ExxonMobil Lail Property
East Greenwich Township and Borough of Paulsboro, Gloucester County, New Jersey

Site History

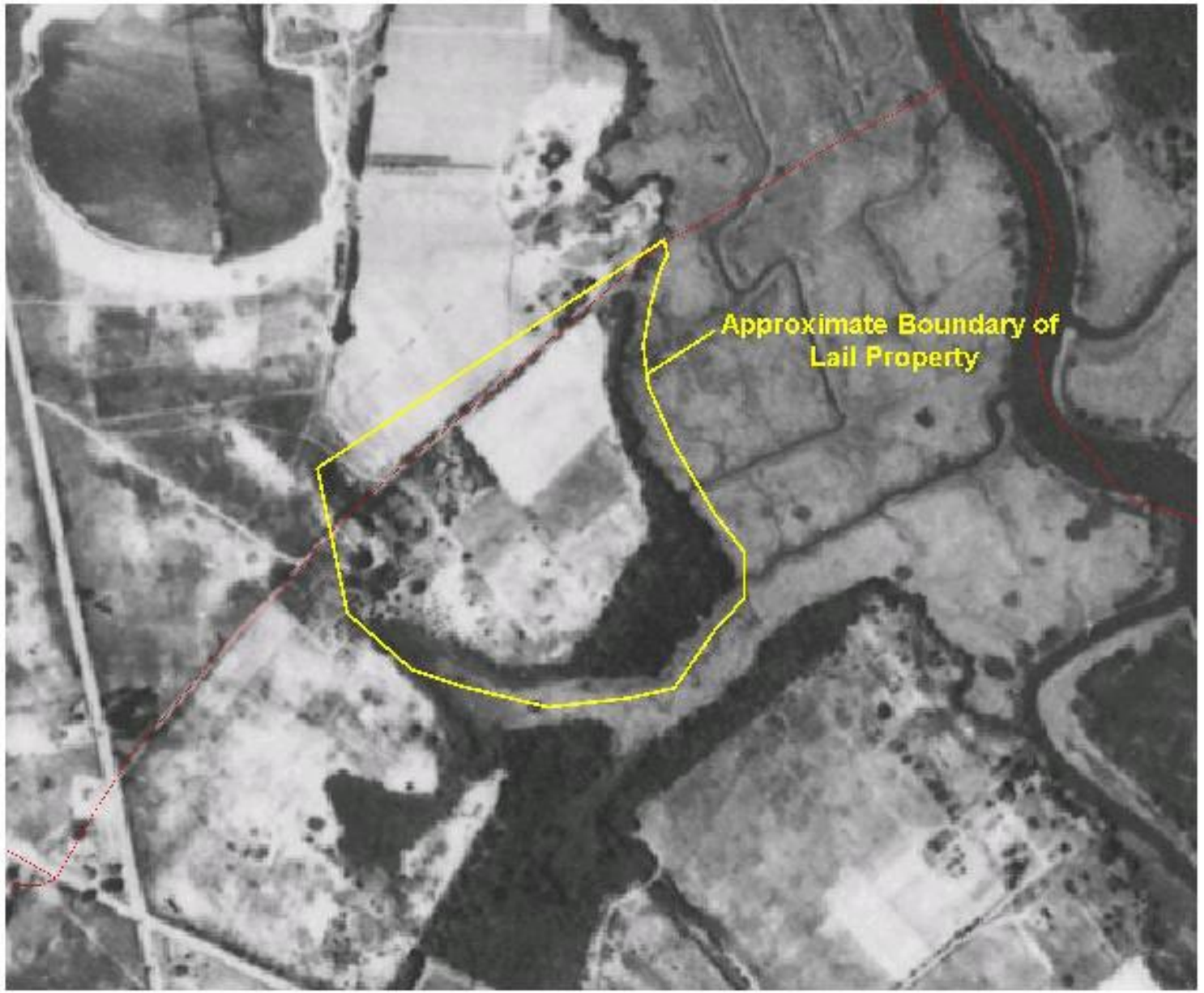
- 30,000 Cubic Yards of Aluminosilicate Material (ASM) Deposited in 1950’s
- 1985 Investigation of Buried Drums
- 1995 Mobil Signed MOA for Cleanup
- 2001 Mobil Signed MOA for ASM
- 2005 ExxonMobil Signed ACO for Remediation of ASM and PCB Residuals
- 2008 ExxonMobil Implements Remedial Actions (RA)

