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Guterl Specialty Steel Site, Technical Project Planning Session

August 2005





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Formerly Utilized Sites Remedial Action Program (FUSRAP)

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FUSRAP – an environmental program created in 1974 under the Atomic Energy Act of 1954

FUSRAP was transferred to USACE in 1997

USACE focus on radiological contamination from MED/AEC activities



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Formerly Utilized Sites Remedial Action Program (FUSRAP)

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USACE is the Lead Federal Agency

- Protect human health and the environment
- Execute the program in the most safe, effective, and efficient manner
- Comply with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)



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Responsibilities

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USACE:

- Follows CERCLA – USACE is not a Regulator (considers ARARs, TBCs, stakeholders and public views)
- Completes remediation, if required
- Transfers site back to USDOE upon completion



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Responsibilities

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USACE:

- Coordinates with other Federal Agencies
- Executes Cooperative Agreement with States
- NYSDEC is lead State Agency
 - coordinates with other NYS Agencies



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Responsibilities

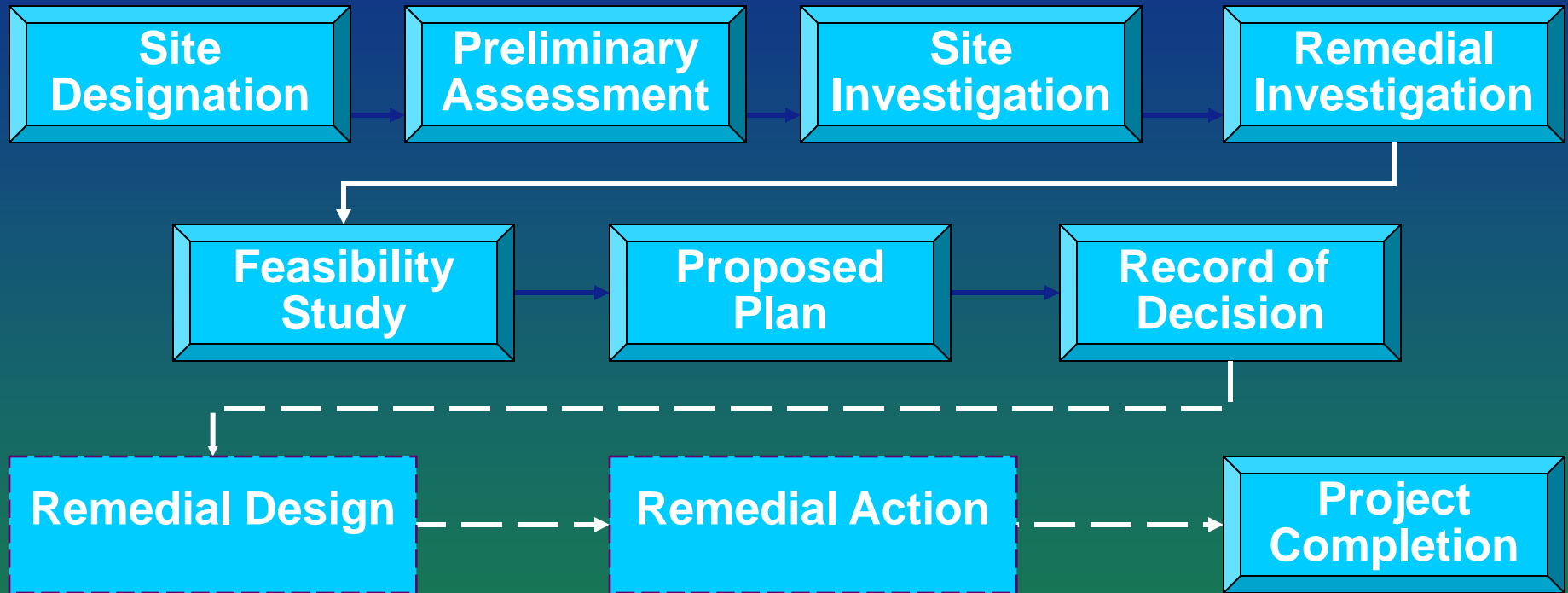
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USACE:

- Ensures Safety to workers and the public
- Establishes Policies
- Determines Legal Liabilities
- Provides an Open Forum



Comprehensive Environmental Response Compensation and Liability Act (CERCLA) Process for FUSRAP



Notes:

1. No further action may be recommended if determined site poses no risk.
2. A removal action may be initiated at any time during the process if human health or the environment is in immediate danger.



