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.

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 unacce.

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

8002-3016



| 4. Owner name | United States Department of Energy | | | | | | | | | OUA | 14- | 901 | | 18 | | |
|---|------------------------------------|--|---|--|---------------------------------|----------------|--------------------------|--|---|--|--|--------------------------|--------------------------------|--------------------|-----------------------------|----|
| 5. Owner addre | | | | | | | | | 2. Ow We | ner ll ID# | MW-4 | 21 In | termed | | | |
| 6. City | Wes | st Padı | ucah | | | | 7. Stat | e KY | | 8. Zip 42053 | 3. Atta Regui | chmen ired | ts | | | 1 |
| If site n | ame and | address | differ fr | rom owne | er name a | nd addre | 988: | | | | 1. | | an or sketch cation | map | | |
| 9. Site name | Pad | lucah | Gase | ous Di | ffusion | Plant | C-4 | 00 Bui | lding | | | On to | opographic | | <u></u> | |
| 10. Site address 5600 Hobbs Road | | | | | | | | 3. | 3. Well diagram (monitoring well) 4. Coliform analysis (if applicable) | | | | | | | |
| 11. City | Wes | West Paducah | | | | | ^{13. Zip} 42053 | | | 5. Optio | S. Signed variance (if applicable) Optional Other laboratory analysis report | | | | | |
| 14. Agend | ry . | | | 15. Facili | ty type | ☐ CE | RÇLA | ☐ Solid | d Waste | Drinking Water | 31. W | ork | Jun | 04 | 2009 | 1 |
| (Al) | 3 | 059 | | l | & (umber | ☐ RCI | RA | UST | | | 32. Wo | ork | Jun Month | 04 Day | 2009 Year | |
| Numb | r | | | | | 17. Si | | | | · · · · · · · · · · · · · · · · · · · | | lease rep | port depths in | feet belov | v surface, | 1 |
| phone | topo map | Heatl | h | | | pl | hone | - Di : | | | | | not as relative | elevations 83.3 | | |
| 19. Coun | | | acker | ` | | - | — ² | 22. Physiographic Region Bluegrass Ohio River Alluvium | | | | tal dept | . , | | <u></u> | |
| | | WICCI | | | letermined | hv | \dashv | E. C | - | eld D W Coal Field | | | 50.0 | | | |
| 20. Surfa elevation | | 1.00 | | GPS 🔳 | Map 🔲 P | rior repo | | ☐ Miss. Plateau ☐ Jackson Purchase | | | 9 | | er level (ft) ight above sı | | | |
| 23. Well I | Use | | 164 | Survey | 24. Drilling | rior well | | | | 25. Well status | 30, Ca | | TER WE | | | - |
| ☐ Agricu | | | □Ge | othermal | Auge | _ | _ | Jet wash | | Active | 37. Est | | | LLS UN | LY | |
| Comm | nercial | | He | at pump | ☐ Auge | r-SS | | Push/probe Inactive | | | | 37. Estimated well yield | | | | |
| Dome | | | _ HV | | Auge | | | Rotary - a Rotary - n | | Unsuitable for intended use | 1 1 | ell servi | | | ple served | |
| Indust | — | | _ □Inje | | Cable | tool | _ | Rotary - r | | 26, Wellhead | 39. Dis | sinfecta | nt amount | 40. | Туре | |
| Monito Reme | | blent Monito | ei ∐Mir - | ning | Core Drive | n casing | _ | Sand poir Sonic | nt | Flush Locking | - 1 | | | _ | Bleach | |
| Public | | | Un | used | ☐ Exca | vation | _ | Unknown | | Well cap | O۰ | | qts 🔲 cu | ps 🗖 | Hypo- | |
