



US Army Corps
of Engineers
Buffalo District


Formerly Utilized Sites Remedial Action Program (FUSRAP)

Briefing for the City of Tonawanda

Tonawanda Landfill and Mudflats Area

Tonawanda, New York

June 9, 2006

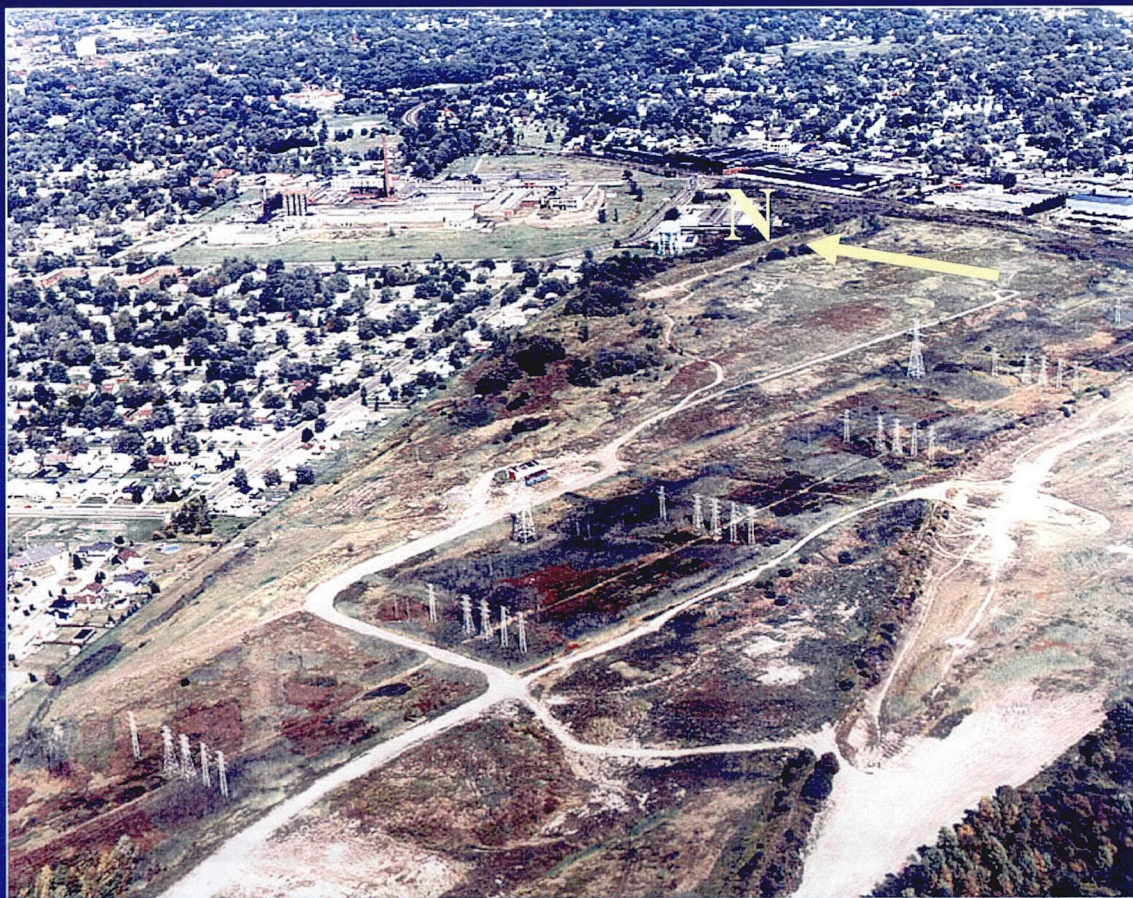

Project Manager
Buffalo District
U.S. Army Corps of Engineers



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Purpose of Briefing

- **Relay** site history
- **Report** results of the Remedial Investigation
- **Explain** Corps' conclusions
- **Discuss** next steps



Tonawanda Landfill and Mudflats Area



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Site History

- 1930s - 1989** - Landfill accepted municipal waste, incinerator ash, and sludge. Mudflats Area was vacant except for incinerator. (Town)
- May 1984** - Aerial survey conducted for Am-241, which was detected in Landfill. Slightly elevated radioactivity also detected in Mudflats Area. (NYSDOH)
- Feb. 1988** - Radiological characterization of Landfill for Am-241 completed. (Town)
- Apr. 1989** - Town receives approval from NYSDOH to close Landfill with Am-241 in place. (Town)



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Site History (Continued)

- | | |
|------------------|---|
| Apr. 1990 | - Mobile gamma scan of areas surrounding Linde FUSRAP Site. Spot with elevated radioactivity in Mudflats Area. (DOE) |
| Sep. 1991 | - Radiological survey of Landfill and Mudflats Area. Small areas of elevated radioactivity found in both. (DOE) |
| Dec. 1992 | - Designated as Vicinity Property of Linde FUSRAP Site. Restricted to areas containing radioactive materials from activities of DOE's predecessors. (DOE) |
| Nov. 1994 | - Additional sampling in Landfill and Mudflats Area. (DOE) |
| Sep. 2001 | - Remedial Investigation sampling completed in Landfill and Mudflats Area (USACE) |