Site Characteristics

- Former Borrow Pit
- Tidally Influenced Embayment on Mantua Creek
  - contains up to 4’ of water during high tide
  - isolated puddles during low tide
- Emergent Wetland
- Surrounding Upland Areas Impacted
- Sediment PCB levels up to 21,000 ppm observed (Screening level is 0.07 ppm)
- Killifish tissue PCB levels up to 8.4 ppm
- Eagle Nest in Vicinity of Site – Failed until nest moved

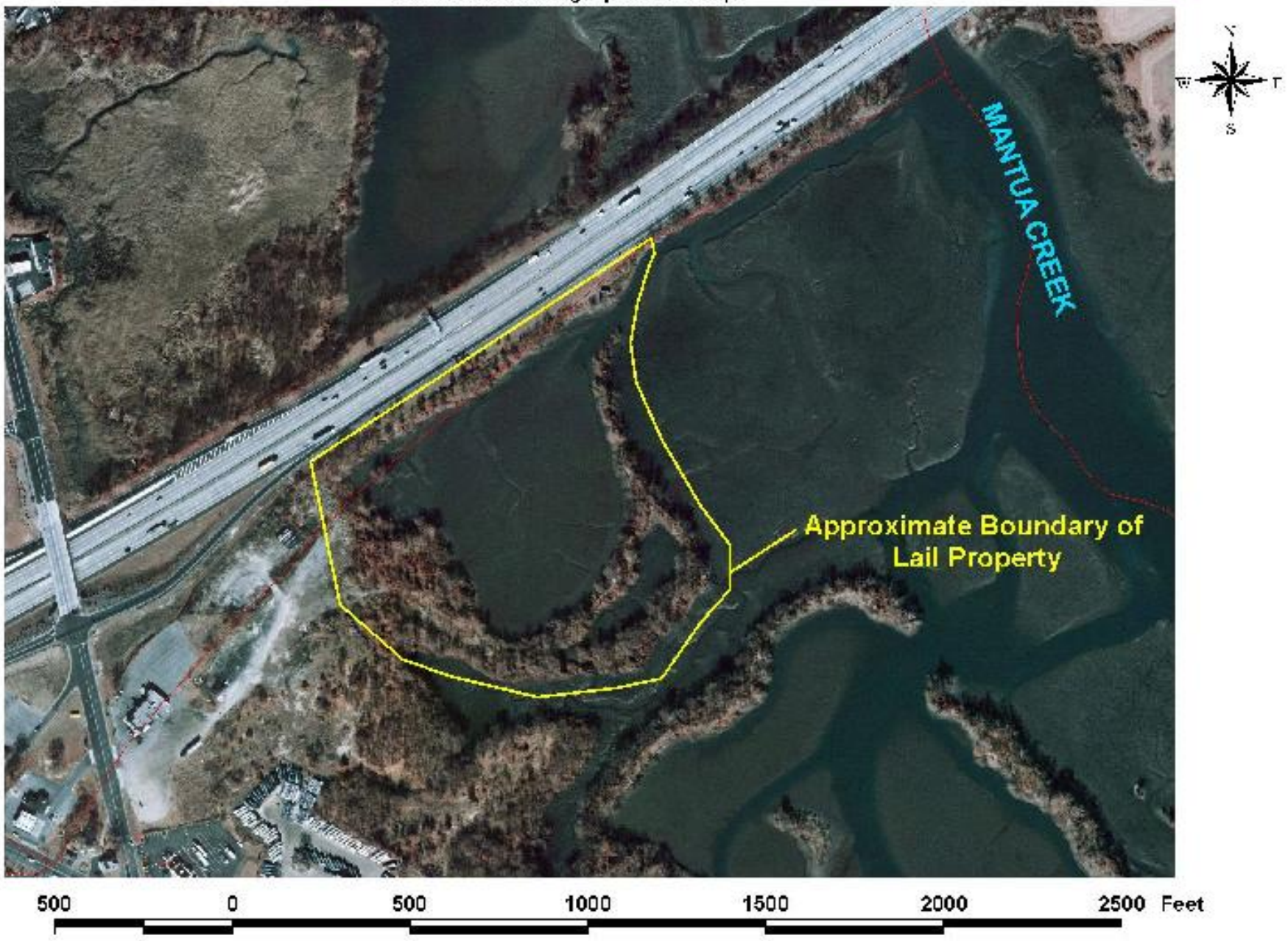
Lail Property, Gloucester County, New Jersey

