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May, 27, 2008
Project No. 13636

Mr. J. Ryan Benefield, P.E.
Chief, Hazardous Waste Division
Arkansas Department of Environmental Quality
8001 National Drive
Little Rock, Arkansas 72219-8913

Subject: Facility Investigation (FI) Workplan Supplement
Perched and Alluvial Aquifer Monitoring Well Installation Program
Cedar Chemical Company Facility ("the Site")
West Helena, Arkansas
State EPA ID No. ARD990660649

Dear Mr. Benefield:

This Supplement is being submitted pursuant to Section 3.1 and 3.2 of the final Facility Investigation (FI) Workplan dated March 2008. Section 3.1 identified methods and proposed locations for perched zone monitoring wells. Section 3.2 discussed alluvial aquifer well locations, and stated that:

> Additional wells will be installed in order to complete delineation of chemical impact in the alluvial aquifer, and to further characterize the hydraulic and geochemical nature of that aquifer. The locations and anticipated depths of alluvial aquifer wells will be based on the results of the CPT investigation and the January 2008 groundwater sampling event.

Both the CPT and the January 2008 groundwater sampling events, as well as a DPT investigation of the process areas, are now complete. This Supplement is intended to describe the objectives, locations, and construction of the planned perched and alluvial aquifer monitoring well system. Please note that this Supplement also modifies the proposed locations for perched zone wells provided in the Work Plan,

The objective of the perched aquifer monitoring well system is to enhance the understanding of the lateral and vertical extent and continuity of this Aquifer, and to monitor areas of the site where identified or known impacts or data gaps exist. After review of the data from the CPT, DPT and January 2008 groundwater sampling events, Geomatrix proposes to install additional perched zone monitoring wells at the locations shown on Figures 1 through 3.

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All perched aquifer wells will be 2-inch nominal diameter, and will be installed using rotasonic drilling methods, as described in Section 3.1 of the FI Work Plan, to a depth of approximately 20 to 25 feet below ground surface. The proposed well construction is presented in Figure 6 the FI Workplan.

The objective of the alluvial aquifer monitoring well installation is to enhance the understanding of groundwater flow, and the lateral and vertical extent of impact, in the alluvial aquifer, both on site and downgradient of the site. Because of the thickness of the alluvial aquifer, screened intervals for monitoring wells will be placed at multiple depths. This will allow Geomatrix to evaluate vertical gradients and the vertical movement of constituents of concern within the aquifer.

The proposed approach is to supplement existing alluvial wells by installing well clusters at key locations. Existing monitoring wells will be integrated into this well system, and their screen settings will not be duplicated by the new well clusters. To the extent practicable, the well cluster screen settings will target highly transmissive horizons, such as coarse sand or gravel beds, that may act as preferential migration pathways for dissolved contaminants. The objective of this approach will be to allow discrete sampling from either the upper, middle, and/or basal zones of the alluvial aquifer. Actual monitoring depths at each location will be selected in the field based on the site specific geology, but the approximate target depths for monitoring are 55, 85 and 145 feet below ground surface. Alluvial aquifer well locations, as well as anticipated completion depths, are shown on Figures 1 through 3.

Each 2-inch multi-level well will be installed using a Continuous Multilevel System technology (CMT Solinst) that allows screening multiple zones across the alluvial aquifer with a single borehole (typical well construction shown in Figure 4). This approach is widely used, represents a proven technology, and is recognized by both state environmental agencies and the U.S. Environmental Protection Agency as a technically sound approach. Discussions of this approach from the technical literature are included with this letter for your review. This mode of construction does vary from that described in the FI Workplan, but will still allow the collection of representative data that can be used in formulating a final remedy for the site.

After well installation is complete, each CMT well will be equipped with a dedicated downhole pump to be used for purging and sampling discrete horizons.

Subject to ADEQ approval of this approach, Geomatrix plans to mobilize to the Site to commence perched zone and alluvial aquifer well installation on approximately June 4th, 2008.

If you have any comments regarding this report, please call me at (512) 494-0333.

