USACE PBOW RAB
MEETING MINUTES
PLUM BROOK ORDNANCE WORKS
March 11, 2010

Attendees

Rick Meadows, USACE Huntington
Lisa Humphreys, USACE Huntington
Lannae Long, USACE Nashville
Peg Kingsley, RAB Member
Janet Bohne, RAB Member
John Blakeman, RAB Member
Mike Parker, RAB Member
Bob Lallier, NASA
Archie Lunsey, Ohio EPA NWDO
Steve Downey, Shaw Environmental
Mike Gunderson, Shaw Environmental
Eric Dodrill, Erie Soil and Water Conservation
Sharon Barnes, Barnes Nursery
Dan Cashbaugh, TMG Services, Inc.
Helen Owens, Stillwater Environmental

Agenda

- PBOW FUDS Website Review – Helen Owens, Stillwater Environmental Services, Inc.
- Status of TNT Area C Remediation – Lisa Humphreys, USACE LRH
- Update - Reservoir No. 2 Burning Grounds – Lannae Long, USACE LRN
- Update – Acid Areas 1, 2, and 3 – Lannae Long, USACE LRN
- Update – Current Field Work – Mike Gunderson, Shaw Environmental
- Update – Groundwater Project – Rick Meadows, Project Manager, USACE LRH
- Other Topics
- Schedule Next RAB

PBOW FUDS Website Review

Helen Owens, Stillwater Environmental Services, demonstrated the features of the website, including the document search features and project names and numbers. The RAB members and guests were invited to review the web site and make comments or suggestions for improvements. The Web link was provided on the meeting notice and agenda.

Status of TNT Area C Remediation (Project 1815)

Lisa Humphreys, USACE LRH, updated the RAB on the project. The contract was awarded in December 2009. Work plans are being drafted and field work is expected to start in late June 2010. The project is currently scheduled for a 13-month field effort. USACE will update the RAB at future meetings. The 3rd quarter RAB meeting may be too early for a site visit to really see the remedial project in action. The 4th quarter RAB or a special RAB may be a better time for the site visit by the RAB.

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Reservoir No. 2 Burning Ground (Project 1812)
Lannae Long, USACE LRN updated the RAB on the project. The Risk Assessment has been finalized and the Feasibility Study is underway.

Acid Area 1 (Project 1823)
Lannae Long, USACE LRN, updated the RAB on the project. The draft Risk Assessment report will be issued at the end of March for 60-day review.

Acid Area 2 & 3 (Project 1823)
Lannae Long, USACE LRN, updated the RAB on the project. Additional sampling was conducted in the winter, USACE is waiting on sample results before deciding if additional delineation is required.

Current Field Work (Projects 1817, 1821, 1822, and 1825)
Mike Gunderson, Shaw Environmental, provided an update on the current field activities. Mr. Gunderson's presentation is included as part of these minutes.

Update – Groundwater Project (Project 1826)
Rick Meadows, Project Manager, USACE LRH, provided an update on the groundwater project. The groundwater project covers the three manufacturing areas (TNT A, B, and C) and Red Water Ponds Areas (West Area and Pentolite Road).

USACE is preparing an addendum to the groundwater Feasibility Study which will include another alternative that includes monitoring and/or institutional controls.

USACE's technical approach includes the following steps:

- Presentation of the Proposed Plan for No Further Action for public and regulator comment
- Receipt of public and regulator comments
- Address public and regulator comments in the Responsiveness Summary
- Prepare Decision Document incorporating Responsiveness Summary (Selected No Further Action remedy can be modified in the Final Decision Document based on comments received during the Public Comment Period)

The RAB and Mr. Lunsey with Ohio EPA expressed that they plan to submit significant comments that will support their position that monitoring should be done for the groundwater at and down gradient of PBOW. Jan Bohne, RAB Member, requested to see Ohio EPA's comments before the end of the comment period. Mr. Lunsey confirmed they can be provided to them.

