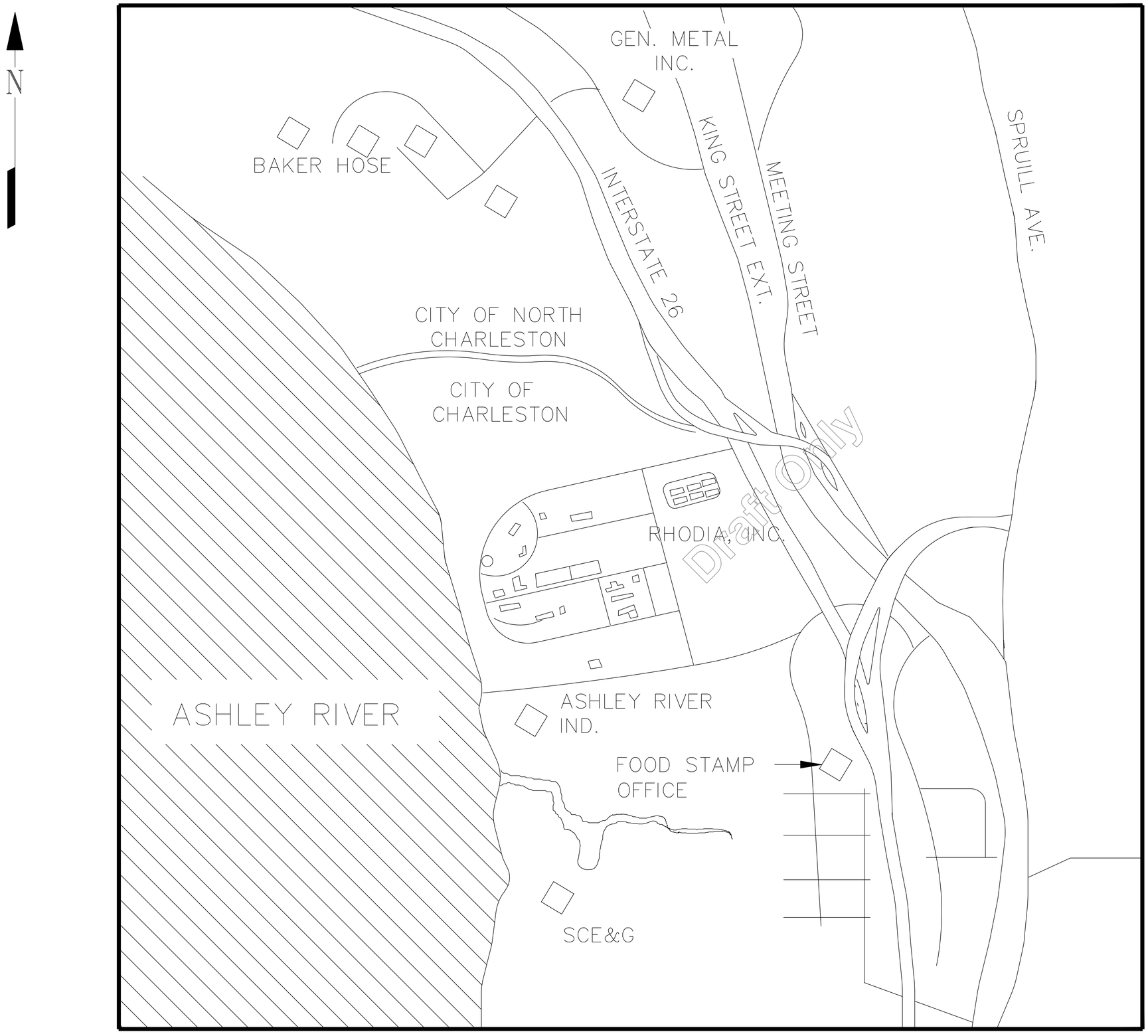

RHODIA CHARLESTON PLANT
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: AREA & VICINITY MAP

DRAWN: TD	DATE: 10/09	SCALE: Not to Scale
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: FIG_1_AREA_VIC		Figure 1
CADD DATE: 10/02/09		

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GeoSciences, Inc.
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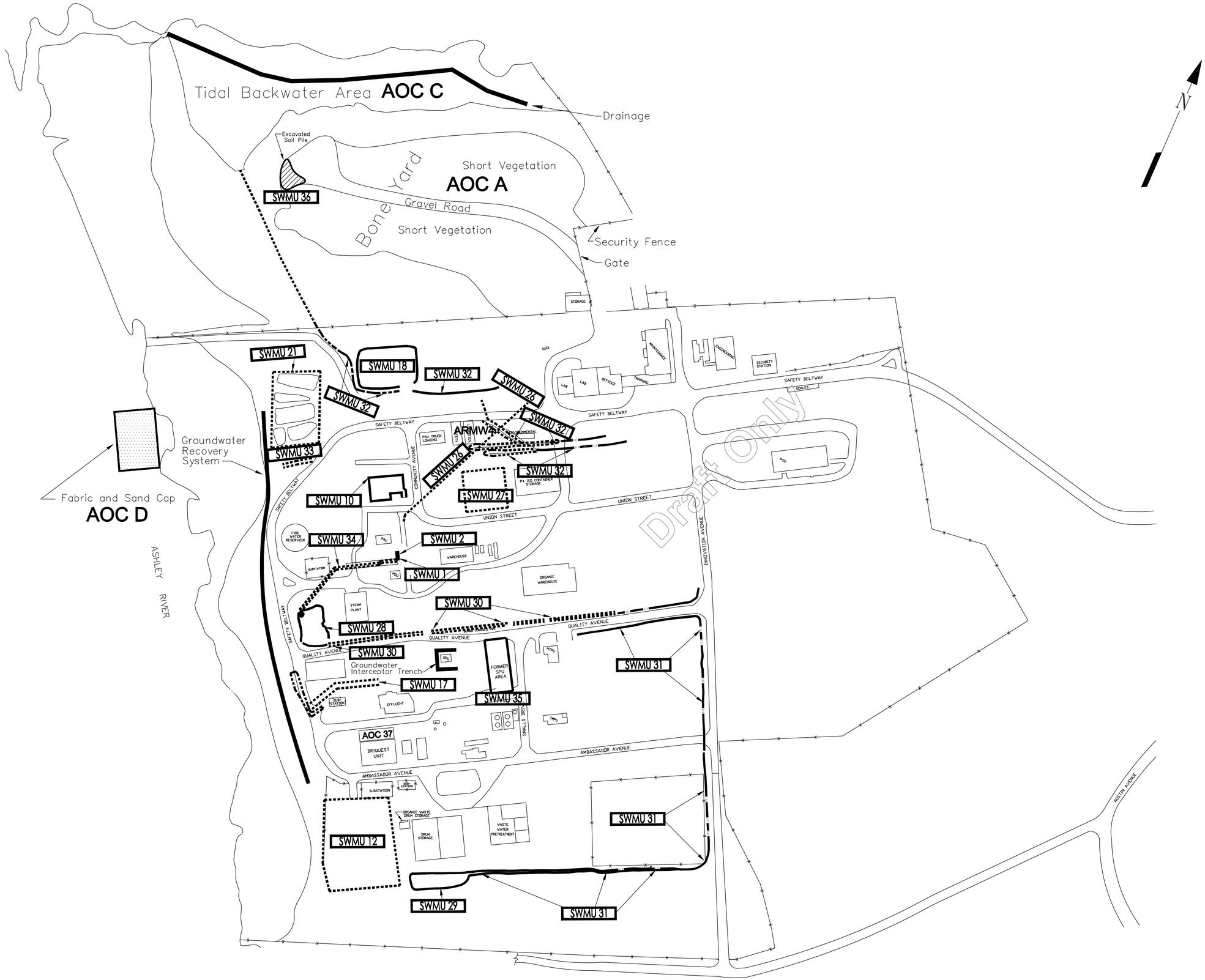
Baton Rouge, Louisiana

PROJECT TITLE:
STATEMENT OF BASIS

DRAWING TITLE:
SITE MAP

DRAWN: TD	DATE: 10/09	SCALE: AS SHOWN
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: FIG_2_SITE		Figure 2
CADD DATE: 10/02/09		



RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

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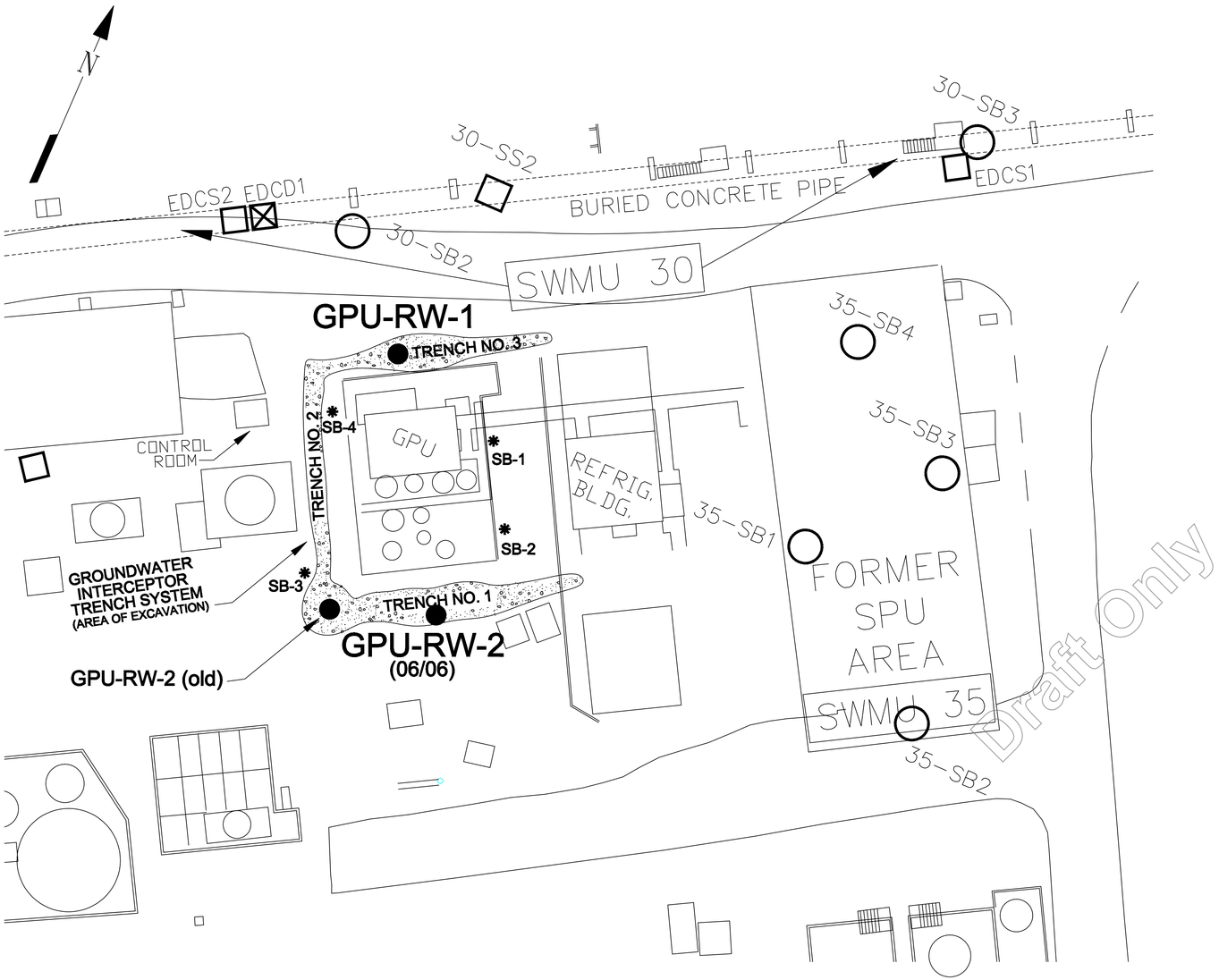
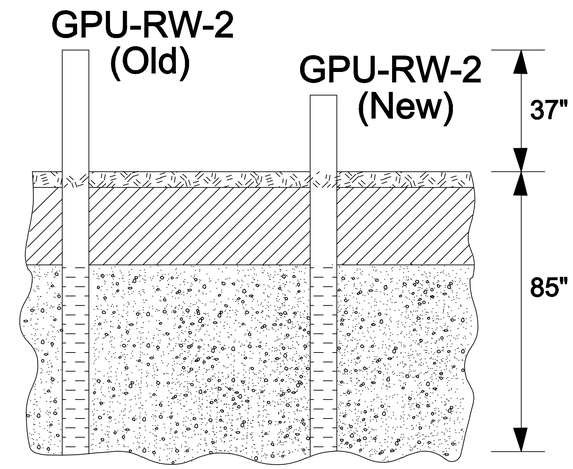
Baton Rouge, Louisiana

PROJECT TITLE:
STATEMENT OF BASIS

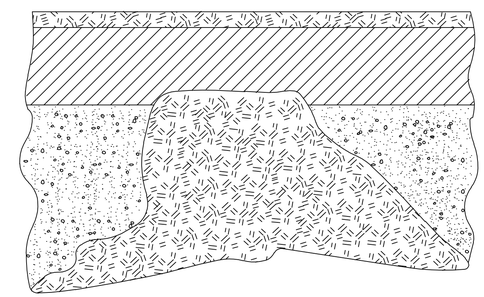
DRAWING TITLE:
SWMUs LOCATION MAP

DRAWN: DRAWN	DATE: 10/09	SCALE: 100 0 100
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: FIG_3_SMU_JUN09		Figure 3
CADD DATE: 10/26/09		





TRENCH NO.1
CROSS SECTION

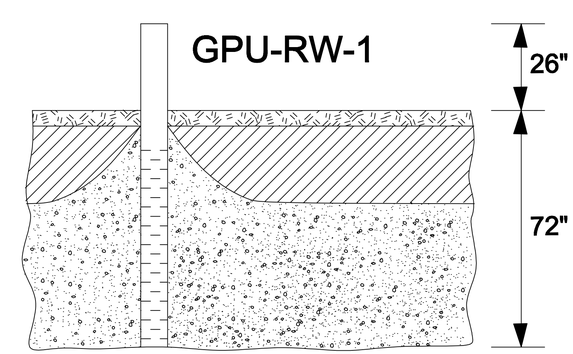


TRENCH NO.2
CROSS SECTION

LEGEND:

- SOIL BORING LOCATION
- RECOVERY WELL
- CONCRETE
- SILTY CLAY CAP
- SAND-GRAVEL MIX

30 Inches 0 VERTICAL SCALE



TRENCH NO.3
CROSS SECTION

30 0 30

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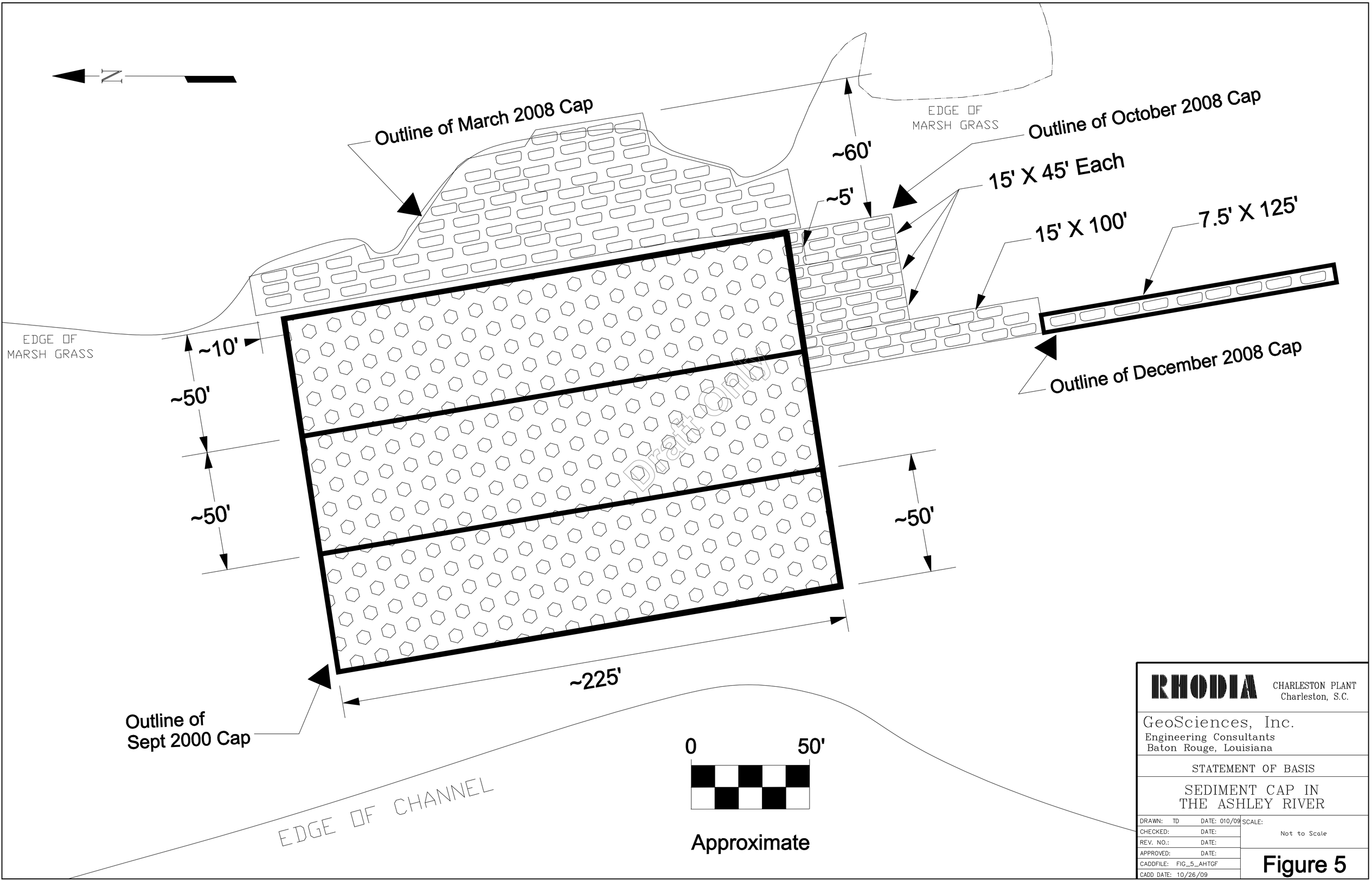
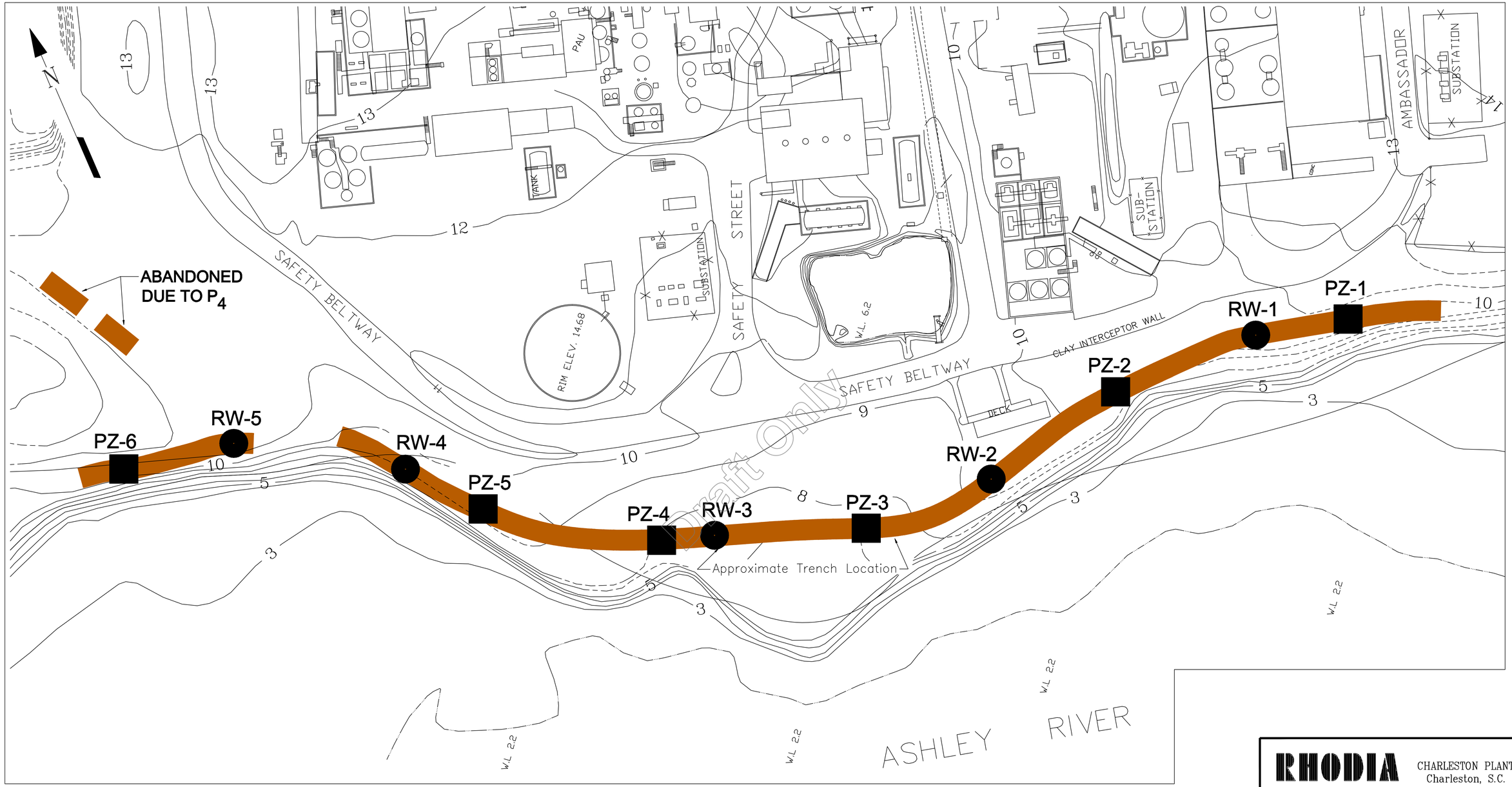
GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: GPU GROUNDWATER RECOVERY SYSTEM LAYOUT