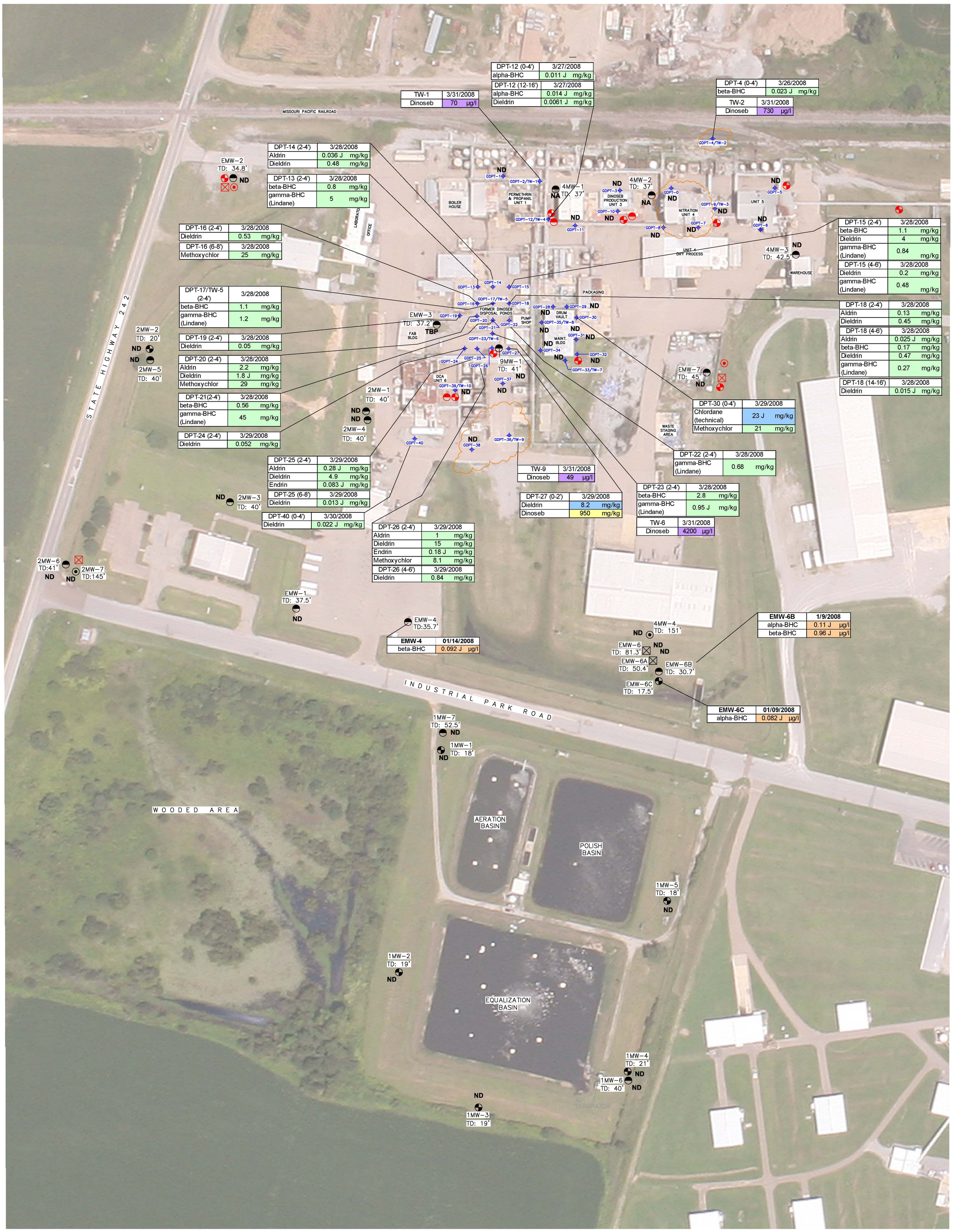
Sincerely,
GEOMATRIX CONSULTANTS, INC.

Kelly Beck, P.G.
Senior Project Manager

cc: Exxon Mobil Corporation
Helena Chemical Company

Attachments:

Figures 1 through 4
Multilevel Well Technology Supporting Literature



DPT-12 (0-4')	3/27/2008
alpha-BHC	0.011 J mg/kg

DPT-12 (12-16')	3/27/2008
alpha-BHC	0.014 J mg/kg
Dieldrin	0.0061 J mg/kg

TW-1	3/31/2008
Dinoseb	70 µg/l

DPT-4 (0-4')	3/26/2008
beta-BHC	0.023 J mg/kg

TW-2	3/31/2008
Dinoseb	730 µg/l

DPT-14 (2-4')	3/28/2008
Aldrin	0.036 J mg/kg
Dieldrin	0.48 mg/kg

DPT-13 (2-4')	3/28/2008
beta-BHC	0.8 mg/kg
gamma-BHC (Lindane)	5 mg/kg

DPT-16 (2-4')	3/28/2008
Dieldrin	0.53 mg/kg

DPT-16 (6-8')	3/28/2008
Methoxychlor	25 mg/kg

DPT-17/TW-5 (2-4')	3/28/2008
beta-BHC	1.1 mg/kg
gamma-BHC (Lindane)	1.2 mg/kg

DPT-19 (2-4')	3/28/2008
Dieldrin	0.05 mg/kg

DPT-20 (2-4')	3/28/2008
Aldrin	2.2 mg/kg
Dieldrin	1.8 J mg/kg
Methoxychlor	29 mg/kg

DPT-21(2-4')	3/28/2008
beta-BHC	0.56 mg/kg
gamma-BHC (Lindane)	45 mg/kg

DPT-24 (2-4')	3/29/2008
Dieldrin	0.052 mg/kg

DPT-25 (2-4')	3/29/2008
Aldrin	0.28 J mg/kg
Dieldrin	4.9 mg/kg
Endrin	0.083 J mg/kg

DPT-25 (6-8')	3/29/2008
Dieldrin	0.013 J mg/kg

DPT-40 (0-4')	3/30/2008
Dieldrin	0.022 J mg/kg

DPT-26 (2-4')	3/29/2008
Aldrin	1 mg/kg
Dieldrin	15 mg/kg
Endrin	0.18 J mg/kg
Methoxychlor	8.1 mg/kg

DPT-26 (4-6')	3/29/2008
Dieldrin	0.84 mg/kg

TW-9	3/31/2008
Dinoseb	49 µg/l

DPT-27 (0-2')	3/29/2008
Dieldrin	8.2 mg/kg
Dinoseb	950 mg/kg

DPT-15 (2-4')	3/28/2008
beta-BHC	1.1 mg/kg
Dieldrin	4 mg/kg
gamma-BHC (Lindane)	0.84 mg/kg

DPT-15 (4-6')	3/28/2008
Dieldrin	0.2 mg/kg
gamma-BHC (Lindane)	0.48 mg/kg

DPT-18 (2-4')	3/28/2008
Aldrin	0.13 mg/kg
Dieldrin	0.45 mg/kg

DPT-18 (4-6')	3/28/2008
Aldrin	0.025 J mg/kg
beta-BHC	0.17 mg/kg
Dieldrin	0.47 mg/kg
gamma-BHC (Lindane)	0.27 mg/kg