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Remedial Investigation Soil Sampling Results

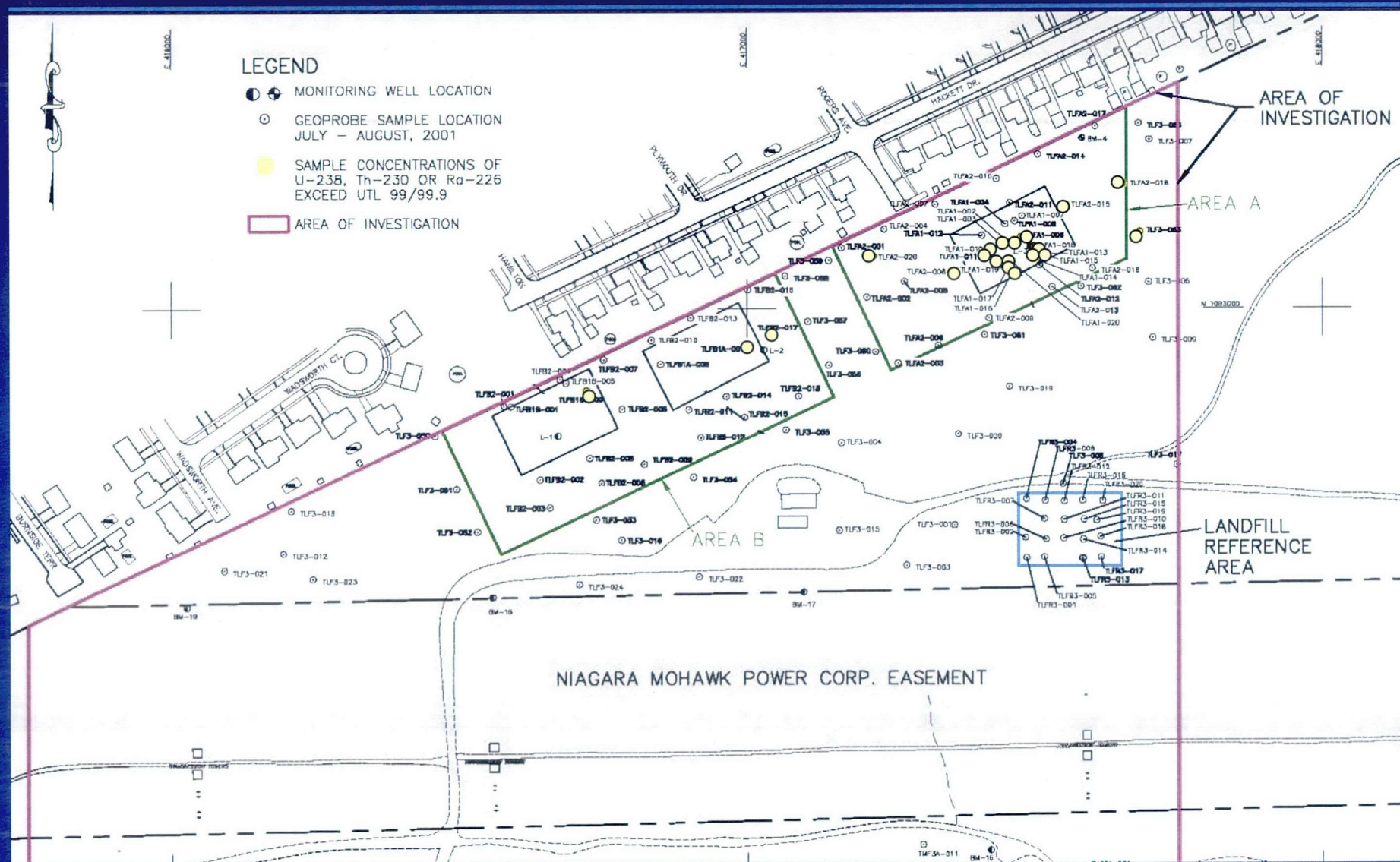
- Small areas of soil with concentrations above background in the Landfill
- In the Mudflats, only two sample locations had results above background
- Site meets risk and dose guidelines



