PUBLIC INFORMATION SESSION PROGRESS OF CORRECTIVE ACTION

Cavenham Forest Industries, LLC

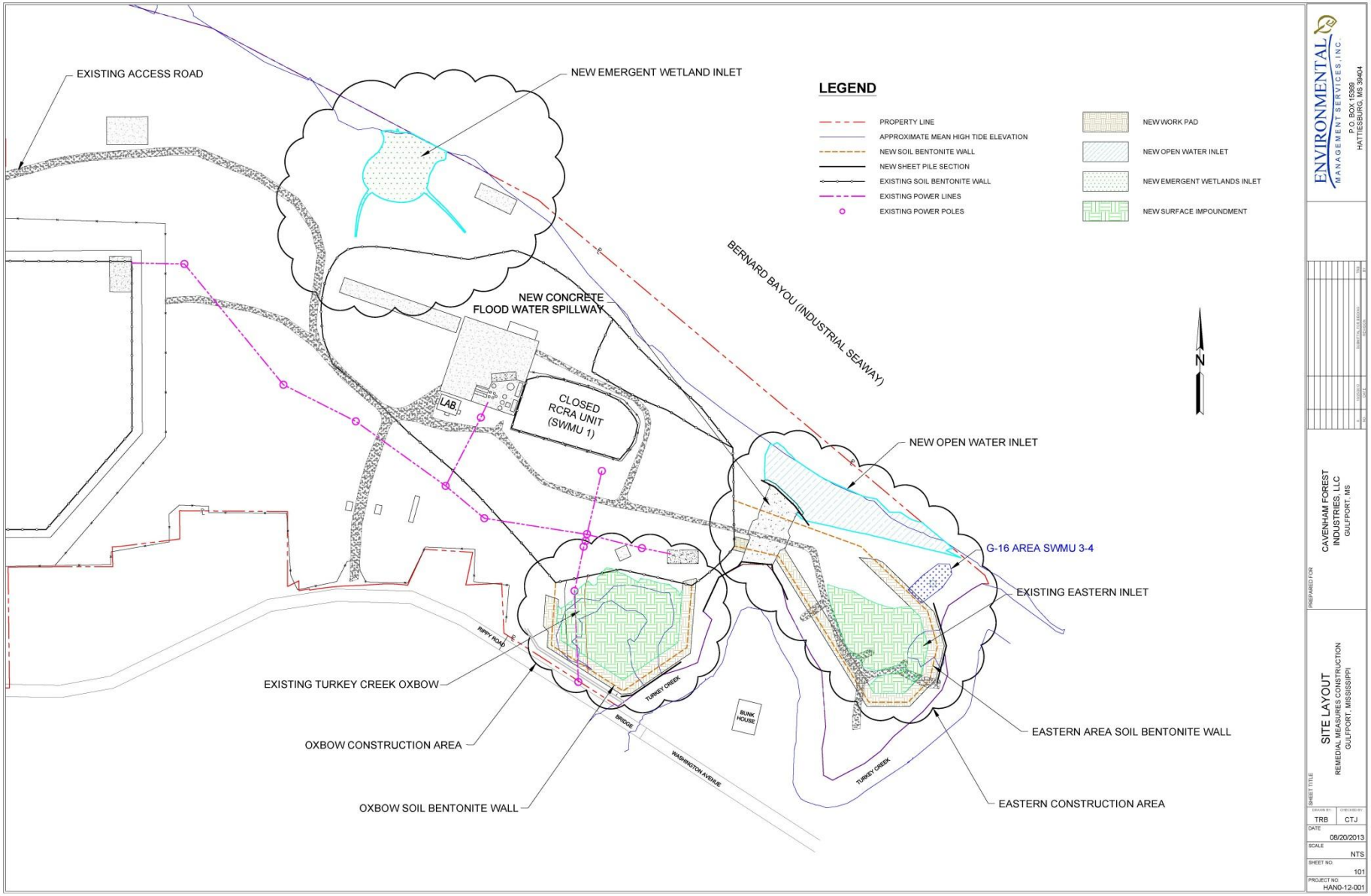
Presented by:

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

August 20, 2013


NOTICE:
KEYPAD CANNOT
BE USED AS A
TELEPHONE
05/06/2013 13:03

Original Site Goal




CAT
02/08/2013 08:17

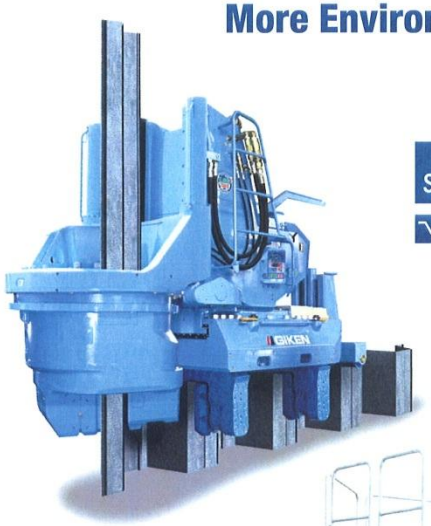

02/14/2013 08:23

New

SILENT PILER®

for Wider Z & U Sheet Piles and More Environmentally-Friendly Piling

SILENT PILER ECO700S / 1400S



SILENT PILER ECO 700S

for Single piles

ECO
Environment Conscious Operation

SILENT PILER ECO 1400S

for Double piles

GIKEN


BLUE IRON
BLUE IRON


BLUE IRON
Foundations and Shoring, LLC
BLUE IRON


BLUE IRON
Foundations and Shoring, LLC
BLUE IRON


PREMIER
BLUE IRON


HARD GROUND
BLUE IRON
BLUE IRON


BLUE IRON
03/19/2013 11:30


GULFPORT
POLICE
MARINE UNIT
SEA HUNT
3662
GULFPORT
POLICE
MARINE
UNIT
EVINRUDE
E-TEC
175
04/29/2013 14:39


04/18/2013 10:28


04/16/2013 08:44


04/18/2013 14:55


05/28/2013 17:46


CAT
CAT
04/29/2013 16:34


05/09/2013 19:39


05/20/2013 15:20


05/15/2013 16:59


CAT
05/21/2013 15:53


DEERE
05/29/2013 16:16


04/24/2013 09:41


05/24/2013 14:17


06/01/2013 09:47


06/01/2013 09:49


05/24/2013 14:19


05/24/2013 14:19


08/15/2013 09:03


50067
330D L
CAT
04/02/2013 16:59


04/26/2013 09:53


06/29/2013 14:17


05/06/2013 15:48


05/21/2013 08:42


06/05/2013 08:01


DO NOT
PUSH, PULL
CAT
CAT
324E
L
Puckett


06/29/2013 09:18


PORT-A-PUG
BECK
CAT
DO NOT ENTER
NO ENTRAR
06/29/2013 14:15

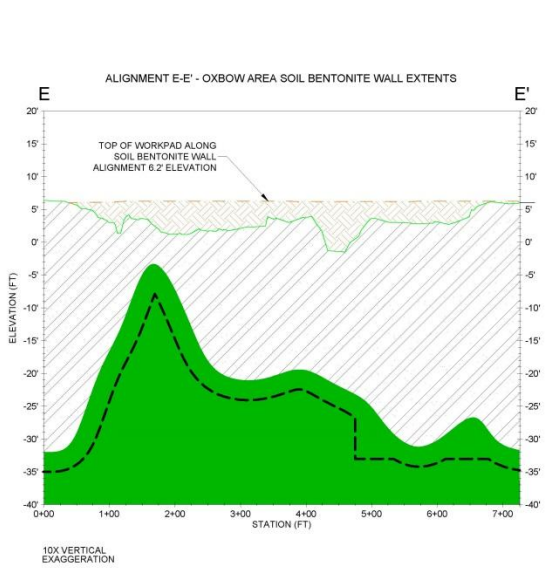

MANTIS
14010
BECK
07/30/2013 13:25

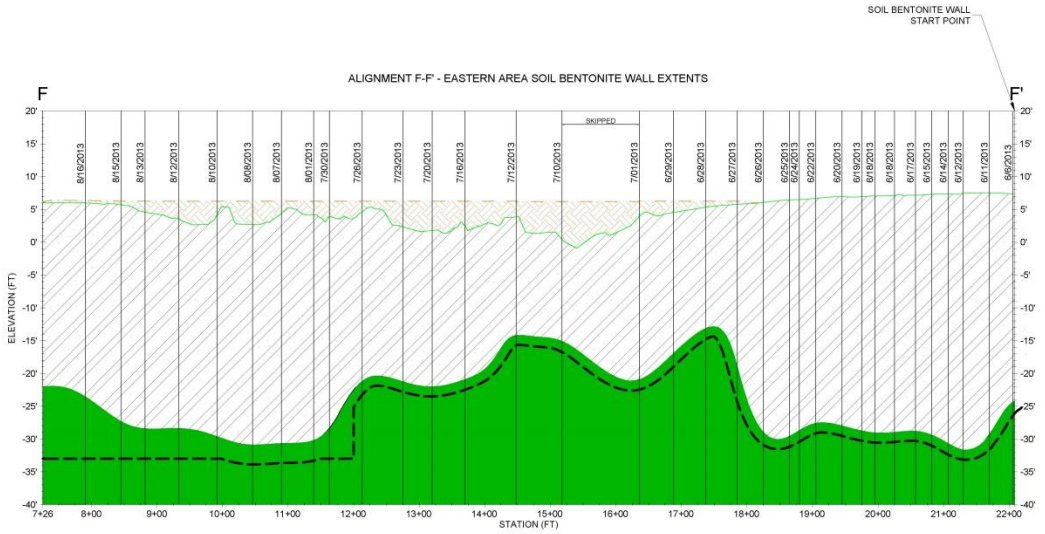

CAT
07/30/2013 17:17


MANTIS
MANTIS
08/01/2013 07:37


H-17
MANTIS
14010
BECK
08/14/2013 07:17

Slurry Wall Cross Section





LEGEND

- EXISTING GRADE
- TOP OF TEMPORARY WORK PAD
- LIMIT OF SOIL BENTONITE WALL EXCAVATION
- WORK PAD FILL
- INSITU SOILS
- ESTIMATED H4 CLAY LOCATION