1930 Aerial Photograph Base Map



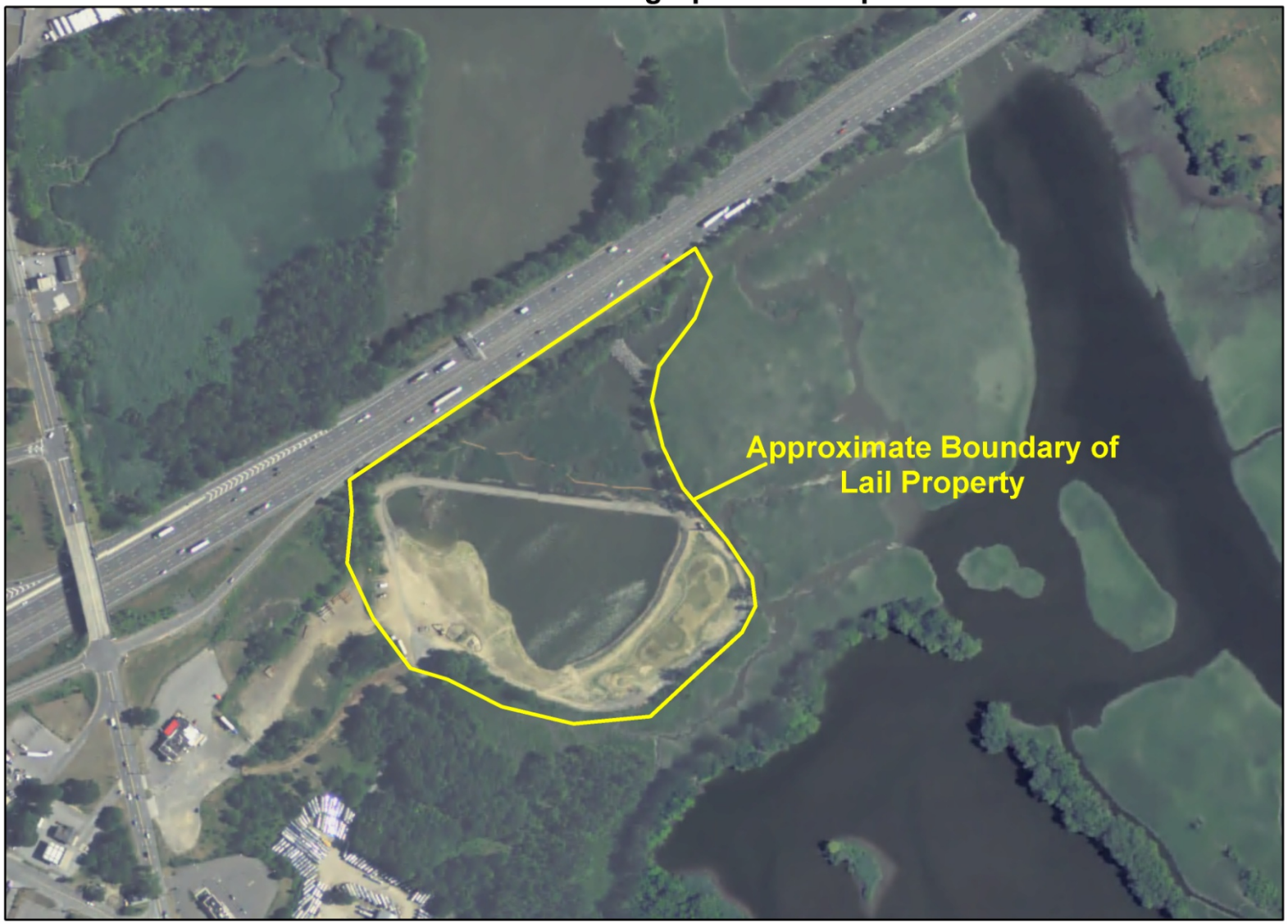
Lail Property, Gloucester County, New Jersey

2002 Aerial Photograph Base Map



Lail Property, Gloucester County, New Jersey

2010 Aerial Photograph Base Map



Material Placed Into the Former Borrow Pit

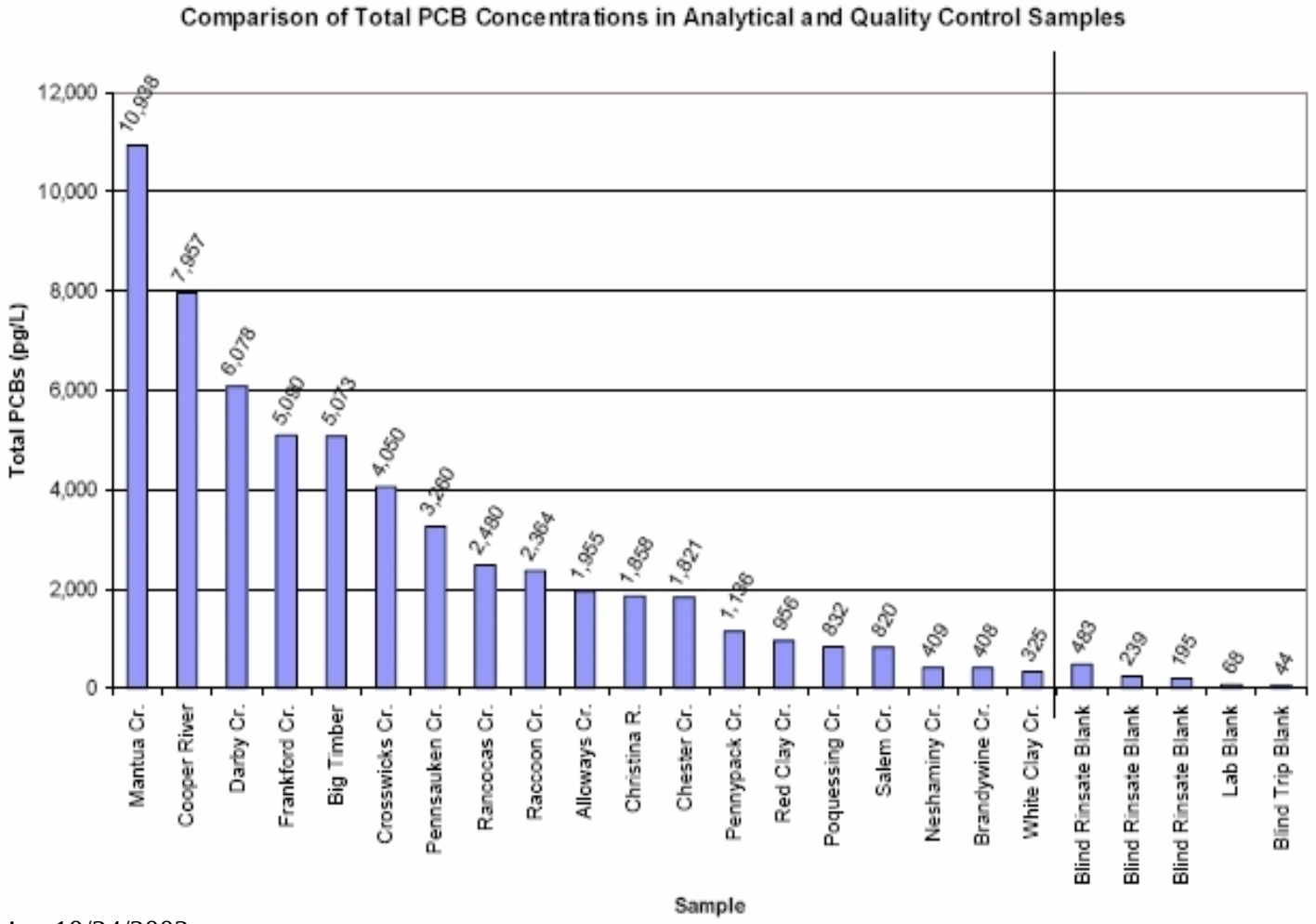
- Placed Into the Borrow Pit During the 1950s
- Catalyst Used in the Petroleum Industry
- Consists of Aluminosilicate Material (ASM)
- ASM Passed Through a Bath Containing Aroclor 1254
- Fired to a Glass-like Consistency

DRBC Sampling Effort

- Delaware River Basin Commission Sampled Tributaries to Delaware River
- Lail Property located on Mantua Creek, sample collected downstream of Site
- Mantua Creek exhibited highest level of PCBs in surface water of all tributaries sampled

Dry Weather Total PCB Concentrations plus Blanks

Non-detects set to Zero
flagged data set to reported value



Site Photographs

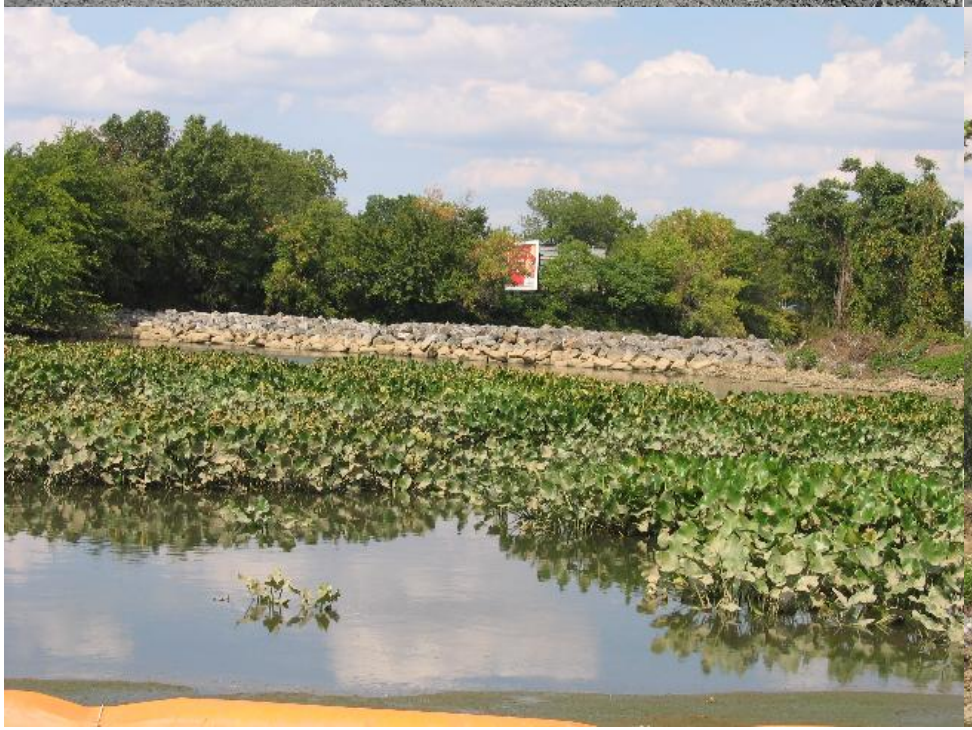
- Slide 11 shows (clockwise) Site at high tide, ASM Beads in Sediment , Waterfowl Nest, ASM Beads collected from Subsurface

Excavation of ASM and Surrounding Sediment to 1 ppm

- Material excavated to pre-delineated extent
- Post-excavation samples collected every 900 ft^2
- Samples exhibiting > 1 ppm required further excavation
- Backfill to within 4 ft of previous elevation once post-excavation sample confirmation received

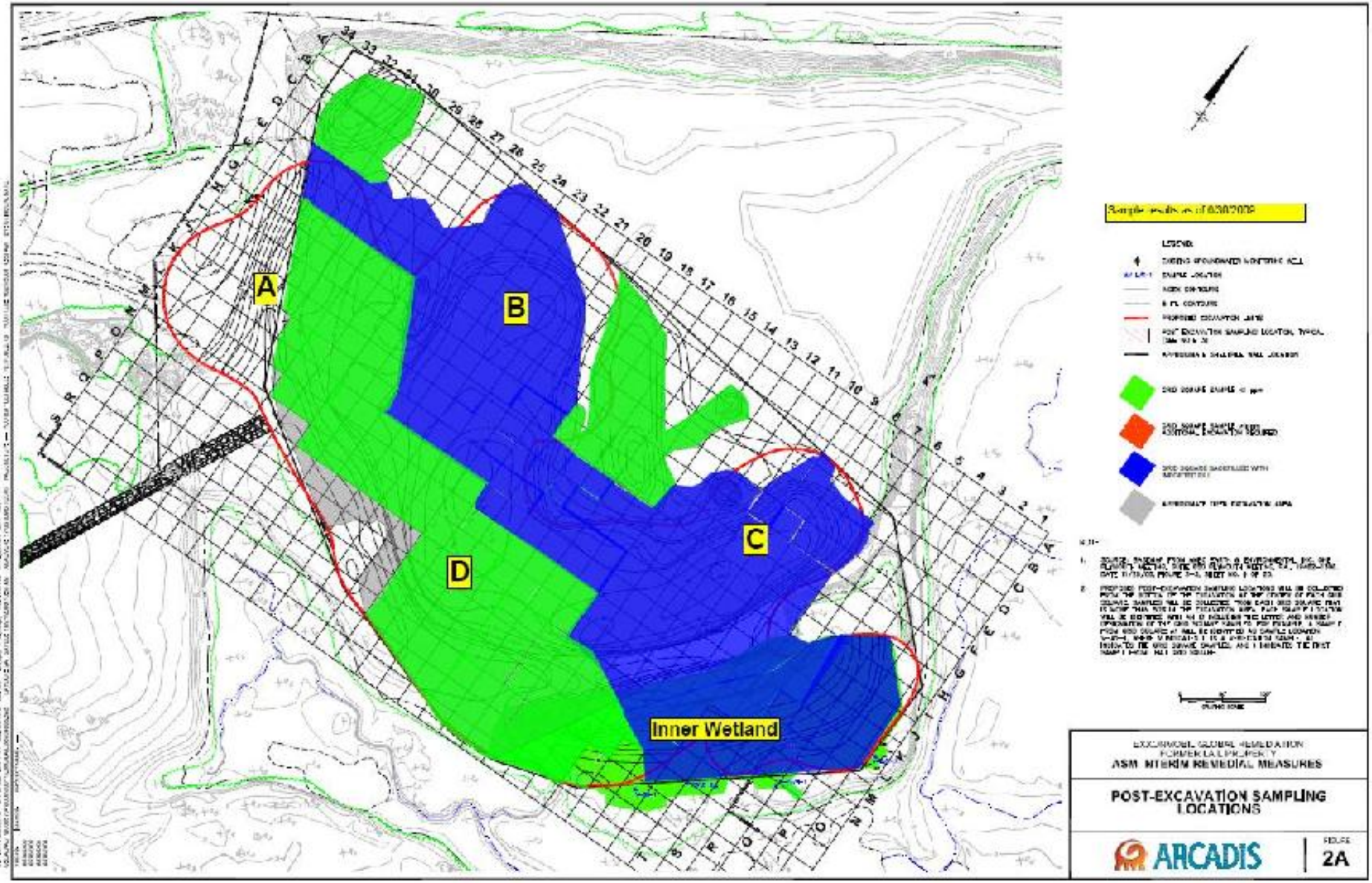
Site Photographs

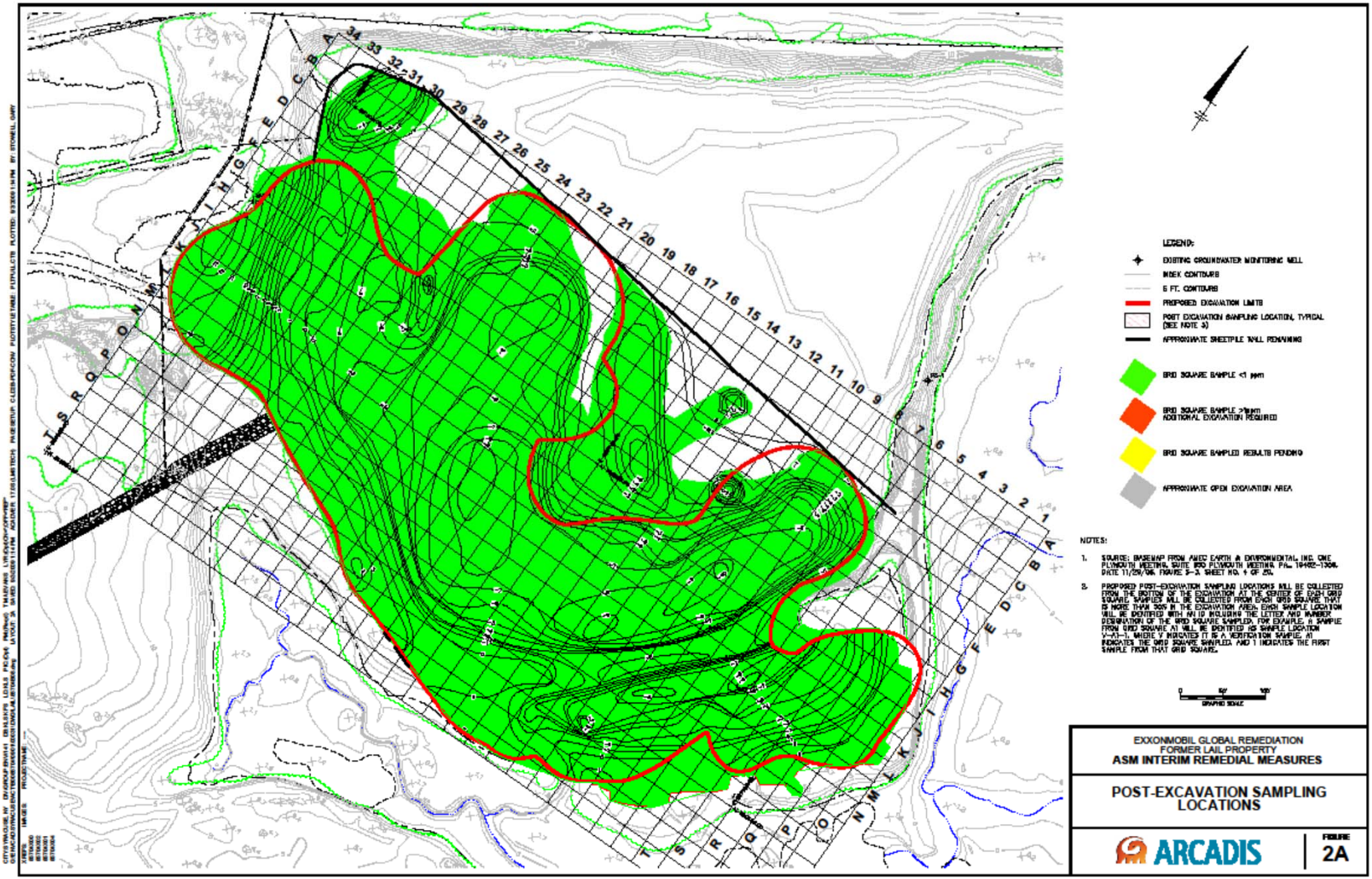
- Slide 14 shows (clockwise) Construction Road (top two photos) , Air Monitoring Station, Stone Berm to reduce tidal influence
- Slide 15 Shows (clockwise) Truck being detarped for loading, Truck being loaded , Wastewater Treatment Plant, Truck being decontaminated
- Slide 16 shows various views of dewatered sediments being removed
- Slide 17 shows various views of site during construction
- Slide 18 shows Raccoon Tracks and Carp and Killifish in surface water



Post RA Results

- Slides 20 and 21 shows status of all excavated cells
- Slide 22 shows all upland area PCB results above 1 ppm
- Slide 23 shows all sediment area PCB results above 1 ppm


A
B
C
D
Inner Wetland
POST-EXCAVATION SAMPLING LOCATIONS
ARCADIS
2A


LEGEND:
EXISTING GROUNDWATER MONITORING WELL
INDEX CONTOURS
5 FT. CONTOURS
PROPOSED EXCAVATION LIMITS
POST EXCAVATION SAMPLING LOCATION, TYPICAL (SEE NOTE 3)
APPROXIMATE SHEETPILE WALL REMAINING
GRID SQUARE SAMPLE <1 ppm
GRID SQUARE SAMPLE >1ppm ADDITIONAL EXCAVATION REQUIRED
GRID SQUARE SAMPLED RESULTS PENDING
APPROXIMATE OPEN EXCAVATION AREA
NOTES:
1. SOURCE: BASEMAP FROM AMEC EARTH & ENVIRONMENTAL, INC. ONE PLYMOUTH MEETING, SUITE 850 PLYMOUTH MEETING PA., 19462-1306. DATE 11/29/06. FIGURE 5-3, SHEET NO. 1 OF 20.
2. PROPOSED POST-EXCAVATION SAMPLING LOCATIONS WILL BE COLLECTED FROM THE BOTTOM OF THE EXCAVATION AT THE CENTER OF EACH GRID SQUARE. SAMPLES WILL BE COLLECTED FROM EACH GRID SQUARE THAT IS MORE THAN 20% IN THE EXCAVATION AREA. EACH SAMPLE LOCATION WILL BE IDENTIFIED WITH AN ID INCLUDING THE LETTER AND NUMBER DESIGNATION OF THE GRID SQUARE SAMPLED. FOR EXAMPLE, A SAMPLE FROM GRID SQUARE A1 WILL BE IDENTIFIED AS SAMPLE LOCATION V-A1-1, WHERE V INDICATES IT IS A VERIFICATION SAMPLE, A1 INDICATES THE GRID SQUARE SAMPLED AND 1 INDICATES THE FIRST SAMPLE FROM THAT GRID SQUARE.
GRAPHIC SCALE
EXXONMOBIL GLOBAL REMEDIATION
FORMER LAIL PROPERTY
ASM INTERIM REMEDIAL MEASURES
POST-EXCAVATION SAMPLING LOCATIONS
ARCADIS
FIGURE
2A

CITY: SYR DIVGROUP: SYE40 DB: KEW

LEGEND

SOIL SAMPLE LOCATION
APPROXIMATE EXCAVATION BOUNDARY
THIESSEN POLYGON
ND (DEFINED AS ½ THE MAXIMUM REPORTING LIMIT)
< 1
1 - 2
2 - 4
4 - 6
6 - 8
8 - 10

NOTE:

1. INFORMATION NETWORK (NJGIN)
2. EXCAVATION BOUNDARY BASED ON A COMPILATION OF SURVEYS CONDUCTED BY ARCADIS FROM APRIL/MAY/JUNE 2009 DURING CONSTRUCTION. FINAL LIMITS MAY VARY BASED UPON

0 250 500 Feet

GRAPHIC SCALE

EXXONMOBIL CORPORATION

FORMER TAIL PROPERTY

POST-INTERIM REMEDIAL MEASURE ECOLOGICAL RISK ASSESSMENT

SOIL AROCLOR THIESSEN POLYGON ESTIMATES

ARCADIS

FIGURE **3-4**

LEGEND

- SEDIMENT SAMPLE LOCATION
- APPROXIMATE EXCAVATION BOUNDARY
- THIESSON POLYGON
- ND (DEFINED AS ½ THE MAXIMUM REPORTING LIMIT)
- < 1
- 1 - 2
- 2 - 4
- 4 - 6
- 6 - 8
- 8 - 10
- 10 - 15

NOTE:

1. 2007 AERIAL IMAGE COURTESY OF NEW JERSEY GEOGRAPHIC INFORMATION NETWORK (NJGIN) https://njgin.state.nj.us/
2. EXCAVATION BOUNDARY BASED ON A COMPILATION OF SURVEYS CONDUCTED BY ARCADIS FROM APRIL/MAY/JUNE 2009 DURING CONSTRUCTION. FINAL LIMITS MAY VARY BASED UPON VERIFICATION SAMPLING RESULTS.

0 250 500
Feet
GRAPHIC SCALE

EXXONMOBIL CORPORATION
FORMER LAIL PROPERTY
POST-INTERIM REMEDIAL MEASURE
ECOLOGICAL RISK ASSESSMENT

SEDIMENT AROCLOR THIESSEN POLYGON ESTIMATES

ARCADIS

FIGURE
3-5

Post RA Results

- Slide 25 shows various views of post RA restoration
- Slide 26 shows various views of post RA planting




Excavation Results

- 87,600 cubic yards of material removed (30,000-40,000 cubic yards contained ASM)
- $46.2 million, approximately $0.5 million estimated for implementing 5 year plan
- Excavation of sample locations above 1 ppm

5 Year Sampling Plan

Location	Sample Type	Year	Parameter
Embayment	Forage fish tissue	1 (3, 5 if needed)	PCB Aroclors
Embayment	Young of the year tissue	1 (3, 5 if needed)	PCB Aroclors
Embayment	Sediment	1 (3, 5 if needed)	PCB Aroclors
Mantua Creek	Forage fish tissue	(5 if needed)	PCB Aroclors
Mantua Creek	Co-located sediment	(5 if needed)	PCB Aroclors
Little Mantua Creek	N/A	N/A	N/A

Historic Data for Comparison

Embayment	Mantua Creek	Little Mantua Creek
4.06 mg/kg	1.92 mg/kg	1.15 mg/kg