DRAWN: T Davis	DATE: 10/09	SCALE: See Drawing
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig4_gpu_rec_sys		Figure 4
CADD DATE: 10/26/09		


N
Outline of March 2008 Cap
EDGE OF
MARSH GRASS
~60'
~5'
Outline of October 2008 Cap
15' X 45' Each
15' X 100'
7.5' X 125'
EDGE OF
MARSH GRASS
~10'
~50'
~50'
~50'
Outline of December 2008 Cap
Draft Only
~225'
Outline of
Sept 2000 Cap
EDGE OF CHANNEL
0
50'
Approximate
RHODIA
CHARLESTON PLANT
Charleston, S.C.
GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana
STATEMENT OF BASIS
SEDIMENT CAP IN
THE ASHLEY RIVER
DRAWN: TD DATE: 010/09
CHECKED: DATE:
REV. NO.: DATE:
APPROVED: DATE:
CADDFILE: FIG_5_AHTGF
CADD DATE: 10/26/09
SCALE:
Not to Scale
Figure 5



LEGEND:

9 — TOPOGRAPHIC CONTOUR LINE (FEET, MSL)

GROUNDWATER INTERCEPTOR TRENCH LOCATION (APPROXIMATE)

GROUNDWATER RECOVERY WELL LOCATION (APPROXIMATE)

PIEZOMETER LOCATION (APPROXIMATE)

0 100

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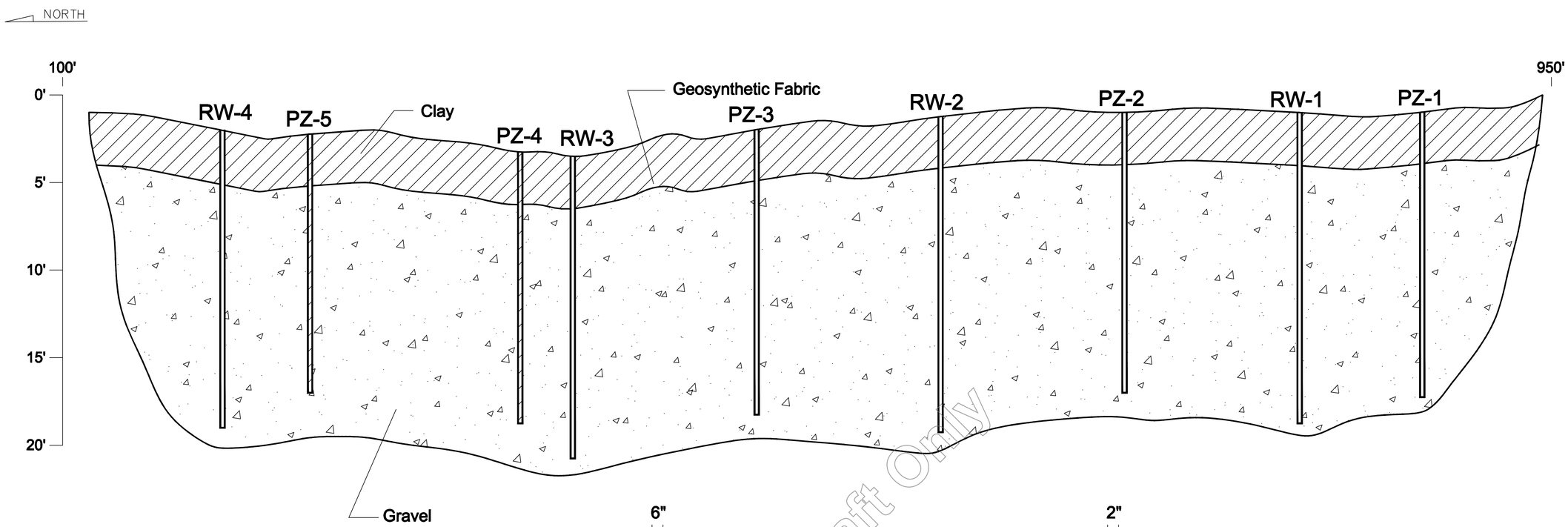
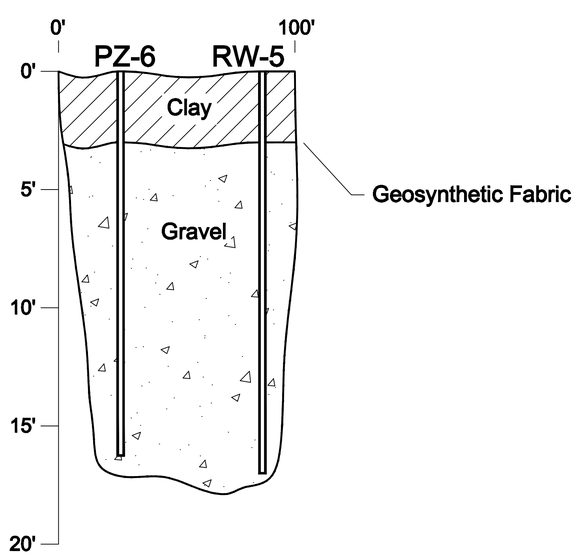
Baton Rouge, Louisiana

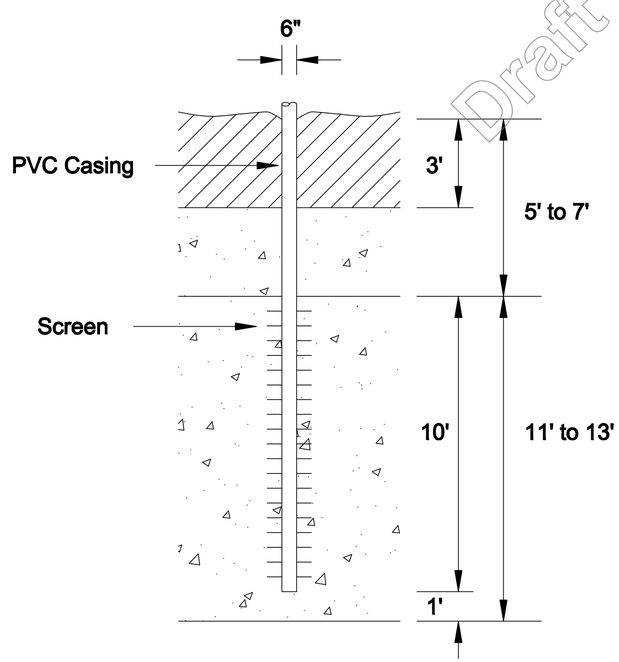
PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: GENERAL LAYOUT OF THE GROUNDWATER RECOVERY SYSTEM

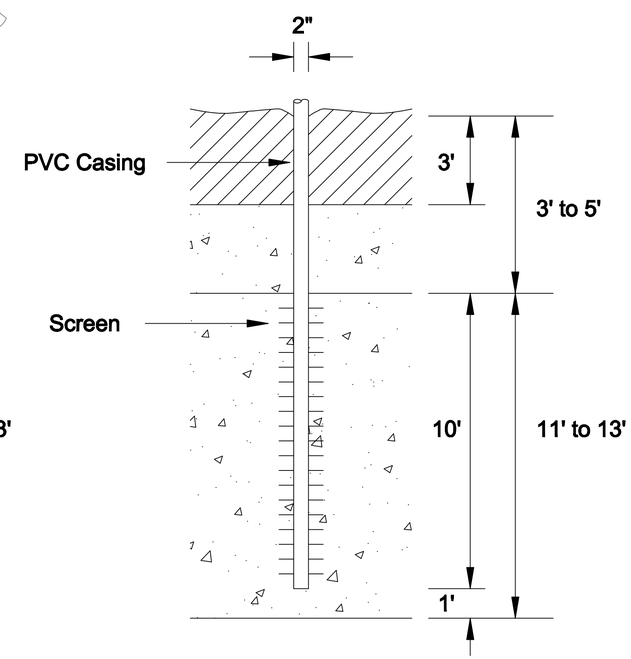
DRAWN: T Davis	DATE: 10/09	SCALE: As Shown
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig6a_gdw_rec_lay		Figure 6A
CADD DATE: 10/26/09		



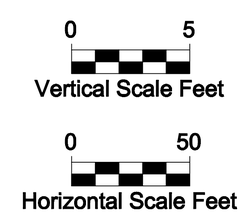




GROUNDWATER RECOVERY WELL
CROSS SECTION



PIEZOMETER
CROSS SECTION



NOTE: ALL MEASUREMENTS ARE APPROXIMATE

Draft Only

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Charleston, S.C.

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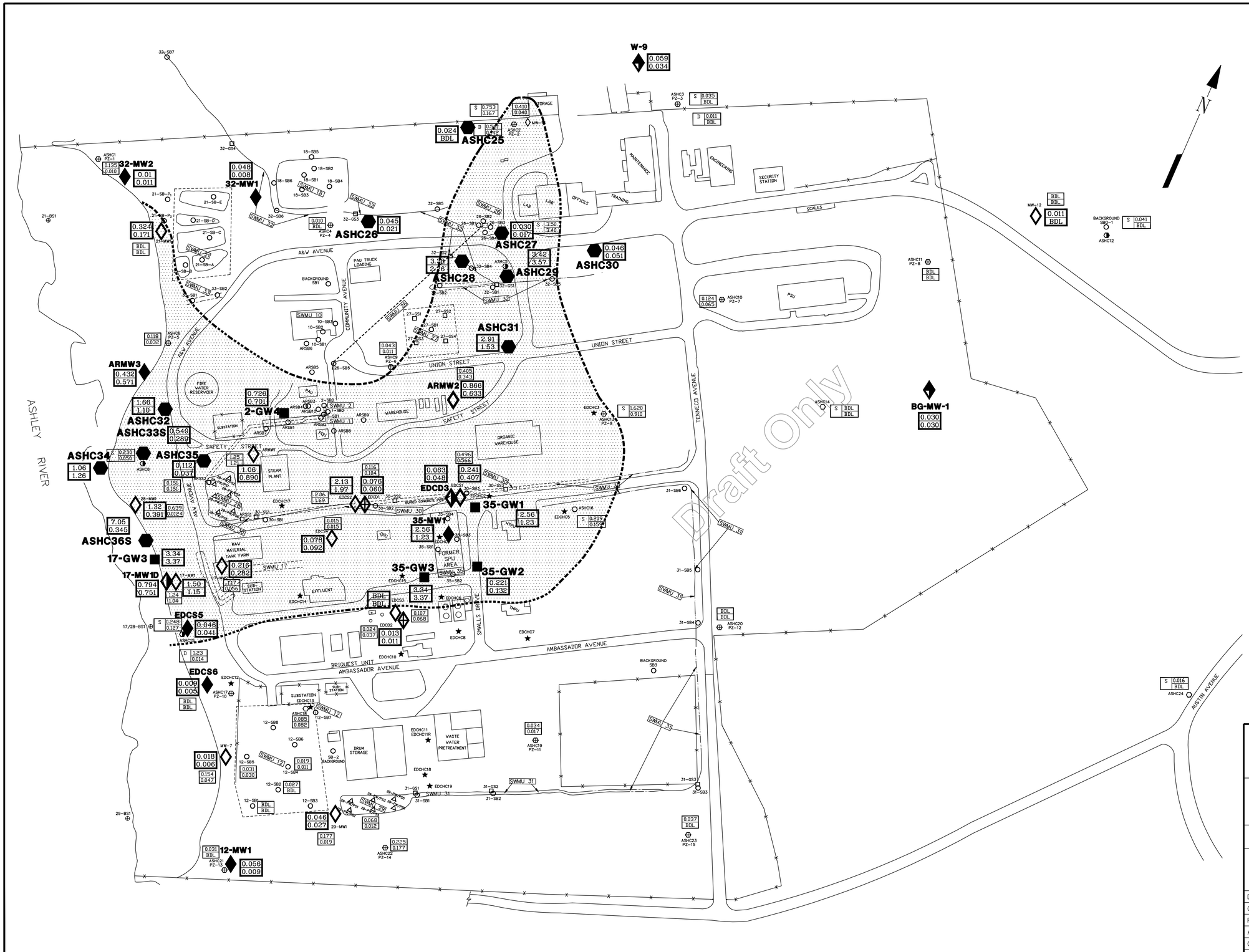
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: GROUNDWATER RECOVERY SYSTEM CROSS SECTIONS

DRAWN: T Davis	DATE: 10/09	SCALE: As Shown
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig6b_inter_trch		Figure 6B
CADD DATE: 10/26/09		



LEGEND:

—x—	FENCE
PHASE I RFI SAMPLES	
□	GRAB SEDIMENT SAMPLE
○	SOIL BORING
◇	SHALLOW MONITOR WELL WELL WATER SAMPLE
◆	DEEP MONITOR WELL WELL WATER SAMPLE
⊕	BENTHIC SURVEY LOCATION
△	POND WATER AND POND SEDIMENT SAMPLE
○	SHALLOW (≤ 15') HYDROCONE® SAMPLE (ARSENIC)
⊕	SHALLOW HYDROCONE® SAMPLE, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
◑	SHALLOW AND DEEP (~ 25') HYDROCONE® SAMPLES
◑	SHALLOW AND DEEP HYDROCONE® SAMPLES, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
★	EDC SAMPLE LOCATION
TAC / DAC	Total Arsenic Concentration / Dissolved Arsenic Concentration
	All units are mg/l
PHASE II RFI SAMPLES	
■	GROUNDWATER SAMPLE LOCATION (SINGLE DEPTH)
⬢	ARSENIC GROUNDWATER SAMPLE LOCATION
◇	SHALLOW MONITOR WELL WELL WATER SAMPLE
◆	DEEP MONITOR WELL WELL WATER SAMPLE
TAC / DAC	Total Arsenic Concentration / Dissolved Arsenic Concentration
	All units are mg/l
▬▬	PROJECTED APPROXIMATE LIMITS OF AREA OF ARSENIC IMPACT

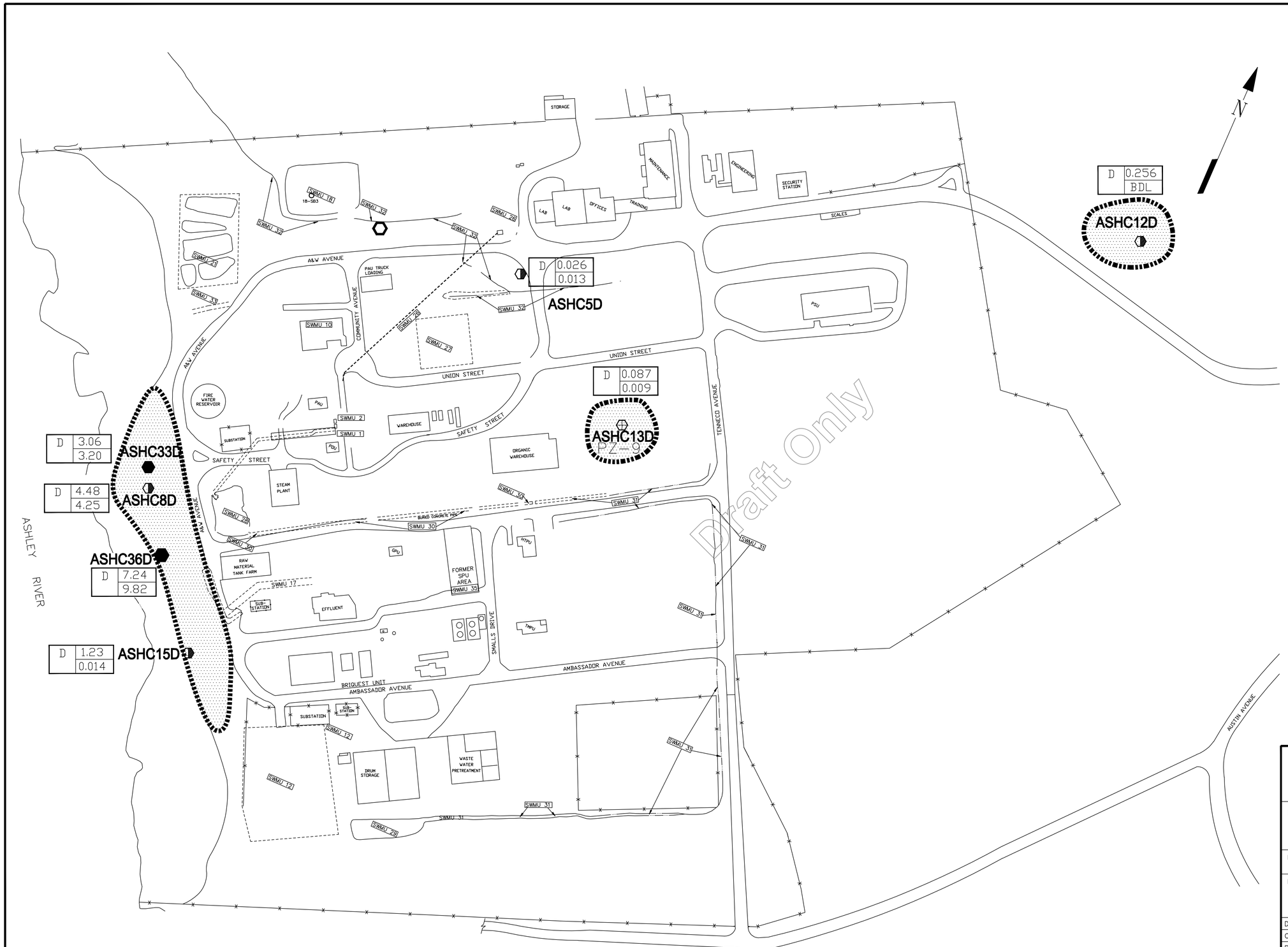
RHODIA CHARLESTON PLANT
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: APPROXIMATE AREA OF ARSENIC IMPACT IN SHALLOW SANDS (RFI DATA)