DPT-18 (14-16')	3/28/2008
Dieldrin	0.015 J mg/kg

DPT-30 (0-4')	3/29/2008
Chlordane (technical)	23 J mg/kg
Methoxychlor	21 mg/kg

DPT-22 (2-4')	3/28/2008
gamma-BHC (Lindane)	0.68 mg/kg

DPT-23 (2-4')	3/28/2008
beta-BHC	2.8 mg/kg
gamma-BHC (Lindane)	0.95 J mg/kg

TW-6	3/31/2008
Dinoseb	4200 µg/l

EMW-4	01/14/2008
beta-BHC	0.092 J µg/l

EMW-6B	1/9/2008
alpha-BHC	0.11 J µg/l
beta-BHC	0.96 J µg/l

EMW-6C	01/09/2008
alpha-BHC	0.082 J µg/l

Screening Levels for Soil Samples		
Analyte	*Residential Soil MSSL (0-6" bgs) (mg/kg)*	*DAF (6"-Groundwater) (mg/kg)*
Aldrin	0.029	0.02
alpha-BHC	0.09	0.00003
beta-BHC	0.32	0.0001
Chlordane (technical)	1.6	0.5
Dieldrin	0.03	0.0002
Endrin	18	0.05
gamma-BHC (Lindane)	0.44	0.0005
Methoxychlor	310	8
Dinoseb	61	NA

	Sample Result Exceeds Residential Soil (0-6") MSSL
	Sample Result Exceeds Soil Dilution Attenuation Factor (DAF)
	Sample Result Exceeds Both Soil MSSL and DAF

Screening Levels for Groundwater Samples		
Analyte	*Primary Drinking Water Standard (ug/L)*	*Region 6 TapWater MSSL (ug/l)*
alpha-BHC	None	0.011
beta-BHC	None	0.037

	Sample Result Exceeds the Primary Drinking Water Standard
	Sample Result Exceeds the Tap Water MSSL
	Sample Result Exceeds Both the Primary Drinking Water Standard and the Tap Water MSSL

EXPLANATION

PROPOSED ↓ EXISTING ↓

- Perched Well Location
- Upper Alluvial Well Location
- Middle Alluvial Well Location
- Lower Alluvial Well Location

GDPT-5 DIRECT PUSH LOCATION

TW-1 TEMPORARY WELL LOCATION

SUSPECT WASTE BURIAL AREA IDENTIFIED BY ADEQ

DPT-2, DPT-18, DPT-39 ADEQ EXPANDED PROTOCOL

DPT-10 (0-4')	3/27/2008
1,2-Dichloroethane	0.4 mg/kg
Tetrachloroethene	2.1 mg/kg
Trichloroethene	0.0066 J mg/kg

Sample ID with Depth

Concentration of Analytes Detected above Screening Levels

ND - VOCs Not Detected above Screening Levels

NA - Sample Not Collected

TBP - To be Plugged and Abandoned

0 80
APPROXIMATE SCALE IN FEET

NOTE:
ALL ALLUVIAL WELLS WILL BE INSTALLED USING ROTASONIC DRILLING TECHNIQUES IN A SINGLE BOREHOLE.

ALL PROPOSED WELL & BORING LOCATIONS ARE APPROXIMATE, & MAY BE ADJUSTED BASED ON UTILITIES, FIELD ACCESS, & OTHER CONDITIONS.

BASEMAP MODIFIED FROM:
EnSafe, 1996-Phase III FI, 2001 Groundwater Monitoring Report, Drawings C2162GWS and C2162VC7

Pesticides/Herbicides in Soil and Groundwater and Proposed Perched and Alluvial Monitoring Well Locations
DPT Investigation March 2008
Cedar Chemical
Helena-West Helena, Arkansas

By: MLS | Date: 5/27/08 | Project No. 13636

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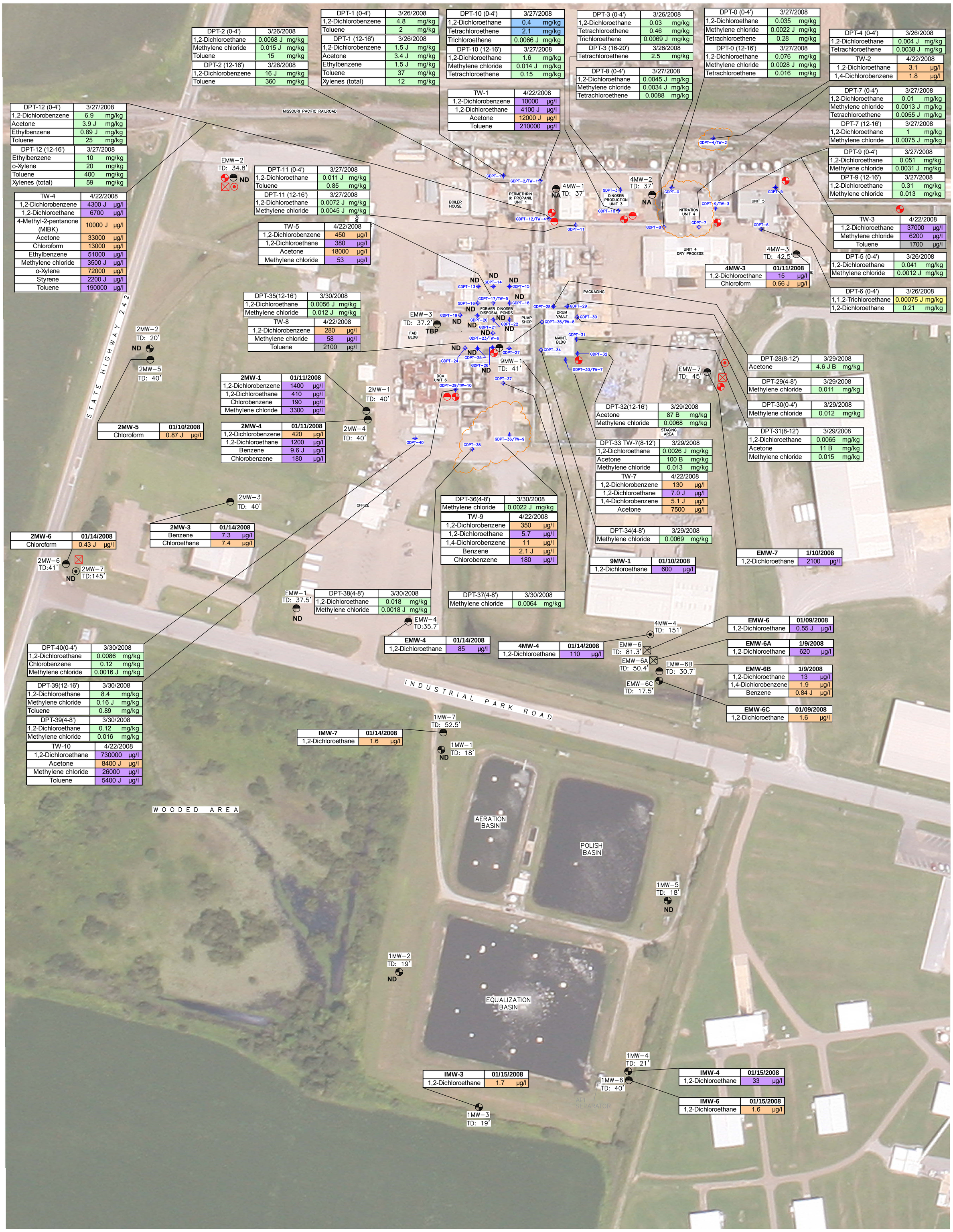
Figure 1