SOIL-BENTONITE WALL SPECIFICATIONS

Soil-Bentonite Wall Section	Depth of Wall Below Top of Work Pad
Station 0+00 to 4+75	3 feet penetration into marine clay
Station 4+75 to 12+00	3 feet penetration into marine clay OR 39 feet deep whichever is deeper
Station 12+00 to 22+09	3 feet penetration into marine clay

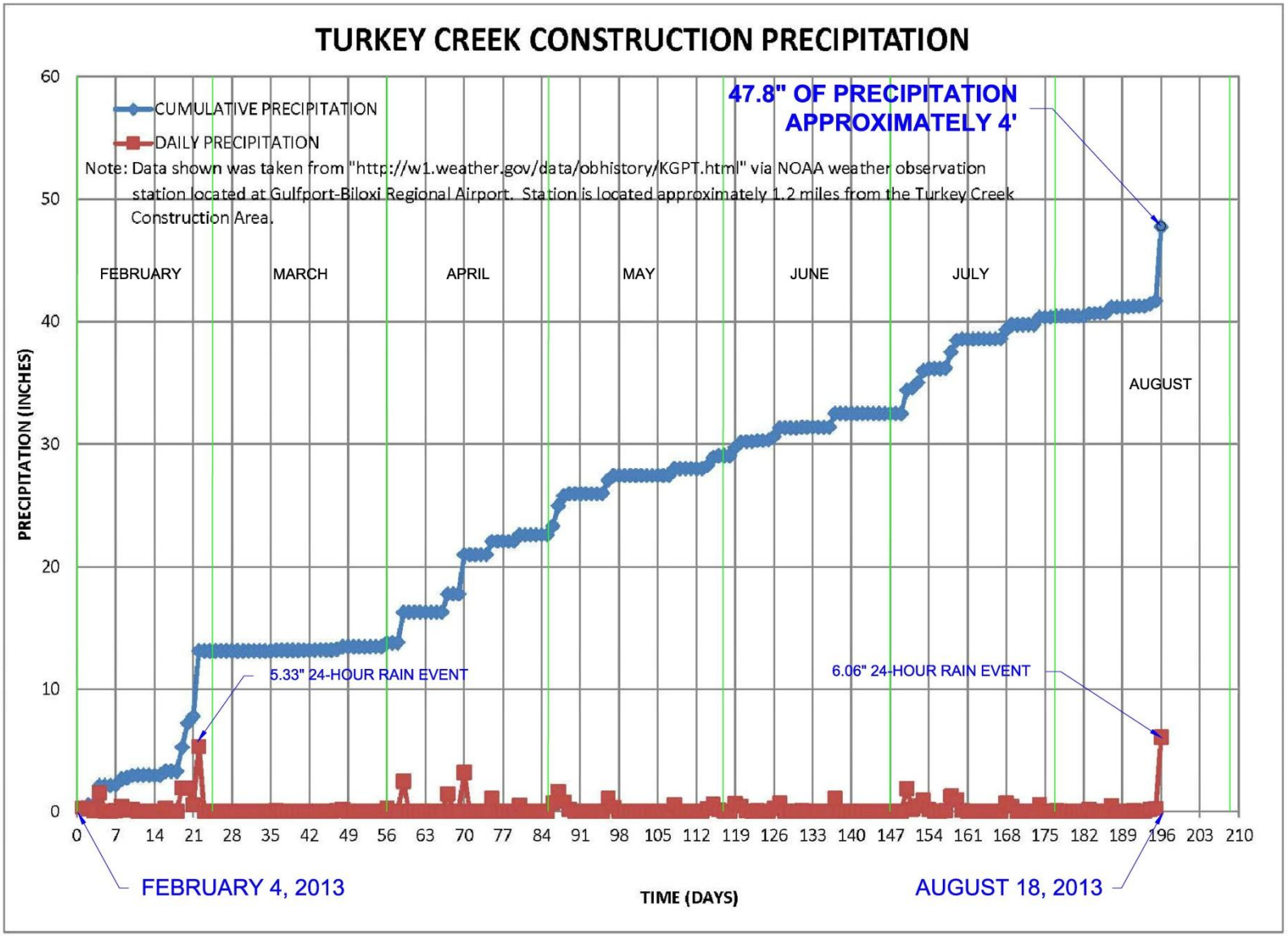
ENVIRONMENTAL MANAGEMENT SERVICES, INC.
P.O. BOX 15369
HATTIESBURG, MS 39404

PREPARED FOR:
CAVENHAM FOREST INDUSTRIES, LLC
GULFPORT, MS

SHEET TITLE
SOIL BENTONITE WALL PROGRESS
SOIL BENTONITE WALL CONSTRUCTION
REMEDIAL MEASURES CONSTRUCTION
GULFPORT, MISSISSIPPI

DRAWN BY	CHECKED BY
TRB	CTJ

DATE: 08-19-2013
SCALE: AS SHOWN
SHEET NO.: 1000
PROJECT NO.: HAN0-12-001



ENVIRONMENTAL MANAGEMENT SERVICES, INC.
P.O. BOX 16369
HATTIESBURG, MS 39404

PREPARED FOR
CAVENHAM FOREST INDUSTRIES, LLC
GULFPORT, MS

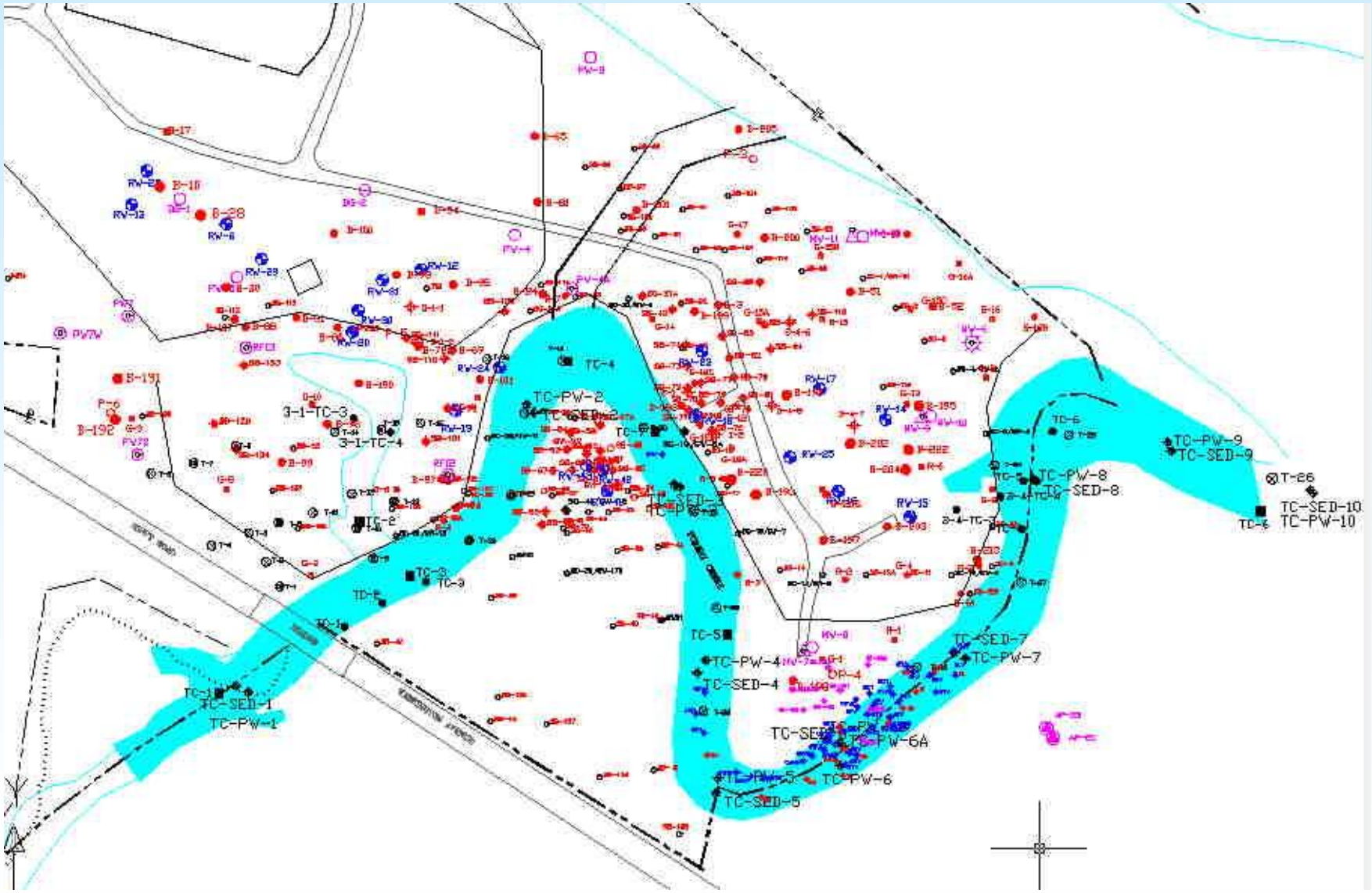
SHEET TITLE
CONSTRUCTION PRECIPITATION
SOIL BENTONITE WALL CONSTRUCTION
REMEDIAL MEASURES CONSTRUCTION
GULFPORT, MISSISSIPPI