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100
CHECKED:	DATE:	SCALE: 1 INCH = 100 FEET
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig7a_ars_ss_rfi		Figure 7A
CADD DATE: 10/26/09		



LEGEND:

—X—	FENCE
PHASE I RFI SAMPLES	
□	GRAB SEDIMENT SAMPLE
○	SOIL BORING
◇	SHALLOW MONITOR WELL WELL WATER SAMPLE
◆	DEEP MONITOR WELL WELL WATER SAMPLE
⊕	BENTHIC SURVEY LOCATION
△	POND WATER AND POND SEDIMENT SAMPLE
○	SHALLOW (≤ 15') HYDROCONE® SAMPLE (ARSENIC)
⊕	SHALLOW HYDROCONE® SAMPLE, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
◑	SHALLOW AND DEEP (~ 25') HYDROCONE® SAMPLES
◑	SHALLOW AND DEEP HYDROCONE® SAMPLES, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
★	EDC SAMPLE LOCATION
TAC / DAC	Total Arsenic Concentration / Dissolved Arsenic Concentration
	All units are mg/l
PHASE II RFI SAMPLES	
■	GROUNDWATER SAMPLE LOCATION (SINGLE DEPTH)
⬢	ARSENIC GROUNDWATER SAMPLE LOCATION
◇	SHALLOW MONITOR WELL WELL WATER SAMPLE
◆	DEEP MONITOR WELL WELL WATER SAMPLE
TAC / DAC	Total Arsenic Concentration / Dissolved Arsenic Concentration
	All units are mg/l
▬	PROJECTED APPROXIMATE LIMITS OF AREA OF ARSENIC IMPACT

RHODIA CHARLESTON PLANT Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: APPROXIMATE AREA OF ARSENIC IMPACT IN DEEP SANDS (RFI DATA)

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100
CHECKED:	DATE:	SCALE: 1 INCH = 100 FEET
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig7b_ars_dp_rfi		Figure 7B
CADD DATE: 07/26/09		

N

LEGEND:

♦	– SHALLOW MONITOR WELL
◊	– DEEP MONITOR WELL
♦	– BACKGROUND MONITOR WELL
✖	– IN–SITU GROUNDWATER SAMPLE
●	– GROUNDWATER RECOVERY WELL
(110)	– ARSENIC CONCENTRATIONS ()
▬	– PROJECTED AREA OF ARSENIC IMPACT ()

NOTE: ARSENIC CONCENTRATIONS FOR IN–SITU GROUNDWATER SAMPLES IGWAS1 TO IGWAS11 WERE INCLUDED IN THE ANNUAL 2006 REPORT.

RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

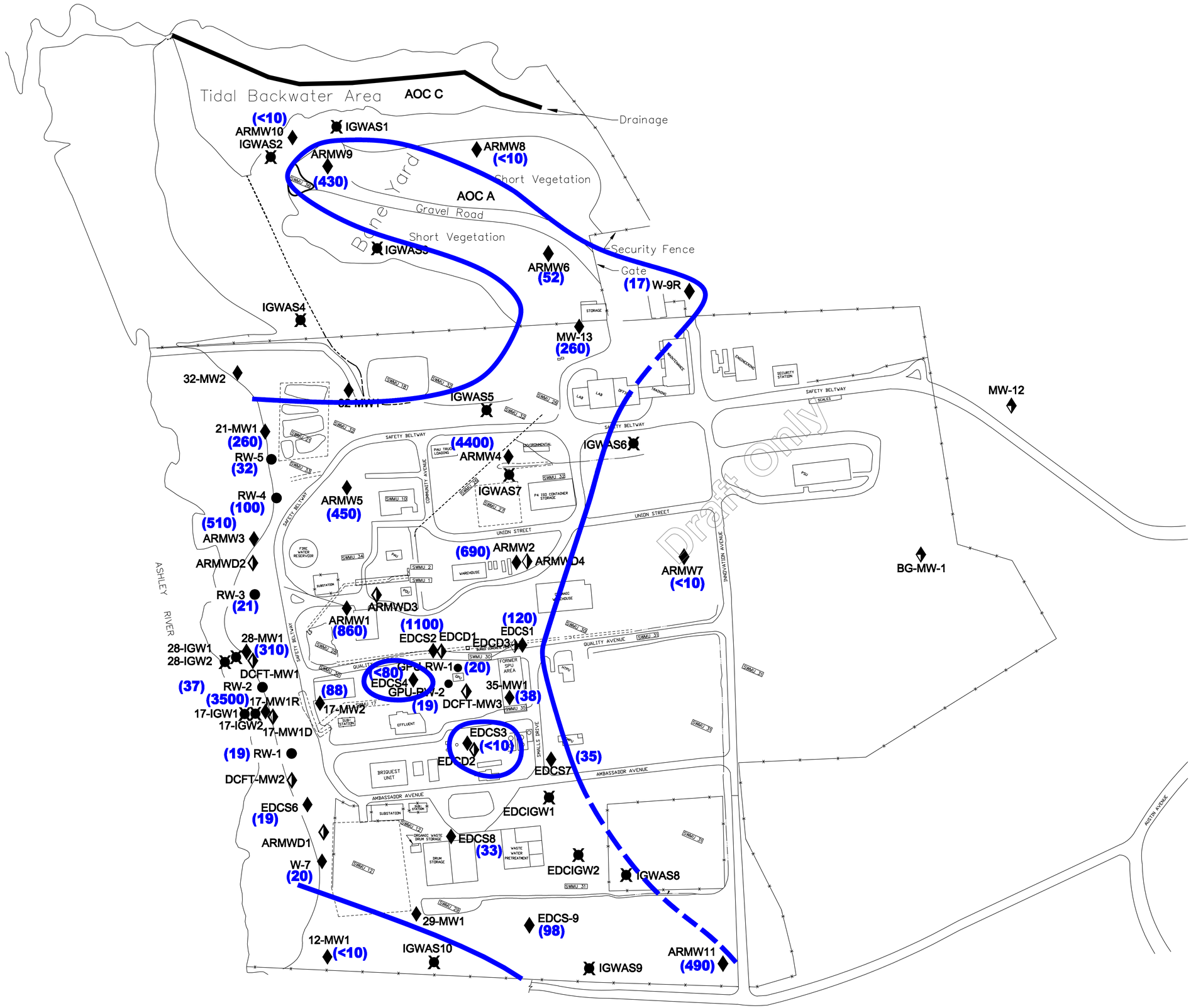
RHODIA CHARLESTON PLANT Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: ARSENIC CONCENTRATIONS MAP SHALLOW SANDS – 50 ug/l CONTOUR (June 2009)

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	REV.
CADDFILE: fig8a_ars ss50 jun09		Figure 8A
CADD DATE: 10/26/09		



LEGEND:

◆	– SHALLOW MONITOR WELL
◆	– DEEP MONITOR WELL
◆	– BACKGROUND MONITOR WELL
✖	– IN–SITU GROUNDWATER SAMPLE
●	– GROUNDWATER RECOVERY WELL
(110)	– ARSENIC CONCENTRATIONS ()
▬	– PROJECTED AREA OF ARSENIC IMPACT ()

NOTE: ARSENIC CONCENTRATIONS FOR IN–SITU GROUNDWATER SAMPLES IGWAS1 TO IGWAS11 WERE INCLUDED IN THE ANNUAL 2006 REPORT.

RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

RHODIA

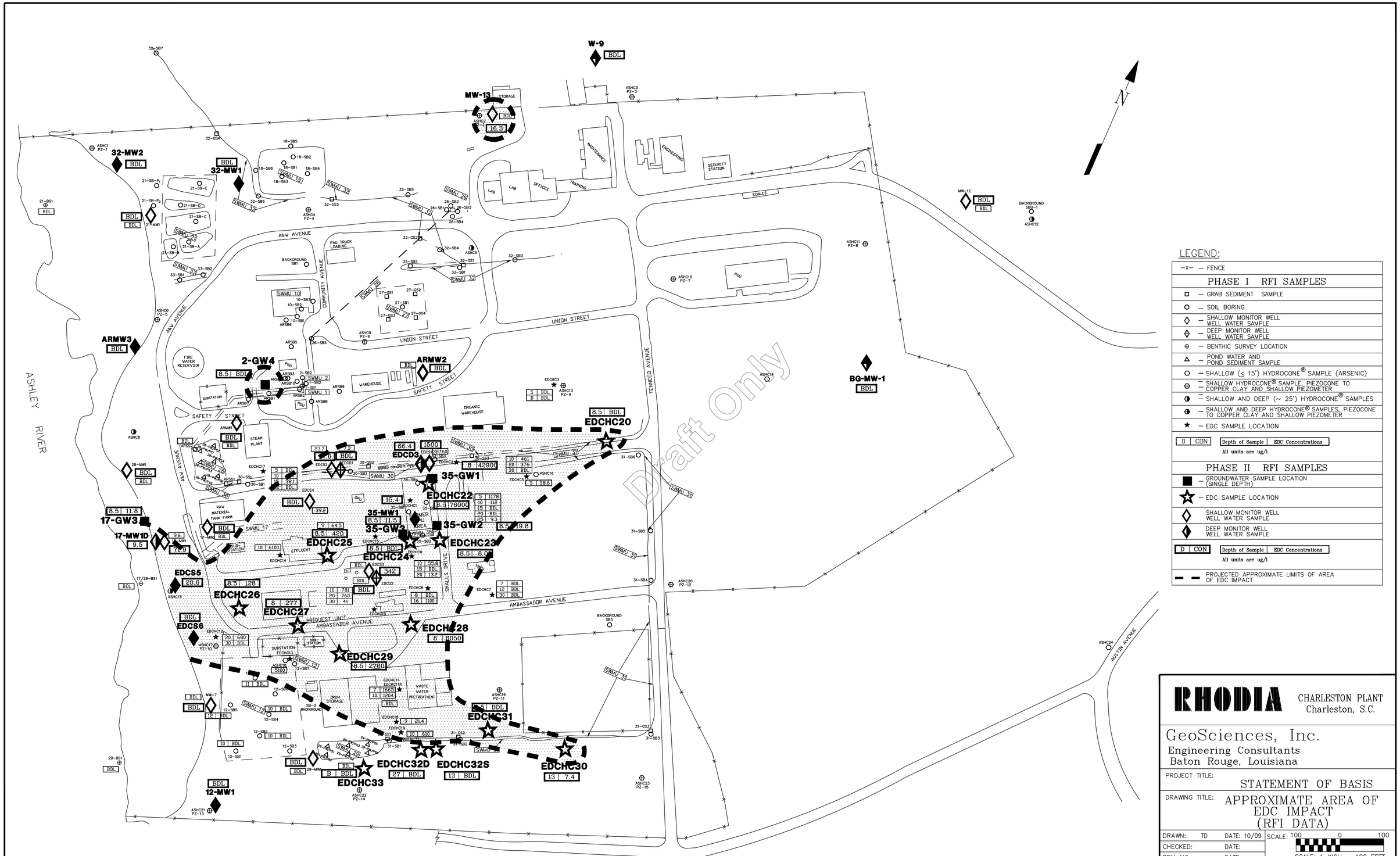
CHARLESTON PLANT
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: ARSENIC CONCENTRATIONS MAP
SHALLOW SANDS – 10 ug/l CONTOUR
(June 2009)

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	REV.
CADDFILE: fig8a_ars ss10 jun09		Figure 8B
CADD DATE: 10/26/09		



LEGEND:

–x–	FENCE
PHASE I RFI SAMPLES	
□	GRAB SEDIMENT SAMPLE
○	SOIL BORING
◇	SHALLOW MONITOR WELL WELL WATER SAMPLE
◆	DEEP MONITOR WELL WELL WATER SAMPLE
⊕	BENTHIC SURVEY LOCATION
△	POND WATER AND POND SEDIMENT SAMPLE
⬡	SHALLOW (≤ 15') HYDROCONE® SAMPLE (ARSENIC)
⊕	SHALLOW HYDROCONE® SAMPLE, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
◑	SHALLOW AND DEEP (~ 25') HYDROCONE® SAMPLES
◑	SHALLOW AND DEEP HYDROCONE® SAMPLES, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
★	EDC SAMPLE LOCATION
D | CON	Depth of Sample | EDC Concentrations All units are ug/l
PHASE II RFI SAMPLES	
■	GROUNDWATER SAMPLE LOCATION (SINGLE DEPTH)
☆	EDC SAMPLE LOCATION
◇	SHALLOW MONITOR WELL WELL WATER SAMPLE
◆	DEEP MONITOR WELL WELL WATER SAMPLE
D | CON	Depth of Sample | EDC Concentrations All units are ug/l
— —	PROJECTED APPROXIMATE LIMITS OF AREA OF EDC IMPACT

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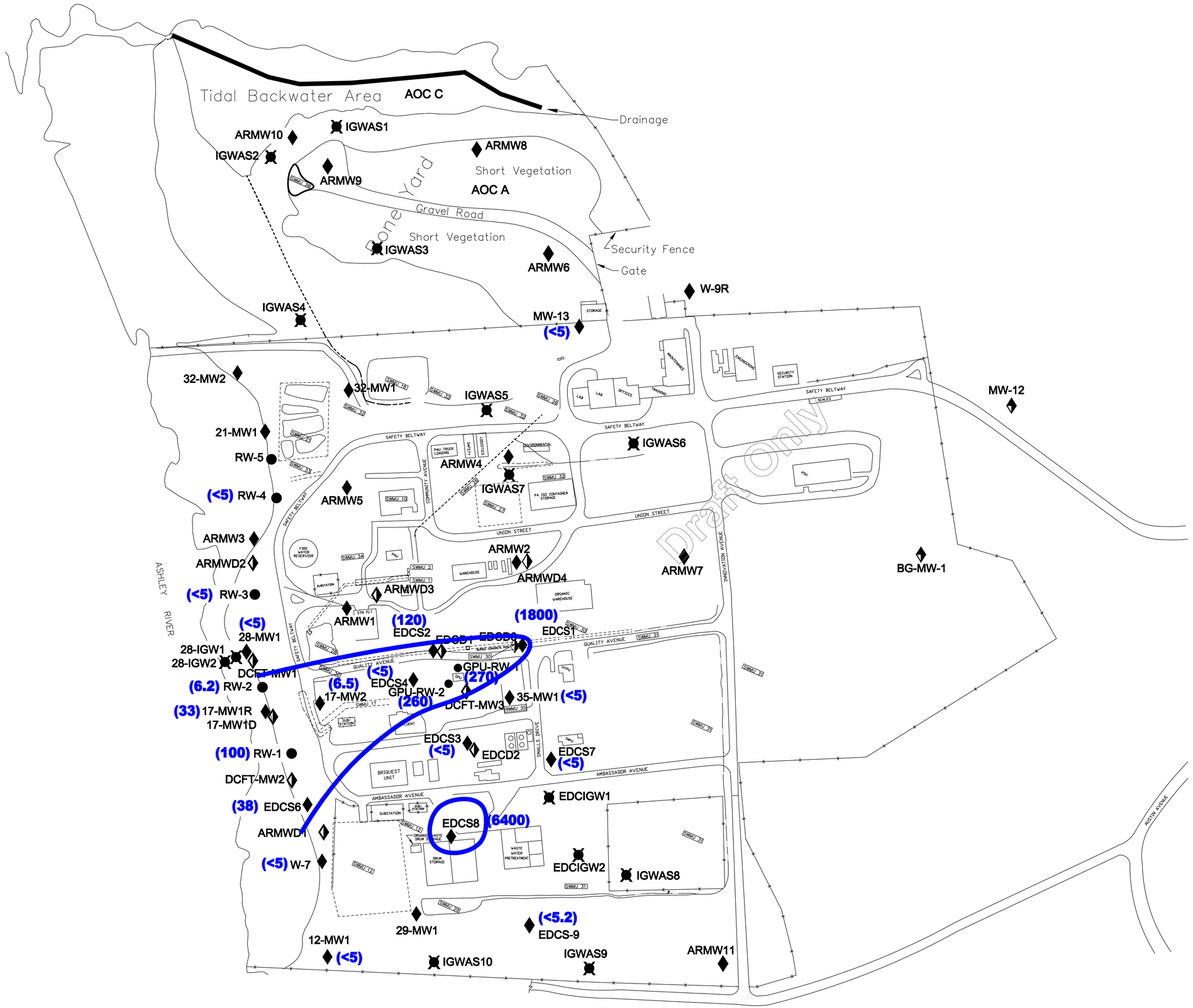
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: APPROXIMATE AREA OF EDC IMPACT (RFI DATA)

DRAWN:	TD	DATE: 10/09	SCALE: 100 0 100
CHECKED:		DATE:	
REV. NO.:		DATE:	SCALE: 1 INCH = 100 FEET
APPROVED:		DATE:	
CADDFILE:	FIG9_EDC_RFI		**Figure 9**
CADD DATE:	10/26/09		



N

LEGEND:

♦	— SHALLOW MONITOR WELL
◊	— DEEP MONITOR WELL
♦	— BACKGROUND MONITOR WELL
●	— GROUNDWATER RECOVERY WELL
✖	— IN-SITU GROUNDWATER SAMPLE
(110)	— EDC CONCENTRATIONS ()
▬	— PROJECTED AREA OF EDC IMPACT ()

RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

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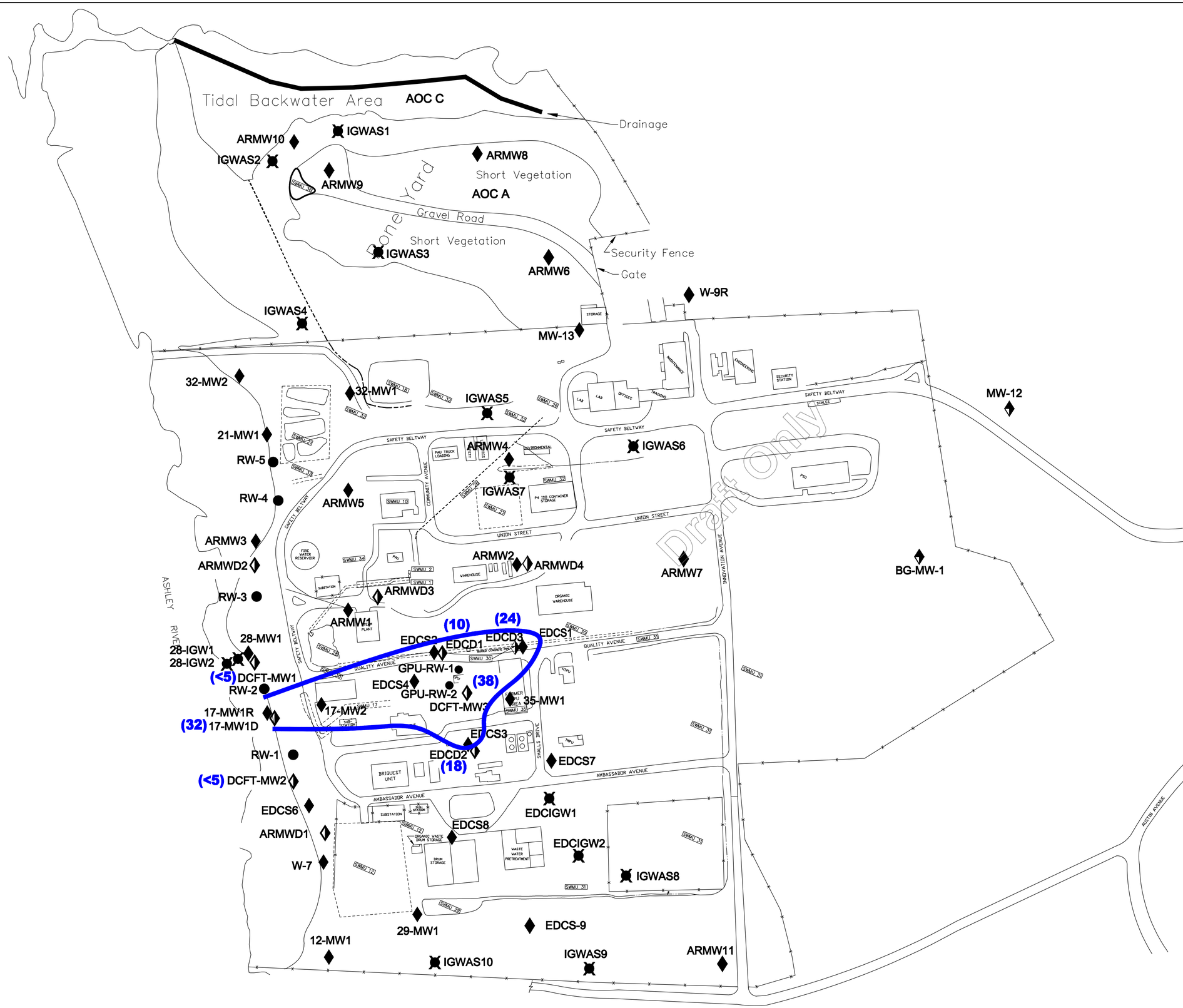
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: EDC CONCENTRATIONS MAP SHALLOW SANDS (June 2009)

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	REV.
CADDFILE: fig10a_edc ss jun 09		Figure10A
CADD DATE: 10/26/09		



N

LEGEND:

♦	— SHALLOW MONITOR WELL
◊	— DEEP MONITOR WELL
♦	— BACKGROUND MONITOR WELL
●	— GROUNDWATER RECOVERY WELL
✖	— IN-SITU GROUNDWATER SAMPLE
(110)	— EDC CONCENTRATIONS (ug/l)
▬	— PROJECTED AREA OF EDC IMPACT (ug/l)

RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

RHODIA

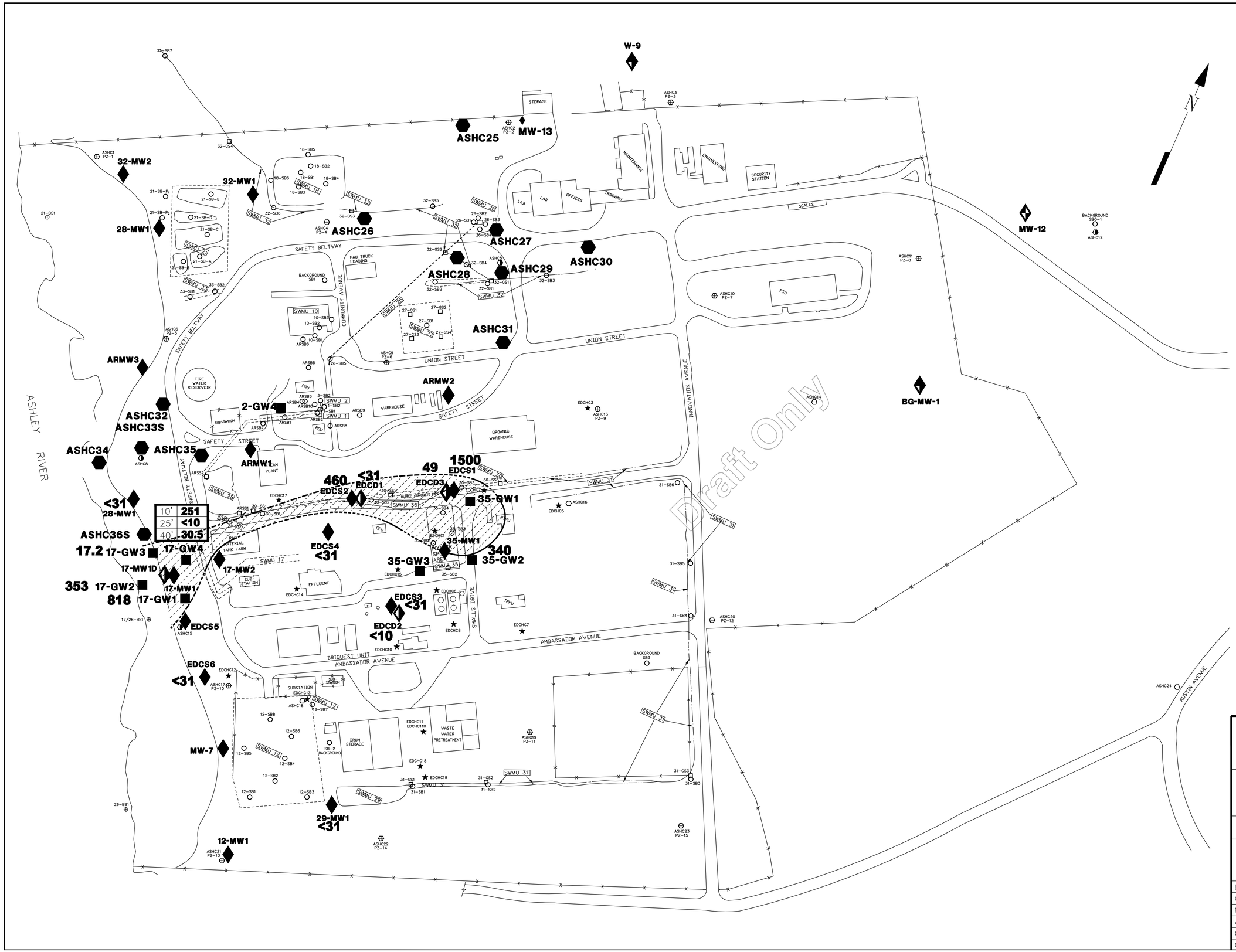
CHARLESTON PLANT
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: EDC CONCENTRATIONS MAP DEEP SANDS (JUNE 2009)

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	REV.
CADDFILE: fig10b edc ds jun 09		Figure 10B
CADD DATE: 11/20/09		



LEGEND:

—x—	FENCE
PHASE I RFI SAMPLES	
□	GRAB SEDIMENT SAMPLE
○	SOIL BORING
◆	SHALLOW MONITOR WELL WELL WATER SAMPLE
◆	DEEP MONITOR WELL WELL WATER SAMPLE
◆	BACKGROUND MONITOR WELL
⊕	BENTHIC SURVEY LOCATION
△	POND WATER AND POND SEDIMENT SAMPLE
○	SHALLOW (≤ 15') HYDROCONE® SAMPLE (ARSENIC)
⊕	SHALLOW HYDROCONE® SAMPLE, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
◑	SHALLOW AND DEEP (~ 25') HYDROCONE® SAMPLES
◑	SHALLOW AND DEEP HYDROCONE® SAMPLES, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
★	EDC SAMPLE LOCATION
TAC / DAC	Total Arsenic Concentration / Dissolved Arsenic Concentration
	All units are mg/l
PHASE II RFI SAMPLES	
■	GROUNDWATER SAMPLE LOCATION (SINGLE DEPTH)
⬢	ARSENIC GROUNDWATER SAMPLE LOCATION
◆	SHALLOW MONITOR WELL WELL WATER SAMPLE
◆	DEEP MONITOR WELL WELL WATER SAMPLE
5.80	DCFT CONCENTRATIONS (ug/l)
------	PROJECTED APPROXIMATE LIMITS OF AREA OF DCFT IMPACT

RHODIA CHARLESTON PLANT
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: DCFT CONCENTRATIONS RFI DATA MAP

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100
CHECKED:	DATE:	SCALE: 1 INCH = 100 FEET
REV. NO.:	DATE:	
APPROVED:	DATE:	REV.
CADDFILE: fig11_dcft_rfi		Figure 11
CADD DATE: 10/26/09		

N

LEGEND:

♦	— SHALLOW MONITOR WELL
◊	— DEEP MONITOR WELL
♦	— BACKGROUND MONITOR WELL
●	— GROUNDWATER RECOVERY WELL
✖	— IN-SITU GROUNDWATER SAMPLE
(110)	— DCFT CONCENTRATIONS (ug/l)
▬	— PROJECTED AREA OF DCFT IMPACT (ug/l)

RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

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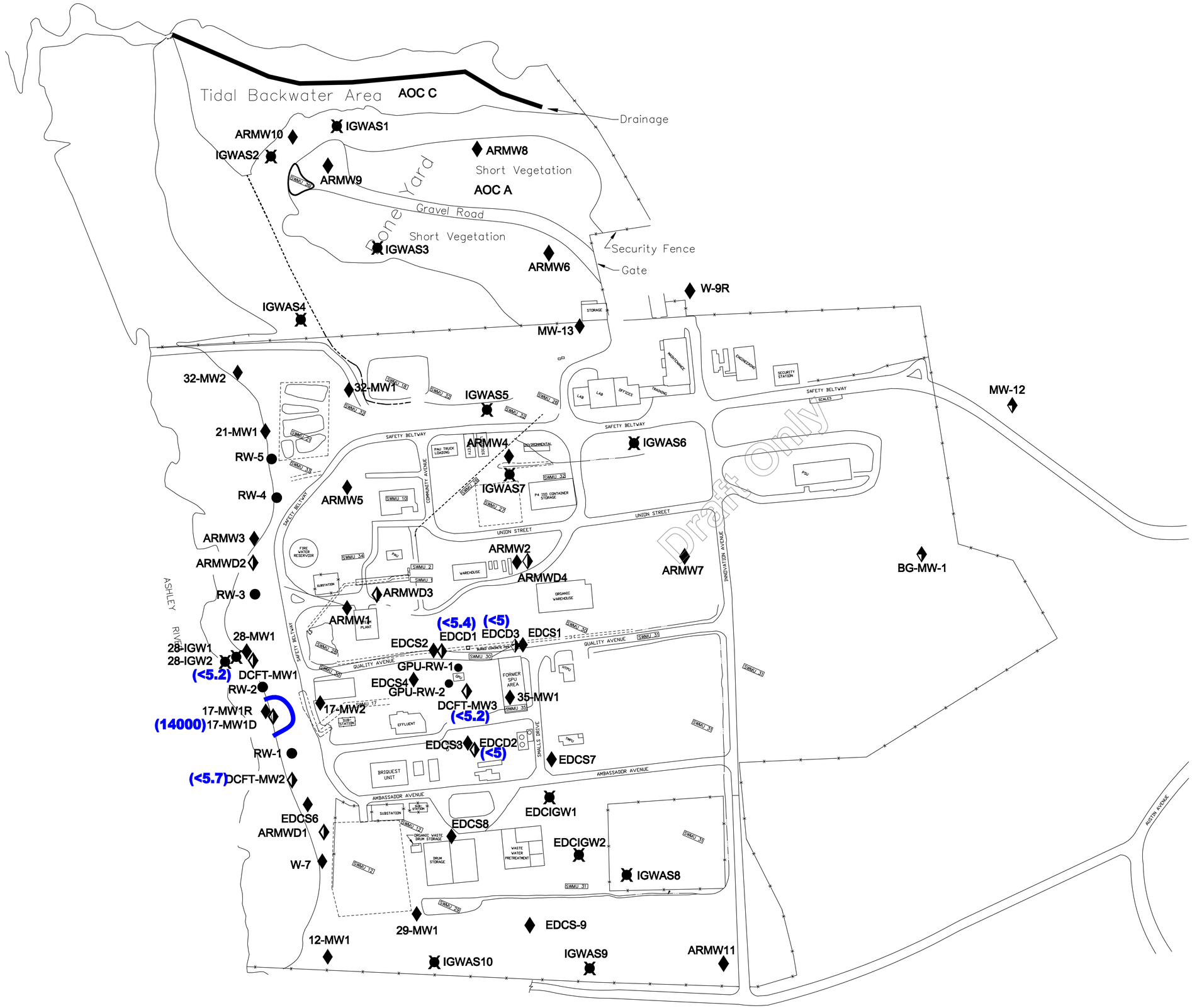
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: DCFT CONCENTRATIONS MAP SHALLOW SANDS (JUNE 2009)

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	REV.
CADDFILE: fig12a dcft ss jun 09		Figure12A
CADD DATE: 10/26/09		



LEGEND:

♦	— SHALLOW MONITOR WELL
◊	— DEEP MONITOR WELL
♦	— BACKGROUND MONITOR WELL
●	— GROUNDWATER RECOVERY WELL
✖	— IN-SITU GROUNDWATER SAMPLE
(110)	— DCFT CONCENTRATIONS (ug/l)
▬	— PROJECTED AREA OF DCFT IMPACT (ug/l)

RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

RHODIA

CHARLESTON PLANT
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: DCFT CONCENTRATIONS MAP DEEP SAND (JUNE 2009)

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	REV.
CADDFILE: fig12b dcft ds jun09		Figure12B
CADD DATE: 10/26/09		

LEGEND:

–x– – FENCE
PHASE I RF1 SAMPLES
□ – GRAB SEDIMENT SAMPLE
○ – SOIL BORING
◇ – SHALLOW MONITOR WELL WELL WATER SAMPLE
◇ – DEEP MONITOR WELL WELL WATER SAMPLE
◆ – PROPOSED MONITOR WELL SHALLOW WELL WATER SAMPLE
◆ – PROPOSED MONITORING WELL DEEP WELL WATER SAMPLE
⊕ – BENTHIC SURVEY LOCATION
△ – POND WATER AND POND SEDIMENT SAMPLE
○ – SHALLOW (≤ 15') HYDROCONE® SAMPLE (ARSENIC)
⊕ – SHALLOW HYDROCONE® SAMPLE, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
◑ – SHALLOW AND DEEP (~ 25') HYDROCONE® SAMPLES
◑ – SHALLOW AND DEEP HYDROCONE® SAMPLES, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
★ – EDC SAMPLE LOCATION
○ – BACKGROUND SOIL SAMPLE LOCATION
◇ – BACKGROUND MONITOR WELL LOCATION
PHASE II RF1 SAMPLES
◑ – HYROGEOLOGIC SOIL BORING LOCATION
◔ – BACKGROUND SOIL SAMPLE LOCATION
● – SOIL SAMPLE LOCATION
▲ – GRAB SEDIMENT SAMPLE LOCATION
METALS – ANALYSIS TYPE

RHODIA CHARLESTON PLANT Charleston, S.C.

GeoSciences, Inc.
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Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: SOIL SAMPLE LOCATION MAP

DRAWN: T Davis	DATE: 10/09	SCALE: 100 0 100
CHECKED:	DATE:	SCALE: 1 INCH = 100 FEET
REV. NO.:	DATE:	
APPROVED:	DATE:	Figure 13A
CADDFILE: fig13a_soil_slm		
CADD DATE: 11/20/09		

LEGEND:

PHASE I RFI SAMPLES:
□ — GRAB SEDIMENT SAMPLE
○ — SOIL BORING
♦ — SHALLOW MONITORING WELL WELL WATER SAMPLE
◊ — DEEP MONITORING WELL WELL WATER SAMPLE
◊ — BACKGROUND MONITORING WELL
⊕ — BENTHIC SURVEY LOCATION
△ — POND WATER AND POND SEDIMENT SAMPLE
⬡ — SHALLOW (≤ 15') HYDROCONE® SAMPLE (ARSENIC)
⊕ — SHALLOW HYDROCONE® SAMPLE, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
◑ — SHALLOW AND DEEP (~ 25') HYDROCONE® SAMPLES
◑ — SHALLOW AND DEEP HYDROCONE® SAMPLES, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
★ — EDC SAMPLE LOCATION
PHASE II RFI SAMPLES:
◐ — BACKGROUND SOIL SAMPLE LOCATION
● — SOIL SAMPLE LOCATION
▲ — GRAB SEDIMENT SAMPLE LOCATION
PHASE III RFI SAMPLES:
○ — SOIL SAMPLE LOCATION FEB 2003
—X— — FENCE

0-2 1.43	Depth of Sample (feet)	EDC Concentrations (mg/kg)

NT — NOT TESTED
(D) — DUPLICATE SAMPLE

RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

RHODIA

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Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: ARSENIC CONCENTRATIONS IN SOILS

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100 FEET APPROXIMATE
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig13b_ars		Figure 13B
CADD DATE: 10/26/09		

LEGEND:

PHASE I RFI SAMPLES:
□ – GRAB SEDIMENT SAMPLE
○ – SOIL BORING
♦ – SHALLOW MONITORING WELL WELL WATER SAMPLE
◊ – DEEP MONITORING WELL WELL WATER SAMPLE
◊ – BACKGROUND MONITORING WELL
⊕ – BENTHIC SURVEY LOCATION
△ – POND WATER AND POND SEDIMENT SAMPLE
○ – SHALLOW (≤ 15') HYDROCONE® SAMPLE (ARSENIC)
⊕ – SHALLOW HYDROCONE® SAMPLE, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
◑ – SHALLOW AND DEEP (~ 25') HYDROCONE® SAMPLES
◑ – SHALLOW AND DEEP HYDROCONE® SAMPLES, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
★ – EDC SAMPLE LOCATION
PHASE II RFI SAMPLES:
◑ – BACKGROUND SOIL SAMPLE LOCATION
● – SOIL SAMPLE LOCATION
▲ – GRAB SEDIMENT SAMPLE LOCATION
PHASE III RFI SAMPLES:
⊙ – SOIL SAMPLE LOCATION FEB 2003
–X– – FENCE

0–2 1.43	Depth of Sample (feet)	EDC Concentrations (mg/kg)

NT – NOT TESTED
(D) – DUPLICATE SAMPLE

AREAS WHERE ARSENIC CONCENTRATIONS EXCEED BACKGROUND

NOTE:
BACKGROUND SOIL SAMPLES WITH ARSENIC CONCENTRATIONS GREATHER THAN BACKGROUND (i.e. 29 mg/Kg) ARE NOT INCLUDED INTHIS FIGURE.