DPT-2 (0-4')	3/26/2008
1,2-Dichloroethane	0.0068 J mg/kg
Methylene chloride	0.015 J mg/kg
Toluene	15 mg/kg

DPT-2 (12-16')	3/26/2008
1,2-Dichlorobenzene	16 J mg/kg
Toluene	360 mg/kg

DPT-1 (0-4')	3/26/2008
1,2-Dichlorobenzene	4.8 mg/kg
Toluene	2 mg/kg

DPT-1 (12-16')	3/26/2008
1,2-Dichlorobenzene	1.5 J mg/kg
Acetone	3.4 J mg/kg
Ethylbenzene	1.5 J mg/kg
Toluene	37 mg/kg
Xylenes (total)	12 mg/kg

DPT-10 (0-4')	3/27/2008
1,2-Dichloroethane	0.4 mg/kg
Tetrachloroethene	2.1 mg/kg
Trichloroethene	0.0066 J mg/kg

DPT-10 (12-16')	3/27/2008
1,2-Dichloroethane	1.6 mg/kg
Methylene chloride	0.014 J mg/kg
Tetrachloroethene	0.15 mg/kg

DPT-3 (0-4')	3/26/2008
1,2-Dichloroethane	0.03 mg/kg
Tetrachloroethene	0.46 mg/kg
Trichloroethene	0.0069 J mg/kg

DPT-3 (16-20')	3/26/2008
Tetrachloroethene	2.5 mg/kg

DPT-8 (0-4')	3/27/2008
1,2-Dichloroethane	0.0045 J mg/kg
Methylene chloride	0.0034 J mg/kg
Tetrachloroethene	0.0088 mg/kg

DPT-0 (0-4')	3/27/2008
1,2-Dichloroethane	0.035 mg/kg
Methylene chloride	0.0022 J mg/kg
Tetrachloroethene	0.28 mg/kg

DPT-0 (12-16')	3/27/2008
1,2-Dichloroethane	0.076 mg/kg
Methylene chloride	0.0028 J mg/kg
Tetrachloroethene	0.016 mg/kg

DPT-4 (0-4')	3/26/2008
1,2-Dichloroethane	0.004 J mg/kg
Tetrachloroethene	0.0038 J mg/kg

TW-2	4/22/2008
1,2-Dichloroethane	3.1 µg/l
1,4-Dichlorobenzene	1.8 µg/l

DPT-7 (0-4')	3/27/2008
1,2-Dichloroethane	0.01 mg/kg
Methylene chloride	0.0013 J mg/kg
Tetrachloroethene	0.0055 J mg/kg

DPT-7 (12-16')	3/27/2008
1,2-Dichloroethane	1 mg/kg
Methylene chloride	0.0075 J mg/kg

DPT-9 (0-4')	3/27/2008
1,2-Dichloroethane	0.051 mg/kg
Methylene chloride	0.0031 J mg/kg

DPT-9 (12-16')	3/27/2008
1,2-Dichloroethane	0.31 mg/kg
Methylene chloride	0.013 mg/kg

TW-3	4/22/2008
1,2-Dichloroethane	37000 µg/l
Methylene chloride	6200 µg/l
Toluene	1700 µg/l

DPT-5 (0-4')	3/26/2008
1,2-Dichloroethane	0.041 mg/kg
Methylene chloride	0.0012 J mg/kg

DPT-6 (0-4')	3/26/2008
1,1,2-Trichloroethane	0.00075 J mg/kg
1,2-Dichloroethane	0.21 mg/kg

4MW-3	01/11/2008
1,2-Dichloroethane	15 µg/l
Chloroform	0.56 J µg/l

DPT-12 (0-4')	3/27/2008
1,2-Dichlorobenzene	6.9 mg/kg
Acetone	3.9 J mg/kg
Ethylbenzene	0.89 J mg/kg
Toluene	25 mg/kg

DPT-12 (12-16')	3/27/2008
Ethylbenzene	10 mg/kg
o-Xylene	20 mg/kg
Toluene	400 mg/kg
Xylenes (total)	59 mg/kg

TW-4	4/22/2008
1,2-Dichlorobenzene	4300 J µg/l
1,2-Dichloroethane	6700 µg/l
4-Methyl-2-pentanone (MIBK)	10000 J µg/l
Acetone	33000 µg/l
Chloroform	13000 µg/l
Ethylbenzene	51000 µg/l
Methylene chloride	3500 J µg/l
o-Xylene	72000 µg/l
Styrene	2200 J µg/l
Toluene	190000 µg/l