| 27 33/-11 | | Carles | | | Comb | oined – H | IS aug | er & air rotary Sanitary seal 28. Annulus fill and seal | | | | os 🔲 | • | . . . | chlorite | |
| From | completion To | Borehole | | | | 8 | creen | From | | | | ness aus mp inst | apter installe | a L11e | s LINO | |
| depth, ft. | depth, ft. | diameter | diameter | and the second s | lasing type | sk | ot size | depth, ft. | depth, ft | Material | District. | ıbmersi | | et 🗖 | Turbine | |
| 0.0 79.0 | 79.0 81.0 | 8 | 2 | PVC sc | reen | ^ | .010 | 1.0 | 57.0 59.0 | Bentonite Bentonite pellets | 1 | | oucket 🗖 F | land 🔲 | No pump | |
| 81.0 | 83.33 | 8 | 2 | PVC | 40011 | | .010 | 57.0 59.0 | 87.42 | · | 1 | | ntake (ft) | | | |
| | | | · · • • • • • • • • • • • • • • • • • • | | attornis tiano, industrio tenno | ANALOS ASSOCIA | ***** | | 01.42 | | 44. Ap | parent | quality and | odor: | | |
| | | | | 1 | | | | | | | <u> </u> | Clea | ar | none slight | e did | |
| 29. Lithol | logic log (| if more sp | ace is ne | eded, conti | inue on sep | arate page | :) | 30. Sketc | h map | Manager and Assessment and Assessmen | 15 | Clou | . 8 | | E E □ □ tron | |
| From To Description (include any show of water and indicate | | | | | | | | | PE | Mud Turt | , | | Sulfur | | | |
| 200000000000000000000000000000000000000 | 19.4 | depth, ft. apparent quality) 19.4 Silt | | | | | | | 1 | _ ruit | oid | | ☐ ☐ Salt | | | |
| 19.4 | 25.5 | | | | | | | | COLI | FORM | TEST | | | | | |
| 25.5 | 26.0 | | | | | | | | | | test type | and total | | | | |
| 26.0 | 29.3 | Silt to Very Fine Sand | | | | | | | 46. Co | | test results | _ | Confluent | | | |
| 29.3 | 35.1 | Fine to Coarse Sand | | | | | | | or | a 0 01 \ | | nies per | | | | |
| 35.1 | 36.0 | Silt | | | | | | | | _ | | por | | | | |
| 36.0 | 40.8 | | | | | | | | 47. D Samp | | | Day | Year | | | |
| 40.8 | 54.6 59.3 | Fine Sand With Clay Fine Sand | | | | | | | 48. D | | | | w | | | |
| 54.6 59.3 | | | | | | Show well loc | ation and dist | ances from permanent structures, septic | Analy | | Month | Day | Year | | | |
| * | | Januy | Giave | 21 | | | .ــ.ــا | fields, major i | roeds (include INDICAT | name or number) and intersections. E NORTH WITH AN ARROW. | Latitu | de o | or | | | |
| 49. Com | | od well- | | latad !- | | or 0 !- | oh b | orobole | 00 BAIA | 1.424 AIVAIV42" | | | Decimal 3 | <u>1.11</u> 5 | 402 | GA |
| | | | | | ocking co | | | | | /-421. 4'X4'X12" | Longi | tude ' | DMS or Decimal S | 2.81 | 7715 | |
| 50. Affiri | mation: T | he work des | scribed ab | ove was do | ne under my | supervision | n, and th | nis report is | true and co | prrect to the best of my knowled or completing this well. | | ong met | | SUR [| REP | |
| Note: | the driller is | s not respor | ISIDIO TOT I | inchi ali incui | ndwater qual | ity or quant | utj minot | | | | | | | | 100 CO 100 CO 100 CO 100 CO | |
| Signature certified | the driller is e of | s not respon |) De | lely | ndwater qual | ny or quan | uty who | Dat sign | e , | Jun 30 200 Month Day Ye | | Receive | JUL 1 | 3 20 | 09 | |