DRAWN BY:	CHECKED BY:
TRB	CW

DATE: 08-19-2013
SCALE: AS SHOWN
SHEET NO.: 1001
PROJECT NO.: HAN0-12-001

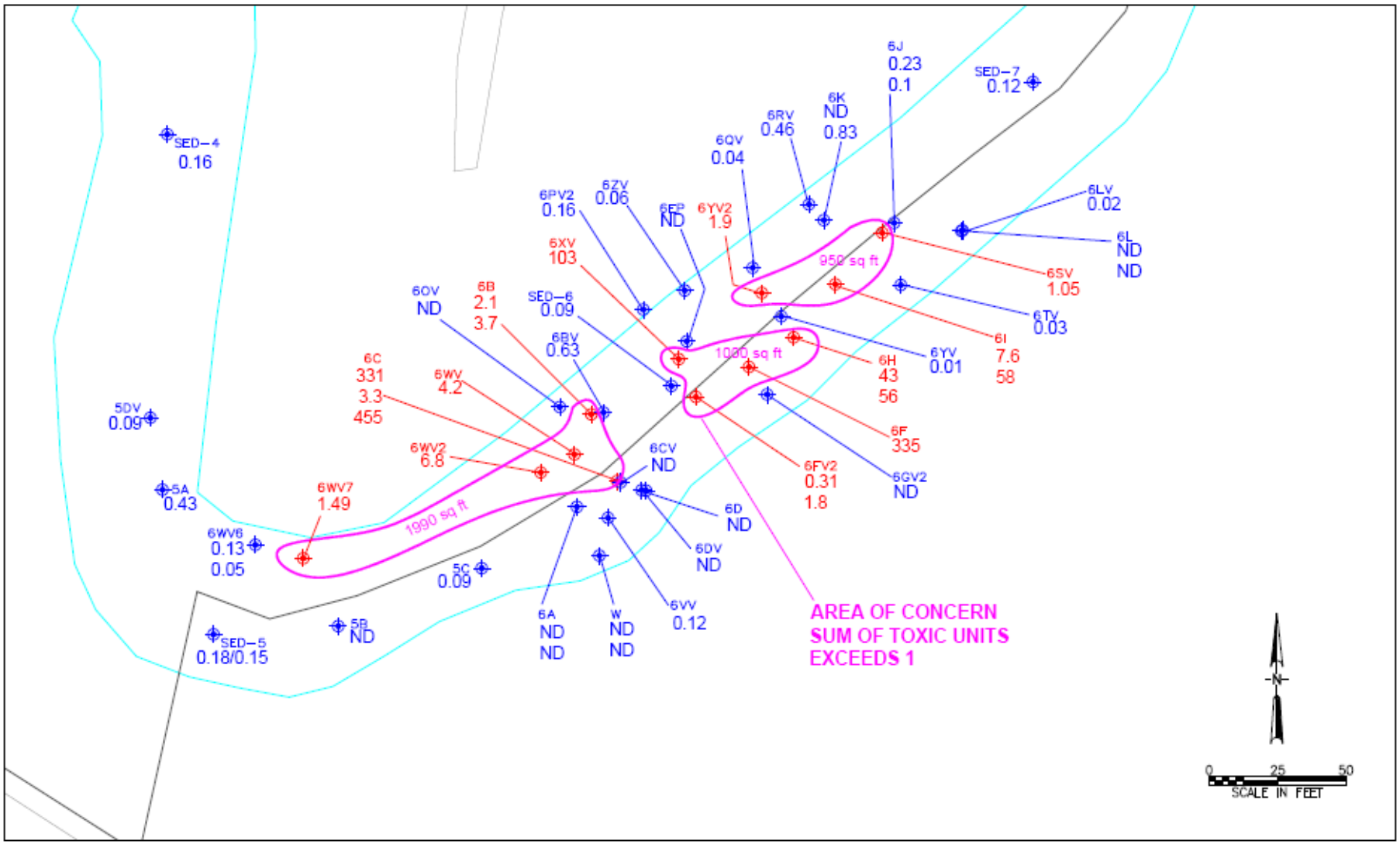
Turkey Creek-Sedimite™ and Ecological Risk Assessment

Solid Waste Management Units

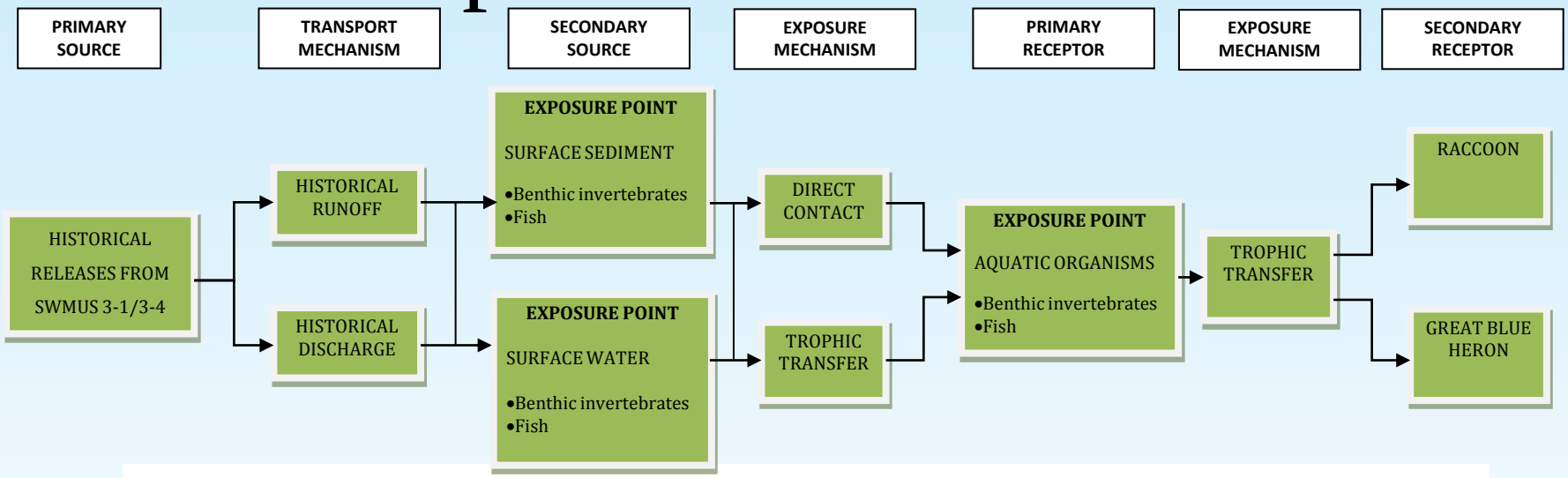

TC-PW-1
TC-SED-1
TC-PW-2
TC-SED-2
TC-PW-3
TC-SED-3
TC-PW-4
TC-SED-4
TC-PW-5
TC-SED-5
TC-PW-6
TC-PW-6A
TC-SED-7
TC-PW-7
TC-PW-8
TC-SED-8
TC-PW-9
TC-SED-9
TC-PW-10
TC-SED-10
3-1-TC-3
3-1-TC-4

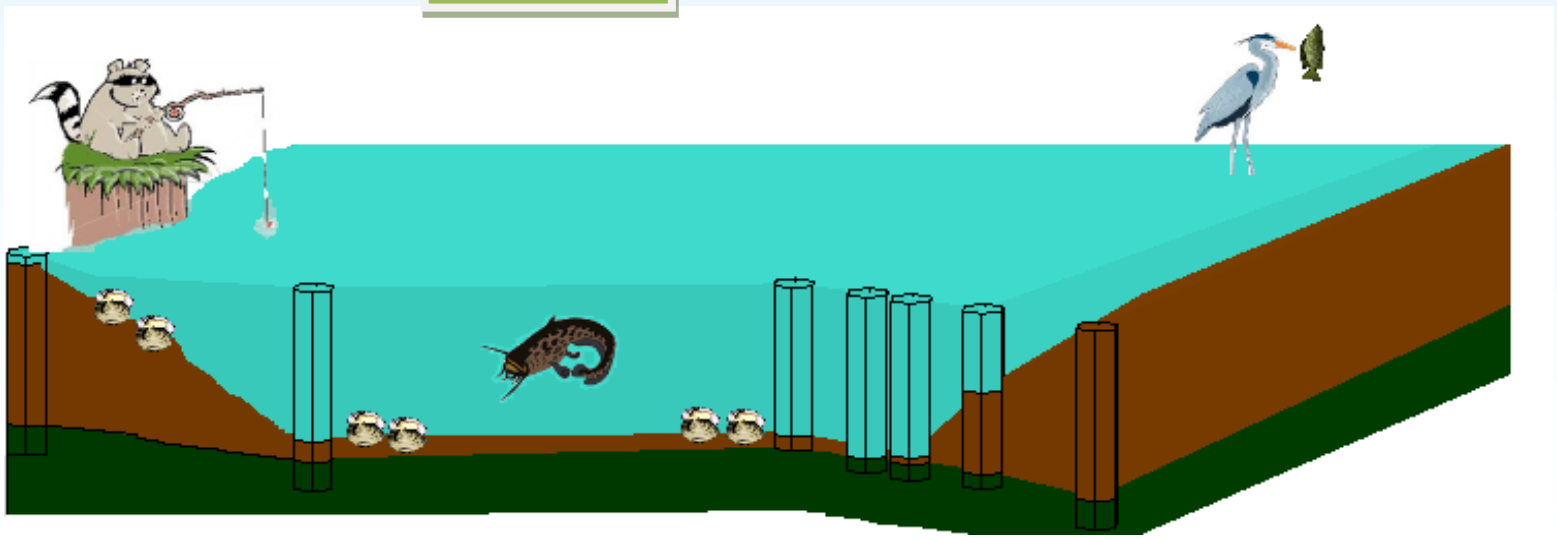
Sediment and Pore Water Sampling March 3 2010 Report