Other Topics

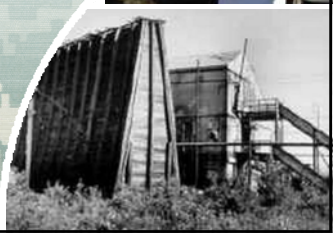
- Rick Meadows informed the RAB that no comments were received on the TNT A Proposed Plan during the Public Comment Period that closed on 13 January 2010 and that the USACE is proceeding with a Decision Document for TNT Area A. The Decision Document is currently under internal review. The remediation technology will be basically the same as what is going to be used at TNT C.

Next RAB Meeting

The next RAB Meeting is scheduled for Tuesday June 15, 2010.

Fieldwork Update

Michael Gunderson
Shaw E&I, Inc.,
Knoxville, Tennessee
11 March 2010



US Army Corps of Engineers
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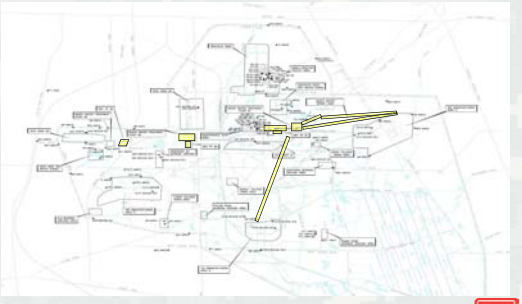
Site Locations



Wastewater Treatment Plant #1

- Soil
  - 10 soil borings completed, 27 soil samples collected
    - Surface soil (max. detections shown in parenthesis)
      - Three nitroaromatics, 4ADNT (2.31 ppm), 2ADNT (3.09 ppm), and 2,4,6-TNT (26.9 ppm) were detected in surface soil
      - Benzo(a)pyrene was the only SVOC constituent detected at a concentration of 0.115 ppm.
    - Subsurface soil
      - 4ADNT (2.95 mg/kg), 2ADNT (7.74 mg/kg), 1-3 dinitrobenzene (0.922 mg/kg), 2,4-DNT 9.47 mg/kg)), 2,6-DNT (2.03 mg/kg), and TNT (181 mg/kg) were detected

Wastewater Treatment Plant #1

- Overburden Groundwater
  - Six piezometers installed
    - 4ADNT (1.66 ug/L), 2,4-DNT (8.09 ppb), and 2,6-DNT (4.14 ppb) in one piezometer.
  - Three overburden wells installed
    - 4ADNT (1.3 ug/L), 2ADNT (2.2 ug/L) 2,4-DNT (1.7ppb), 2,6-DNT (1.7ppb), TNT (1.7 ug/L) in one well.
- Bedrock Groundwater
  - Three bedrock wells installed
    - Nitroaromatics were not detected.

Wastewater Treatment Plant #3

- Soil
  - 9 soil borings completed, 24 soil samples collected
    - Surface soil (max. detections shown in parenthesis)
      - Only 2ADNT and TNT detected at low (<1 mg/kg) concentrations in two locations
    - Subsurface soil
      - Nitroaromatics were not detected
- Overburden Groundwater
  - Six piezometers installed
    - Nitroaromatics were not detected
  - Three overburden wells installed
    - 1,3-DNB, 2,4-DNT and 1,3,5-TNB detected at low (<0.3 ug/L) in one well.
- Bedrock Groundwater
  - Three bedrock wells installed
    - Nitroaromatics were not detected

Ash Pit #1

- Soil
  - 12 soil borings completed, 24 soil samples collected
    - Surface soil/subsurface soil
      - Nitroaromatics were not detected
      - Low levels (less then 2 mg/kg) of PAHs in ash layer in one surface sample
      - In general, metals were within 2X background concentrations
- Overburden Groundwater
  - Six piezometers installed
    - 4ADNT detected at low (0.342J ug/L) in one sample
  - Three overburden wells installed
    - 2-NT and 4-NT detected at low concentrations (<0.20 ug/L) in one sample
- Bedrock Groundwater
  - Three bedrock wells installed
    - Nitroaromatics were not detected