RE:
BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

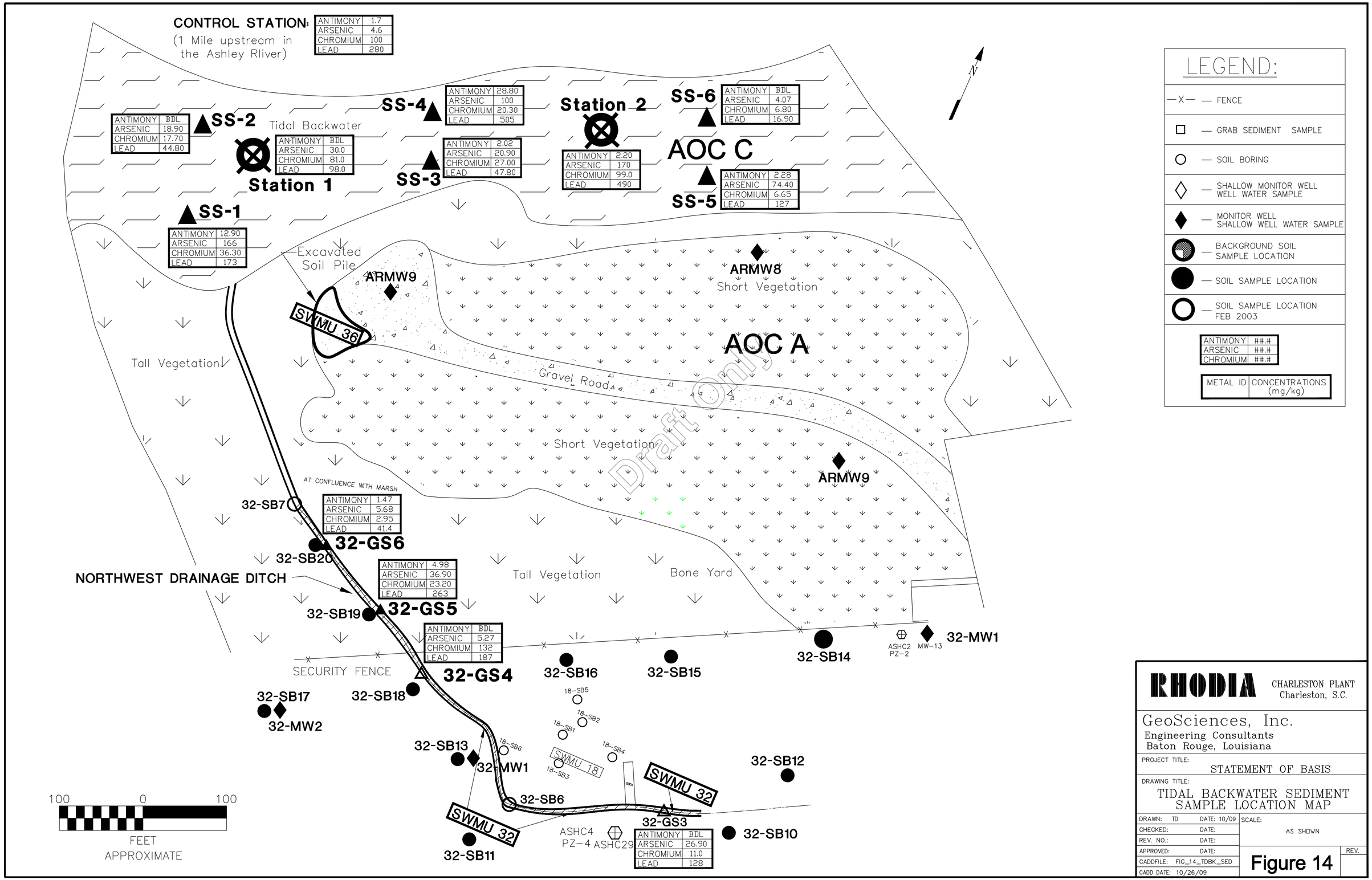
RHODIA CHARLESTON PLANT Charleston, S.C.

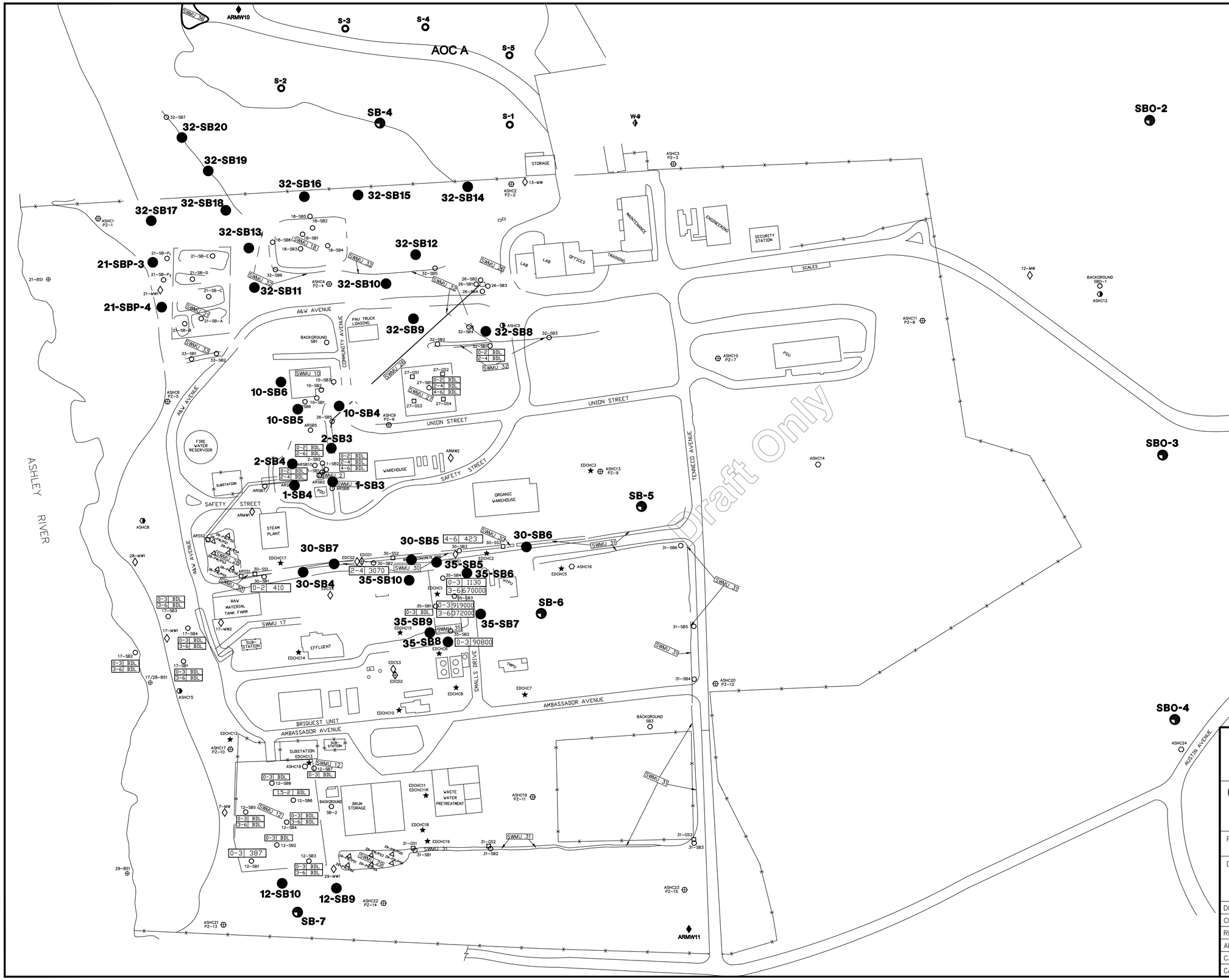
GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: AREA OF ARSENIC IMPACT IN SOILS

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100 FEET APPROXIMATE
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig_13c_po_ars_res		Figure 13C
CADD DATE: 10/26/09		


CONTROL STATION:
(1 Mile upstream in the Ashley Rliver)
ANTIMONY 1.7
ARSENIC 4.6
CHROMIUM 100
LEAD 280
SS-2
ANTIMONY BDL
ARSENIC 18.90
CHROMIUM 17.70
LEAD 44.80
Tidal Backwater
Station 1
ANTIMONY BDL
ARSENIC 30.0
CHROMIUM 81.0
LEAD 98.0
SS-4
ANTIMONY 28.80
ARSENIC 100
CHROMIUM 20.30
LEAD 505
SS-3
ANTIMONY 2.02
ARSENIC 20.90
CHROMIUM 27.00
LEAD 47.80
Station 2
ANTIMONY 2.20
ARSENIC 170
CHROMIUM 99.0
LEAD 490
SS-6
ANTIMONY BDL
ARSENIC 4.07
CHROMIUM 6.80
LEAD 16.90
AOC C
SS-5
ANTIMONY 2.28
ARSENIC 74.40
CHROMIUM 6.65
LEAD 127
SS-1
ANTIMONY 12.90
ARSENIC 166
CHROMIUM 36.30
LEAD 173
Excavated Soil Pile
ARMW9
SWMU 36
ARMW8
Short Vegetation
AOC A
Tall Vegetation
Gravel Road
Short Vegetation
ARMW9
AT CONFLUENCE WITH MARSH
32-SB7
ANTIMONY 1.47
ARSENIC 5.68
CHROMIUM 2.95
LEAD 41.4
32-GS6
32-SB20
NORTHWEST DRAINAGE DITCH
ANTIMONY 4.98
ARSENIC 36.90
CHROMIUM 23.20
LEAD 263
32-GS5
32-SB19
Tall Vegetation
Bone Yard
ANTIMONY BDL
ARSENIC 5.27
CHROMIUM 132
LEAD 187
32-GS4
SECURITY FENCE
32-SB16
32-SB15
32-SB14
ASHC2
PZ-2
MW-13
32-MW1
32-SB17
32-MW2
32-SB18
18-SB5
18-SB2
18-SB1
18-SB6
18-SB4
18-SB3
SWMU 18
32-SB13
32-MW1
32-SB12
SWMU 32
32-SB6
SWMU 32
32-GS3
ASHC4
PZ-4
ASHC29
ANTIMONY BDL
ARSENIC 26.90
CHROMIUM 11.0
LEAD 128
32-SB10
32-SB11
100 0 100
FEET
APPROXIMATE
N
LEGEND:
FENCE
GRAB SEDIMENT SAMPLE
SOIL BORING
SHALLOW MONITOR WELL WELL WATER SAMPLE
MONITOR WELL SHALLOW WELL WATER SAMPLE
BACKGROUND SOIL SAMPLE LOCATION
SOIL SAMPLE LOCATION
SOIL SAMPLE LOCATION FEB 2003
ANTIMONY ##.#
ARSENIC ##.#
CHROMIUM ##.#
METAL ID
CONCENTRATIONS (mg/kg)
Draft Only
RHODIA
CHARLESTON PLANT
Charleston, S.C.
GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana
PROJECT TITLE:
STATEMENT OF BASIS
DRAWING TITLE:
TIDAL BACKWATER SEDIMENT SAMPLE LOCATION MAP
DRAWN: TD DATE: 10/09
CHECKED: DATE:
REV. NO.: DATE:
APPROVED: DATE:
CADDFILE: FIG_14_TDBK_SED
CADD DATE: 10/26/09
SCALE:
AS SHOWN
REV.
Figure 14



LEGEND:

—x—	FENCE
PHASE I RFI SAMPLES:	
□	GRAB SEDIMENT SAMPLE
○	SOIL BORING
◇	SHALLOW MONITORING WELL WELL WATER SAMPLE
◇	DEEP MONITORING WELL WELL WATER SAMPLE
⊕	BENTHIC SURVEY LOCATION
△	POND WATER AND POND SEDIMENT SAMPLE
○	SHALLOW (≤ 15') HYDROCONE® SAMPLE (ARSENIC)
⊕	SHALLOW HYDROCONE® SAMPLE, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
◑	SHALLOW AND DEEP (~ 25') HYDROCONE® SAMPLES
◑	SHALLOW AND DEEP HYDROCONE® SAMPLES, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
★	EDC SAMPLE LOCATION
D C	Depth of Sample (feet) / EDC Concentrations (mg/kg)
PHASE II RFI SAMPLES:	
◑	BACKGROUND SOIL SAMPLE LOCATION
●	SOIL SAMPLE LOCATION
▲	GRAB SEDIMENT SAMPLE LOCATION
D C	Depth of Sample (feet) / EDC Concentrations (mg/kg)
BDL	BELOW DETECTION LIMITS

RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

RHODIA

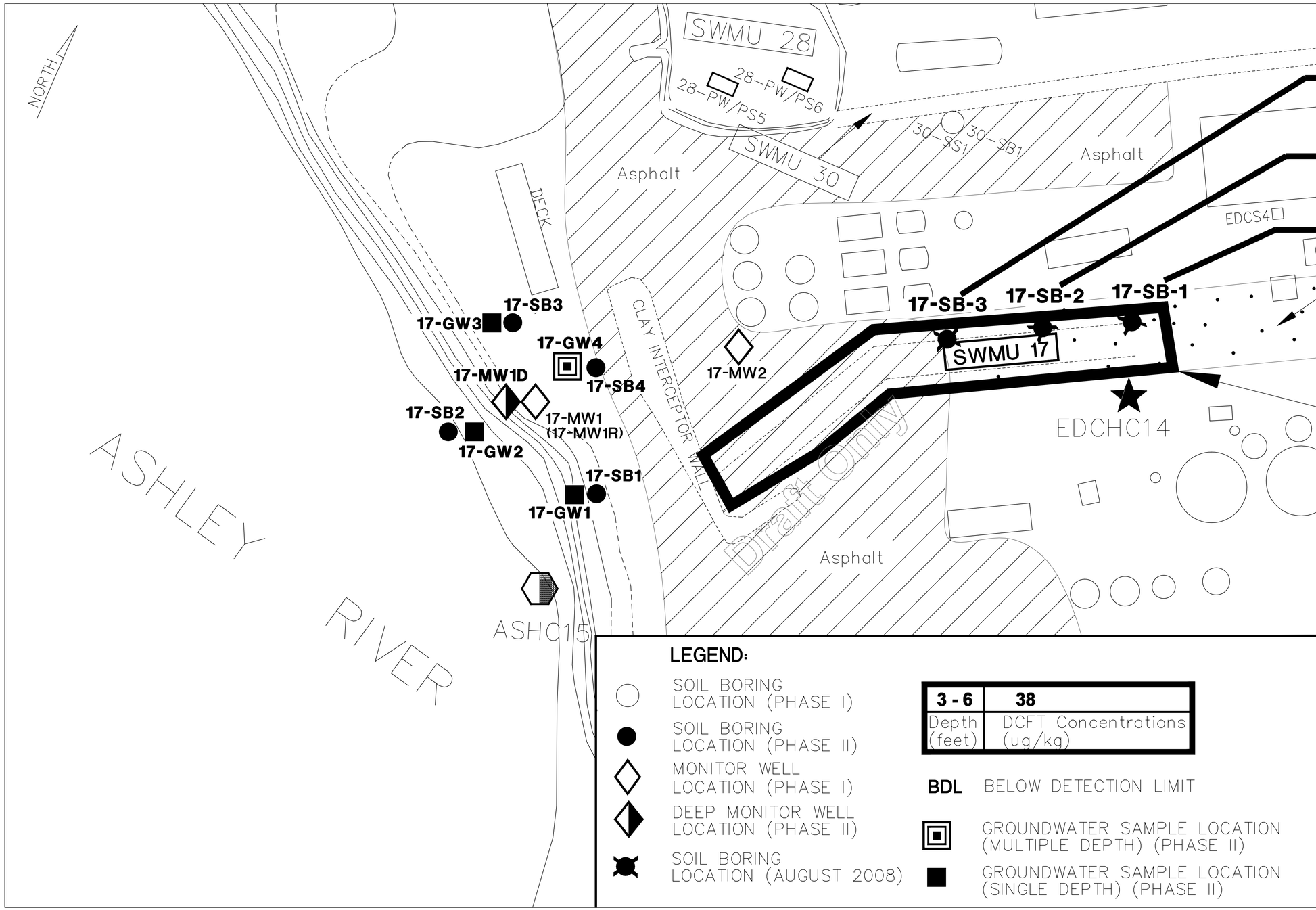
CHARLESTON PLANT
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE:
STATEMENT OF BASIS

DRAWING TITLE:
DCFT CONCENTRATIONS IN SOILS (RFI DATA)

DRAWN: T Davis	DATE: 10/09	SCALE: 100 0 100
CHECKED:	DATE:	SCALE: 1 INCH = 100 FEET
REV. NO.:	DATE:	
APPROVED:	DATE:	Figure 15A
CADDFILE: fig15a_dcft		
CADD DATE: 11/20/09		