Sediment PAHs Toxic Units



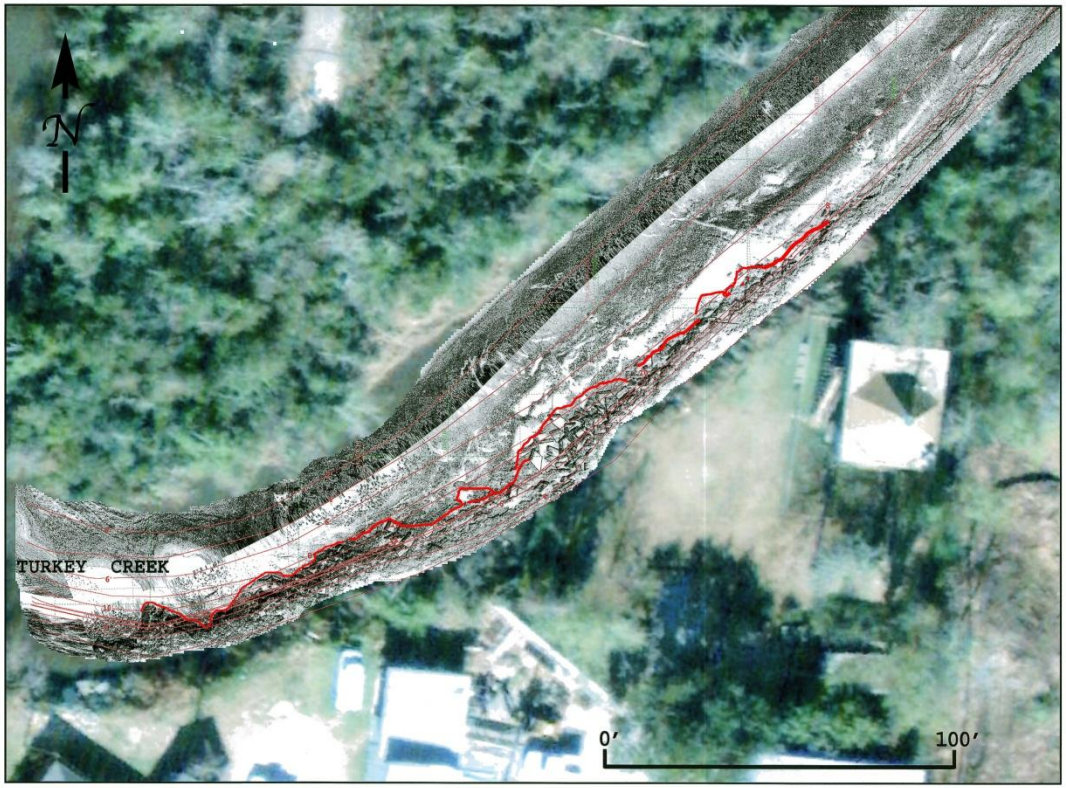
Exposure Evaluation





Concrete in creek

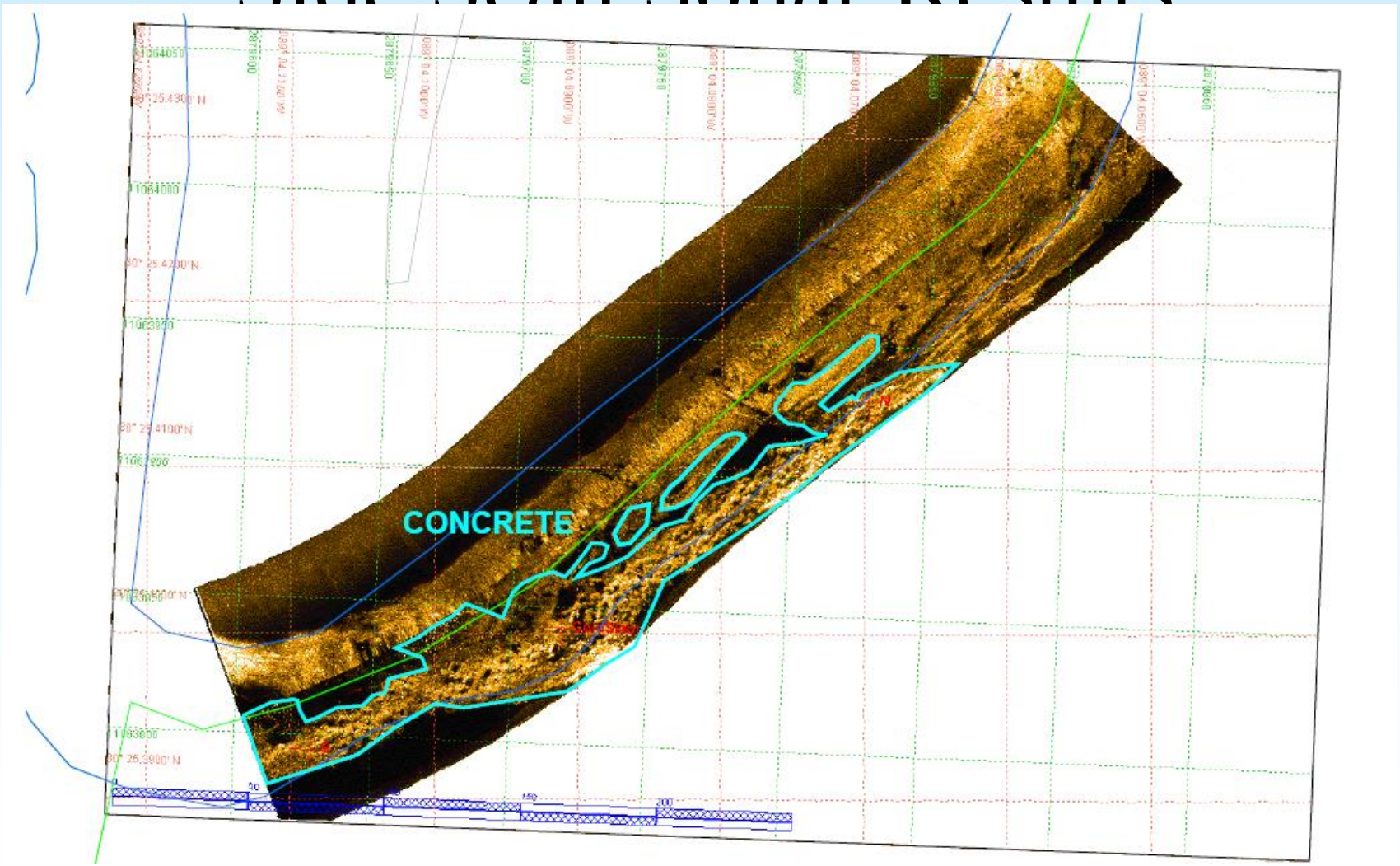
SideScan Sonar Survey



7' - Depth Contours

Environmental Management Services, Inc. SideScan Sonar Survey Turkey Creek Remediation Site Gulfport, Mississippi	SideScan Sonar Overlay Water Bottom Depth Contours, Characteristics & Obstructions
	Robert P. Waldron, Incorporated 10/2010