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Technical Project Planning Purpose

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Identify Project and Data Quality Objectives

Satisfy Project Objectives

Develop Data Collection Options

Discuss Data Collection Program

Improve Efficiency



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Guterl Specialty Steel Site





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Guterl Specialty Steel Site Lockport, New York

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Earth Tech



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Existing Site Information and Data Summary of Site Investigations

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- Non-radiological focus
Five investigations (1988 to 2000)
- Radiological focus
Four investigations (1978 to 1999)
- Summary and Assessment
One investigation (USACE PA/SI 2001)



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Existing Site Information and Data (Non-Radiological)

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NYSDEC 1988

Phase I Investigation, January 1988

Groundwater from Landfill Area analyzed for metals, phenol, total halogenated organics, TOC, pH, oil and grease, and conductivity.



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Existing Site Information and Data (Non-Radiological)

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NYSDEC 1991

Preliminary Site Assessment, January 1991

Additional Groundwater Samples from
Landfill Area analyzed for metals, phenol,
total halogenated organics, TOC, pH, oil and
grease, and conductivity



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Existing Site Information and Data (Non-Radiological)

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NYSDEC 1994

*Preliminary Site Assessment Evaluation
Report of Initial Data, April 1994*

Subsurface Soil, Surface water, Sediment,
Groundwater, and Waste Samples from
Landfill Area

Analyzed for metals, pesticides, PCBs,
VOCs, SVOCs, EP Toxicity, Corrosivity,
Ignitability, and Reactivity



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Existing Site Information and Data (Non-Radiological)

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USEPA 1998

Final Report, April 1998.

Surface and Subsurface Soil and Waste Samples from Excised Area (inside and outside of Buildings 2 and 3) analyzed for heavy metals (X-Ray Fluorescence and lab), TCLP metals and PCBs.



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Existing Site Information and Data (Non-Radiological)

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NYSDEC 2000

*Immediate Investigative Work Assignment Report,
October 2000*

Surface and Subsurface Soil, Groundwater, Surface water, and Sediment Samples from Excised Area (inside and outside of buildings) as well as outside of Excised Area.

Analyzed for metals, pesticides, PCBs, VOCs, SVOCs, and TCLP.



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Existing Site Information and Data (Radiological)

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Department of Energy (DOE) 1978
*Final Report Radiological Survey of the Former
Simonds Saw and Steel, September 1978*

Survey performed in 1976 by ORNL

Residual alpha and beta-gamma radiation levels measured inside rolling mill building and forging shop.

Soil samples analyzed for U-234, U-235, U-238, Ra-226, and Th-232 from beneath removable floor plates.



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Existing Site Information and Data (Radiological)

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(Cont'd)

Department of Energy (DOE) 1978 - *Final Report Radiological Survey of the Former Simonds Saw and Steel*, September 1978

Air samples in rolling mill analyzed for Rn-222 and daughter products.

Water samples from drainage and canal analyzed for U-238, Ra-226, and Th-232.



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Existing Site Information and Data (Radiological)

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Bechtel National, Inc. (BNI) 1981

*Preliminary Engineering and Environmental
Evaluation of the Remedial Action Alternatives for
the Former Simonds Saw and Steel Company Site
Final Report, November 1981*

Work Performed by Ford Bacon & Davis Utah Inc.
in 1980. Cinder samples from inside buildings in
Excised Area

Analyzed for U-238, Ra-226, and Th-232



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Existing Site Information and Data (Radiological)

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NYSDEC 1994

*Preliminary Site Assessment Evaluation Report
of Initial Data, April 1994*

Gamma, alpha, and beta surveys of Landfill
Groundwater and Surface Water Samples from
Landfill Area

Analyzed for gross alpha and gross beta



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Existing Site Information and Data (Radiological)

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Oak Ridge Institute for Science and Education (ORISE)
1999 - *Radiological Survey of the Guterl Specialty Steel Corporation, December 1999*

Surface and Subsurface Soil and Sediment Samples from
Excised Area (inside and outside of buildings).

