			phon	1			Total de	not as relative		_		
19. Coun			acker	`			22, Physio		legion  Ohio River Alluviur	1	33. Total depth (ft)				
		IVICCI			etermined b			oal Field				50.0	00		
20. Surfa elevation		1.00			Map 🔲 Pri			s. Platea	Jackson Purchase	1	ater level (ft) neight above s				
23. Well l	Use		1 64 5		24. Drilling				25. Well status	_	ATER WE			ł	
Agricu			□Ge	othermal	☐ Auger		Jet wash		Active	1	ed well yield	LLS UN	LI		
□ Comm	nercial		He	at pump	Auger		Push/pro	Push/probe Inactive			gpm gph gpd				
	Auger - hand Rotary - mud Intended							Unsuitable for intended use	38. Well ser	vice	# of peo	ple served			
Indust  Monite	—		_ □Inje ei □Mir		Cable		Rotary -		26. Wellhend	39. Disinfec	tant amount	40.	Туре		
Reme		bient Monito	- UW	""'y	☐ Core ☐ Driven		<ul><li>Sand poi</li><li>Sonic</li></ul>	nt	☐ Flush ☐ Locking	_	_		Bleach		
Public	_		Un	used	Excava	-	Unknown		Well cap		qts 🔲 cu	ips 🔲	Hypo- chlorite		
27. Well completion: Casing and screens							<del>~</del>	ulus fill a	Sanitary seal	_	☐ gal dapter installe	ed TIYe	_		
From	To	Borehole			asing type	Scree	n From		Material	42. Pump ir	,		5 110		
depth, ft.	depth, ft. 79.0	diameter 8	diameter 2	PVC	ising type	slot si	ze depth, fi	57.0	Bentonite	☐ Submer	rsible 🔲 .		Turbine		
79.0	81.0	8	2	PVC scr	een	0.01		59.0	Bentonite pellets	1	r bucket 🔲 l	Hand 🔲	No pump		
81.0	83.33	8	2	PVC			59.0	87.42	·	43. Depth to	ountake (It)  out quality and	odor:			
		V 144, (4.401.) 1, (4.444.) 2, (1.4	N 1400W TON 1000		TOTAL THE STATE OF	CALCONIA DI AGATTANIANA ATETA			**************************************	тъ кррате	it quality and	ouor.			
										No □ CI		none slight	high High		
29. Lithol	ogic log (	if more sp	ace is ne	eded, conti	nue on separ	ate page)	30. Sket	ch map			Application of the control of the co				
From depth, ft.	From To Description (include any show of water and indicate lepth, ft. depth, ft. apparent quality)				and the same				Turbid Sulfur						
200000000000000000000000000000000000000	19.4	Silt		aamtidonanoumo							□ □ □ Salt				
19.4	25.5	Grave	ly San	d	AAA.V					COLIFOR					
25.5	26.0	÷		into ancomorphic	water transfer a toward						45. Coliform test type    fecal   fecal and total   46. Coliform test results   0 or <1.0   TNTC   Confluent				
26.0	29.3			ine San	* II- II-II II-II- F- III - I										
29.3	35.1	· j · · · · · · · · · · · · · · · · · ·	Fine to Coarse Sand							or _	# cold	onies per	100 ml		
35.1 36.0	36.0 40.8		Silt							47. Date					
40.8	54.6	Fine Sand With Gravel Fine Sand With Clay								Sampled		Day	Year		
54.6	59.3	Fine Sand							48. Date Analyzed	Month	Day	Year			
59.3 87.5 Sandy Gravel					Show well to fields, major	Show well location and distances from permanent structures, septic drain fields, major roads (include name or number) and intersections.  INDICATE NORTH WITH AN ARROW.			DMS	•					
49. Comr	nents							INDICAT	E NURTH WITH AN ARROW.	Latitude	or Decimal 3	7.115	ant		
One of	f 3 nest						borehole		/-421. 4'X4'X12"	Longitude	DMS or		[0]	Sul	
										1000000	Decimal 8	8.810	1715		
50. Affire Note:	nation: Ti the driller is	he work det s not respor	scribed ab	ove was don natyfal frour	e under my s dwater quality	upervision, ar or quantity of	nd this report is encountered wh	nile drilling	or completing this well.	□ INT	GPS 🖸	SUR [	REP		
Signature certified			B	lely			Da sig	te ,	Jun 30 2009 Month Day Yes	\$55,000,50000 LUIS 100	JUL 1	3 20	09		
Certifica number	tion O	344-045	54-00		Drillin		se Enviror	mental	Group, Inc.	Initials of	E CONTRACTOR OF THE CONTRACTOR			1	