TW-1	4/22/2008
1,2-Dichlorobenzene	10000 µg/l
1,2-Dichloroethane	4100 J µg/l
Acetone	12000 J µg/l
Toluene	210000 µg/l

DPT-11 (0-4')	3/27/2008
1,2-Dichloroethane	0.011 J mg/kg
Toluene	0.85 mg/kg

DPT-11 (12-16')	3/27/2008
1,2-Dichloroethane	0.0072 J mg/kg
Methylene chloride	0.0045 J mg/kg

TW-5	4/22/2008
1,2-Dichlorobenzene	450 µg/l
1,2-Dichloroethane	380 µg/l
Acetone	18000 µg/l
Methylene chloride	53 µg/l

DPT-35(12-16')	3/30/2008
1,2-Dichloroethane	0.0056 J mg/kg
Methylene chloride	0.012 J mg/kg

TW-8	4/22/2008
1,2-Dichlorobenzene	280 µg/l
Methylene chloride	58 µg/l
Toluene	2100 µg/l

2MW-1	01/11/2008
1,2-Dichlorobenzene	1400 µg/l
1,2-Dichloroethane	410 µg/l
Chlorobenzene	190 µg/l
Methylene chloride	3300 µg/l

2MW-5	01/10/2008
Chloroform	0.87 J µg/l

2MW-4	01/11/2008
1,2-Dichlorobenzene	420 µg/l
1,2-Dichloroethane	1200 µg/l
Benzene	9.6 J µg/l
Chlorobenzene	180 µg/l

2MW-3	01/14/2008
Benzene	7.3 µg/l
Chloroethane	7.4 µg/l

2MW-6	01/14/2008
Chloroform	0.43 J µg/l

DPT-36(4-8')	3/30/2008
Methylene chloride	0.0022 J mg/kg

TW-9	4/22/2008
1,2-Dichlorobenzene	350 µg/l
1,2-Dichloroethane	5.7 µg/l
1,4-Dichlorobenzene	11 µg/l
Benzene	2.1 J µg/l
Chlorobenzene	180 µg/l

DPT-38(4-8')	3/30/2008
1,2-Dichloroethane	0.018 mg/kg
Methylene chloride	0.0018 J mg/kg

DPT-37(4-8')	3/30/2008
Methylene chloride	0.0064 mg/kg

EMW-4	01/14/2008
1,2-Dichloroethane	85 µg/l

4MW-4	01/14/2008
1,2-Dichloroethane	110 µg/l

DPT-40(0-4')	3/30/2008
1,2-Dichloroethane	0.0086 mg/kg
Chlorobenzene	0.12 mg/kg
Methylene chloride	0.0016 J mg/kg

DPT-39(12-16')	3/30/2008
1,2-Dichloroethane	8.4 mg/kg
Methylene chloride	0.16 J mg/kg
Toluene	0.89 mg/kg

DPT-39(4-8')	3/30/2008
1,2-Dichloroethane	0.12 mg/kg
Methylene chloride	0.016 mg/kg

TW-10	4/22/2008
1,2-Dichloroethane	730000 µg/l
Acetone	8400 J µg/l
Methylene chloride	26000 µg/l
Toluene	5400 J µg/l

IMW-7	01/14/2008
1,2-Dichloroethane	1.6 µg/l

DPT-28(8-12')	3/29/2008
Acetone	4.6 J B mg/kg

DPT-29(4-8')	3/29/2008
Methylene chloride	0.011 mg/kg

DPT-30(0-4')	3/29/2008
Methylene chloride	0.012 mg/kg

DPT-31(8-12')	3/29/2008
1,2-Dichloroethane	0.0065 mg/kg
Acetone	11 B mg/kg
Methylene chloride	0.015 mg/kg

DPT-32(12-16')	3/29/2008
Acetone	87 B mg/kg
Methylene chloride	0.0068 mg/kg

DPT-33 TW-7(8-12')	3/29/2008
1,2-Dichloroethane	0.0026 J mg/kg
Acetone	100 B mg/kg
Methylene chloride	0.013 mg/kg

TW-7	4/22/2008
1,2-Dichlorobenzene	130 µg/l
1,2-Dichloroethane	7.0 J µg/l
1,4-Dichlorobenzene	5.1 J µg/l
Acetone	7500 µg/l

DPT-34(4-8')	3/29/2008
Methylene chloride	0.0069 mg/kg

9MW-1	01/10/2008
1,2-Dichloroethane	600 µg/l

EMW-7	1/10/2008
1,2-Dichloroethane	2100 µg/l

EMW-6	01/09/2008
1,2-Dichloroethane	0.55 J µg/l

EMW-6A	1/9/2008
1,2-Dichloroethane	620 µg/l

EMW-6B	1/9/2008
1,2-Dichloroethane	13 µg/l
1,4-Dichlorobenzene	1.9 µg/l
Benzene	0.84 J µg/l

EMW-6C	01/09/2008
1,2-Dichloroethane	1.6 µg/l

IMW-3	01/15/2008
1,2-Dichloroethane	1.7 µg/l

IMW-4	01/15/2008
1,2-Dichloroethane	33 µg/l

IMW-6	01/15/2008
1,2-Dichloroethane	1.6 µg/l

Screening Levels for Soil Samples		
Analyte	*Residential Soil MSSL (0-6" bgs) (mg/kg)*	*DAF (6" to Groundwater) (mg/kg)*
1,1,2-Trichloroethane	0.84	0.0009
1,2-Dichlorobenzene	280	0.9
1,2-Dichloroethane	0.35	0.001
1,4-Dichlorobenzene	3.2	0.1
Acetone	14000	0.8
Chlorobenzene	270	0.07
Ethylbenzene	230	0.7
Methylene chloride	8.9	0.001
o-Xylene	280	9
Tetrachloroethene	0.55	0.003
Toluene	520	0.6
Trichloroethene	0.043	0.003
Xylenes (total)	210	10