0 - 3	490
3 - 6	BDL

0 - 3	BDL
3 - 6	550,000

0 - 3	10,000
3 - 6	29,000,000

AREA OF IMPACT

(Existing Cover: Asphalt & Soil Berm

0 10 20 40 80

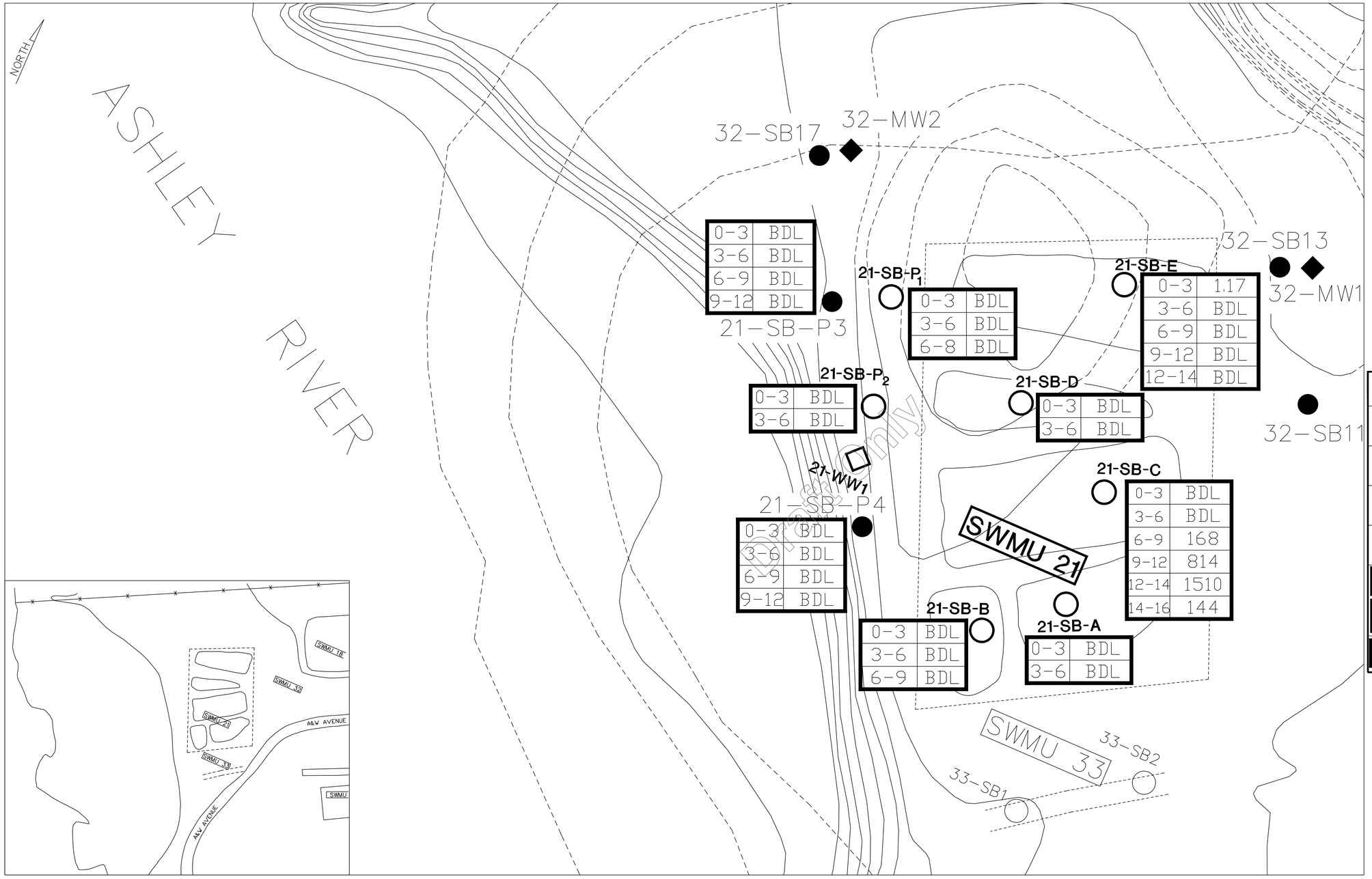
RHODIA CHARLESTON PLANT Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: DCFT CONCENTRATIONS IN SOILS AT SWMU 17 (AUGUST 2008)

DRAWN: T Davis	DATE: 10/09	SCALE: See Drawing
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig15b_swmu17		Figure 15B
CADD DATE: 11/20/09		



RHODIA CHARLESTON PLANT
Charleston, S.C.

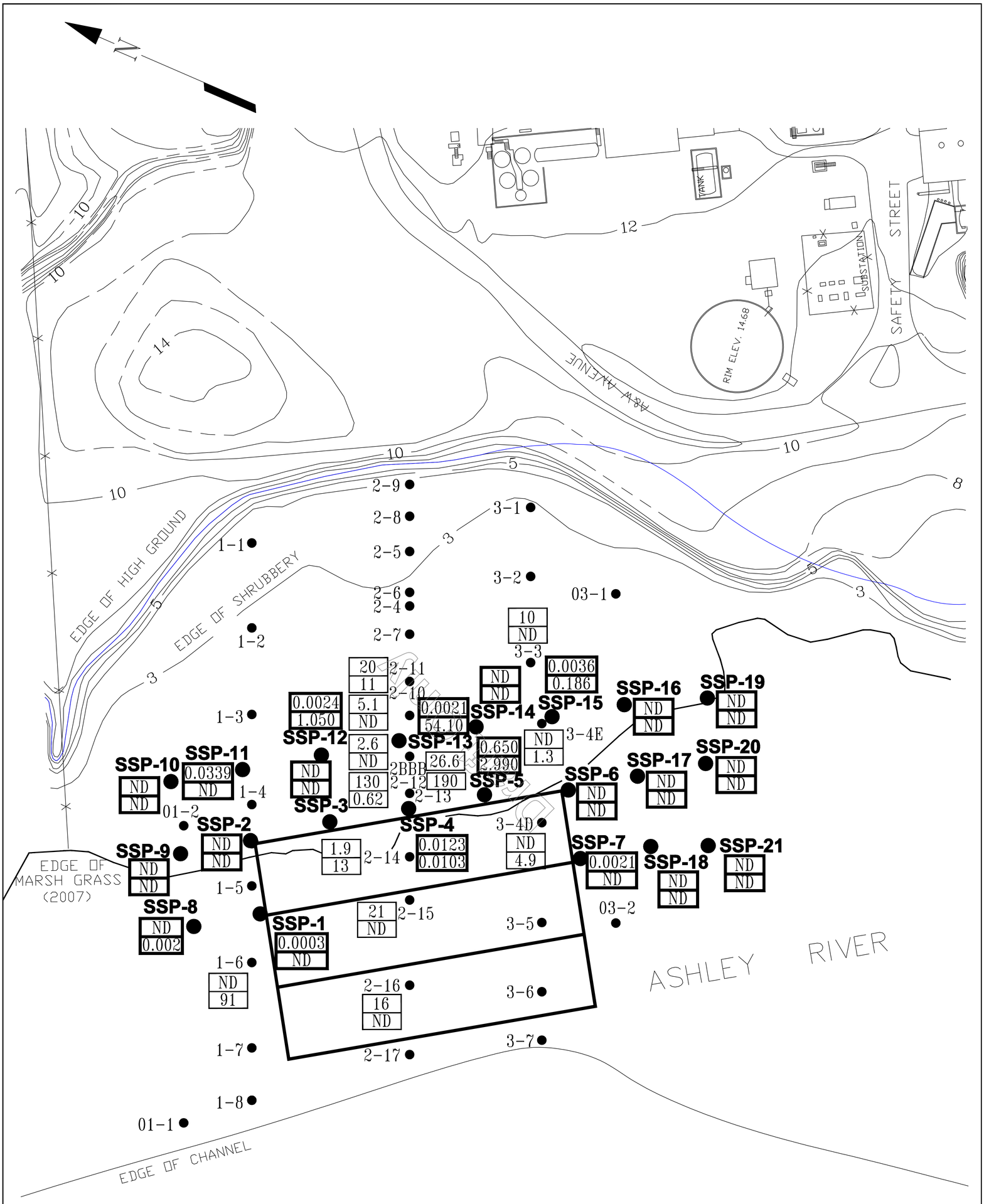
GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: ELEMENTAL PHOSPHORUS CONCENTRATIONS IN SOILS

DRAWN: TD	DATE: 10/09	SCALE: AS SHOWN
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: FIG16_ELEM_PHOS		
CADD DATE: 10/26/09		

Figure 16



LEGEND:

- ● Sediment Sample Location (July 2007)
- • Sediment Sample Location (1988 Sampling Event)
- [16] Elemental Phosphorus Concentrations (mg/kg)
- [ND] Not Detected

100 0 100

RHODIA CHARLESTON PLANT Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

STATEMENT OF BASIS

DRAWING TITLE:
ELEMENTAL PHOSPHORUS CONCENTRATIONS IN SEDIMENTS

DRAWN: T Davis	DATE: 10/09	SCALE: As Shown
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig_17 hist & rec		Figure 17
CADD DATE: 11/20/09		

LEGEND:

PHASE I RFI SAMPLES:
□ — GRAB SEDIMENT SAMPLE
○ — SOIL BORING
♦ — SHALLOW MONITORING WELL WELL WATER SAMPLE
◊ — DEEP MONITORING WELL WELL WATER SAMPLE
◊ — BACKGROUND MONITORING WELL
⊕ — BENTHIC SURVEY LOCATION
△ — POND WATER AND POND SEDIMENT SAMPLE
⬡ — SHALLOW (≤ 15') HYDROCONE® SAMPLE (ARSENIC)
⊕ — SHALLOW HYDROCONE® SAMPLE, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
◑ — SHALLOW AND DEEP (~ 25') HYDROCONE® SAMPLES
◑ — SHALLOW AND DEEP HYDROCONE® SAMPLES, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
★ — EDC SAMPLE LOCATION
PHASE II RFI SAMPLES:
⊕ — BACKGROUND SOIL SAMPLE LOCATION
● — SOIL SAMPLE LOCATION
▲ — GRAB SEDIMENT SAMPLE LOCATION
PHASE III RFI SAMPLES:
⊙ — SOIL SAMPLE LOCATION FEB 2003
—x— — FENCE

0-2	1.43	Depth of Sample (feet)	EDC Concentrations (ug/kg)

NT — NOT TESTED
(D) — DUPLICATE SAMPLE
(BDL) — BELOW DETECTION LIMITS

RE:
BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

RHODIA
CHARLESTON PLANT
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: ORGANIC CHEMICAL CONCENTRATIONS IN SOILS

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100 FEET APPROXIMATE
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig_18a organic chm		Figure 18A
CADD DATE: 10/26/09		

LEGEND:

PHASE I RFI SAMPLES:
□ – GRAB SEDIMENT SAMPLE
○ – SOIL BORING
♦ – SHALLOW MONITORING WELL WELL WATER SAMPLE
♦ – DEEP MONITORING WELL WELL WATER SAMPLE
♦ – BACKGROUND MONITORING WELL
⊕ – BENTHIC SURVEY LOCATION
△ – POND WATER AND POND SEDIMENT SAMPLE
⬡ – SHALLOW (≤ 15') HYDROCONE® SAMPLE (ARSENIC)
⊕ – SHALLOW HYDROCONE® SAMPLE, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
◑ – SHALLOW AND DEEP (~ 25') HYDROCONE® SAMPLES
◑ – SHALLOW AND DEEP HYDROCONE® SAMPLES, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
★ – EDC SAMPLE LOCATION
PHASE II RFI SAMPLES:
● – BACKGROUND SOIL SAMPLE LOCATION
● – SOIL SAMPLE LOCATION
▲ – GRAB SEDIMENT SAMPLE LOCATION
PHASE III RFI SAMPLES:
○ – SOIL SAMPLE LOCATION FEB 2003
–X– – FENCE
0-2 | 1.43 — Depth of Sample (feet) — EDC Concentrations (ug/kg)
NT – NOT TESTED
(D) – DUPLICATE SAMPLE
(BDL) – BELOW DETECTION LIMITS
VOCs/SVOCs Exceeding Residentail and Industrial PRGs
VOCs/SVOCs Exceeding SSLs for Protection of Groundwater

RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

RHODIA

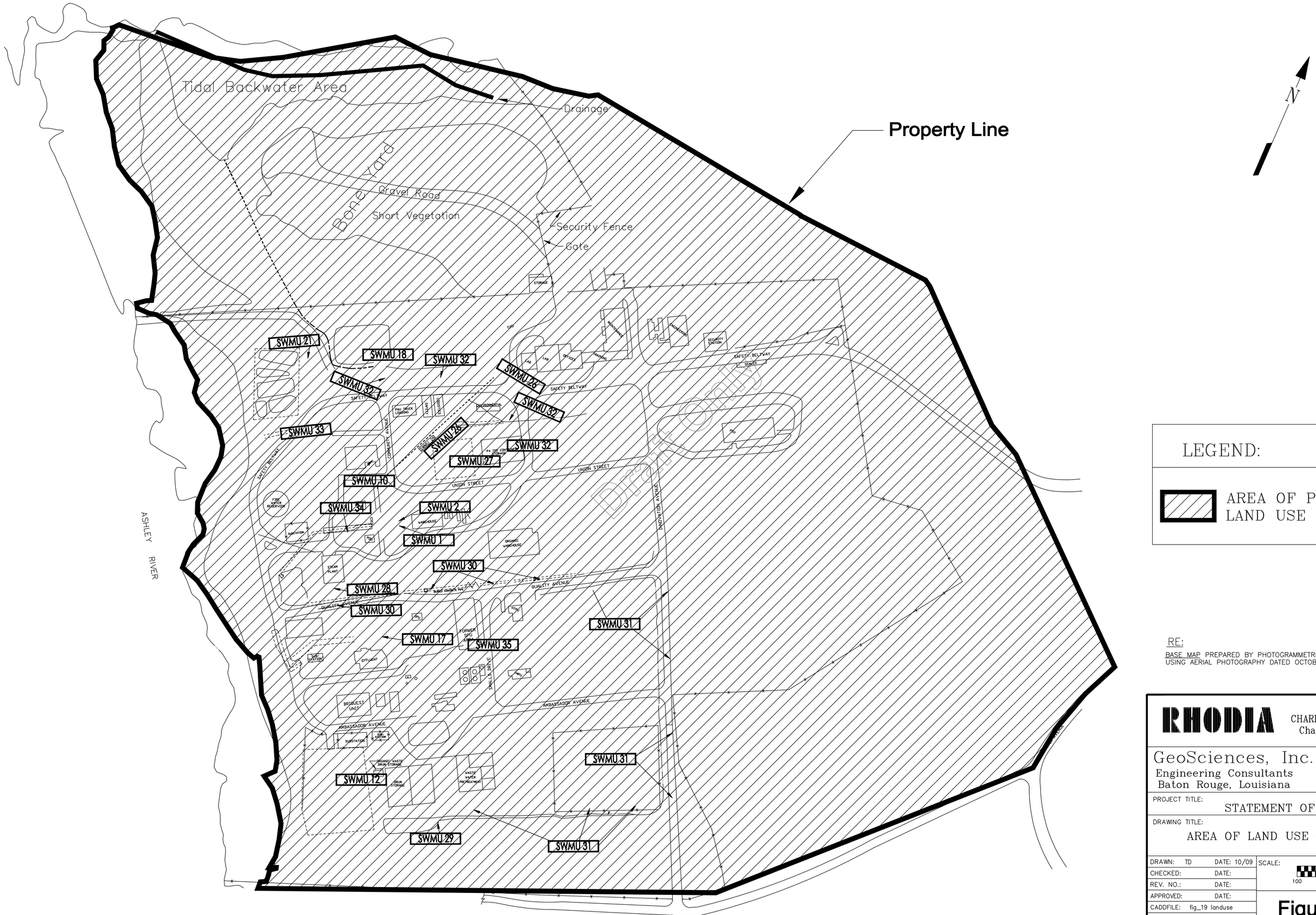
CHARLESTON PLANT
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE:
STATEMENT OF BASIS

DRAWING TITLE:
PROJECTED AREA OF ORGANIC CHEMICAL IMPACT IN SOILS – INDUSTRIAL PRGs

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100 FEET APPROXIMATE
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig18b_orgnic chm im		Figure 18B
CADD DATE: 10/26/09		



RE:
BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

RHODIA

CHARLESTON PLANT
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: AREA OF LAND USE CONTROL

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig_19 landuse		Figure 19
CADD DATE: 10/26/09		

NOTE: SEE FIGURES 18A1, 18B, 18E. 18G, 18H, 18I, 19 AND 20 FOR ADDITIONAL DETAILS.

LEGEND:

PHASE I RFI SAMPLES:
□ – GRAB SEDIMENT SAMPLE
○ – SOIL BORING
♦ – SHALLOW MONITORING WELL WELL WATER SAMPLE
◊ – DEEP MONITORING WELL WELL WATER SAMPLE
⊕ – BACKGROUND MONITORING WELL
⊕ – BENTHIC SURVEY LOCATION
△ – POND WATER AND POND SEDIMENT SAMPLE
○ – SHALLOW (≤ 15') HYDROCONE® SAMPLE (ARSENIC)
⊕ – SHALLOW HYDROCONE® SAMPLE, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
◑ – SHALLOW AND DEEP (~ 25') HYDROCONE® SAMPLES
◑ – SHALLOW AND DEEP HYDROCONE® SAMPLES, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
★ – EDC SAMPLE LOCATION
PHASE II RFI SAMPLES:
◔ – BACKGROUND SOIL SAMPLE LOCATION
● – SOIL SAMPLE LOCATION
▲ – GRAB SEDIMENT SAMPLE LOCATION
PHASE III RFI SAMPLES:
⊙ – SOIL SAMPLE LOCATION FEB 2003
–X– – FENCE
0–2 | 1.43 — Depth of Sample (feet) — EDC Concentrations (mg/kg)
NT – NOT TESTED
(D) – DUPLICATE SAMPLE
▭ – PROJECTED AREA OF COVER PLACEMENT

RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

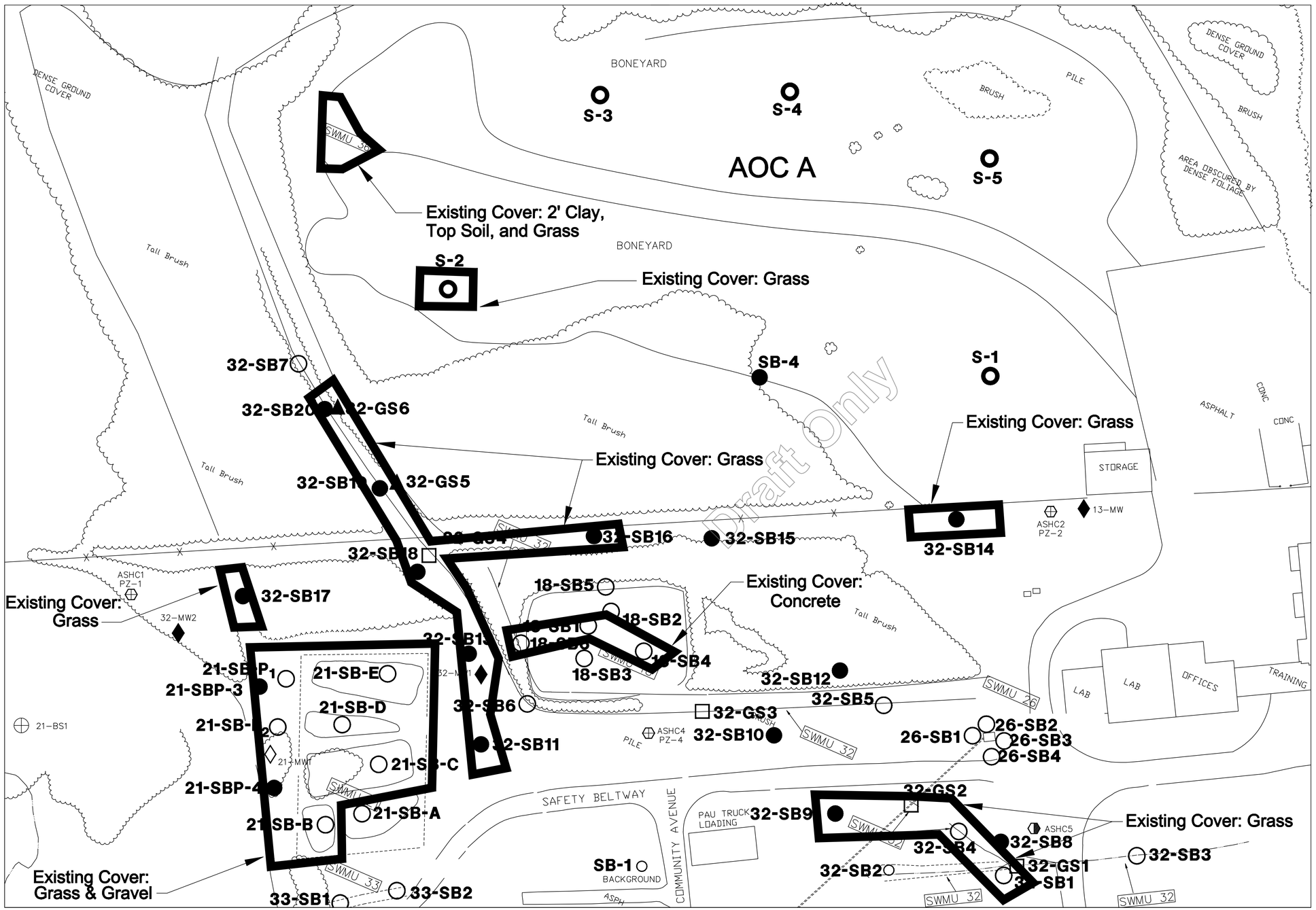
RHODIA CHARLESTON PLANT Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: AREAS DESIGNATED FOR CAPPING

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100 FEET APPROXIMATE
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig20a_gnd cvr		Figure 20A
CADD DATE: 10/26/09		



100 0 100

FEET APPROXIMATE

NOTE: SEE FIGURES 18E. 18H, 19 AND 20 FOR ADDITIONAL DETAILS.