JB

rev 04/11/2008

Attach Well Identification Number

Label Hara (if applicable)

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JB

Signature of

Certification

ertified driller

0344-0454-00

One copy to Division of Water, one copy to owner, one copy to driller's files. United States Department of Energy name 5. Owner Well ID# MW-421 Deep 5600 Hobbs Road address 8. **Z**ip 3. Attachments 7. State City 42053 West Paducah KY Required • 1. Site plan or sketch map If site name and address differ from owner name and address: 2. Well location On topographic map, OR Paducah Gaseous Diffusion Plant C-400 Building 9. Site Obtained by GPS unit Conditionally Required Well diagram (monitoring from 4. Coliform analysis (if applicable) 10. Site 5600 Hobbs Road address 12. State KY 13. Zip 11. City 42053 Optional West Paducah Other laboratory analysis report □ 31. Work 2009 Jun 14. Agency 15. Facility type ■ CERCLA Solid Waste Drinking Water start date Day Year Interest ☐ RCRA ☐ UST 3054 04 2009 Jun 32. Work (AI) ID Number nd date Month Day Year Number Please report depths in feet below surface, not as relative elevations 16. Owner 17. Site phon 18. USGS topo map Heath 33. Total depth (ft) 22. Physiographic Region ☐ Bluegrass Ohio River Alluvium 34. Depth to bedrock (ft) Mccracken 19. County W. Coal Field E. Coal Field 21. Elevation determined by

GPS Map Prior report
Survey Prior well log 35. Static water level (ft) 20. Surface Miss. Plateau Jackson Purchase elevation (ft) 381.00 36. Casing height above surface (in) 33.00 25. Well status WATER WELLS ONLY 24. Drilling method 23. Well Use Active ☐ Agriculture Geotherm Auger - HS Jet wash 37. Estimated well yield Auger - SS Push/probe Inactive □ Commercial ☐ Heat pump gpm gph gpd Rotary - air Auger - bucket Unsuitable for □ HVAC 38. Well service \_\_\_\_\_ # of people served □ Domestic Rotary - mud Auger - hand intended use □ Injection Industrial Cable tool Rotary - reverse 39. Disinfectant amount 40. Type 26. Wellhead Monitoring / Ambient Monitori Mining Sand point Core Bleach ☐ Flush ☐ Locking Sonic Remed Driven casing oz qts cups □ Нуро-Well cap ☐ Excavation Unknown Public Unused Sanitary seal ☐lbs ☐ gal Combined – HS auger & air rotary 41. Pitless adapter installed 🔲 Yes 🔲 No 28. Annulus fill and seal 27. Well completion: Casing and screens 42. Pump installed: Meterial Casing type Submersible Jet Turbine
Bailer or bucket Hand No pump Submersible 1.0 57.0 Bentonite 0.0 83.0 8 2 PVC 57.0 59.0 Bentonite pellets 83.0 85.0 8 2 PVC screen 0.010 43. Depth to intake (ft) 59.0 87.42 Sand 85.0 87.33 8 2 PVC 44. Apparent quality and odor: Clear Cloudy 30. Sketch map 29. Lithologic log (if more space is needed, continue on separate page) III II II III II Iron Muddy Sulfur Description (include any show of water and indicate Turbid Salt 19.4 Silt 0.0 COLIFORM TEST 19.4 25.5 Gravely Sand 45. Coliform test type