Ash Pit #2

- Soil
  - 8 soil borings completed, 27 soil samples collected
    - Surface soil/subsurface soil
      - Nitroaromatics were not detected
      - Sporadic low level PAH detections
      - In general, metals were within 2X background concentrations (beryllium is the exception)
- Overburden Groundwater
  - Seven piezometers installed
    - Nitroaromatics were not detected
  - Three overburden wells installed
    - Nitroaromatics were not detected
- Bedrock Groundwater
  - Three bedrock wells installed
    - Nitroaromatics were not detected

Ash Pit #3

- Nesting eagles have disrupted field program
- Pond and utilities prevented deep soil borings and well installation
- Alternate approach
  - Use shallow soil sampling to determine presence/absence of contamination in ash layer and underlying native soil
    - Ash layer generally in upper two feet of soil
    - 8 borings completed, 16 soil samples collected
    - Low level of PAHs in one sample (less than 0.3 mg/kg)
    - Metals generally within 2X background concentration
  - Incorporate findings from other ash pits to evaluate if there is a concern for leaching to groundwater

Locomotive Building

- Soil
  - 10 soil borings completed, 19 soil samples collected
    - Surface soil/subsurface soil
      - Nitroaromatics not detected in surface soil
      - 2,4-DNT (1.37 mg/kg), 2,6-DNT (0.842 mg/kg) and 2-NT (2.34 mg/kg) detected in one subsurface soil sample
- Overburden Groundwater
  - Seven piezometers installed
    - Seven nitroaromatics were detected in one groundwater sample including 2,4-DNT (17.2 ug/L) and 2,6-DNT (15.1 ug/L)
  - Three overburden wells installed
    - Similar results for nitroaromatics for 2,4-DNT (17.8 ug/L) and 2,6-DNT (12.4 ug/L) as well as BTEX and chlorinated solvents
- Bedrock Groundwater
  - Three bedrock wells installed
    - Nitroaromatics and chlorinated solvents were not detected

Railcar Wash Area

- Soil
  - 8 soil borings completed, 14 soil samples collected
    - Surface soil
      - 2,4-DNT (1.13 mg/kg) detected in one sample
    - Subsurface soil
      - 2,4-DNT (5.68 mg/kg), 2,6-DNT (2.12 mg/kg) and 2-NT (22.7 mg/kg) detected in one subsurface soil soil sample
- Overburden Groundwater
  - Four piezometers installed, low recharge, no sampling
  - Three overburden wells installed
    - Low levels (< 1 ug/L) of 2,4-DNT and 2,6-DNT as well as 2-NT (2.1 ug/L)
- Bedrock Groundwater
  - Three bedrock wells installed
    - Nitroaromatics were not detected

TNTA Sewerlines

- Soil
  - 10 soil borings, 22 test pits completed, 40 soil samples collected
    - Surface soil
      - Nitroaromatics were not detected above 1 mg/kg
    - Subsurface soil
      - TNT detected at up to 1,380 mg/kg
- Overburden Groundwater
  - Ten piezometers installed
    - TNT detected at up to 59.9 ug/L in groundwater
  - Three overburden wells installed
    - Nitroaromatics were not detected
- Bedrock Groundwater
  - Three bedrock wells installed
    - Nitroaromatics were not detected

TNTB Sewerlines

- Soil
  - 15 soil borings, 20 test pits completed, 46 soil samples collected
    - Surface soil
      - Nitroaromatics were not detected
    - Subsurface soil
      - Nitroaromatics detected at low concentrations
        - TNT detected at up to 3.65 mg/kg
- Overburden Groundwater
  - Four piezometers installed
    - TNT detected at 2.1 ug/L in groundwater
  - Two overburden wells installed
    - Nitroaromatics were not detected
- Bedrock Groundwater
  - No bedrock wells installed

Future Work

- Report of Findings for all sites in preparation
- Risk Assessment workplans for all sites finalized except Locomotive Building (currently in review, finalized in April 2010)
- TNTB sewerline wells to be sampled May 2010
- Investigative trenching along steel sewerline May 2010