**Field Work –
Soil Sampling**

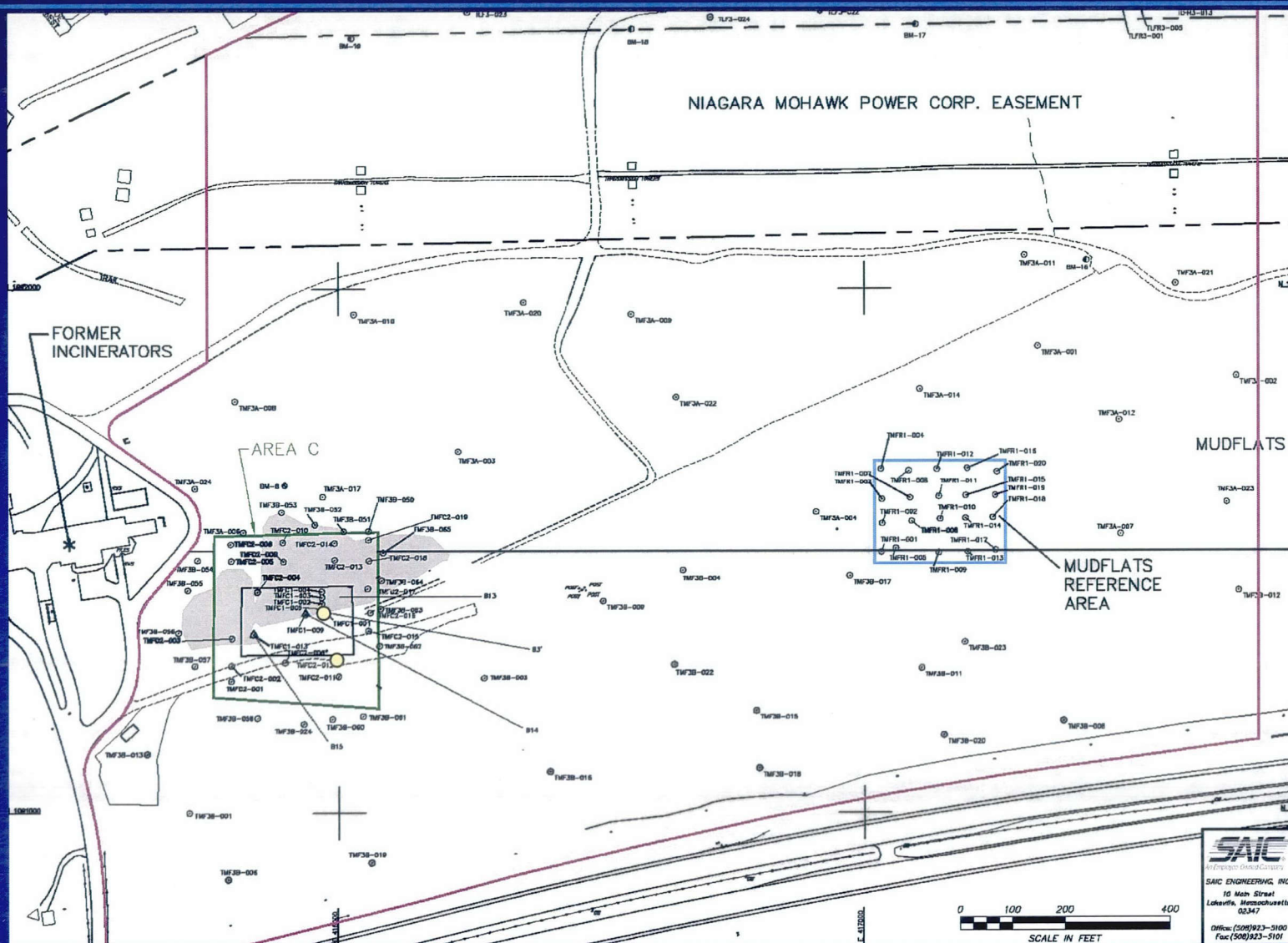


Landfill Investigation Results





Mudflats Investigation Results





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Remedial Investigation Groundwater Sampling Results

- One out of ten wells sampled had uranium above Federal drinking water limits
- Groundwater is not a drinking water source
- Town's landfill cap will reduce potential for migration



**Field Work –
Soil Sampling**



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Landfill Risk Assessment

[CERCLA Risk Range is 1 in One Million *to* 1 in Ten Thousand]

User	Lifetime Risk
Recreational - Current	1.3 in Ten Thousand
Recreational - After Cap	Less than 1 in One Million



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Mudflats Area Risk Assessment

[CERCLA Risk Range is 1 in One Million *to* 1 in Ten Thousand]

User	Lifetime Risk
Recreational	3.0 in Ten Million
Industrial/Commercial	3.8 in One Million
Residential	7.9 in One Hundred Thousand



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Landfill and Mudflats Dose

User	Dose (mrem/ year)	Federal Limit (mrem/year)	State Guideline (mrem/year)
Landfill Recreational	6.0	25	10
Mudflats Recreational	0.013	25	10
Mudflats Industrial	0.79	25	10
Mudflats Residential	4.3	25	10



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Conclusion

- Risk for current and likely future land uses in Landfill and Mudflats are within CERCLA risk range
- Doses for current and likely future land uses are below Federal limits and New York State guidelines
- No FUSRAP remedial action required by CERCLA for the Tonawanda Landfill and Mudflats Area



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Next Steps

- Prepare a Proposed Plan with recommendation for site closure (Oct 06)
- Hold public meeting (Oct 06)
- Prepare Record of Decision documenting public comments and final site disposition (Sep 07)