fecal fecal and total 26.0 25.5 Clay 46. Coliform test results 29.3 Silt to Very Fine Sand 26.0 O or <1.0 TNTC Confluent Fine to Coarse Sand 29.3 35.1 # colonies per 100 ml 36.0 35.1 47. Date Fine Sand With Gravel 36.0 40.8 Day Sampled Year 54.6 Fine Sand With Clay 40.8 48. Date Analyzed 54.6 59.3 Fine Sand DMS 59.3 87.5 Sandy Gravel atitude 49. Comments One of 3 nested wells completed in a common 8-inch borehole as MW-421. 4'X4'X12" DMS concrete pad, 8-inch Sch 40 steel locking cover, 4 steel bollards. 8. \$10715 at/Long method e was done under my supervision, and this report is true and correct to the best of my know ugal groundwater quality or quantity encountered while drilling or completing this well. GPS SUR REP 50. Affirmation: The work described INT. Note: the driller is not resp 2009 Jun

Date

company Chase Environmental Group, Inc.

Drilling

signed

Day

JUL 1 3 2009

rev 04/11/2008

## MONITORING WELL CONSTRUCTION LOG

Location Name: Paducah Gaseous Diffusion Plant

Address: 5600 Hobbs Road

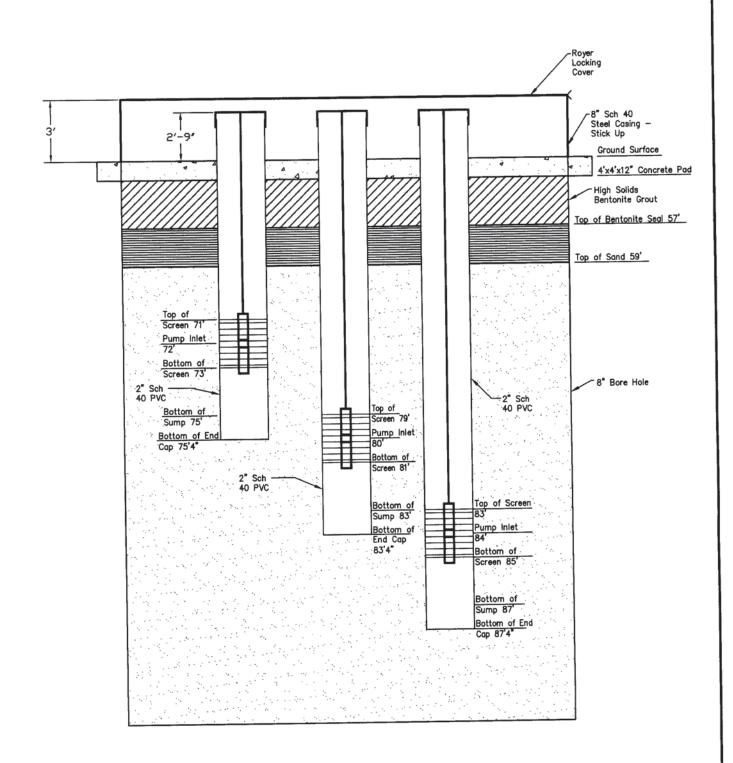
City/State/Zip: West Paducah, KY 42053

State Assigned #

8005-6385

Facility Assigned #

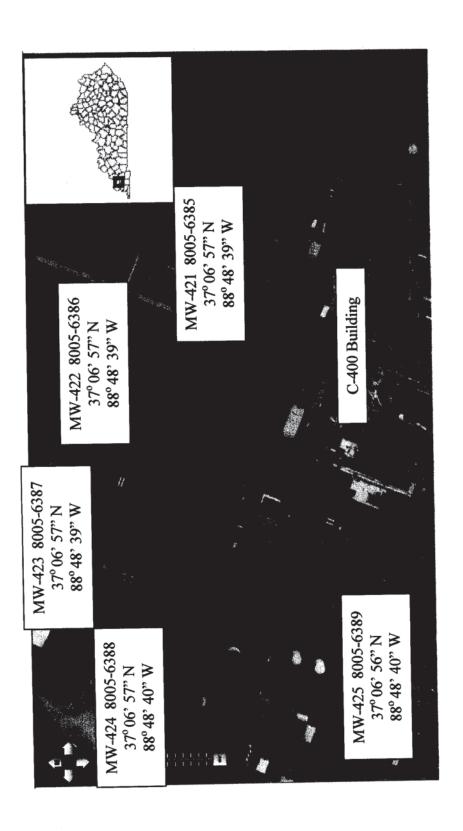
MW-421





Comments: Drawing not to scale.

MW421						
		8-inch bor		Drilled by '	Vernon Scott	
06/02/09 @	2 12:12 - 0	6/03/09 @	08:07			
Drilled	Interval		Dep	oths		
Тор	Bottom	Recovery	Тор	Bottom	Description	Notes
0.0			,		Silt, 10YR7/1 (light gray) with 10YR7/4 (very pale brown)	
	6.0	9.5	0.0		mottling grading downward to 10YR7/4 (very pale brown) with	0.0-0.3 ft: rootlets
					10YR7/1 (light gray) mottling, soft, nonplastic, and moist	
6.0		11.0	6.0	10.7	Silt, 10YR7/4 (very pale brown) with little mottling by 10YR7/1 (light gray), soft, nonplastic, and moist	
	16.0				Silt, 10YR7/4 (very pale brown) mottled with 10YR7/1 (light	
			10.7	16.0	gray) and with 10YR7/8 (yellow) staining, moderately firm to	
				10.4	firm, moderate plasticity, and moist	
	26.0	10.6	16.0		Silt as above Gravelly Sand with silt, 10YR6/4 (light yellowish brown),	
					dense, and moist. Sand is fine quartz(?). Gravel is rounded	
					chert, 0.2-1.0 inch diameter	
16.0			20.5	21.6	Fine Sand, 7.5YR6/6 (reddish yellow), loose, and moist	
10.0			21.6		Gravelly Sand, 7.5YR6/6 (reddish yellow) with some	
					7.5YR2.5/1 (black) staining (manganese?), loose, and moist. Sand is fine guartz(?). Gravel is rounded chert, 0.2-1.0 inch	
					diameter	
					Clay, 10YR7/1 (light gray), soft, plastic, and moist	
					Silt, grading downward to Very Fine Sand, 10YR7/1 (light gray)	