Side Scan Sonar Results



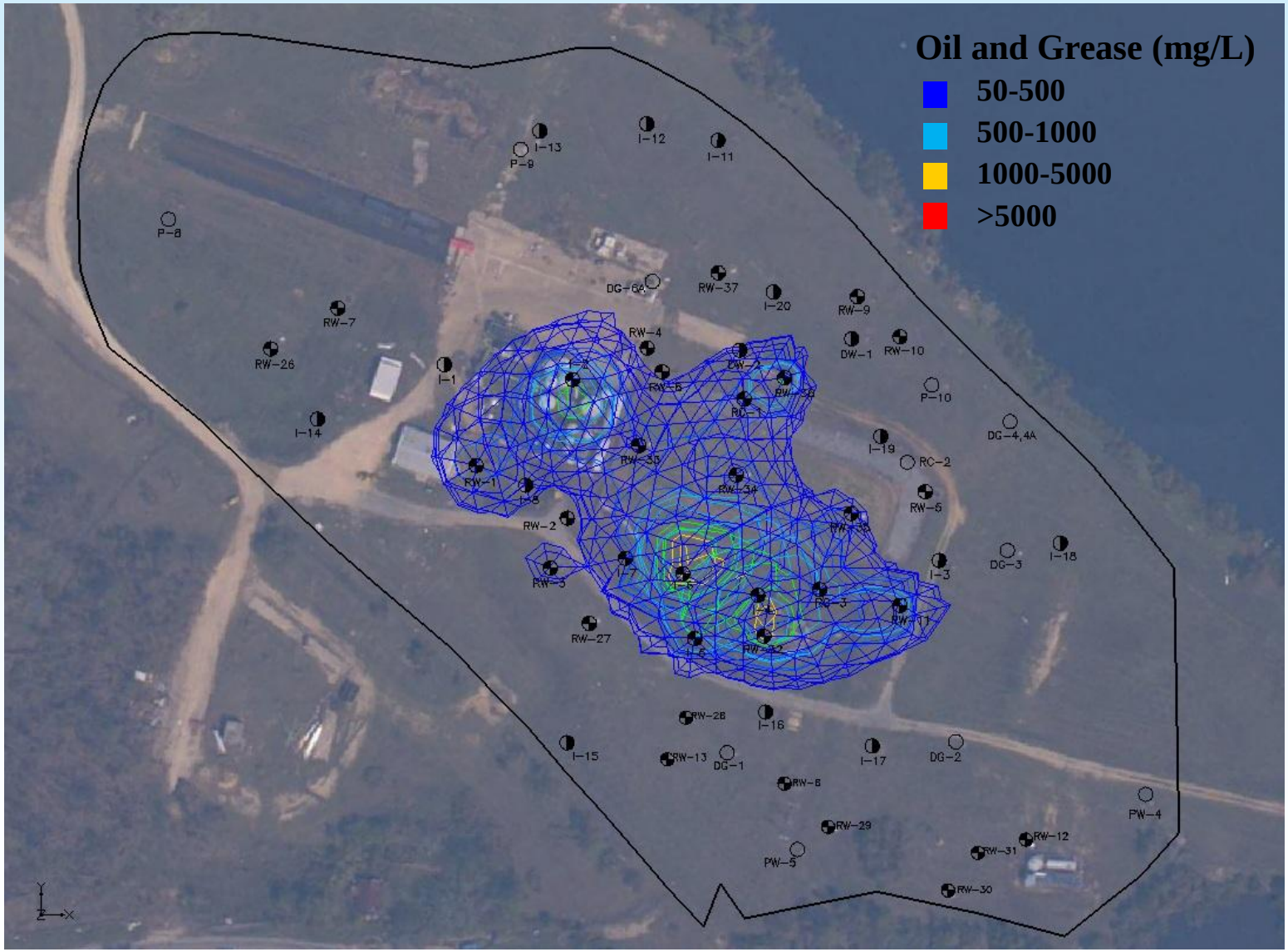

25%
2.5%

Groundwater Recovery and Treatment

GULFPORT

OIL AND GREASE
GROUNDWATER SURVEY

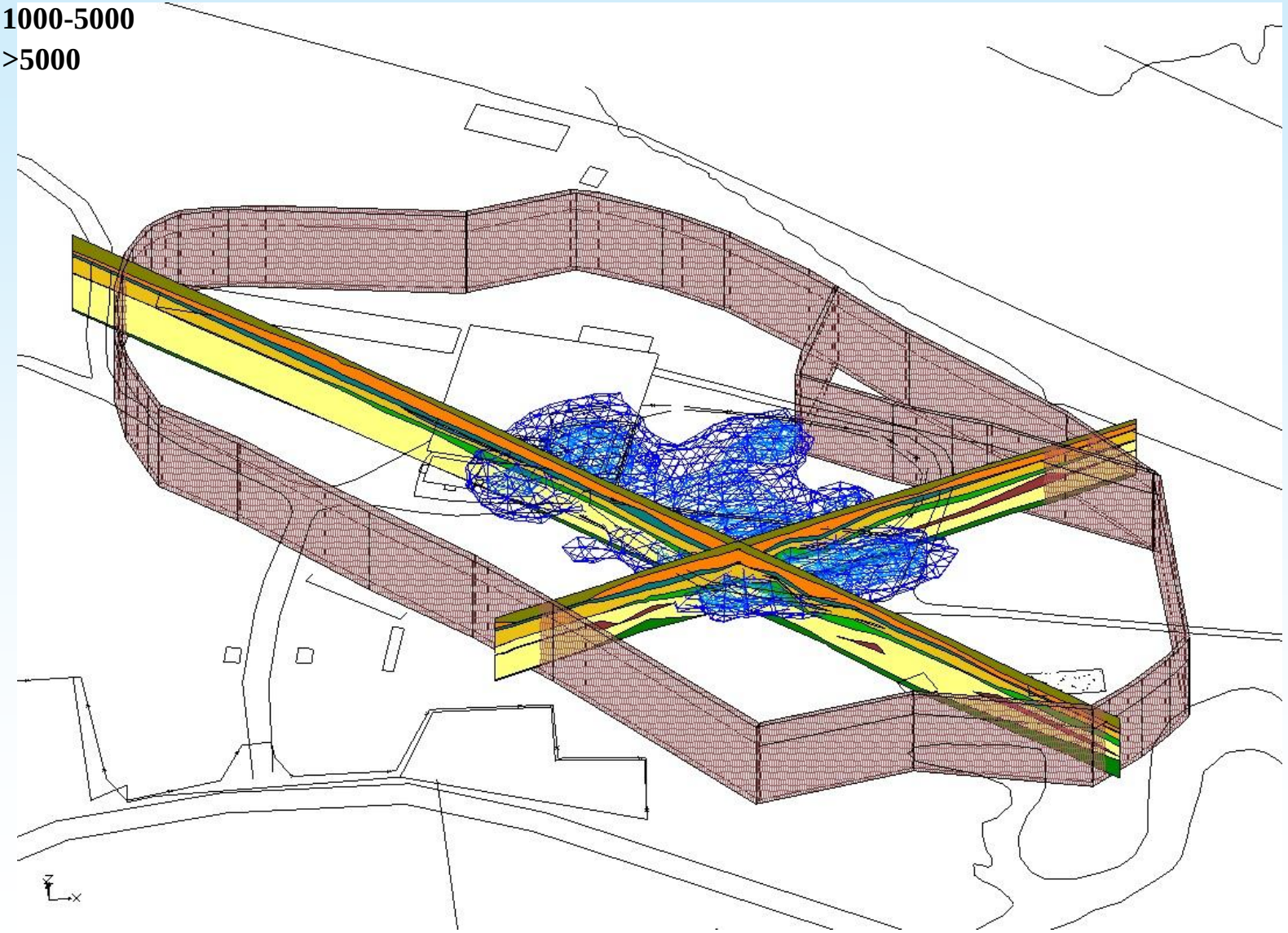
2004


Oil and Grease (mg/L)
50-500
500-1000
1000-5000
>5000
P-8
P-9
I-13
I-12
I-11
DG-64
RW-37
I-20
RW-9
RW-7
RW-26
RW-4
DW-1
RW-10
I-1
RW-5
DW-2
RW-6
RC-1
P-10
I-14
I-19
DG-4,4A
RW-33
RC-2
RW-1
RW-34
RW-5
RW-2
I-3
DG-3
I-18
RW-3
RC-3
RW-11
RW-27
RW-32
RW-28
I-16
I-15
RW-13
DG-1
I-17
DG-2
RW-8
PW-4
RW-29
RW-12
RW-31
PW-5
RW-30

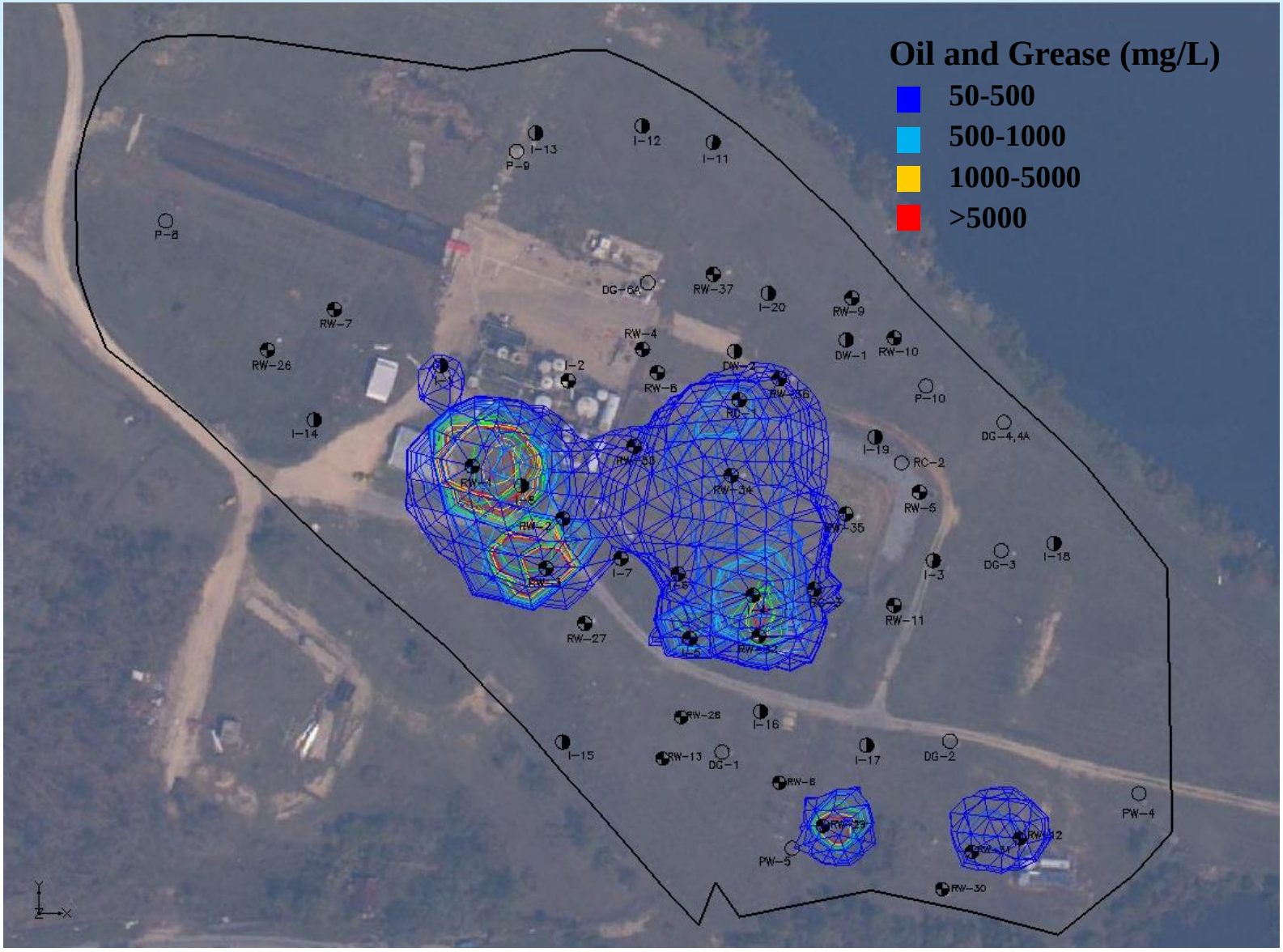
2004

Oil and Grease (mg/L)

