



## MEETING MINUTES

**PUBLIC MEETING  
PROPOSED PLAN FOR SOILS AND SEDIMENTS - TNT AREA B  
PLUM BROOK ORDNANCE WORKS  
SANDUSKY, OHIO  
July 16, 2009**

### Attendees

Rick Meadows, USACE RAB Co-Chairperson	Mike Gunderson, Shaw Environmental
Lisa Humphreys, USACE Huntington	Mary Mischler, Barnes Nursery
Lannae Long, USACE Nashville	Helen Owens, Stillwater Environmental
Paul Jayko, OEPA NWDO	Dean Houman, visitor

### Meeting Agenda

The agenda for the meeting was the presentation of the Proposed Plan for Soils and Sediments – TNT Area B – Former Plum Brook Ordnance Works, Sandusky, Ohio.

### Meeting Minutes

- Rick Meadows called the meeting to order.
- Mr. Meadows indicated the Public Meeting initiated the 30-day public review period which runs from July 16 through August 15, 2009.
- Copies of the Proposed Plan were made available at the meeting and at the BGSU Firelands Library. The document is also available on the USACE website at <http://www.lrh.usace.army.mil/projects/current/derp-fuds/pbow/>.
- Upon completion of the 30-day public review period, Public Review comments will be addressed in a Responsiveness Summary which will be included in the Final Decision Document and archived in the Administrative Record.
- USACE will reassess any significant comments submitted from the public review that may change the direction of the project plan.
- Mr. Meadows introduced Lannae Long, USACE Nashville District to present the Proposed Plan for Soils and Sediments – TNT Area B – Former Plum Brook Ordnance Works, Sandusky, Ohio.
- Ms. Long presented the Proposed Plan for Soils and Sediments of the TNT B Manufacturing Area of the Former PBOW. The presentation is attached. The No Action Alternative is proposed in the Proposed Plan. No Action Alternative fulfills the seven NCP 40 CFR 300.430 performance remedial criteria. The two NCP modifying criteria, are OEPA comment and acceptance of the proposed plan, and community comment and responsiveness of the Proposed Plan.

- Public and OEPA comments should be sent to Rick Meadows by 15 August 2009, and his contact information is located on the lower left corner of the front page of the Proposed Plan.
- Upon completion of Ms. Long's presentation, Rick Meadows asked for questions/comments. A correction was made to Rick Meadows' email address ([Richard.L.Meadows@usace.army.mil](mailto:Richard.L.Meadows@usace.army.mil)) on the cover of the Proposed Plan document.
- There were no comments from the meeting attendees.

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**Proposed Plan for Soils and Sediments  
TNT Area B  
Former Plum Brook Ordnance Works,  
Sandusky, OH**

Public Briefing  
16 July 2009

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**Presentation Outline**

- Purpose of the Proposed Plan
- Community's role in TNTB Proposed Plan
- Present the proposed alternative
- Present summary of the RI/FS, risk assessments, and NTCRA that lead to the conclusion of the proposed alternative
- Present how the alternative meets the NCP 9 remedial criteria

1

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**Purpose of the TNT Area B Proposed Plan**

- Present the Preferred Alternative proposed for cleanup of contaminated soils and sediments
  - Based on results of RI/FS and NTCRA
  - Prevents human exposure to soil containing constituents of concern (COCs) at concentrations above remediation goals
  - Reduces potential ecological hazards
- Provide for community comment

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**Community Involvement**

- The Proposed Plan is made available to the public for a 30-day review and comment period
- July 16, 2009 through August 15, 2009
- At the end of the 30-day review period, all comments will be:
  - documented in the administrative record (AR),
  - evaluated and incorporated into the overall remediation plans, if deemed feasible by USACE,
  - and included in the Responsiveness Summary of the Decision Document

2

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**PBOW Site Map**

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**TNT B Site Map**

3

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**Summary of Selected Response Action**

- The only alternative considered is the No Action Alternative for TNTB Soils and Sediments
- The selected response action will be documented in a Decision Document for TNTB by the USACE

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**Summary of TNTB RI**

- Summary of remedial investigation (RI) fieldwork
  - Field investigation conducted in 1998
  - 431 soil samples
  - 4 surface water samples, 2 RI, 2 SI
  - 7 sediment samples, 5 RI, 2 SI

4

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**Summary of TNTB RI (cont.)**

- 21 TNTB soil areas were investigated
  - DNT Processing 412, 415
  - Waste Water Settling Tanks 417, pipes
  - Process line 5, 451, 452, 453, 456, 459, NENail
  - Process line 6, 461, 462, 463, 466, 469, NWNail
  - Process line 7, 471, 472, 473, 476, 479
- SW and Sed – lack of site related chemical detection and no further investigation