JB

rev 04/11/2008

Attach Well Identification Number

Label Hara (if applicable)

Use this form to report installation of monitoring or water we 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 unacce

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

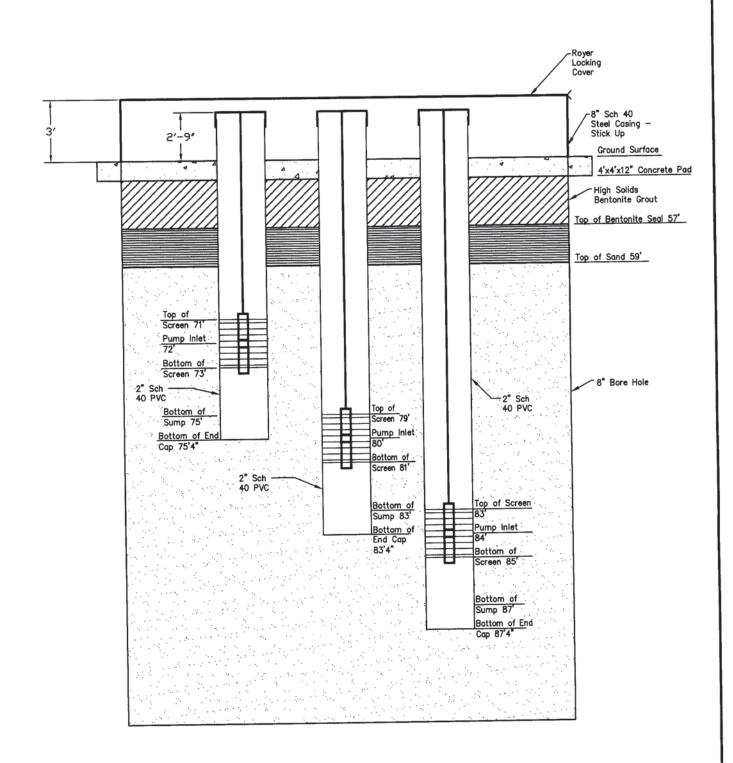
City/State/Zip: West Paducah, KY 42053

State Assigned #

8005-6385

Facility Assigned #

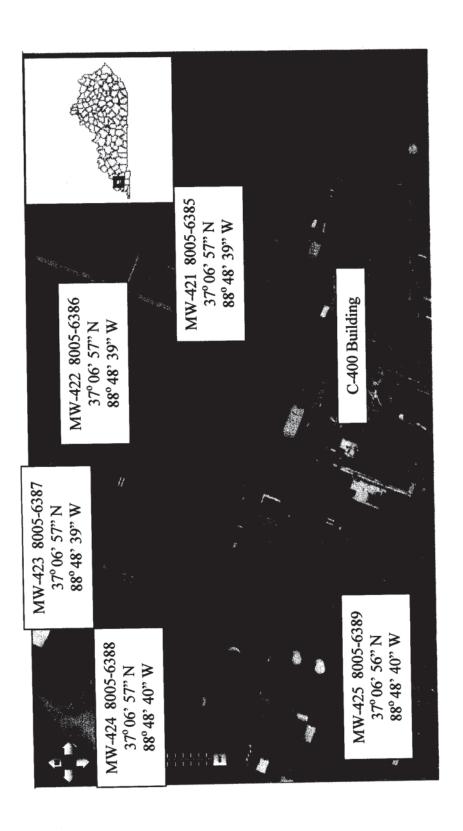
MW-421





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 |
| | | | | | Silt, 10YR7/1 (light gray) with 10YR7/4 (very pale brown) | |
| 0.0 | 6.0 | 9.5 | 0.0 | 6.0 | 7 | 0.0-0.3 ft: rootlets |
| | | | | | 10YR7/1 (light gray) mottling, soft, nonplastic, and moist | |
| | 16.0 | 11.0 | 6.0 | 10.7 | Silt, 10YR7/4 (very pale brown) with little mottling by 10YR7/1 (light gray), soft, nonplastic, and moist | |
| 6.0 | | | | | 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 | |
| | | | | | firm, moderate plasticity, and moist | |
| | 26.0 | | 16.0 | 19.4 | Silt as above Gravelly Sand with silt, 10YR6/4 (light yellowish brown), | |
| | | | 19.4 | 20.5 | 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 | 25.5 | Gravelly Sand, 7.5YR6/6 (reddish yellow) with some | |
| | | | | | 7.5YR2.5/1 (black) staining (manganese?), loose, and moist. Sand is fine quartz(?). Gravel is rounded chert, 0.2-1.0 inch | |
| | | | | | diameter | |
| | | | 25.5 | 26.0 | Clay, 10YR7/1 (light gray), soft, plastic, and moist | |
| | | | 26.0 | 29.3 | Silt, grading downward to Very Fine Sand, 10YR7/1 (light gray) | |
| | | | | | stained with 10YR7/8 (yellow) and 2.5YR7/4 (light reddish | |
| | | | 29.3 | | brown), soft, low plasticity to nonplastic, and moist Fine Sand, 10YR7/6 (yellow), grading downward to Coarse | |
| 00.0 | | | | 35.1 | Sand with gravel, 10YR7/3 (very pale brown), loose, and | |
| 26.0 | | | | | 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 | |
| | | | | | Fine Sand with gravel, 10YR8/1 (white), loose, and moist. | |
| | 46.0 | 12.2 | 36.0 | 40.8 | Gravel is well rounded chert pebbles, weathered white, 0.2-0.3 | |
| | | | | | inch diameter | |
| | | | | | Fine Sand with very little clay, 10YR8/2 (very pale brown) | |
| 36.0 | | | | | mottled with 10YR6/8 (brownish yellow), slightly dense, and moist | |
| | | | | | Fine Sand with little clay, 10YR8/2 (very pale brown) mottled | |
| | | | 44.3 | 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) | |
| | | | 46.0 | 49.8 | mottled with 7.5YR5/3 (brown), very dense, low plasticity, and | |
| 46.0 | | | 54.1 54.6 | 54.1 | moist | |
| | | 40 - | | | Fine Sand, 7.5YR6/8 (reddish yellow) marbled with 7.5YR3/1 | Trace subrounded gravel, 2.0 inch |
| | 56.0 | 12.5 | | | (very dark gray), loose to dense Very Clayey Fine Sand, 7.5YR6/8 (reddish yellow) marbled | diameter |
| | | | | 54.6 | with 7.5YR3/1 (very dark gray), loose to dense, and moderate | |
| | | | | | plasticity | |
| | | | | | Fine Sand as at 49.8-54.1 ft | |
| | | | 56.0 | | Fine Sand, 10YR7/4 (very pale brown), loose, and moist | |
| 56.0 | | 9.0 | 56.9 | 59.3 | Fine Sand as above but stained 7.5YR3/1 (very dark gray) Sandy Gravel, 10YR7/4 (very pale brown), loose, and moist. | |
| | 66.0 | | 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, | |
| | | | | | subrounded to subangular, chert grains | |
| | 76.0 | 2.2 | | 68.2 | Sandy Gravel, 10YR6/4 (light yellowish brown), loose, and wet Gravel is rounded chert with iron patina, 0.2-3.0 inch diameter. | |
| 66.0 | | | | | Sand is predominately fine quartz(?) but includes some | |
| | | | | | coarse, subrounded to subangular, chert grains | |
| | | | 68.2 | 76.0 | Missing | |
| | 87.5 | 11.3 | | | Sandy Gravel, 10YR6/4 (light yellowish brown), loose, and wet | |
| 76.0 | | | 76.0 | 87.5 | Gravel is rounded to subrounded chert with iron patina, 0.2-3.0 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

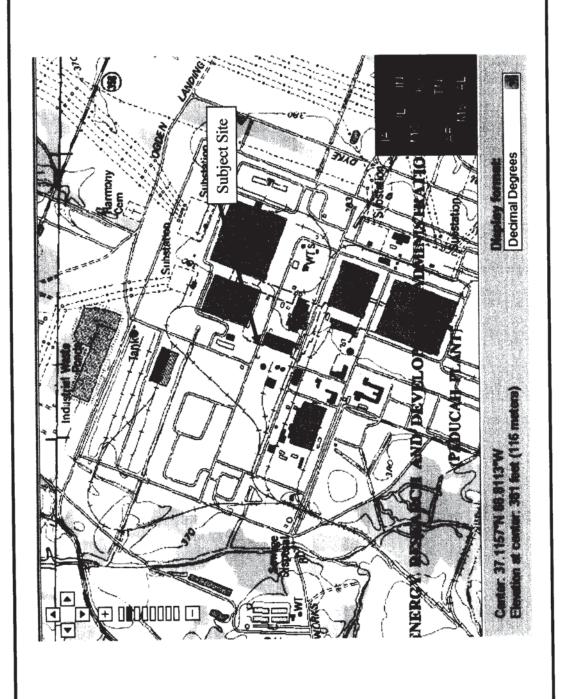
Paducah Gaseous Diffusion Plant - C-400 Building

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