- **50-500**
- **500-1000**
- **1000-5000**
- **>5000**



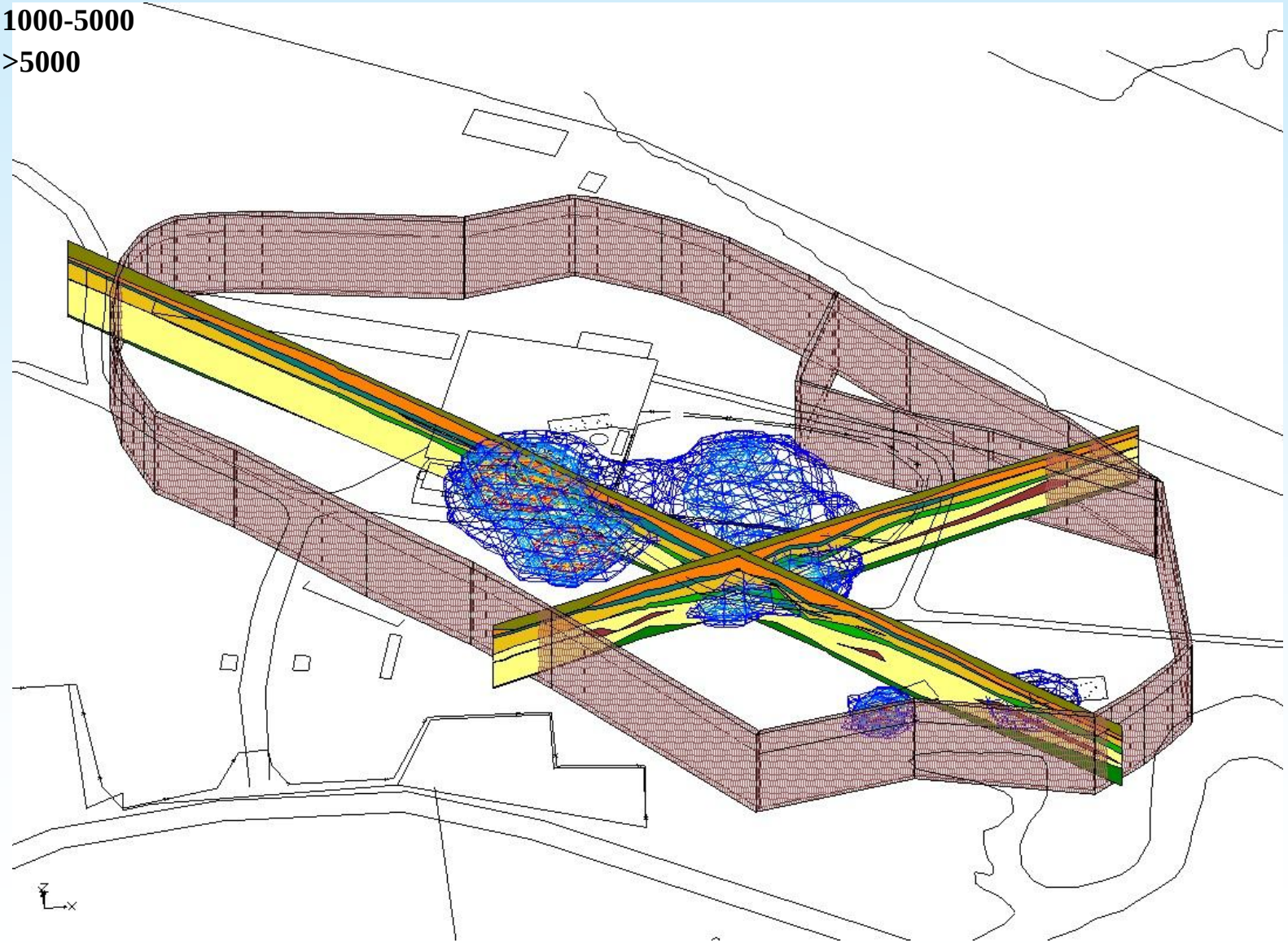
2008


Oil and Grease (mg/L)
50-500
500-1000
1000-5000
>5000
I-13
P-9
I-12
I-11
P-8
DG-6A
RW-37
I-20
RW-9
RW-7
RW-4
DW-1
RW-10
RW-26
I-2
RW-6
DW-2
RW-36
P-10
I-14
RC-1
DG-4,4A
I-19
RW-33
RC-2
RW-1
RW-34
RW-5
RW-2
RW-35
I-7
I-6
I-3
DG-3
I-18
RW-11
RW-27
I-5
RW-32
RW-28
I-16
I-15
RW-13
DG-1
I-17
DG-2
RW-8
PW-4
RW-29
RW-12
PW-5
RW-31
RW-30

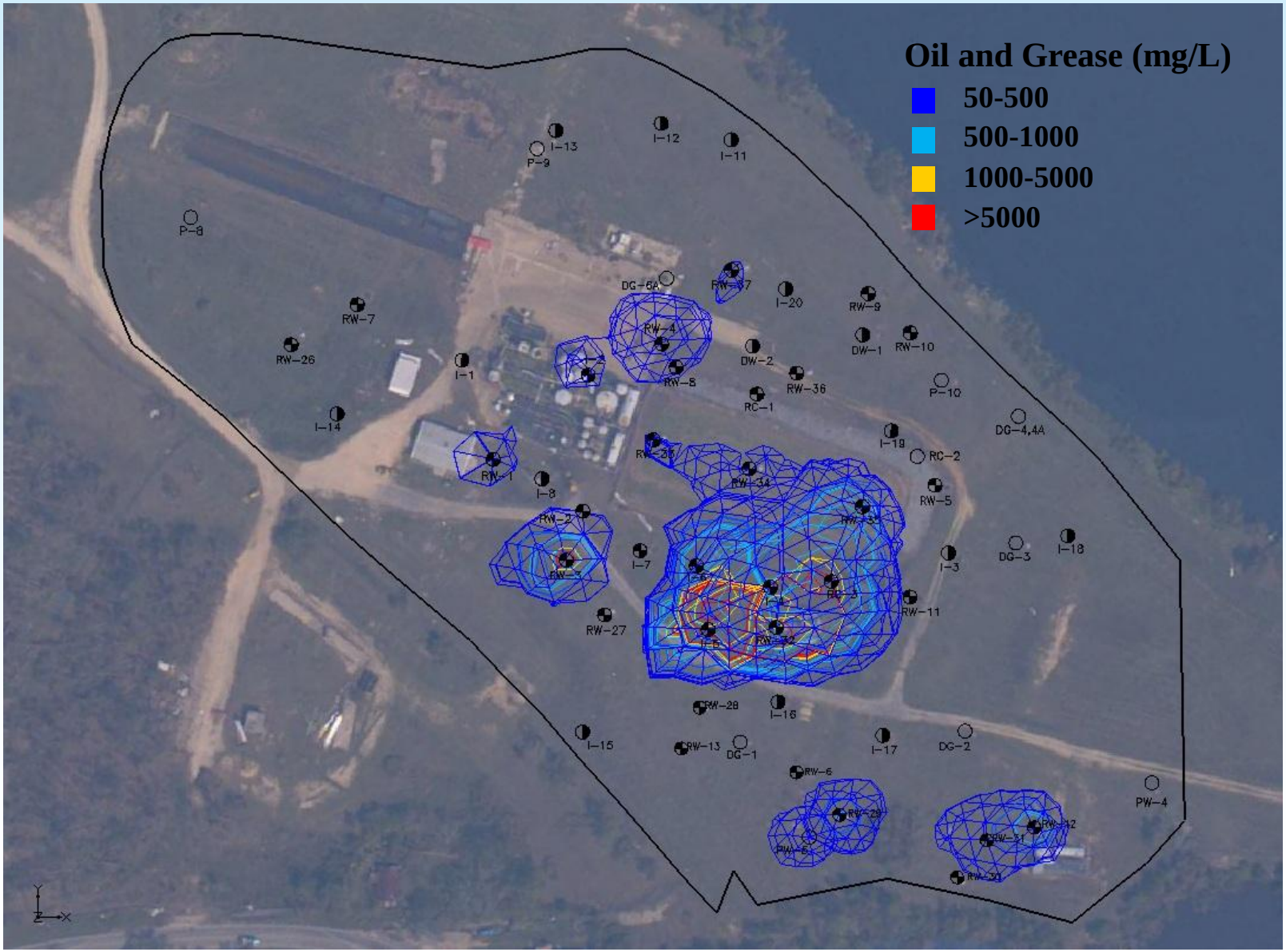
2008

Oil and Grease (mg/L)