	Sample Result Exceeds Residential Soil (0-6") MSSL
	Sample Result Exceeds Soil Dilution Attenuation Factor (DAF)
	Sample Result Exceeds Both Soil MSSL and DAF

Screening Levels for Groundwater Samples		
Analyte	*Primary Drinking Water Standard (ug/L)*	*Region 6 TapWater MSSL (ug/l)*
1,2-Dichlorobenzene	600	49
1,2-Dichloroethane	5	0.12
1,4-Dichlorobenzene	75	0.47
4-Methyl-2-pentanone (MIBK)	None	2000
Acetone	None	5500
Benzene	5	0.35
Chlorobenzene	100	91
Chloroethane	None	3.9
Chloroform	None	0.17
Methylene chloride	5	4.3
o-Xylene	None	1400
Styrene	100	1600
Toluene	1000	2300

	Sample Result Exceeds the Primary Drinking Water Standard
	Sample Result Exceeds the Tap Water MSSL
	Sample Result Exceeds Both the Primary Drinking Water Standard and the Tap Water MSSL

EXPLANATION

PROPOSED — EXISTING

- Perched Well Location
- Upper Alluvial Well Location
- Middle Alluvial Well Location
- Lower Alluvial Well Location

GDPT-5 DIRECT PUSH LOCATION

TW-1 TEMPORARY WELL LOCATION

SUSPECT WASTE BURIAL AREA IDENTIFIED BY ADEQ

DPT-2, DPT-18, DPT-39 ADEQ EXPANDED PROTOCOL

0 80
APPROXIMATE SCALE IN FEET

NOTE:
ALL ALLUVIAL WELLS WILL BE INSTALLED USING ROTASONIC DRILLING TECHNIQUES IN A SINGLE BOREHOLE.

ALL PROPOSED WELL & BORING LOCATIONS ARE APPROXIMATE, & MAY BE ADJUSTED BASED ON UTILITIES, FIELD ACCESS, & OTHER CONDITIONS.

BASEMAP MODIFIED FROM:
EnSafe, 1996-Phase III FI, 2001 Groundwater Monitoring Report, Drawings C2162GWS and C2162VC7

Sample ID with Depth

DPT-10 (0-4')	3/27/2008
1,2-Dichloroethane	0.4 mg/kg
Tetrachloroethene	2.1 mg/kg
Trichloroethene	0.0066 J mg/kg

Concentration of Analytes Detected above Screening Levels

ND - VOCs Not Detected above Screening Levels

NA - Sample Not Collected

TBP - To be Plugged and Abandoned

VOCs in Soil and Groundwater and Proposed Perched and Alluvial Monitoring Well Locations
DPT Investigation March 2008

Cedar Chemical
Helena-West Helena, Arkansas

By: MLS | Date: 5/27/08 | Project No. 13636

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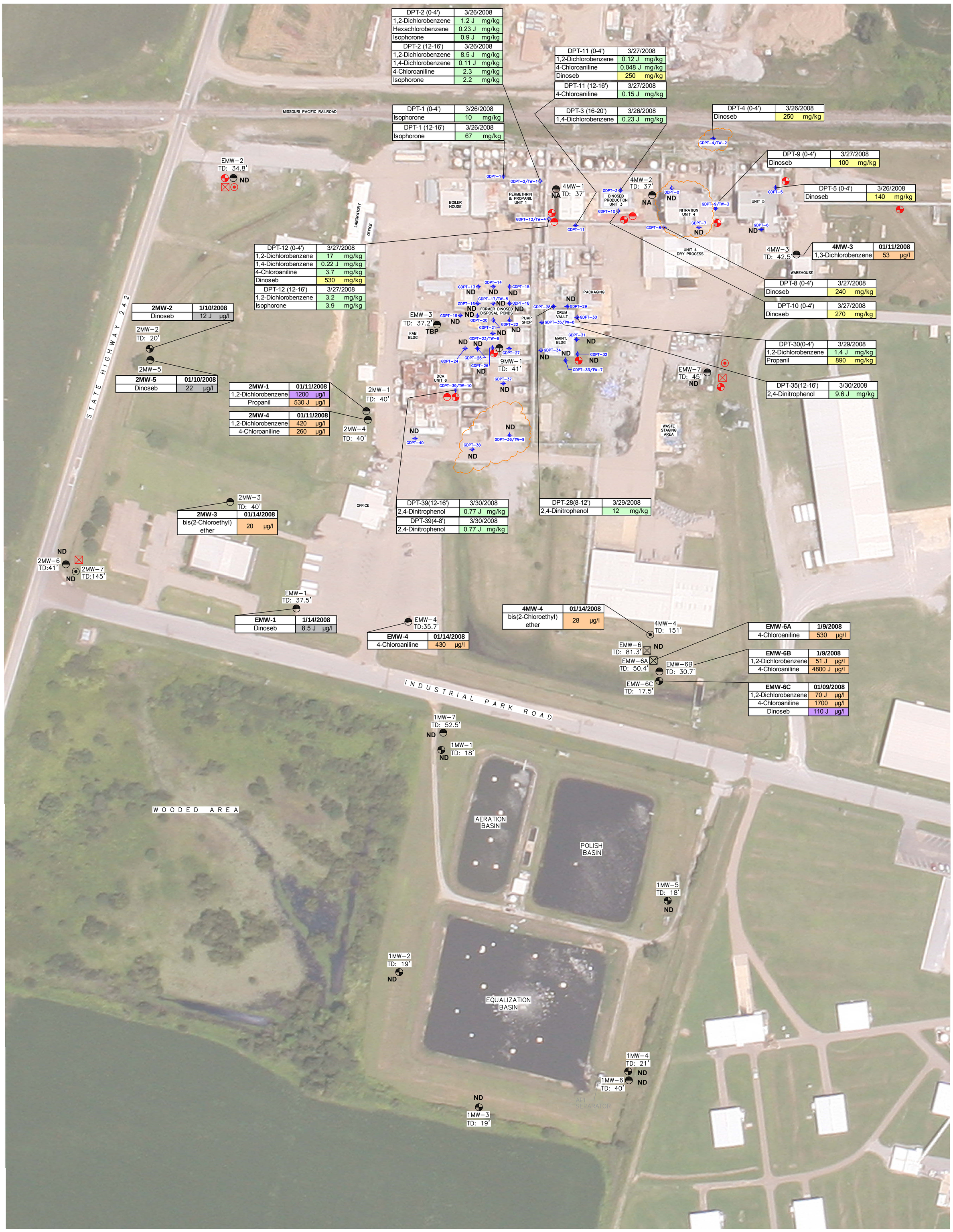
Figure 2