N

LEGEND:

PHASE I RFI SAMPLES:
□ – GRAB SEDIMENT SAMPLE
○ – SOIL BORING
♦ – SHALLOW MONITORING WELL WELL WATER SAMPLE
◊ – DEEP MONITORING WELL WELL WATER SAMPLE
⊕ – BACKGROUND MONITORING WELL
⊕ – BENTHIC SURVEY LOCATION
△ – POND WATER AND POND SEDIMENT SAMPLE
○ – SHALLOW (≤ 15') HYDROCONE® SAMPLE (ARSENIC)
⊕ – SHALLOW HYDROCONE® SAMPLE, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
◑ – SHALLOW AND DEEP (~ 25') HYDROCONE® SAMPLES
◑ – SHALLOW AND DEEP HYDROCONE® SAMPLES, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
★ – EDC SAMPLE LOCATION
PHASE II RFI SAMPLES:
◔ – BACKGROUND SOIL SAMPLE LOCATION
● – SOIL SAMPLE LOCATION
▲ – GRAB SEDIMENT SAMPLE LOCATION
PHASE III RFI SAMPLES:
○ – SOIL SAMPLE LOCATION FEB 2003
–x– – FENCE

0–2	1.43	Depth of Sample (feet)	EDC Concentrations (mg/kg)

NT – NOT TESTED
(D) – DUPLICATE SAMPLE

PROJECTED AREA OF COVER PLACEMENT

RE:
BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

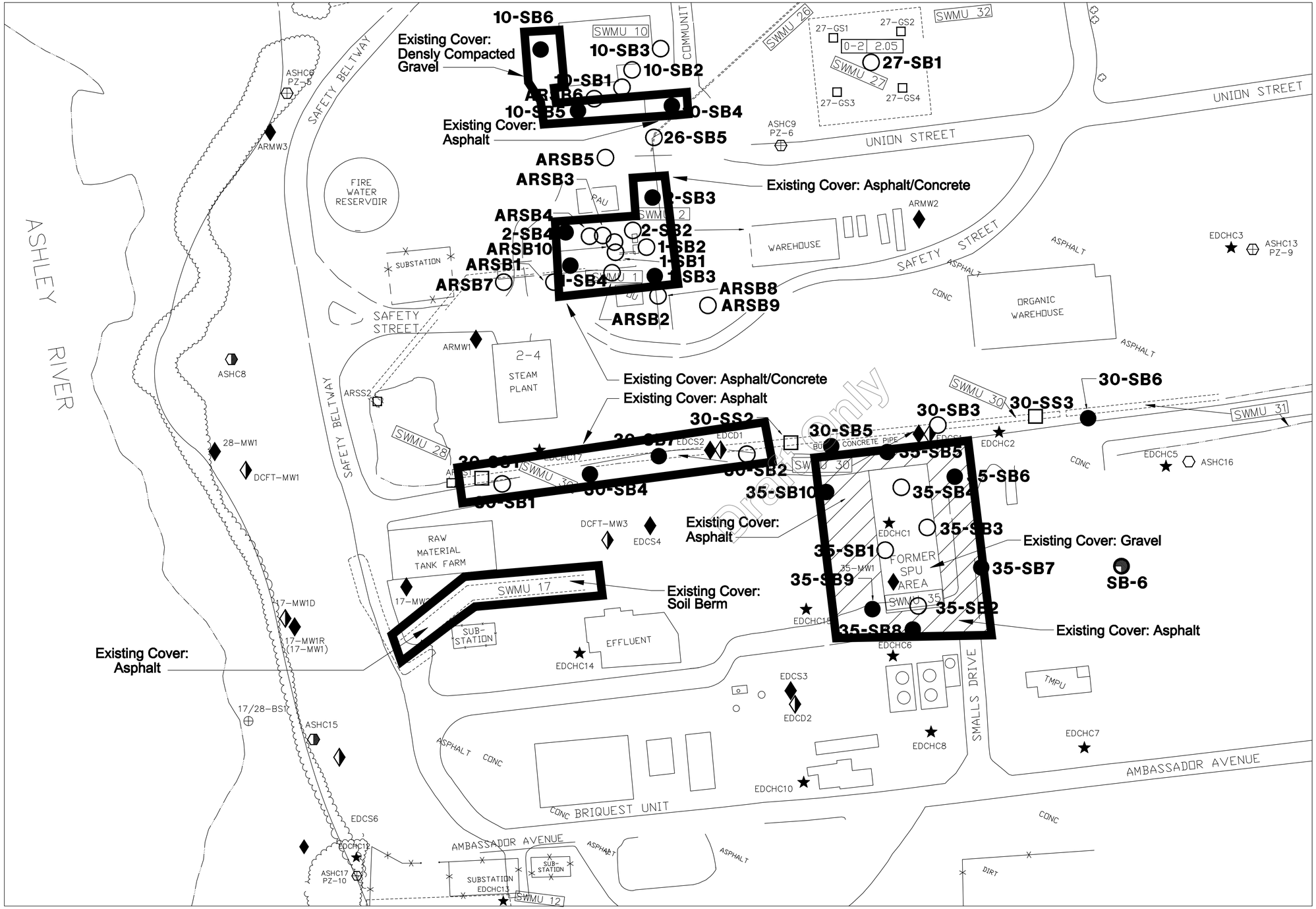
RHODIA CHARLESTON PLANT Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: AREAS DESIGNATED FOR CAPPING (NORTHWEST CORNER)

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100 FEET APPROXIMATE
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig20b_gnd cvr		Figure 20B
CADD DATE: 10/26/09		



NOTE: SEE FIGURES 18A1, 18B, 18D. 18G, AND 18I FOR ADDITIONAL DETAILS.

LEGEND:

PHASE I RFI SAMPLES:
□ – GRAB SEDIMENT SAMPLE
○ – SOIL BORING
♦ – SHALLOW MONITORING WELL WELL WATER SAMPLE
♦ – DEEP MONITORING WELL WELL WATER SAMPLE
♦ – BACKGROUND MONITORING WELL
⊕ – BENTHIC SURVEY LOCATION
△ – POND WATER AND POND SEDIMENT SAMPLE
○ – SHALLOW (≤ 15') HYDROCONE® SAMPLE (ARSENIC)
⊕ – SHALLOW HYDROCONE® SAMPLE, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
◑ – SHALLOW AND DEEP (~ 25') HYDROCONE® SAMPLES
◑ – SHALLOW AND DEEP HYDROCONE® SAMPLES, PIEZOCONE TO COPPER CLAY AND SHALLOW PIEZOMETER
★ – EDC SAMPLE LOCATION
PHASE II RFI SAMPLES:
◐ – BACKGROUND SOIL SAMPLE LOCATION
● – SOIL SAMPLE LOCATION
▲ – GRAB SEDIMENT SAMPLE LOCATION
PHASE III RFI SAMPLES:
◐ – SOIL SAMPLE LOCATION FEB 2003
–x– – FENCE
0-2 1.43 — Depth of Sample (feet); EDC Concentrations (mg/kg)
NT – NOT TESTED
(D) – DUPLICATE SAMPLE
PROJECTED AREA OF COVER PLACEMENT

RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

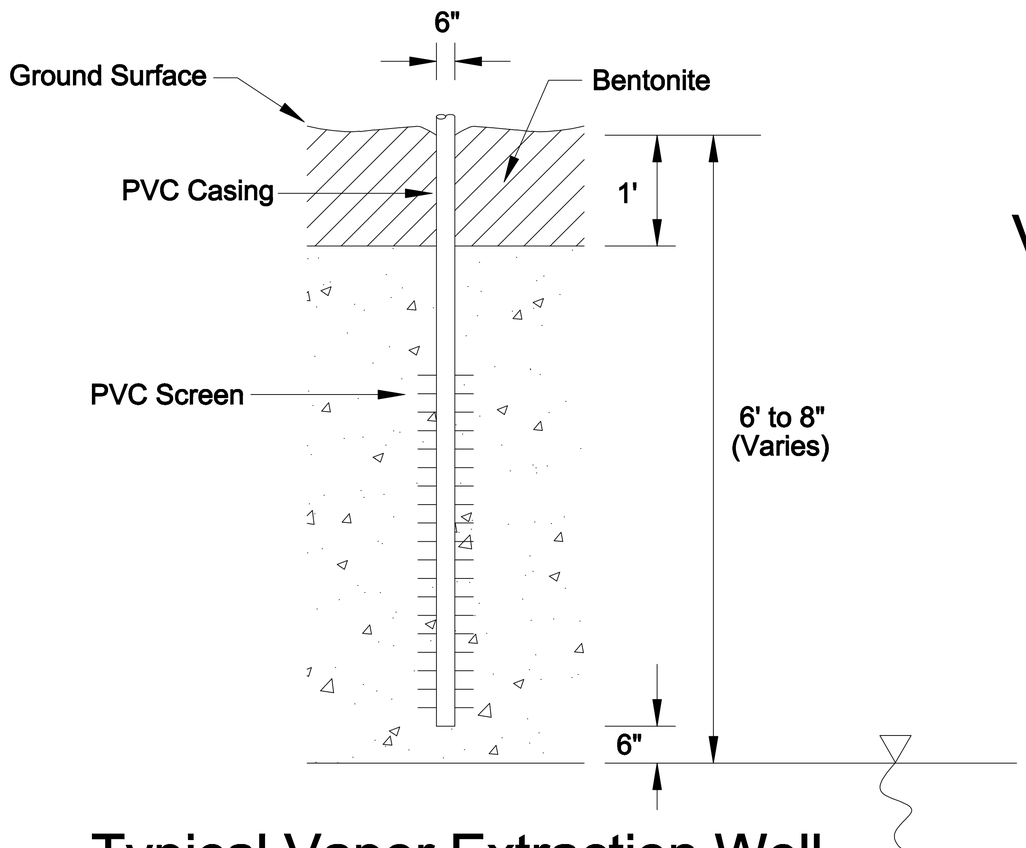
RHODIA CHARLESTON PLANT Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

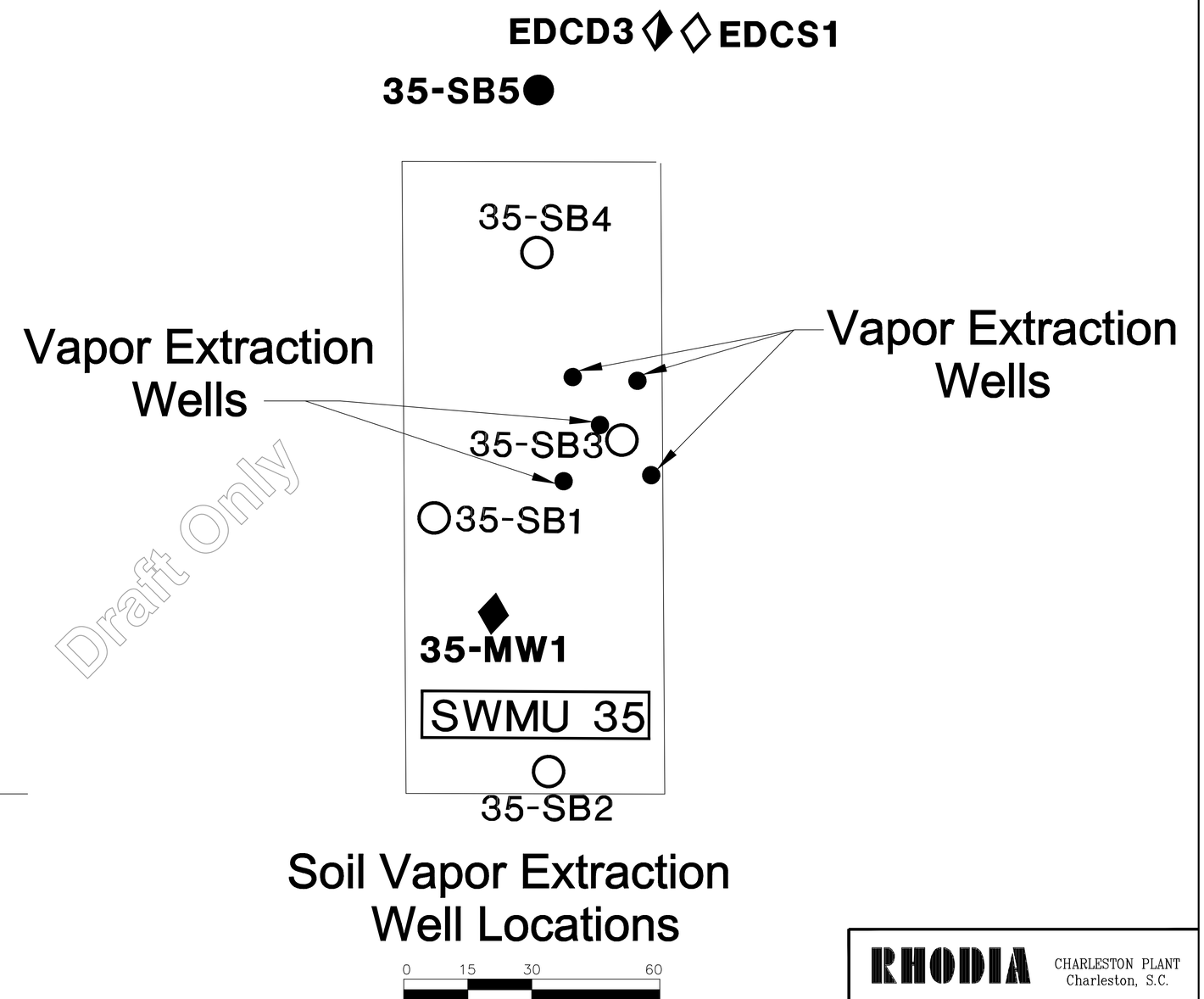
DRAWING TITLE: AREAS DESIGNATED FOR CAPPING (CENTRAL)

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100 FEET APPROXIMATE
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	Figure 20C
CADDFILE: fig24c_gnd cvr		
CADD DATE: 10/02/09		



Typical Vapor Extraction Well Cross Section

Not to Scale



Soil Vapor Extraction Well Locations

Draft Only

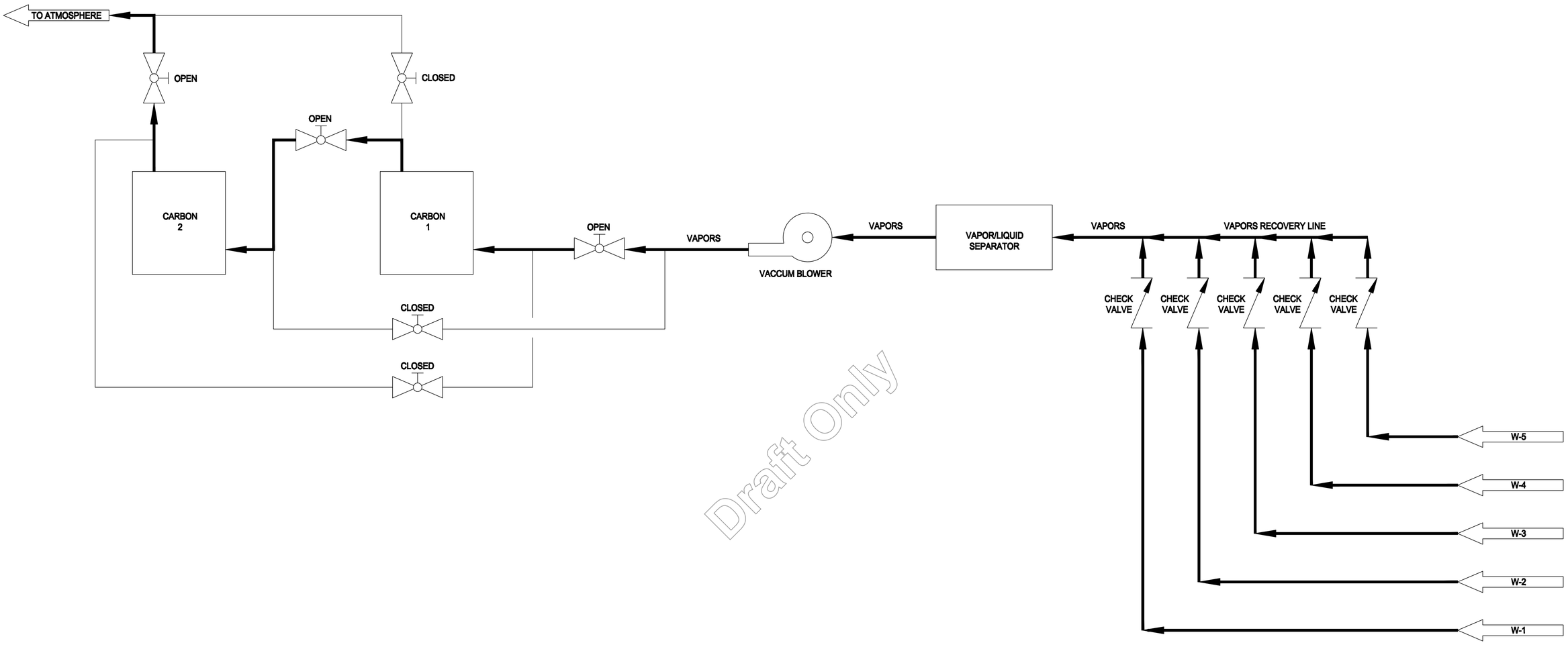
RHODIA CHARLESTON PLANT Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: Soil Vapor Extraction Well Location Map & Typical Cross Section