- **50-500**
- **500-1000**
- **1000-5000**
- **>5000**



2012


Oil and Grease (mg/L)
50-500
500-1000
1000-5000
>5000
I-13
P-9
I-12
I-11
P-8
DG-6A
RW-7
I-20
RW-9
RW-4
DW-1
RW-10
RW-7
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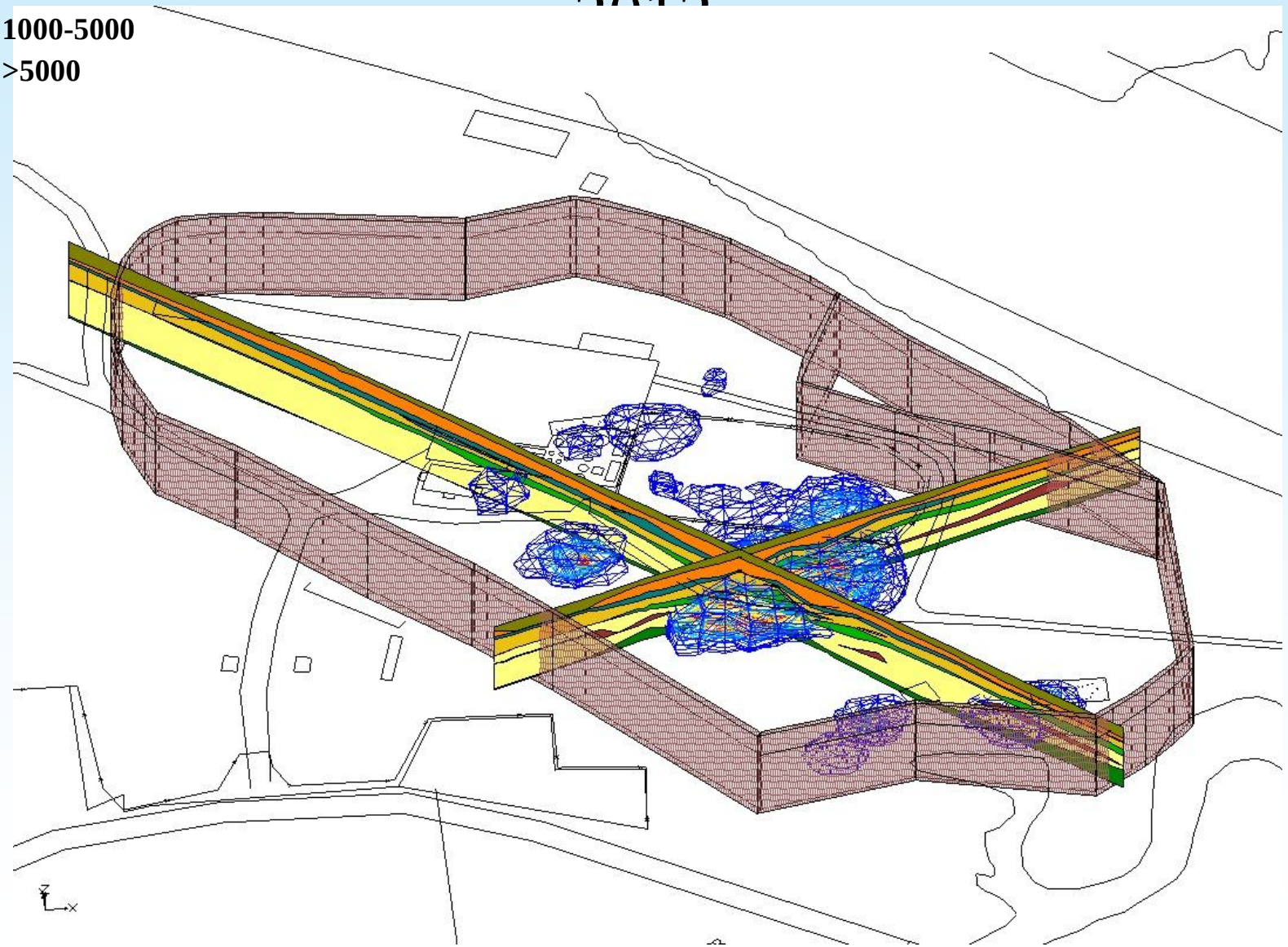
RW-27
RW-28
I-16
I-15
RW-13
DG-1
I-17
DG-2
RW-6
PW-4
RW-12
RW-31

Oil and Grease (mg/L)

- **50-500**
- **500-1000**
- **1000-5000**
- **>5000**

2012

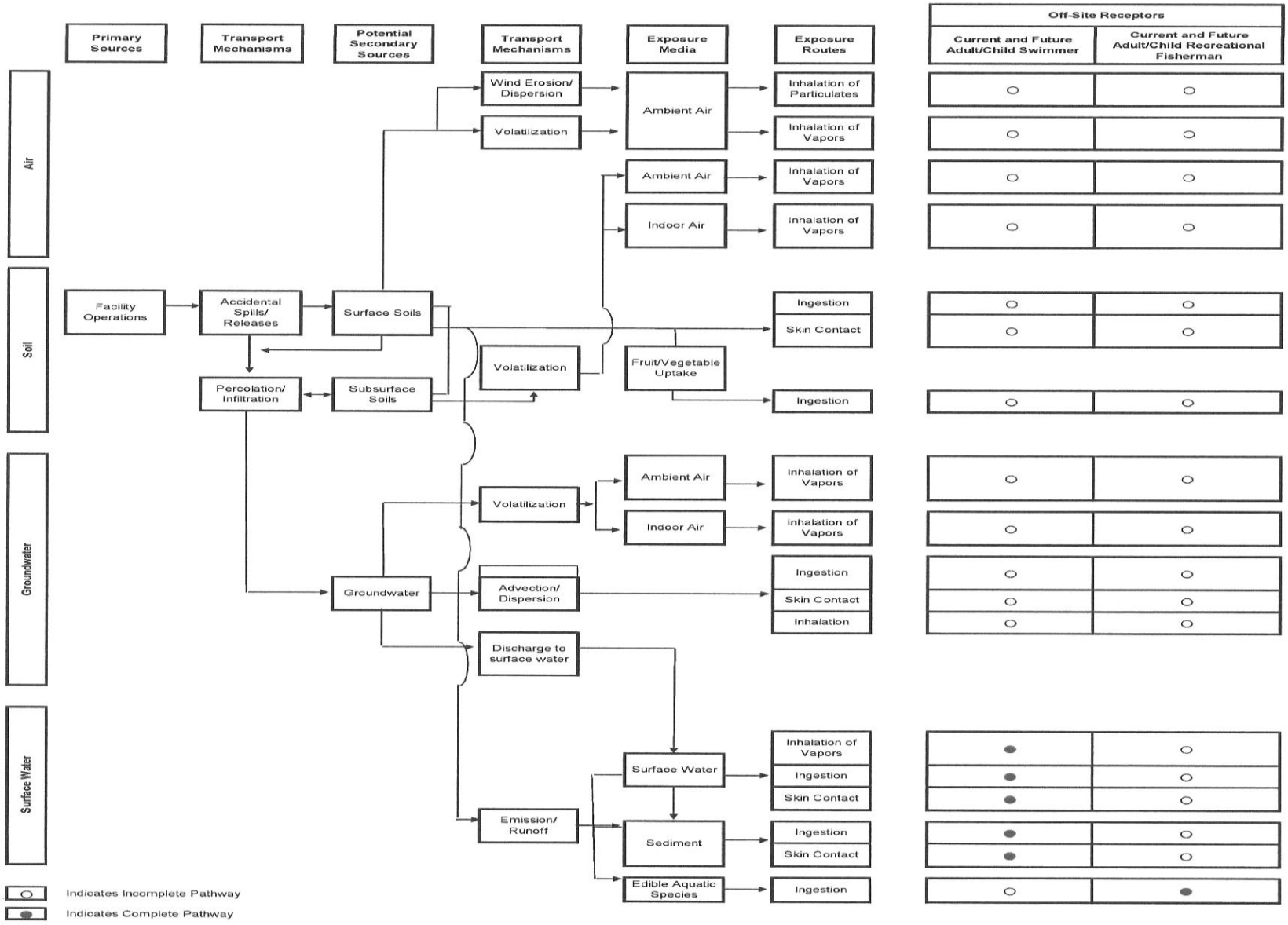


Gulfport RCRA Closure
Oil and Grease Survey

- Reduction in volume of 49% between 2008 and 2012
- Reduced 10% between 2004 and 2008
- Reduced 54% between 2004 and 2012

Human Health Risk Assessment

HHRA Conceptual Site Model



Comments from CTEH

Surface Water (Swimming exposure- following pathways evaluated: ingestion, dermal contact, inhalation (volatiles))

- PAHs – detections of naphthalene, fluoranthene, pyrene, benzo(a)anthracene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene
  - all detections below the federal ambient water quality criteria (AWQC) and USEPA Nov 2011 Tapwater regional screening level (RSL); this indicates that PAHs are not chemicals of concern in surface water for the swimmer.

- Dioxins – all detections below the MCL but above the AWQC for "water + organism" and "organism only" values
  - Preliminary risk estimates lifetime cancer risks from exposure to dioxins in surface water for the swimmer will be below 1 x 10-6 (the USEPA target lifetime cancer risk)

Comments from CTEH (continued)

Sediment (Pathways considered: ingestion, dermal contact)

- PAHS – some detections in background and site samples above the USEPA Nov 2011 Residential Soil RSL
  - Preliminary risk estimates indicate that lifetime cancer risks from direct contact with PAHs in sediment will be between 1 x 10-5 and 1 x 10-6 for the swimmer ingesting sediment and exposed to sediment on the skin; this range is within the range of lifetime cancer risks considered acceptable by USEPA.
  - Noncancer risks will be acceptably low for the swimmer exposed to PAHs in sediment.

- Dioxins – all detections below the USEPA Nov 2011 Residential Soil RSL; this indicates that dioxins are not chemicals of concern in sediment for the swimmer.