DPT-2 (0-4')	3/26/2008
1,2-Dichlorobenzene	1.2 J mg/kg
Hexachlorobenzene	0.23 J mg/kg
Isophorone	0.9 J mg/kg

DPT-2 (12-16')	3/26/2008
1,2-Dichlorobenzene	8.5 J mg/kg
1,4-Dichlorobenzene	0.11 J mg/kg
4-Chloroaniline	2.3 mg/kg
Isophorone	2.2 mg/kg

DPT-1 (0-4')	3/26/2008
Isophorone	10 mg/kg

DPT-1 (12-16')	3/26/2008
Isophorone	67 mg/kg

DPT-12 (0-4')	3/27/2008
1,2-Dichlorobenzene	17 mg/kg
1,4-Dichlorobenzene	0.22 J mg/kg
4-Chloroaniline	3.7 mg/kg
Dinoseb	530 mg/kg

DPT-12 (12-16')	3/27/2008
1,2-Dichlorobenzene	3.2 mg/kg
Isophorone	3.9 mg/kg

DPT-11 (0-4')	3/27/2008
1,2-Dichlorobenzene	0.12 J mg/kg
4-Chloroaniline	0.048 J mg/kg
Dinoseb	250 mg/kg

DPT-11 (12-16')	3/27/2008
4-Chloroaniline	0.15 J mg/kg

DPT-3 (16-20')	3/26/2008
1,4-Dichlorobenzene	0.23 J mg/kg

DPT-4 (0-4')	3/26/2008
Dinoseb	250 mg/kg

DPT-9 (0-4')	3/27/2008
Dinoseb	100 mg/kg

DPT-5 (0-4')	3/26/2008
Dinoseb	140 mg/kg

4MW-3	01/11/2008
1,3-Dichlorobenzene	53 µg/l

DPT-8 (0-4')	3/27/2008
Dinoseb	240 mg/kg

DPT-10 (0-4')	3/27/2008
Dinoseb	270 mg/kg

DPT-30(0-4')	3/29/2008
1,2-Dichlorobenzene	1.4 J mg/kg
Propanil	890 mg/kg

DPT-35(12-16')	3/30/2008
2,4-Dinitrophenol	9.6 J mg/kg

2MW-2	1/10/2008
Dinoseb	12 J µg/l

2MW-5	01/10/2008
Dinoseb	22 µg/l

2MW-1	01/11/2008
1,2-Dichlorobenzene	1200 µg/l
Propanil	530 J µg/l

2MW-4	01/11/2008
1,2-Dichlorobenzene	420 µg/l
4-Chloroaniline	260 µg/l

2MW-3	01/14/2008
bis(2-Chloroethyl) ether	20 µg/l

EMW-1	1/14/2008
Dinoseb	8.5 J µg/l

EMW-4	01/14/2008
4-Chloroaniline	430 µg/l

4MW-4	01/14/2008
bis(2-Chloroethyl) ether	28 µg/l

EMW-6A	1/9/2008
4-Chloroaniline	530 µg/l

EMW-6B	1/9/2008
1,2-Dichlorobenzene	51 J µg/l
4-Chloroaniline	4800 J µg/l

EMW-6C	01/09/2008
1,2-Dichlorobenzene	70 J µg/l
4-Chloroaniline	1700 µg/l
Dinoseb	110 J µg/l

DPT-39(12-16')	3/30/2008
2,4-Dinitrophenol	0.77 J mg/kg

DPT-39(4-8')	3/30/2008
2,4-Dinitrophenol	0.77 J mg/kg

DPT-28(8-12')	3/29/2008
2,4-Dinitrophenol	12 mg/kg

Screening Levels for Soil Samples		
Analyte	*Residential Soil (0-6" bgs) (mg/kg)*	*DAF (6" to Groundwater) (mg/kg)*
1,2-Dichlorobenzene	280	0.9
1,4-Dichlorobenzene	3.2	0.1
2,4-Dinitrophenol	120	0.01
4-Chloroaniline	240	0.03
Dinoseb	61	NA
Hexachlorobenzene	0.3	0.1
Isophorone	510	0.03
Propanil	310	NA

	Sample Result Exceeds Residential Soil (0-6") MSSL
	Sample Result Exceeds Soil Dilution Attenuation Factor (DAF)
	Sample Result Exceeds Both Soil MSSL and DAF

Screening Levels for Groundwater Samples		
Analyte	*Primary Drinking Water Standard (ug/L)*	*Region 6 TapWater MSSL (ug/l)*
1,2-Dichlorobenzene	600	49
Propanil	None	180
Dinoseb	7	37
bis(2-Chloroethyl) ether	None	0.0098
4-Chloroaniline	None	150
1,3-Dichlorobenzene	None	15

	Sample Result Exceeds the Primary Drinking Water Standard
	Sample Result Exceeds the Tap Water MSSL
	Sample Result Exceeds Both the Primary Drinking Water Standard and the Tap Water MSSL

EXPLANATION

PROPOSED / EXISTING

- Perched Well Location
- Upper Alluvial Well Location
- Middle Alluvial Well Location
- Lower Alluvial Well Location