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**Summary of TNTB RI HHRA (2000)**

- Current and future scenarios evaluated including resident, construction worker, grounds keeper, and indoor worker
- Decisions were based on unrestricted use resident
  - Soil ILCR  $1 \times 10^{-3}$  risk, HI 244
  - 13 COCs identified
    - 2-ADNT, 4-ADNT
    - 2,4-DNT, 2,6-DNT
    - TNT, 2-NT
    - Aroclor 1254, Aroclor 1260
    - PAHs – BaP, BaA, BaF, DahA, I123cdP

5

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**Summary of TNTB RI Eco Risk (2000)**

- Eco setting – old field, shrub thicket, meadow
- Mammalian, avian and herpetian
- Unlikely any rare, threatened or endangered species
- Terrestrial indicator species
  - Mice HQ4970, Shrew HQ18000, Wren HQ40300
  - TNT, 4ADNT, 2ADNT, Aroclor 1260
- Reduction based on HH will reduce HQ for Eco

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**Summary of TNTB FS (2001)**

- Soils COCs RG based on unrestricted use resident and balanced with reduction of potential for adverse ecological effects
- Identified 13 building areas and 30 excavations to meet RGs

Bld 412 - 3	Bld 466 - 4
Bld 417 - 4	Bld 472 - 2
Bld 452 - 2	Bld 473 - 1
Bld 453 - 1	Bld 476 - 2
Bld 456 - 7	NENail - 1
Bld 462 - 1	NWNail - 1
Bld 463 - 1	

6

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**Summary of TNTB NTCRA**

- Action Memorandum 2003
- Alternatives considered for TNTB Soil
  1. No Action
  2. In-situ chem oxidation, excavation, off-site disposal
  3. Excavation, ex-situ stabilization, off-site disposal (most cost effective)
  4. Excavation, on-site composting, off-site disposal
- Alternative 3 chosen, but modified to include windrow composting for high conc. of nitroaromatics

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**Summary of TNTB NTCRA (cont.)**

- 2 phases documented 2006, 2007
- 11,811 total cubic yards excavated
- \$3.7 million
- 8 building sites below RGs and closed 2006 for PCBs, PAHs and Nitroaromatics
- 5 building sites below RGs and closed 2007 for Nitroaromatics

7

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**Summary of TNTB NTCRA PCBs**

- RG Aroclor 1254 0.16 mg/kg
- RG Aroclor 1260 2.87 mg/kg
- Confirmation samples average of each excavation were below respective RGs, or non-detect
- RGs based on unrestricted use

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**Summary of TNTB NTCRA PAHs**

- RG Benzo(a)anthracene 5.43 mg/kg
- RG Benzo(b)fluoranthene 5.43 mg/kg
- RG Benzo(a)pyrene 0.54 mg/kg
- RG Dibenz(a,h)anthracene 0.65 mg/kg
- RG Indeno(1,2,3-cd)pyrene 5.43 mg/kg
- Confirmation samples average of each excavation were below respective RGs, or non-detect
- RGs based on unrestricted use

8

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**Summary of TNTB NTCRA Nitroaromatics**

- RG ILCR=1x10<sup>-5</sup>, HI=1 for total nitroaromatics 2ADNT, 4ADNT, 2,4DNT, 2,6DNT, 2NT, 2,4,6TNT
- Confirmation samples average of each excavation were below respective RGs, or non-detect
- RG based on unrestricted use

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**Summary of Evaluated Alternatives**

- Alternative 1 – No Action
- No other alternative was considered
- NTCRA lowered soil risk to acceptable levels for human unrestricted use, and reduced the potential for adverse ecological effect
- NTCRA provided overall protectiveness to human health and environment
- Site as it is today is protective of human health and the environment

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**Proposed Action Performance Criteria**

- 1 No Action is protective of human health and the environment NTCRA met this criteria
- 2 Complies with Applicable or Relevant and Appropriate Requirements (ARARs) met by NTCRA
- 3 Long-term effectiveness met by NTCRA
- 4 Permanently reduces toxicity and mobility of contaminants met by NTCRA
- 5 Short-term effectiveness met by NTCRA
- 6 Implementability – no action to implement
- 7 Cost -\$0

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**Proposed Action Modifying Criteria**

- 8 State Agency OEPA Support/Acceptance
- 9 Community Acceptance
- Community comment period begins today

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**TNT B Proposed Plan Summary**

- The Proposed Plan is made available to the public for a 30-day review and comment period
- July 16, 2009 through August 15, 2009
- Summary of RI/FS, risk assessments and NTCRA to support the No Action Alternative
- Summarized 9 criteria and how the NTCRA already met the 7 performance criteria

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**Comments can be directed to:**  
 U.S. Army Corps of Engineers, Huntington District  
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