HHRA Approval

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960

RECEIVED
OCT 22 2012
BY:

OCT 16 2012

SCANNED
11/ 2012

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Clyde Woodward, President
Environmental Management Services, Inc.
Cavenham Forest Industries, LLC.
Post Office Box 15369
Hattiesburg, Mississippi 39404-5369

Re: Revised Turkey Creek Human Health Risk Assessment Report
Cavenham Forest Industries, LLC.
Gulfport, Mississippi
EPA ID. No. MSD 057 226 961
HSWA Permit Effective Date July 26, 1996

Dear Mr. Woodward:

The Environmental Protection Agency has received the Revised Turkey Creek Human Health Risk Assessment Report (HHRA) dated September 19, 2012, submitted by Cavenham Forest Industries, LLC (CFI), Gulfport, Mississippi. The revised HHRA Report was submitted in response to EPA comments dated July 2012 on the HHRA Report dated March 16, 2012 and the agreements reached during the conference call on August 22, 2012 regarding CFI's draft response dated August 15, 2012.

The HHRA Report evaluated human chemical exposures from eating fish, dermal contact and ingestion of sediment and surface water both for a noncancer hazard index (HI) and life time cancer risk (LCR) for benzo(a)pyrene (BaP) toxic equivalent quotient (TEQ) compounds and Dioxins/Furans TEQ in a recreational setting. The risks categories were biased towards children's health as being at a higher risk. Sixteen different species of fish were collected in Turkey Creek, Bernard Bayou and Old Fort Bayou (the background location used by Mississippi Department of Environmental Quality (MDEQ).

The noncancer risk (health effects for target organs) from dermal exposure to surface water by swimming and contact with sediments was well below the hazard index (HI) of 1. Greater than 1 indicates a higher risk and concern. The LCR from incidental ingestion of water/sediment and dermal exposure was less than 1.5E-06. The consumption of fish had one exceedance of HI 1 for a noncancer risk for the Blue Catfish. While the noncancer risk for consumption of Stripped Mullet had a HI of 4.4 in Old Fort Bayou it exceeded the HI 1 at the background sampling location. The overall cancer risk for fish tissue consumption is in the risk range of 1.5E-06 to 2.4E-05. The range of the average LCR for fish consumption at the background sampling location in Old Fort Bayou (12 miles from Turkey Creek) and Bernard Bayou is from 1.7E-05 to1.9E-06. The highest concentration in Bernard Bayou was just downstream from the confluence of Turkey Creek.

The location specific hazards for a child consuming Blue Catfish at Turkey Creek Adjacent to/Downstream of Site, is slightly above 1.

Upstream & Adjacent to the Site in Turkey Creek; Upstream & downstream in Bayou Bernard
Cancer risks (average of all fish): **1.9E-06 and 1.2E-05** (within EPA's acceptable risk range)
Noncancer hazards (average of all fish): **HI = less than 1**

Highest cancer risk (Striped Mullet @ Turkey Creek-adjacent)= 9.3E-05
Highest non-cancer HI (Blue Catfish @ Turkey Creek adjacent) =1.1; main COC is dioxin TEQ

Background
Cancer risks (average of all fish): **1.7E-05 and 1.8E-05 (within EPA's acceptable risk range)**
Noncancer hazards (average of all fish): **HI = less than 1**

Highest cancer risk (striped mullet) = 9.7E-05
Highest non-cancer HI (striped mullet) =4.4; main COC is dioxin TEQ

The sum of the cancer risks for adult/child is 1.5E-06 (within EPA's acceptable risk range of 1E-06 to 1E-04). The sum of the noncancer hazards for the child is 0.002 (less than HI=1).

In conclusion, EPA agrees with the findings of CFI that the overall average risks are within the acceptable risk range. There are no significant risks to human health in the consumption of fish tissue in Turkey Creek and Bernard Bayou. The ingestion and dermal contact of PAH TEQ and Dioxin TEQ found in fish tissue, sediment and surface water from Turkey Creek and Bernard Bayou do not present a significant noncancer and/or cancer risk to human health at this time. The Turkey Creek Human Health Risk Assessment Report is hereby approved.

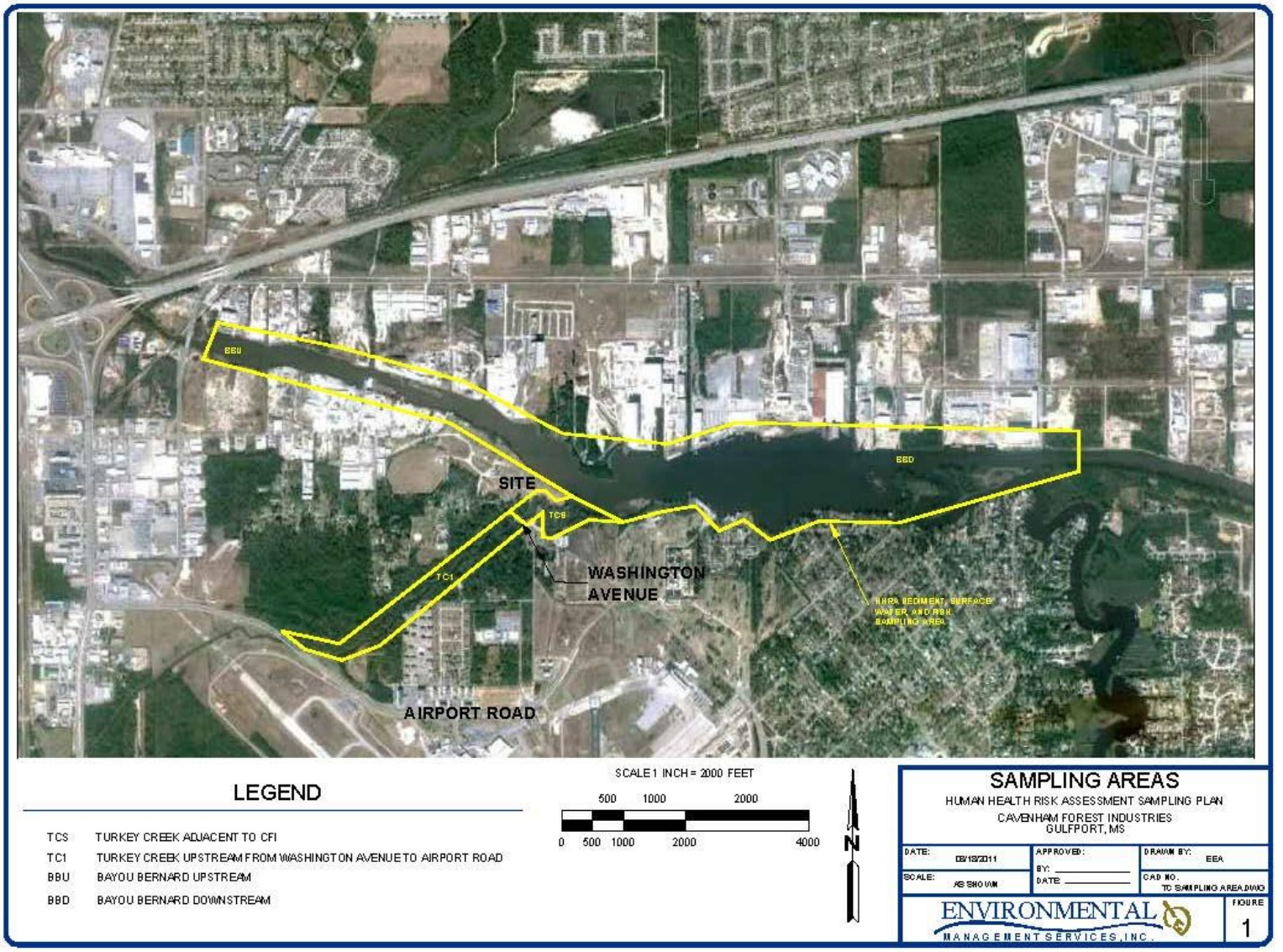
For questions regarding this letter, please contact James H. Smith, Corrective Action Specialist, Corrective Action Section, 404-562-8502 or by electronic mail at smith.jamesh@epa.gov or Russ McLean Acting Section Chief at 404-562-8504 or by electronic mail at mclean.russ@epa.gov.

Sincerely,

Russ McLean, Acting Chief
Corrective Action Section
Restoration and Underground Storage Tank Branch
RCRA Division

cc: Ebony Allen, MDEQ

Sampling Areas



Background Sampling Area

Local Fish Survey Questionnaire

Local Fish Survey Questionnaire

Turkey Creek and Bayou Bernard/Industrial Seaway

Name: Monica L. Bester

Address: 14334 Rippy Rd.
Gulfport, MS 39503

1.) Do you fish in Turkey Creek and/or Bayou Bernard/Industrial Seaway? Yes (No)

2.) Do you consume fish, frogs, crawfish, and/or crabs caught in Turkey Creek and/or Bayou Bernard? (Yes) No

3.) If you answered yes to question 2 check the species you consume from Turkey Creek and/or Bayou Bernard.
Check all that apply:

✓ Bass	✓ Mullet	Frog
✓ Catfish	Crab	Other (specify) _____
Bream/Perch/Sunfish	Crawfish	Other (specify) _____

4.) How often do you eat species caught in Turkey Creek and/or Bayou Bernard?

Fish: 1 times per month

Crabs: _____ times per month

Frogs: _____ times per month

Crawfish: _____ times per month

Other (specify): _____ times per month

Other (specify): _____ times per month

5.) Indicate the number of individuals in household who consume species caught in Turkey Creek and/or Bayou Bernard: 1

Number of children 0 to 2 years old: ____

Number of children 2 to 6 years old: ____

Number of individuals 6 to 16 years old: ____

Number of individuals 16 years old and older: 1

Fish Species Caught

- Atlantic Croaker
- Blue Catfish
- Black Drum
- Blue Gill
- Common Carp
- Ground Mullet
- Large Mouth Bass
- Pumpkinseed Bream
- Redfish
- Striped Bass
- Orange Spotted Sun Fish
- Sheep Head
- Striped Mullet
- White Trout


DEPT. OF ENVIRONMENTAL QUALITY