Sediment (residue from pit areas) Soil (beneath concrete
floors) inside buildings.

Analyzed using gamma spectroscopy for U-235, U-238,
Ra-226, and Th-232.



Exposure Rate (ER) Summary

- ER is measured in microRoentgens/hour (uR/hr) at 1 m
- ER backgrounds inside the buildings are as low as 5 uR/hr
- Outside ER backgrounds are as low as 3 uR/hr
- Maximum ER compared to the Low ER (inside or outside as appropriate)
 - Buildings 1, 2, 3, 4/9 and 6 are ~2x
 - Building 8 is ~12x
 - Outdoors in the excised area ~17x
 - Outdoors in “other” properties ~8x



Surface Radioactivity

Floors, Lower Walls and Equipment (462 direct readings)

Buildings 2, 3, 4/9, 6, 8, and 24S => from 7% to 64% of direct readings by building are in excess of 5000 dpm/100cm²

B3, B8, and B24S => removable a is in excess of 20 dpm/100cm²

B24N and B35 have no readings above apparent background levels



Surface Radioactivity

Upper Surfaces (48 direct readings)

B3, B4/9 and B24S => from 22% to 67% of the direct readings by building are in excess of 5000 dpm/100cm²

B24S => removable a in excess of 20 dpm/100cm²

B24N and B35 have no readings above apparent background levels



Building Media Concentrations

- Floor/Soil (102 samples)
 - Buildings 3, 6, and 8 => elevated U and/or Th
 - Buildings 2, 4 => elevated U
 - Buildings 1, 24, 35 => no samples reported
- Sub-Floor (27 samples)
 - Buildings 2, 3, 8, 24S => elevated U and/or Th
 - Buildings 1, 6, 24N, 35 => no samples reported
- Sediment (6 samples)
 - Buildings 3 and 8 => elevated U
 - Oil/Water Separator => U above background



Exterior Soil Concentrations (pCi/g)

- Systematic Grid (213 samples)
1% with U-238 > 35 and/or Th-232 > 5
Max => U-238 = 51, U-235 = 2.6, Th-232 = 15
- Biased by Elevated Readings (48 samples)
100% with U-238 > 35 and/or Th-232 > 5
Max => U-238 = 55K, U-235 = 1.1K, Th-232 = 95



Exterior Soil Concentrations (pCi/g) (cont'd)

Borehole (118 samples at various depths)

33% with U-238>35 and/or Th-232>5

Max => U-238=18K, U-235=0.5K,
Th-232=371

- Class 3 Area (18 samples)

0% with U-238>35 and/or Th-232>5

Max => U-238=4.6, U-235=0.8,
Th-232=2.2



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Existing Site Information and Data Assessment Report

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USACE 2001 - *Preliminary Assessment/Site Inspection, April 2001*

- Conducted by USACE following determination that the site is eligible for inclusion into FUSRAP
- Evaluated existing information for exposure via air, soil, water, and building pathways.
 - Included a site visit and a structural inspection, and recommendations for further site characterization



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Existing Site Information and Data

Conclusion

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- Site investigations have spanned 27 years
- Areas of investigation have included the landfill, and interior/exterior of structures in the excised area



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Existing Site Information and Data

Conclusion

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- Media sampled have included air, soil, groundwater, and building surfaces
- Analyses have included chemical and radiological constituents; however, not all areas have been sampled for all constituents



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Existing Site Information and Data Conclusion

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Begin TPP

Ms. Heidi Novotny Facilitator