GDPT-5 DIRECT PUSH LOCATION

TW-1 TEMPORARY WELL LOCATION

SUSPECT WASTE BURIAL AREA IDENTIFIED BY ADEQ

DPT-2, DPT-18, DPT-39 ADEQ EXPANDED PROTOCOL

DPT-10 (0-4')	3/27/2008
1,2-Dichloroethane	0.4 mg/kg
Tetrachloroethene	2.1 mg/kg
Trichloroethene	0.0066 J mg/kg

Sample ID with Depth

Concentration of Analytes Detected above Screening Levels

ND - VOCs Not Detected above Screening Levels

NA - Sample Not Collected

TBP - To be Plugged and Abandoned

0 80
APPROXIMATE SCALE IN FEET

NOTE:
ALL ALLUVIAL WELLS WILL BE INSTALLED USING ROTASONIC DRILLING TECHNIQUES IN A SINGLE BOREHOLE.

ALL PROPOSED WELL & BORING LOCATIONS ARE APPROXIMATE, & MAY BE ADJUSTED BASED ON UTILITIES, FIELD ACCESS, & OTHER CONDITIONS.

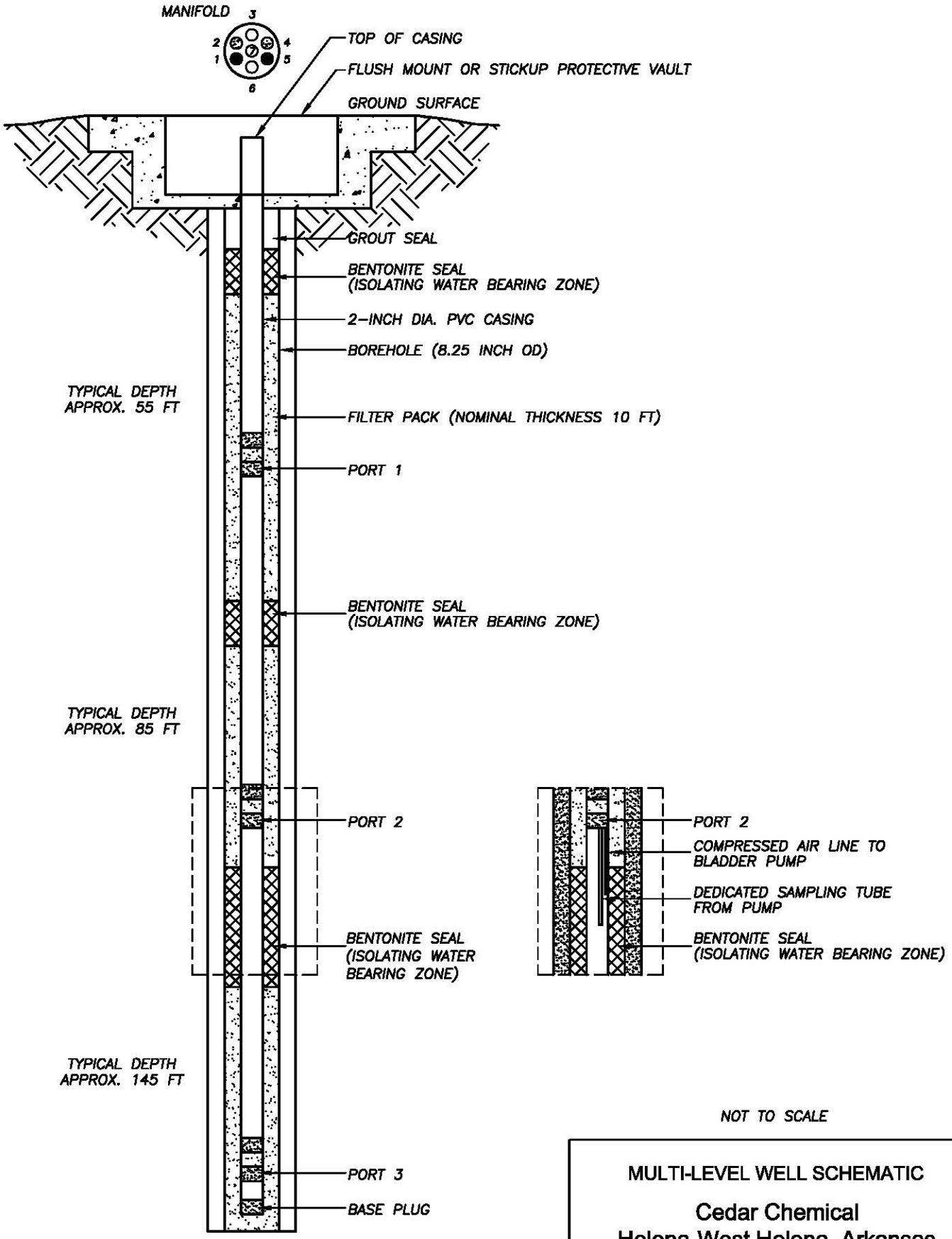
BASEMAP MODIFIED FROM:
EnSafe, 1996-Phase III FI, 2001 Groundwater Monitoring Report, Drawings C2162GWS and C2162VC7

SVOCs in Soil and Groundwater and Proposed Perched and Alluvial Monitoring Well Locations
DPT Investigation March 2008
Cedar Chemical
Helena-West Helena, Arkansas

By: MLS | Date: 5/27/08 | Project No. 13636

Geomatrix

Figure 3



NOTE:
SCHEMATIC SHOWS 3-PORT COMPLETION.
SOME WELLS MAY HAVE 2-PORT COMPLETION.

MULTI-LEVEL WELL SCHEMATIC

Cedar Chemical
Helena-West Helena, Arkansas

By: HCS	Date: 4/30/08	Project No. 13636
Geomatrix		Figure 4

Date: