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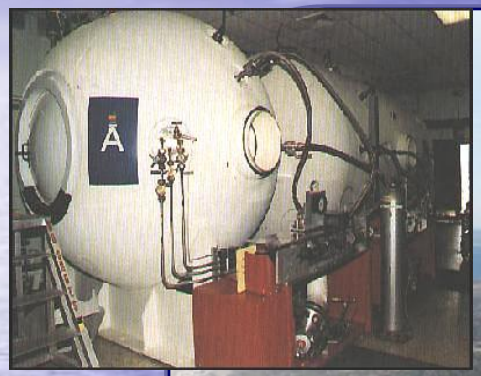
NSA PANAMA CITY
5090.3a

PRESENTATION FROM 9 JUNE 2003 PARTNERING TEAM MEETING NSA PANAMA CITY FL
6/9/2003
NAVFAC SOUTHEAST

Coastal Systems Station Panama City



CSS PC Tier I Partnering Team

Tier 1 Team Organization

Partnering Team Navy

Phil McGinnis – SOUTHDIV
Dan Waddill - SOUTHDIV
Mike Clayton – CSS PC
Arturo McDonald – CSS PC

Partnering Team Regulatory

Pete Dao – US EPA
Tracie Vaught - FDEP

Partnering Team Contractors

Gerry Walker - TtNUS

Partnering Support Members

Pete Paznokas – Facilitator
Rich May – Tier II Link
Carl Loop - SOUTHDIV UST
Paul Calligan – TtNUS UST
Jamie Pelt – TtNUS Scribe

CSS PC Tier I Partnering Team

CSS Tier II Presentation

- HSWA Permit & Partnering
- Activity Mission & Operations
- Accomplishments
- Schedule
- Challenges
- Q & A

CSS HSWA PERMIT AND PARTNERING HISTORY

- December 1985: HSWA permit issued
- May 1995: HSWA Permit Renewal application
- April 2000: EPA rescinds approval of RFI, CMS, and SOB

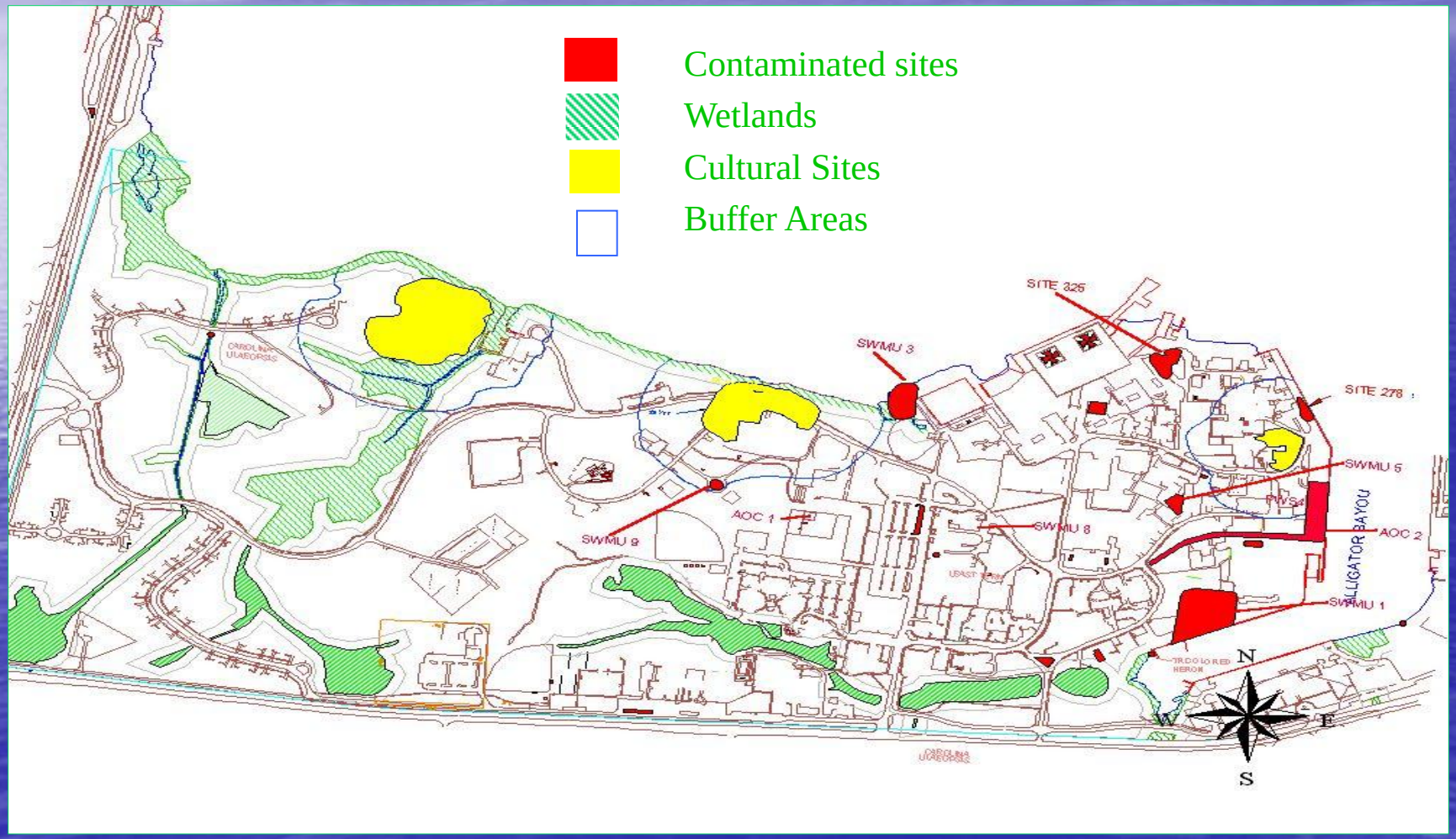
CSS HSWA PERMIT AND PARTNERING HISTORY

- September 2000: EPA requests RFI Addendum Work Plan
- November 2000: EPA issued HSWA permit for CSS effective 12/2/00 through 12/1/10
- November 2000: FDEP receives HSWA delegation

CSS HSWA PERMIT AND PARTNERING HISTORY

- March 2001: CSS Tier I Partnering Team kick off
- January 2002: FDEP requests HSWA Permit Application
- October 2002: CSS submits HSWA Permit Application to FDEP
- Currently HSWA Permit negotiations are ongoing

Environmental Constraints Map



CSS Mission

Provide research, development, test and evaluation, engineering and fleet support for:

Mine Warfare

Expeditionary Maneuver Warfare

Operations in Extreme Environments

Maritime Special Operations

And other Naval missions that take place in coastal regions

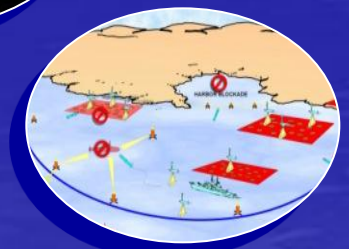
Mission Areas

Mine Warfare

Expeditionary Maneuver Warfare

Operations in Extreme Environments

Special Operations



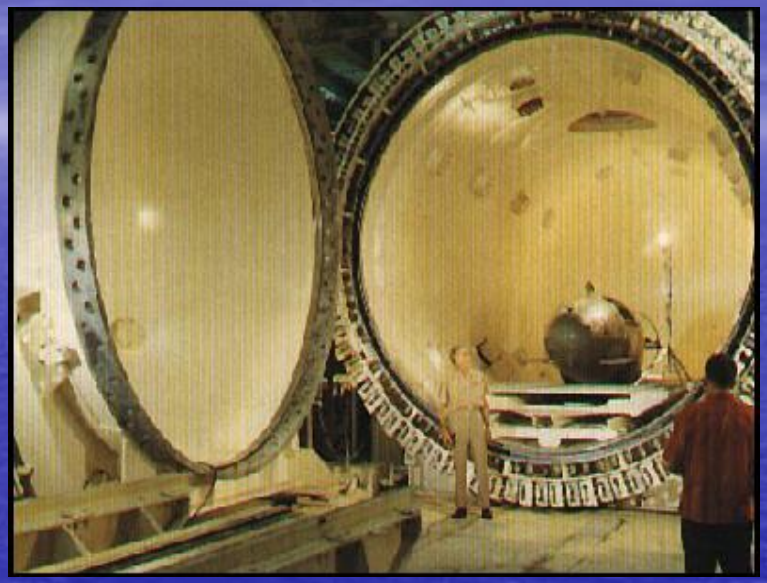
Coastal Operations

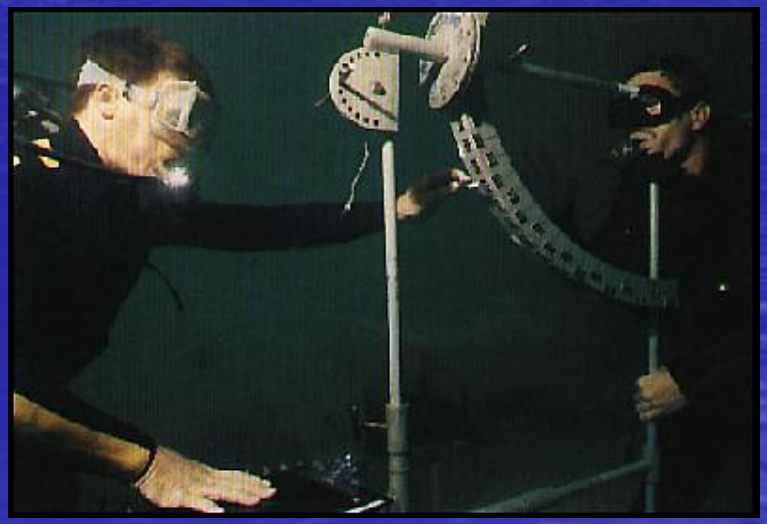
Base Operations

- Navy's Premiere Organization in Littoral Warfare Technology
  - Applications
    - Unmanned Sensor Systems
    - Mine Warfare
    - Anti-Submarine Warfare
    - Special Warfare
    - Expeditionary Maneuver Warfare

Ocean Simulation Facility

- Includes Experimental Dive Facility (EDF) & Experimental Test Pool Facility (ETPF)
- RDT&E
- Certification for manned diver life support system





Landing Craft, Air Cushion (LCAC)

- Project Crossed Many Mission Areas
  - Littoral & Coastal Warfare
  - Mine Countermeasures (DET)
  - Unmanned Vehicles (Automatic Pilot)

Base Technologies and Expertise

NAVSEA
PANAMA CITY
Coastal Systems Station

Unmanned And Autonomous Systems

Seal Delivery Vehicle

- CSS experienced in SDV development
- Developed "in-house"
- Saved money
- Increased performance of vehicle

CSS Sites

- Historic IR Sites
  - 15 sites identified in RFA (5 screened out)
  - 10 sites in RFI (8 SWMUs and 2 AOCs)

CSS Current IR Sites

- AOC 1
  - Fire Fighting Training Area No. 1
- SWMU 2
  - Burn and Disposal Area
- SWMU 3
  - Burn and Disposal Area

CSS Current IR Sites

- SWMU 9
  - Fire Fighting Training Area

- SWMU 10
  - Building 363 Oil-water Separator

CSS UST Sites

- Active UST sites
  - Site 333 (AOC 2/ SWMU 1)
  - Site G300
  - Building 278
  - Building 325

Overview of Accomplishments

- Interim Cleanup
  - SWMU 2
  - SWMU 3
  - SWMU 9
- Bioslurper at AOC 1
- RFI Addendum
  - Re-establish nature and extent
- HSWA Permit

Interim Cleanup

- SWMU 2
  - Soil removal, PAH's remain
  - Land use control issues
- SWMU 3
  - Debris removal from shoreline sediments, 1997
- SWMU 9
  - Excavated 686 tons contaminated soil, 1999
  - Effective source removal

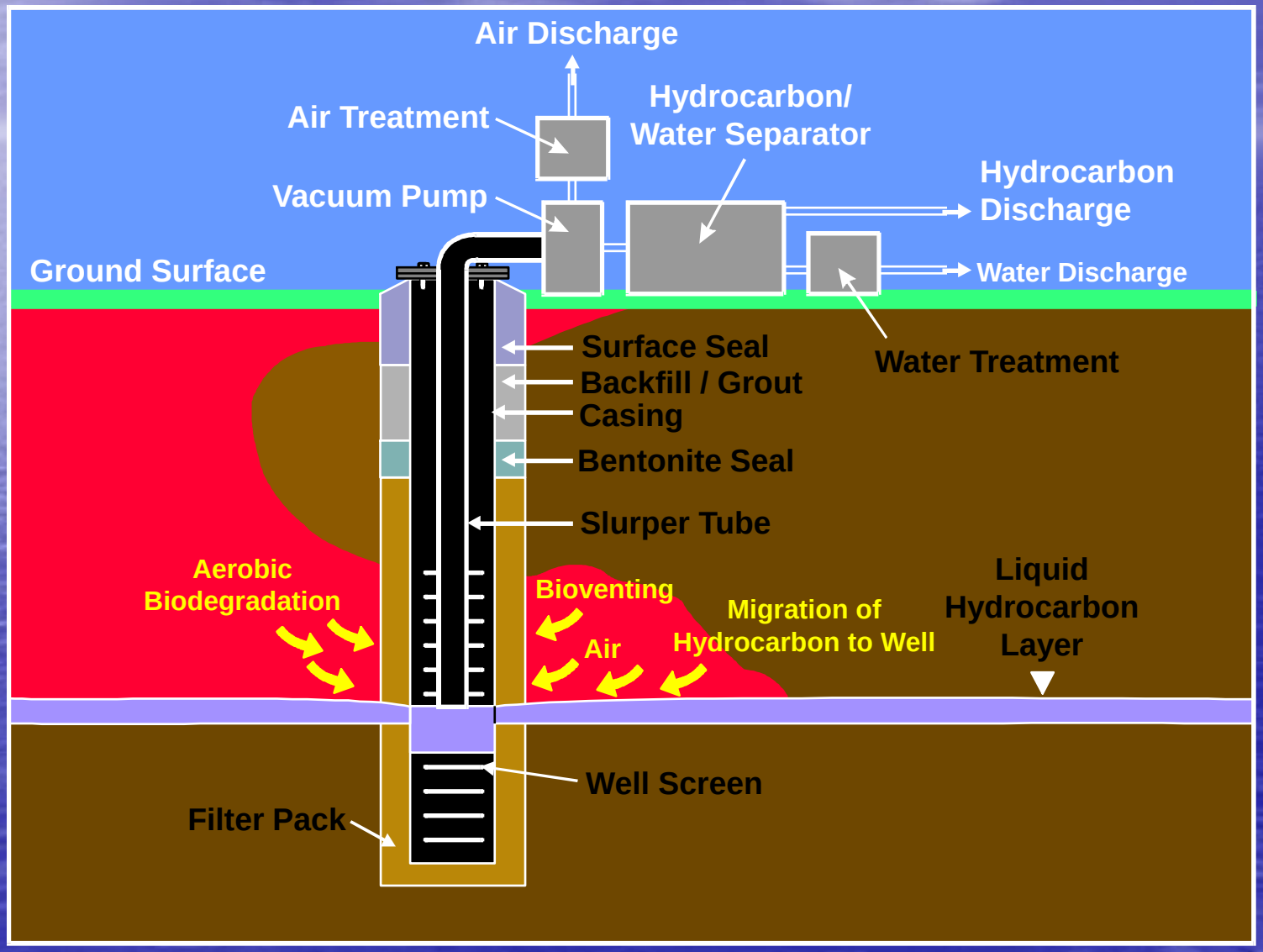
Bioslurper at AOC 1

Objective:

Remove free-product to the maximum extent practicable, in accordance with F.A.C. 62-770

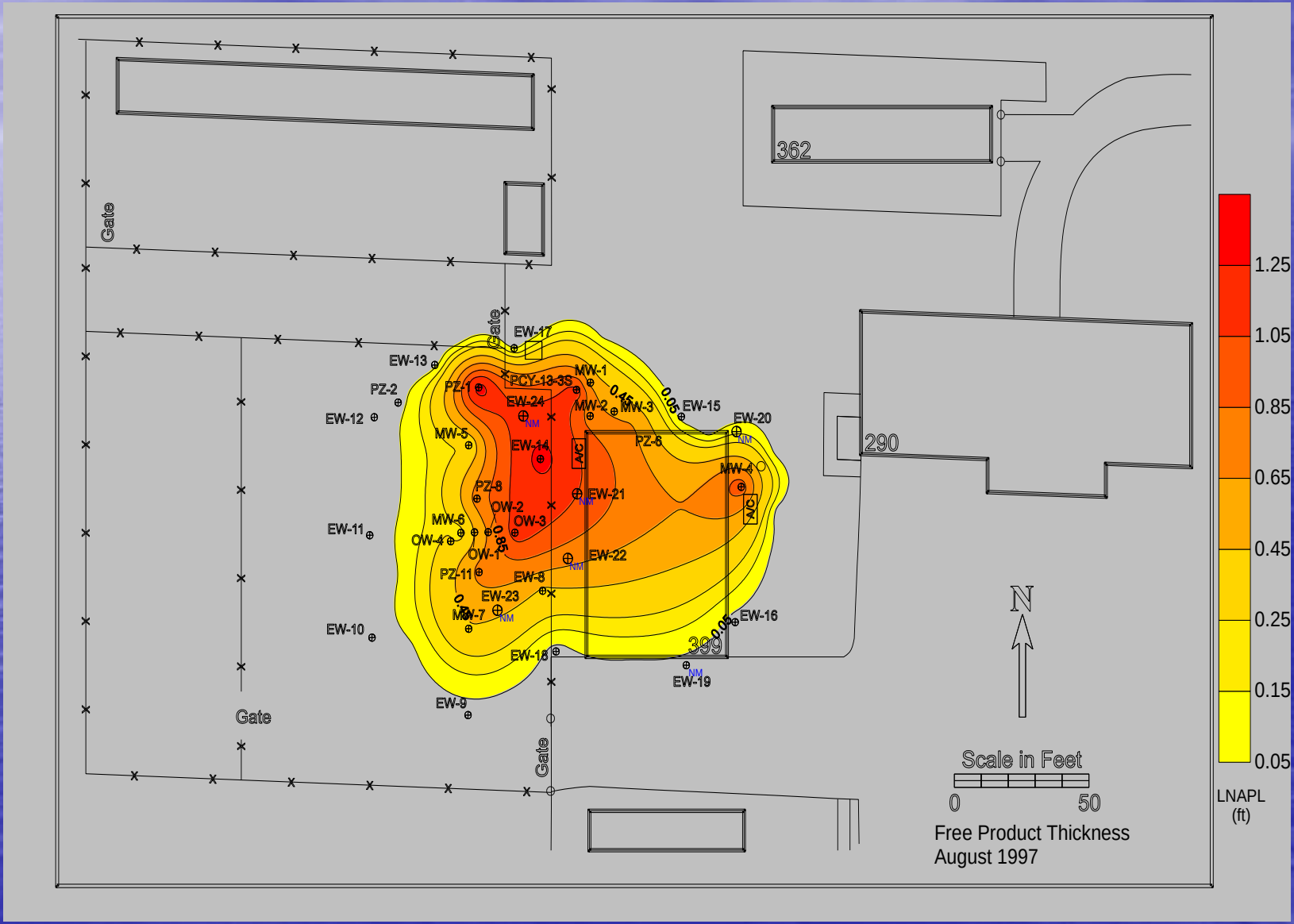
Battelle

Bioslurper Technology



Battelle

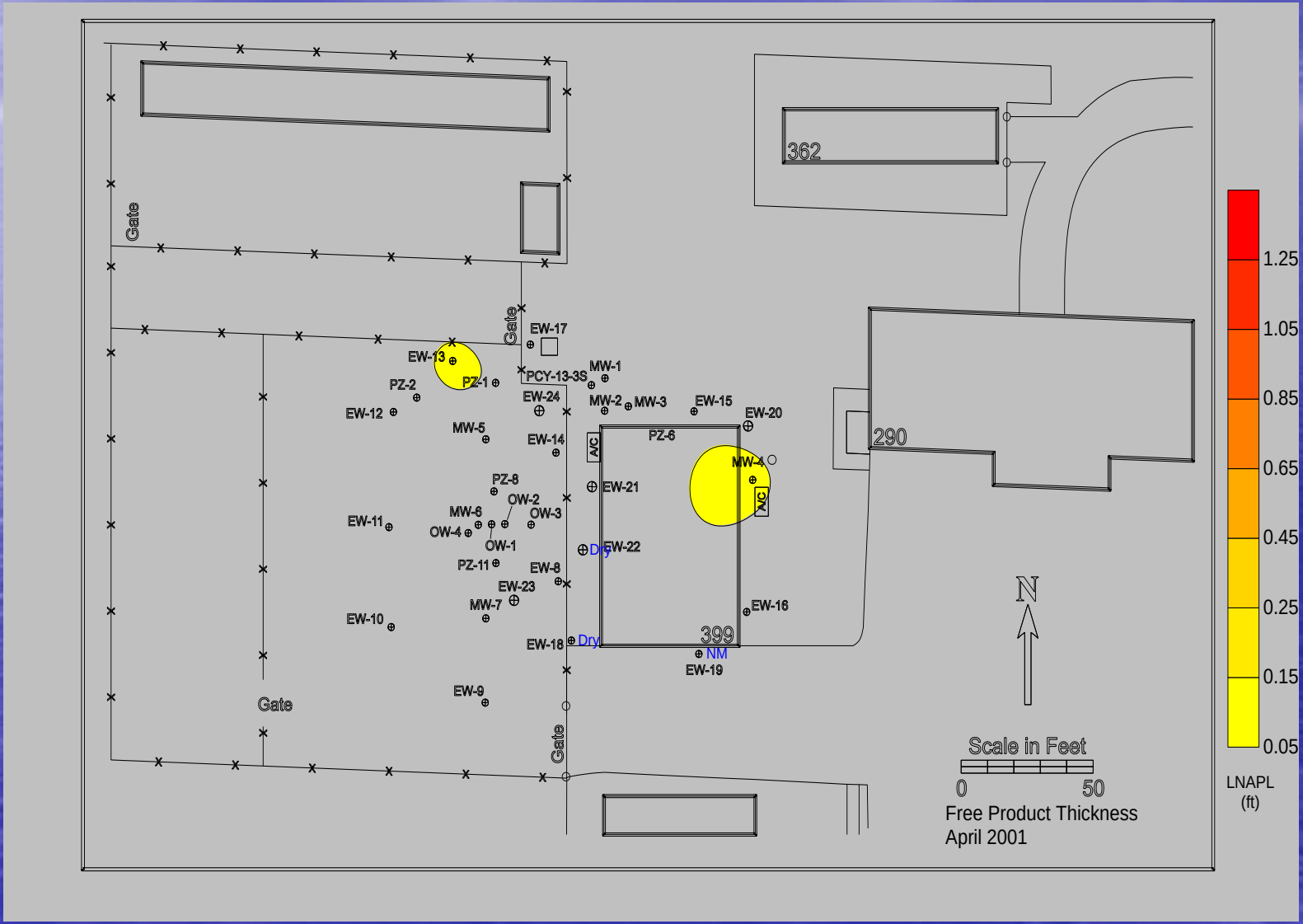
Baseline LNAPL Thickness



Battelle

LNAPL Thickness

Post Op 2 (Immediately after shutdown)



Battelle

Maximum Extent Practicable?

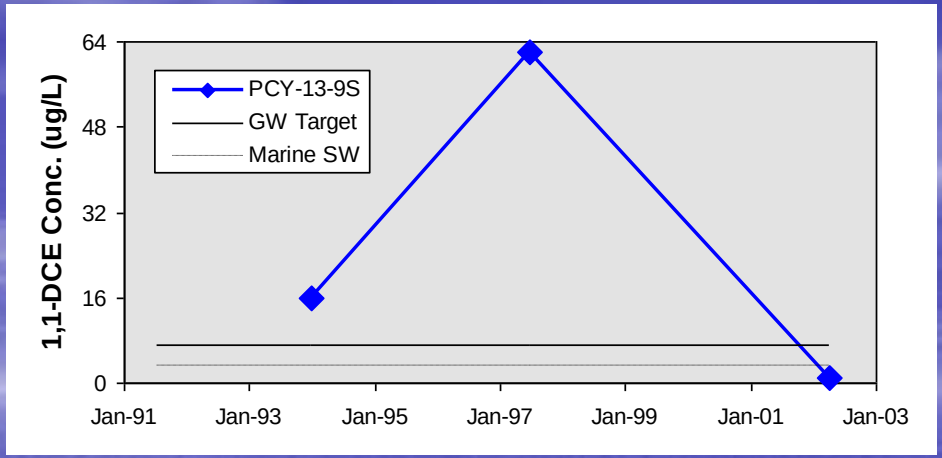
- Best available technology
- Ideal conditions (falling water table)
- LNAPL recovery declined sharply
  - LNAPL recovery declined sharply
  - Cost/gallon LNAPL recovered increased sharply
  - The thickness of LNAPL in site wells significantly reduced
- Bailing met FDEP Guidance
- Effect on groundwater concentrations…

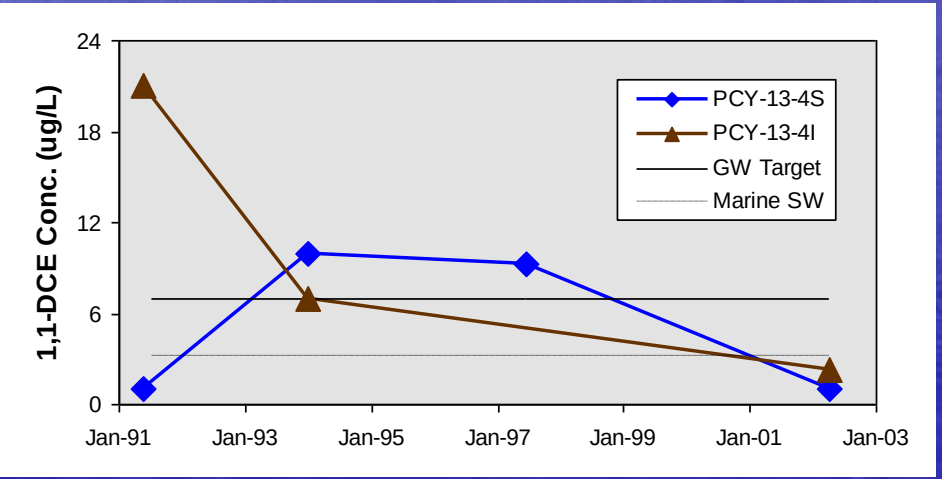
RFI Addendum

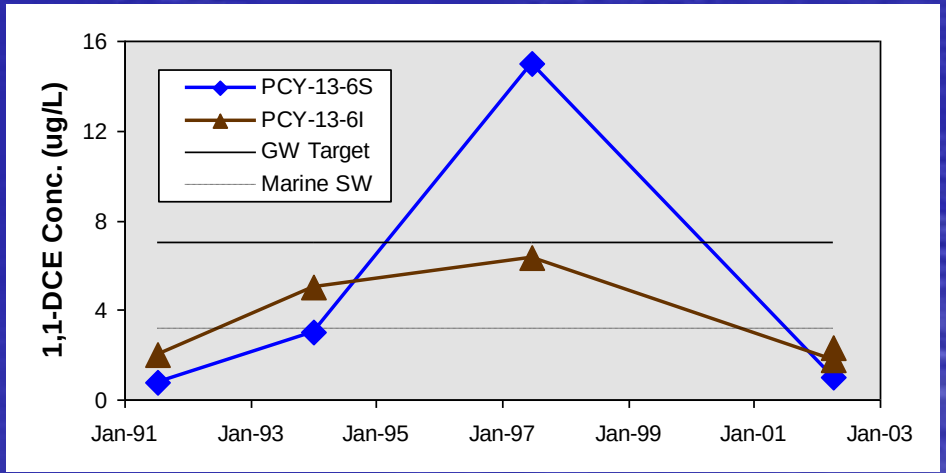
- Final, May 2003
- Re-established nature and extent of contamination
- Will provide data for EI determinations
- Team effort
  - Field Investigation, Eco Risk by TtNUS
  - Report prepared by SOUTHDIV

1,1-DCE

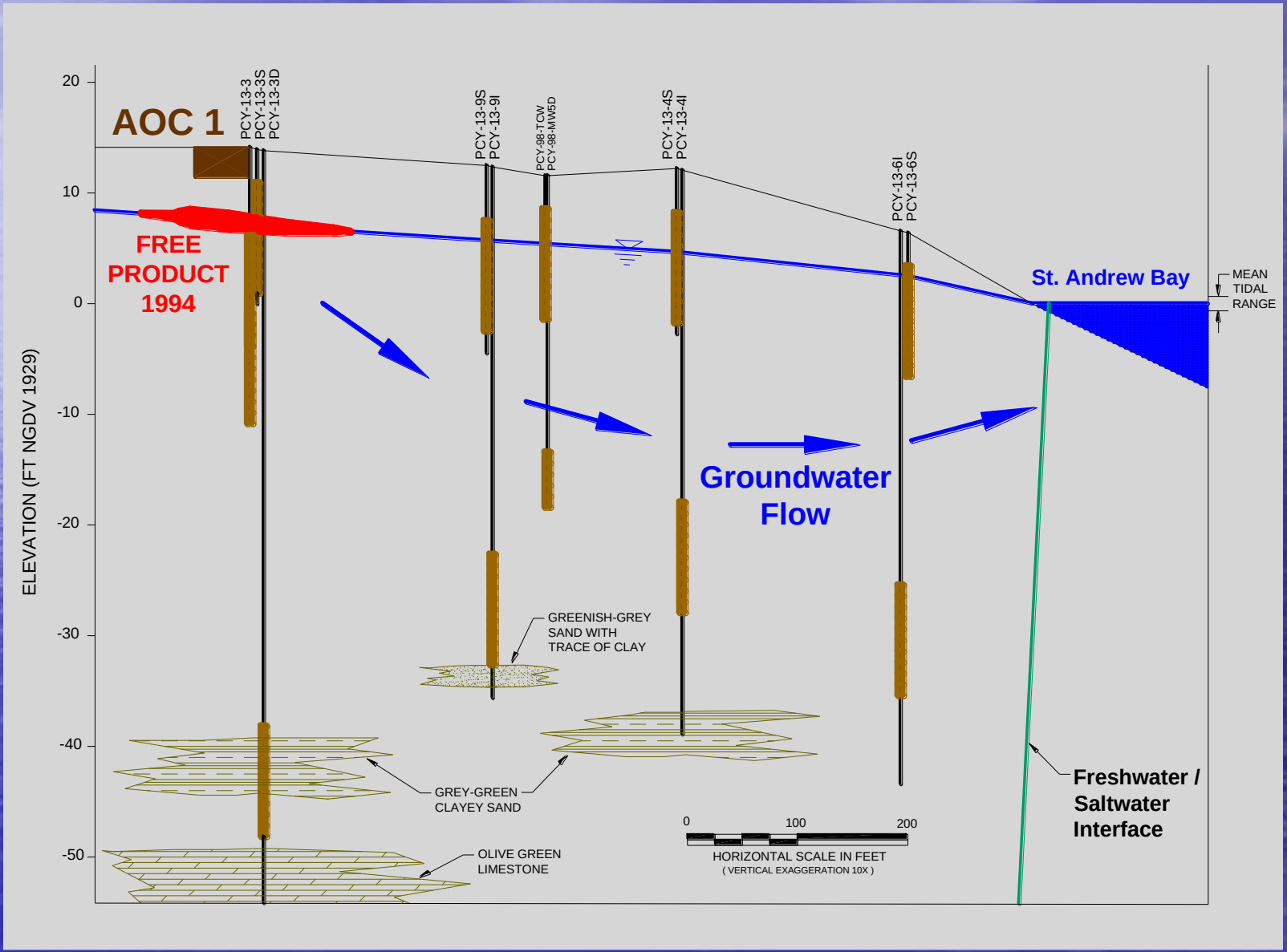
- Concentrations in monitoring wells vs. time







AOC 1 Conceptual Model



DPT Investigation

GMS 3.1

File Edit Display View Data Grid MODFLOW MODPATH MT3D NUFT UTCHEM Window Help

X: 0.0 Y: 0.0 Z: 0.0 F:

Coverage: v default coverage Solution: GMS Data Sets Data Set: 1,1-DCE_interp TS:

1,1-dce.gpr

1,1-DCE
30.0
25.0
20.0
15.0
10.0
5.0
0.0

None

Y
Z
X

Select Particle Starting Locations. Select a starting location to edit its release times.

X: 5005.1 Y: 7334.8 Z: ? F: ?

Start | Inbox - Microsoft Outlo... | Exploring - IR Conf 2002 | FW: ARTT Workgroup... | GMS 3.1 | Microsoft PowerPoint -... | 3:13 PM

GMS 3.1

File Edit Display View Data Grid MODFLOW MODPATH MT3D NUFT UTCHEM Window Help

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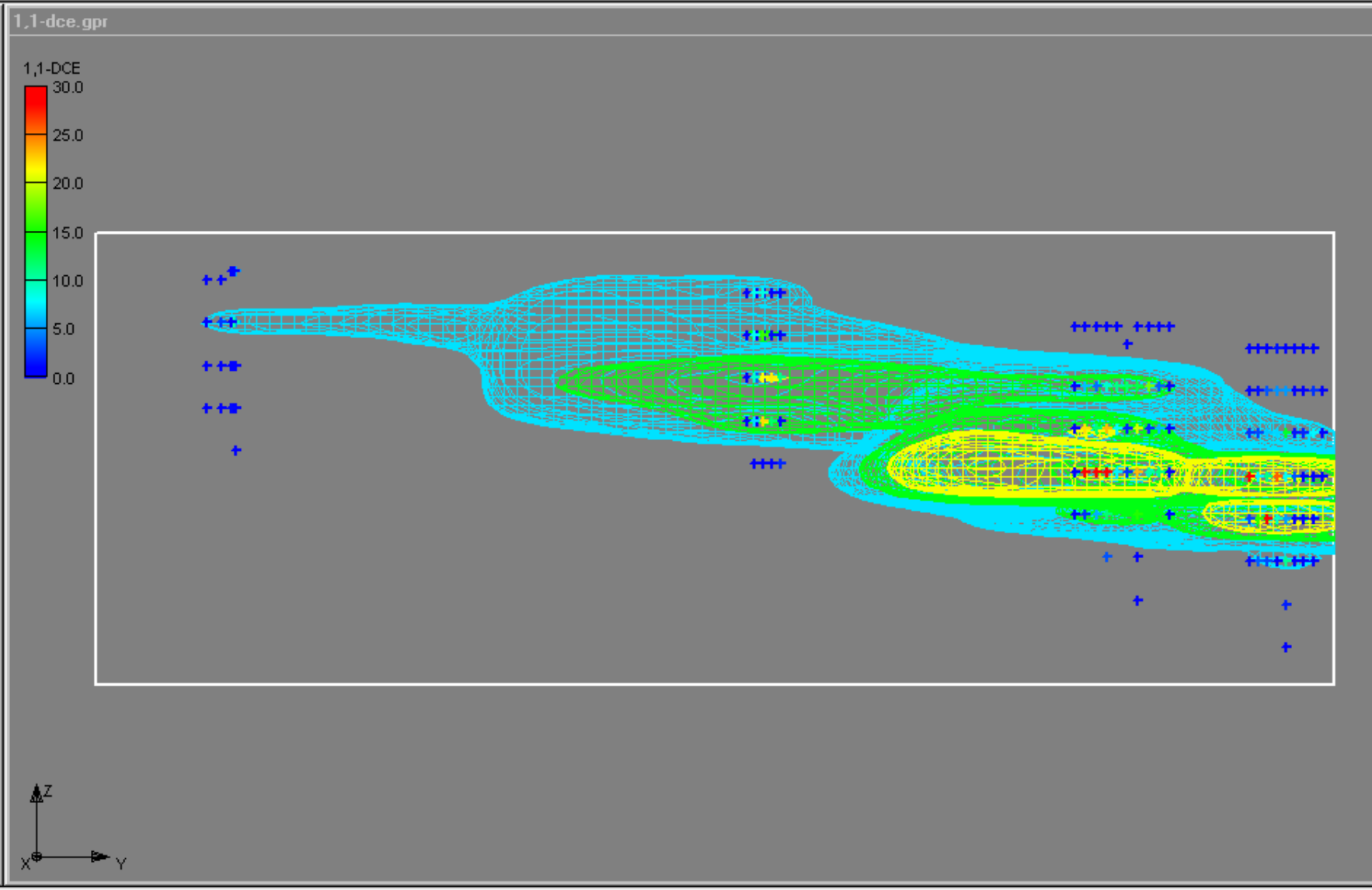
Coverage: v default coverage Solution: GMS Data Sets Data Set: 1,1-DCE_interp TS:

1,1-dce.gpr



X: ? Y: 7255.5 Z: -9.6 F: ? ID: 162150 I: 43 J: 50 K: 33

Start | Inbox - Microsoft Outlook | Exploring - IR Conf 2002 | FW: ARTT Workgroup ... | GMS 3.1 | Microsoft PowerPoint - [... | 3:00 PM

GMS 3.1

File Edit Display View Data Grid MODFLOW MODPATH MT3D NUFT UTCHEM Window Help

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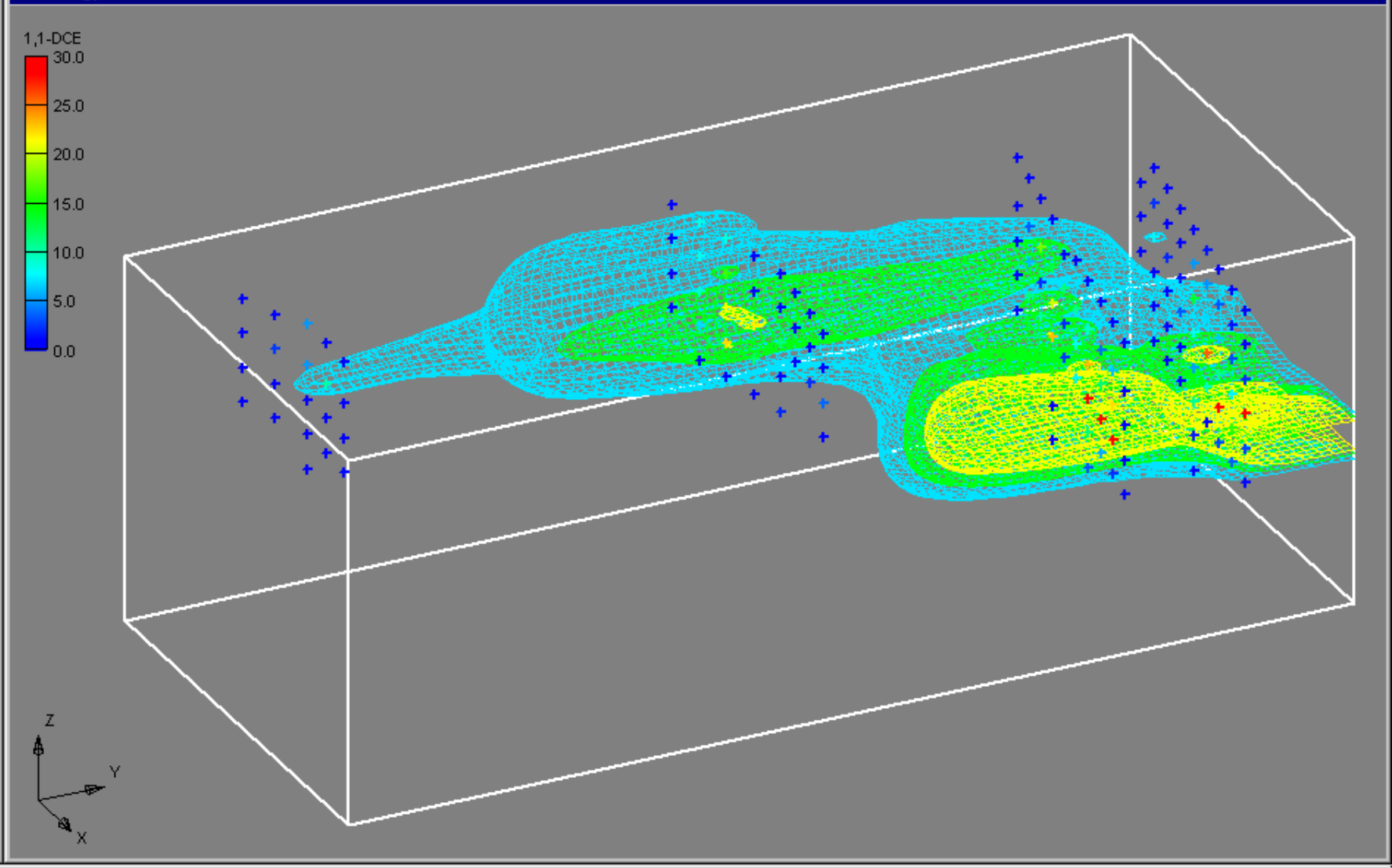
1,1-dce.gpr



Displays helpful information when mouse is moved over an item. Refer to the reference manual and tutorials for any additional questions.

X: ? Y: ? Z: ? F: ?

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GMS 3.1

File Edit Display View Data Grid MODFLOW MODPATH MT3D NUFT UTCHEM Window Help

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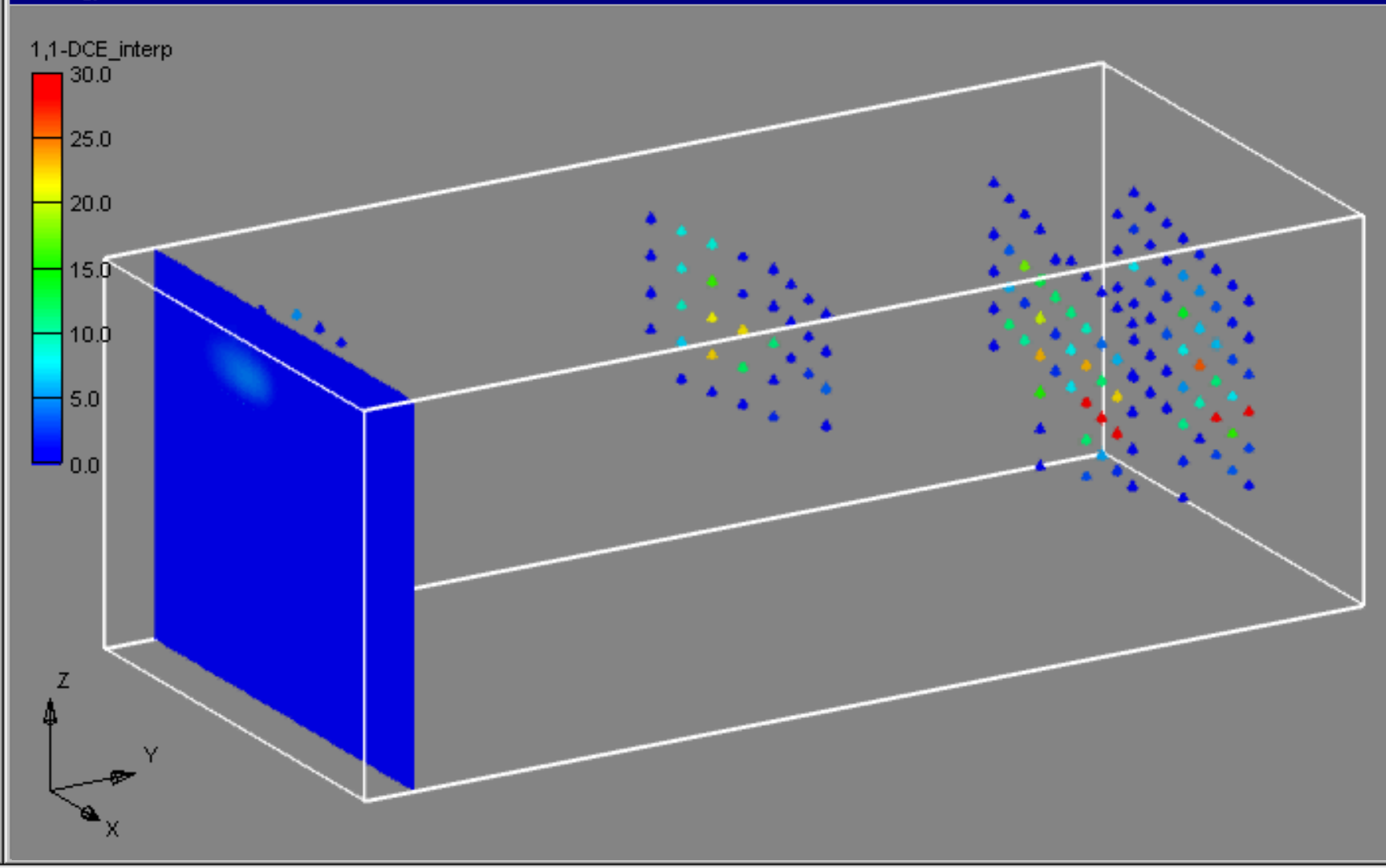
1,1-dce.gpr



Perform a shading operation according to the shading options set.

X: ? Y: ? Z: ? F: ?

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GMS 3.1

File Edit Display View Data Grid MODFLOW MODPATH MT3D NUFT UTCHEM Window Help

X: 0.0 Y: 0.0 Z: 0.0 F:

Coverage: v default coverage Solution: GMS Data Sets Data Set: 1,1-DCE_interp TS:

1,1-dce.gpr

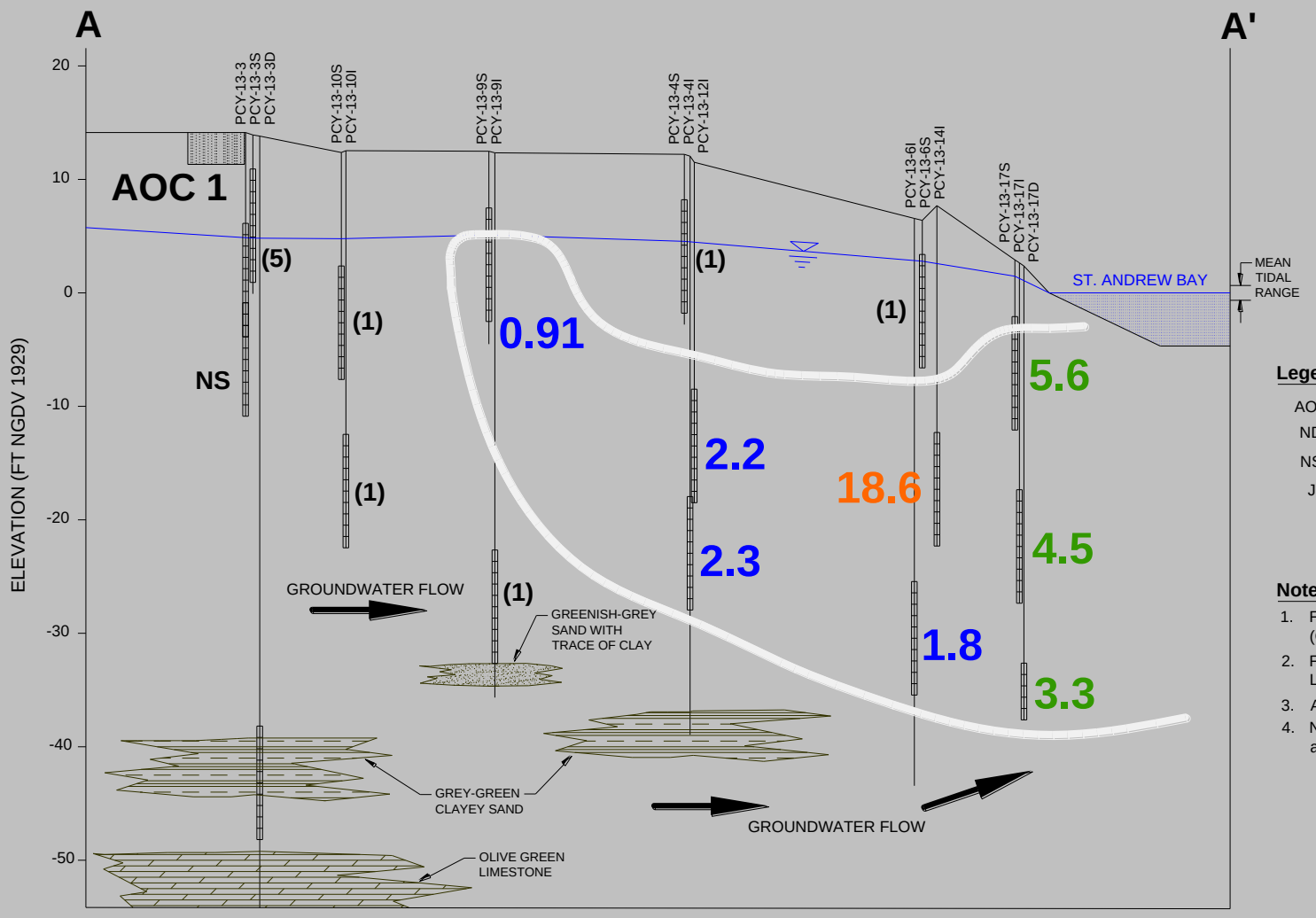
None

Select Particle Starting Locations. Select a starting location to edit its release times.

X: 5005.1 Y: 7334.8 Z: ? F: ?

Start | Inbox - Microsoft Outlo... | Exploring - IR Conf 2002 | FW: ARTT Workgroup... | GMS 3.1 | Microsoft PowerPoint -... | 3:13 PM

1,1-DCE Concentrations



Legend

AOC	Area of Concern
ND	Not Detected
NS	Not Sampled
J	Estimated Concentration

Notes:

1. Florida Groundwater Cleanup Target Level (GCTL) = 7 ug/L
2. Florida Marine Surface Water Cleanup Target Level (MSWCTL) = 3.2 ug/L annual avg.
3. All concentrations shown in ug/L
4. Numbers in parentheses indicate nondetects at the given detection limit

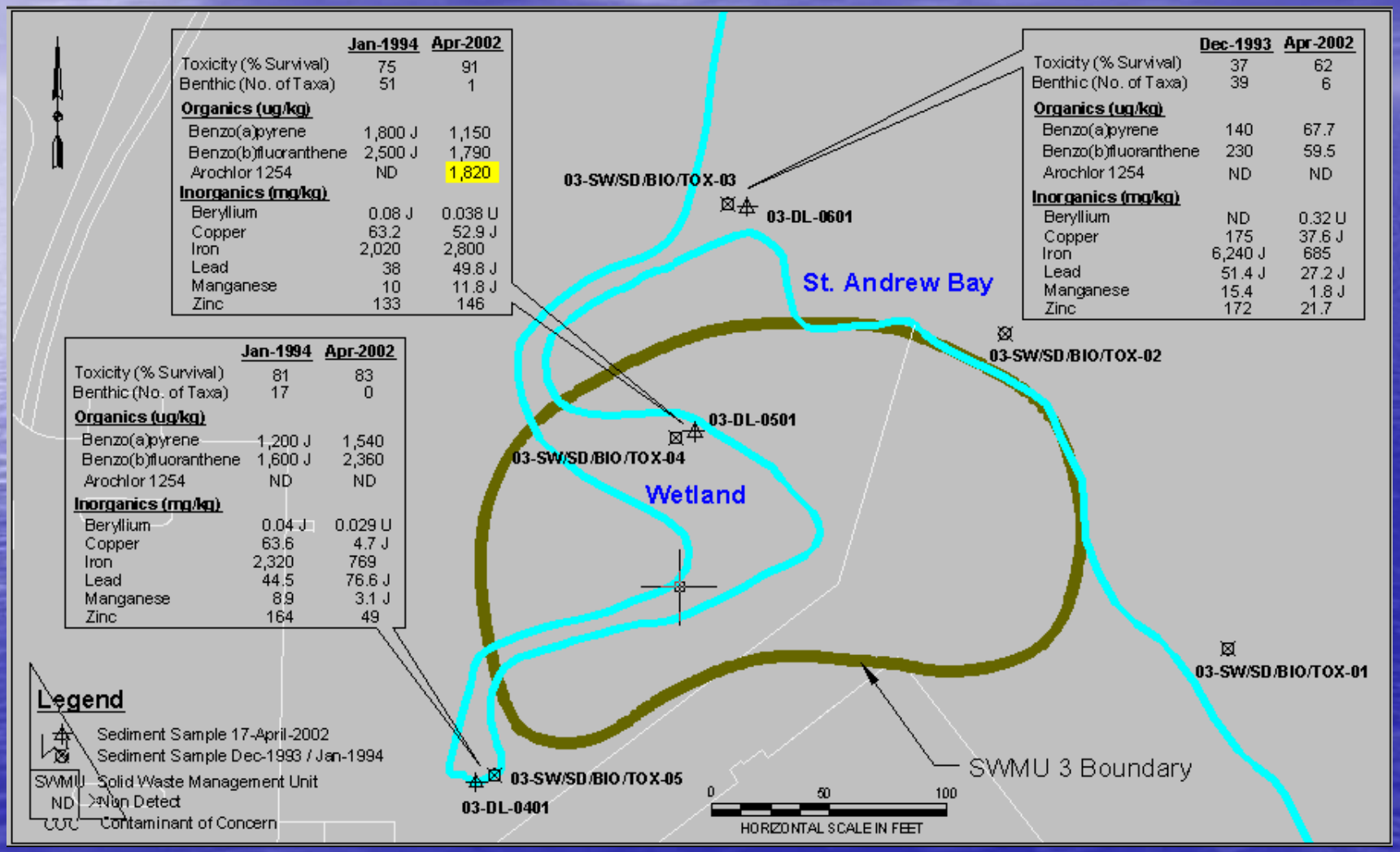
0 100 200

HORIZONTAL SCALE IN FEET
(VERTICAL EXAGGERATION 10X)

AOC 1 Summary

- Bioslurper Successful
  - Free product recovery
  - Residual product removal
  - Water table drop
- Groundwater Plume Detached from Source
- Life-cycle Perspective
  - Greater effort spent on bioslurping will lead to overall savings (time and money) in moving site to closeout.

SWMU 3 Sediment COCs



	Jan-1994	Apr-2002
Toxicity (% Survival)	75	91
Benthic (No. of Taxa)	51	1
Organics (ug/kg)		
Benzo(a)pyrene	1,800 J	1,150
Benzo(b)fluoranthene	2,500 J	1,790
Arochlor 1254	ND	1,820
Inorganics (mg/kg)		
Beryllium	0.08 J	0.038 U
Copper	63.2	52.9 J
Iron	2,020	2,800
Lead	38	49.8 J
Manganese	10	11.8 J
Zinc	133	146

	Dec-1993	Apr-2002
Toxicity (% Survival)	37	62
Benthic (No. of Taxa)	39	6
Organics (ug/kg)		
Benzo(a)pyrene	140	67.7
Benzo(b)fluoranthene	230	59.5
Arochlor 1254	ND	ND
Inorganics (mg/kg)		
Beryllium	ND	0.32 U
Copper	175	37.6 J
Iron	6,240 J	685
Lead	51.4 J	27.2 J
Manganese	15.4	1.8 J
Zinc	172	21.7

	Jan-1994	Apr-2002
Toxicity (% Survival)	81	83
Benthic (No. of Taxa)	17	0
Organics (ug/kg)		
Benzo(a)pyrene	1,200 J	1,540
Benzo(b)fluoranthene	1,600 J	2,360
Arochlor 1254	ND	ND
Inorganics (mg/kg)		
Beryllium	0.04 J	0.029 U
Copper	63.6	4.7 J
Iron	2,320	769
Lead	44.5	76.6 J
Manganese	8.9	3.1 J
Zinc	164	49

CSS PC Schedule

- CAMP/ SCAP
- Future plans

Schedule - CAMP

Corrective Action Management Plan - Fiscal Year - 2003 - Rev. 4 (April 2003) CSS Panama City, Florida						
Report Category	**YEAR ONE** **FY 2002** (Oct01-Sep02)	**YEAR TWO** **FY 2003** (Oct02-Sep03)	**YEAR THREE** **FY 2004** (Oct03-Sep04)	**YEAR FOUR** **FY 2005** (Oct04-Sep05)	**YEAR FIVE** **FY 2006** (Oct05-Sep06)	**YEAR SIX** **FY 2007** (Oct06-Sep07)
AOC 1						
Draft RFI Addendum	09-Oct-02					
Final RFI Addendum		21-May-03				
Draft Corrective Measures Study		23-Sep-03				
Final Corrective Measures Study			20-Jan-04			
Draft Statement of Basis			19-May-04			
Final Statement of Basis			20-Sep-04			
Draft Corrective Measures Implementation Plan				17-Mar-05		
Final Corrective Measures Implementation Plan				20-Aug-05		
Corrective Action					05-Nov-05	
SWMU 2						
Draft RFI Addendum				14-Feb-05		
Final RFI Addendum				13-Jun-05		
Draft Corrective Measures Study					15-Oct-05	
Final Corrective Measures Study					15-Feb-06	
Draft Statement of Basis					15-Jun-06	
Final Statement of Basis						14-Oct-06
Draft Corrective Measures Implementation Plan						13-Apr-07
Final Corrective Measures Implementation Plan						14-Sep-07
Corrective Action						
SWMU 3						
Draft RFI Addendum	09-Oct-02					
Final RFI Addendum			21-May-04			
Draft Corrective Measures Study			23-Sep-04			
Final Corrective Measures Study				20-Jan-05		

Challenges

- LUC
- SWMU 2 Funding
- SWMU 3 Ecological Risk
- Exit strategy
- Native American
- MILCONs
- Environmental Indicators

Questions & Comments