DRAWN: TD	DATE: 10/09	SCALE: As Shown
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: FIG_21A_VAPOR_CS		Figure 21A
CADD DATE: 10/26/09		



Draft Only

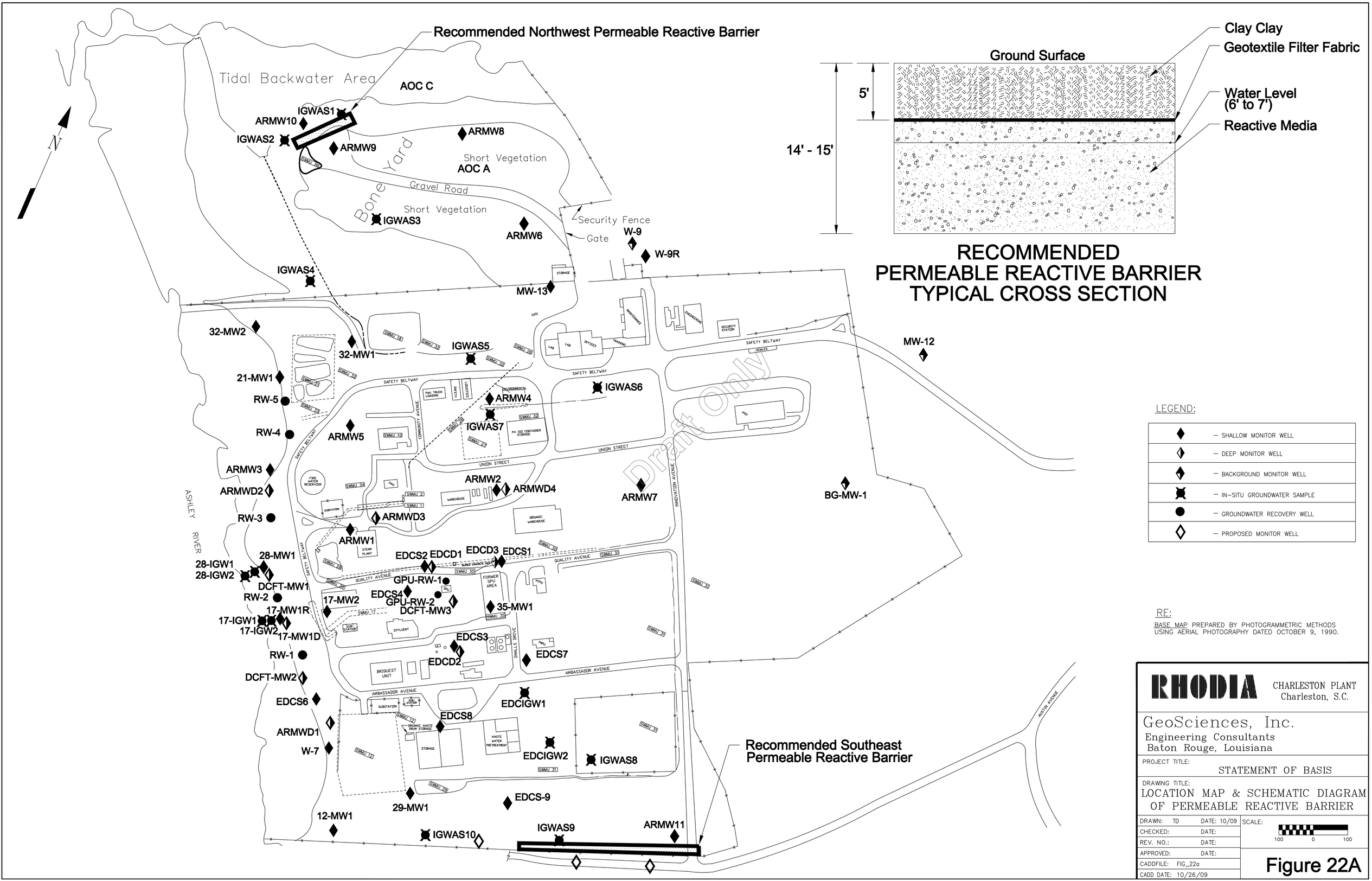
RHODIA CHARLESTON PLANT Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: Soil Vapor Extraction Process Flow Diagram

DRAWN: TD	DATE: 10/09	SCALE: Not to Scale
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: FIG_21B_PID		Figure 21B
CADD DATE: 10/26/09		



Recommended Northwest Permeable Reactive Barrier
Tidal Backwater Area
AOC C
IGWAS1
ARMW10
IGWAS2
ARMW9
ARMW8
Short Vegetation
AOC A
Bone Yard
Gravel Road
Short Vegetation
IGWAS3
ARMW6
Security Fence
Gate
W-9
W-9R
IGWAS4
MW-13
32-MW2
32-MW1
IGWAS5
21-MW1
RW-5
RW-4
ARMW5
ARMW4
IGWAS7
IGWAS6
MW-12
ARMW3
ARMWD2
RW-3
ARMW2
ARMWD4
ARMW7
BG-MW-1
ARMWD3
ARMW1
ASHLEY RIVER
28-MW1
28-IGW1
28-IGW2
DCFT-MW1
RW-2
17-MW2
17-MW1R
17-IGW1
17-IGW2
17-MW1D
RW-1
DCFT-MW2
EDCS6
ARMWD1
W-7
EDCS2
EDCD1
EDCD3
EDCS1
GPU-RW-1
EDCS4
GPU-RW-2
DCFT-MW3
35-MW1
EDCS3
EDCD2
EDCS7
EDCIGW1
EDCS8
EDCIGW2
IGWAS8
29-MW1
EDCS-9
12-MW1
IGWAS10
IGWAS9
ARMW11
Recommended Southeast Permeable Reactive Barrier
Draft Only
Ground Surface
5'
14' - 15'
Clay Clay
Geotextile Filter Fabric
Water Level (6' to 7')
Reactive Media
RECOMMENDED PERMEABLE REACTIVE BARRIER TYPICAL CROSS SECTION
LEGEND:
— SHALLOW MONITOR WELL
— DEEP MONITOR WELL
— BACKGROUND MONITOR WELL
— IN-SITU GROUNDWATER SAMPLE
— GROUNDWATER RECOVERY WELL
— PROPOSED MONITOR WELL
RE:
BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.
RHODIA
CHARLESTON PLANT
Charleston, S.C.
GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana
PROJECT TITLE:
STATEMENT OF BASIS
DRAWING TITLE:
LOCATION MAP & SCHEMATIC DIAGRAM OF PERMEABLE REACTIVE BARRIER
DRAWN: TD DATE: 10/09
CHECKED: DATE:
REV. NO.: DATE:
APPROVED: DATE:
CADDFILE: FIG_22a
CADD DATE: 10/26/09
SCALE:
100 0 100
Figure 22A

Recommended Permeable Reactive Barrier

Tidal Backwater Area

AOC C

IGWAS1

ARMW10

IGWAS2

ARMW9

ARMW8

Bone Yard

Short Vegetation

AOC A

Gravel Road

Short Vegetation

IGWAS3

ARMW6

Security Fence

Gate

W-9

W-9R

IGWAS4

Recommended Groundwater Recovery Well

MW-13

32-MW2

32-MW1

IGWAS5

21-MW1

RW-5

RW-4

ARMW5

ARMW4

IGWAS7

IGWAS6

Recommended Groundwater Recovery Well

MW-12

Recommended Groundwater Recovery Well

ARMW3

ARMWD2

ASHLEY RIVER

RW-3

ARMW2

ARMWD4

ARMW7

BG-MW-1

ARMWD3

ARMW1

28-MW1

28-IGW1

28-IGW2

EDCS2

EDCD1

EDCD3

EDCS1

DCFT-MW1

RW-2

GPU-RW-1

EDCS4

GPU-RW-2

DCFT-MW3

17-MW2

35-MW1

Recommended Groundwater Recovery Well

17-MW1R

17-IGW1

17-IGW2

17-MW1D

Recommended Groundwater Recovery Well

RW-1

EDCS3

EDCD2

EDCS7

DCFT-MW2

EDCS6

EDCIGW1

Recommended Groundwater Interception Trench

ARMWD1

W-7

EDCS8

EDCIGW2

IGWAS8

Recommended Permeable Reactive Barrier

29-MW1

EDCS-9

12-MW1

IGWAS10

IGWAS9

ARMW11

Draft Only

N

LEGEND:

- SHALLOW MONITOR WELL
- DEEP MONITOR WELL
- BACKGROUND MONITOR WELL
- IN-SITU GROUNDWATER SAMPLE
- EXISTING GROUNDWATER RECOVERY WELL
- RECOMMENDED GROUNDWATER RECOVERY WELL
- EXISTING GROUNDWATER INTERCEPTION TRENCH
- RECOMMENDED GROUNDWATER INTERCEPTION TRENCH

NOTE:

See Figure 26B and 27 for details of recommended remediation measures.

RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

RHODIA

CHARLESTON PLANT
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: SHALLOW GROUNDWATER REMEDIATION FEATURES

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100
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REV. NO.:	DATE:	
APPROVED:	DATE:	
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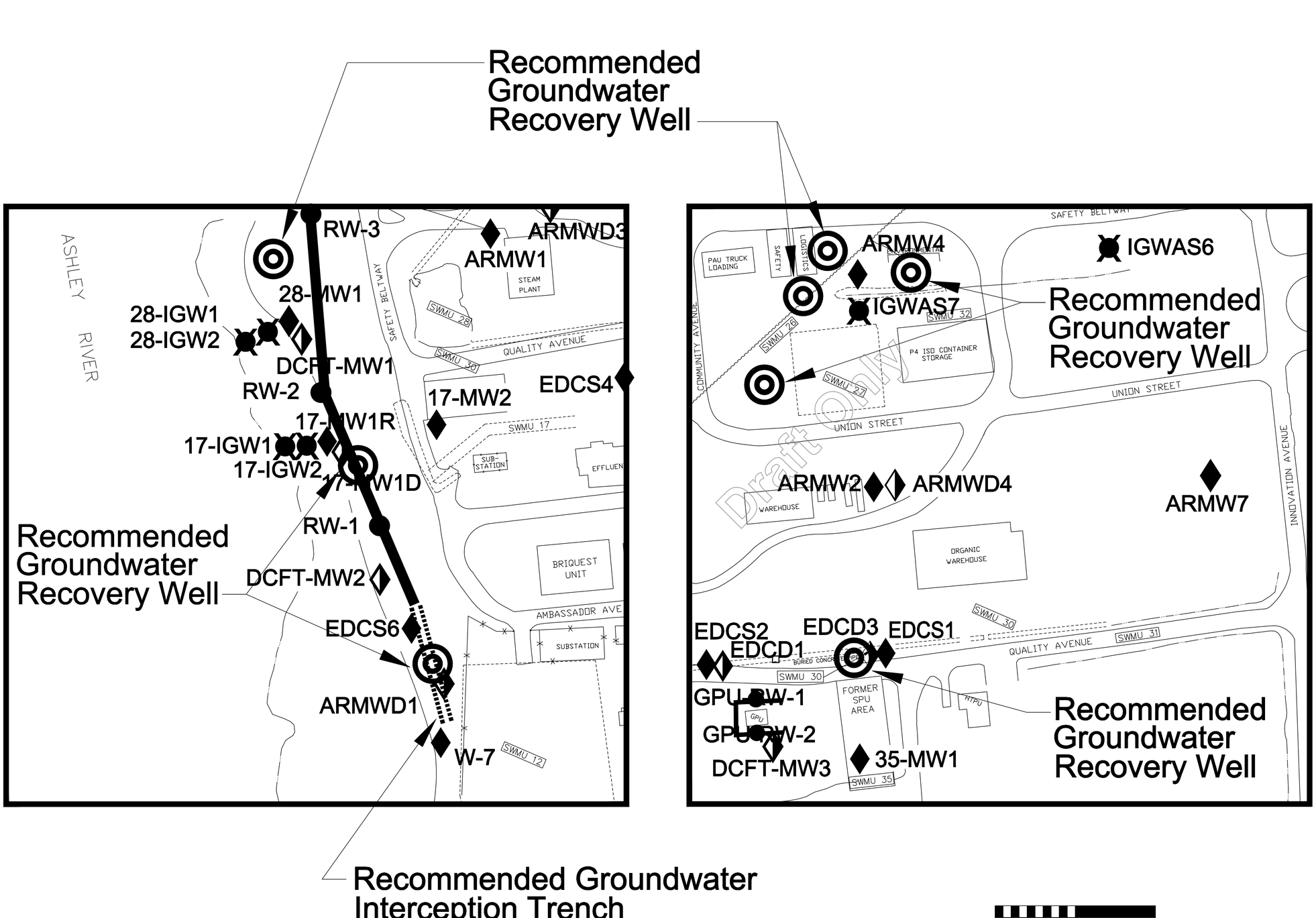
CADD DATE: 10/26/09		



LEGEND:

- SHALLOW MONITOR WELL
- DEEP MONITOR WELL
- BACKGROUND MONITOR WELL
- IN-SITU GROUNDWATER SAMPLE
- EXISTING GROUNDWATER RECOVERY WELL
- RECOMMENDED GROUNDWATER RECOVERY WELL
- EXISTING GROUNDWATER INTERCEPTION TRENCH
- RECOMMENDED GROUNDWATER INTERCEPTION TRENCH

NOTE:

See Figure 26B and 27 for details of recommended remediation measures.

RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

RHODIA CHARLESTON PLANT Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: RECOMMENDED ADDITIONAL SHALLOW GROUNDWATER RECOVERY FEATURES

DRAWN: TD	DATE: 10/09	SCALE: AS SHOWN
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig_22c		Figure 22C
CADD DATE: 10/26/09		

N

LEGEND:

♦	– SHALLOW MONITOR WELL
◊	– DEEP MONITOR WELL
♦	– BACKGROUND MONITOR WELL
✱	– IN-SITU GROUNDWATER SAMPLE
●	– GROUNDWATER RECOVERY WELL
◊	– RECOMMENDED DEEP GROUNDWATER RECOVERY WELL

RE:

BASE MAP PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED OCTOBER 9, 1990.

RHODIA

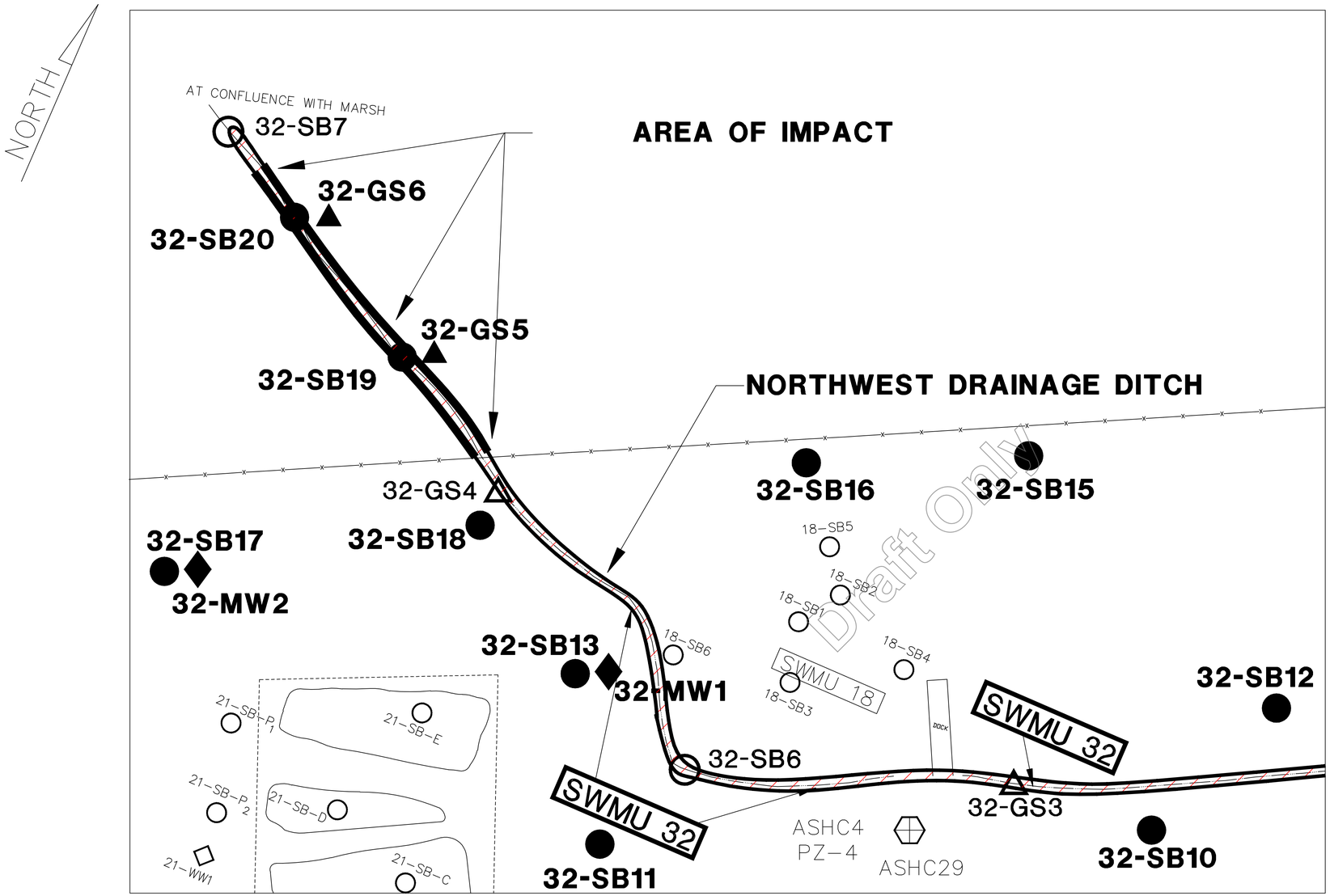
CHARLESTON PLANT
Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: RECOMMENDED DEEP GROUNDWATER RECOVERY WELL LOCATION MAP

DRAWN: TD	DATE: 10/09	SCALE: 100 0 100
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig_23		Figure 23
CADD DATE: 10/26/09		



LEGEND:

- SOIL BORING LOCATION (PHASE I)
- SOIL BORING LOCATION (PHASE II)
- GRAB SEDIMENT SAMPLE LOCATION (PHASE I)
- GRAB SEDIMENT SAMPLE LOCATION (PHASE II)
- MONITOR WELL LOCATION (PHASE II)
- NORTHWEST DRAINAGE DITCH
- AREA OF PROPOSED SEDIMENT STABILIZATION

0 30 60 120

RHODIA CHARLESTON PLANT Charleston, S.C.

GeoSciences, Inc.
Engineering Consultants
Baton Rouge, Louisiana

PROJECT TITLE: STATEMENT OF BASIS

DRAWING TITLE: AREA OF SEDIMENT STABILIZATION

DRAWN: T Davis	DATE: 10/09	SCALE: As Shown
CHECKED:	DATE:	
REV. NO.:	DATE:	
APPROVED:	DATE:	
CADDFILE: fig24_sedi_stab		Figure 24
CADD DATE: 10/26/09		