			26.0	29.3	stained with 10YR7/8 (yellow) and 2.5YR7/4 (light reddish	
			29.3	35.1	brown), soft, low plasticity to nonplastic, and moist Fine Sand, 10YR7/6 (yellow), grading downward to Coarse	
00.0	00.0	40.0			Sand with gravel, 10YR7/3 (very pale brown), loose, and	
26.0	36.0	12.0			moist. Fine sand is quartz(?). Coarse sand is subrounded	
					quartz and chert. Gravel is rounded chert, weathered white,	
					0.4 inch diameter.	
			35.1	36.0	Silt, 10YR7/1 (light gray) laminated with 10YR7/8 (yellow), firm nonplastic, and moist	
	46.0	12.2	36.0	40.8	Fine Sand with gravel, 10YR8/1 (white), loose, and moist.	
					Gravel is well rounded chert pebbles, weathered white, 0.2-0.3	
					inch diameter	
			40.8	44.3 45.6	Fine Sand with very little clay, 10YR8/2 (very pale brown) mottled with 10YR6/8 (brownish yellow), slightly dense, and	
36.0					moist	
					Fine Sand with little clay 10VR8/2 (very nale brown) mottled	
			44.5	43.0	with 10YR6/8 (brownish yellow), dense, and moist	
			45.6	46.0	Clayey Fine Sand, 10YR7/4 (very pale brown), very dense,	
					moderate plasticity, and moist  Very Clayey Very Fine Sand, 10YR7/4 (very pale brown)	
	56.0		46.0	49.8	mottled with 7.5YR5/3 (brown), very dense, low plasticity, and	
			49.8	54.1	moist	
40.0		40.5			Fine Sand, 7.5YR6/8 (reddish yellow) marbled with 7.5YR3/1	Trace subrounded gravel, 2.0 inch
46.0		12.5			(very dark gray), loose to dense Very Clayey Fine Sand, 7.5YR6/8 (reddish yellow) marbled	diameter
			54.1 54.6	54.6	with 7.5YR3/1 (very dark gray), loose to dense, and moderate	
					plasticity	
					Fine Sand as at 49.8-54.1 ft	
	66.0	9.0	56.0 56.9		Fine Sand, 10YR7/4 (very pale brown), loose, and moist Fine Sand as above but stained 7.5YR3/1 (very dark gray)	
56.0				39.3	Sandy Gravel, 10YR7/4 (very pale brown), loose, and moist.	
			59.3	66.0	Gravel is rounded chart with iron nating 0.2-2.0 inch diameter	
					Sand is predominately fine quartz(?) but includes coarse,	
	76.0	2.2			subrounded to subangular, chert grains Sandy Gravel, 10YR6/4 (light yellowish brown), loose, and wet	
				68.2	Gravel is rounded chart with iron nating 0.2-3.0 inch diameter	1
66.0					Sand is predominately fine quartz(?) but includes some	
					coarse, subrounded to subangular, chert grains	
			68.2	76.0	Missing	
76.0	87.5	11.3			Sandy Gravel, 10YR6/4 (light yellowish brown), loose, and wet Gravel is rounded to subrounded chert with iron patina, 0.2-3.0	
			76.0	87.5	inch diameter. Sand is predominately fine quartz(?) but	
					includes 10-15% coarse, subrounded, chert grains	
				·		
TD=87.5						



Drawn By: Todd W. Mills

Date: June 30, 2009

CHASE ENVIRONMENTAL GROUP, INC. environmental engineering, remediation & consulting

5600 Hobbs Road, West Paducah, KY

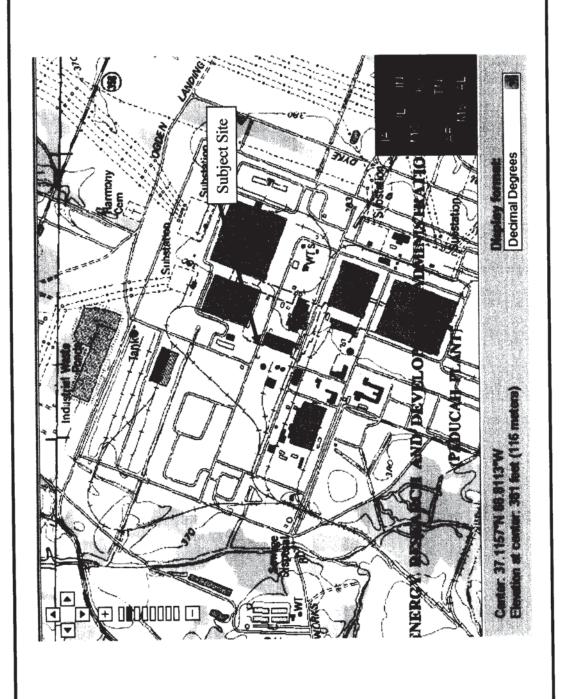
Paducah Gaseous Diffusion Plant - C-400 Building

Site Aerial Photograph

Title:

Comments: Approximate Scale: 1" = 150 Coordinates taken from Google Earth





CHASE ENVIRONMENTAL GROUP, INC. environmental engineering, remediation & consulting

Drawn By: Todd W. Mills

Date: June 30, 2009

Paducah Gaseous Diffusion Plant West Paducah, Kentucky Site Topographic Map Title:

Scale: 1:24,000

Comments: Scale: 1:24,000 Source: USGS 7.5' Topographic Series Heath Quadrangle

