

The Coalition on West Valley Nuclear Wastes

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Figure 15. Trench in the SDA¹³

Comments

*Draft Environmental Impact Statement for Decommissioning and/or
Long-Term Stewardship at the West Valley Demonstration Project and
Western New York Nuclear Service Center
(DOE/EIS-0226-D [Revised])*

*Revision of A Draft Environmental Impact Statement for Completion of the
West Valley Demonstration Project and Closure or Long-Term Management of
Facilities at the Western New York Nuclear Service Center
(also called the Cleanup and Closure Draft EIS) (DOE 1996a)¹*

The Coalition has been concerned about and active in the decision process for the West Valley nuclear waste site for over thirty years. Since the Coalition is the original and oldest, continuously involved public stakeholder group at the West Valley site², the Coalition possesses the largest document base and longest institutional memory. The Coalition was formed initially as a coalition of the Springville Radiation Group in 1974 and Sierra Club's Radioactive Waste Campaign and was organized by Carol Mongerson, Henriette Gerwitz, Betty Cooke, Holly Nachbar, Dorothy Cairns and others in 1976.

The West Valley nuclear facility is the only waste site to have its very own legislation. The West Valley Demonstration Project Act (WVDPA)³ was passed by Congress in 1981 and signed into law by President James Carter. The spirit and intent of this act was to vitrify high-level liquid waste and to then decontaminate and decommission the facility. The law states that among other requirements:

- “(5) The Secretary shall decontaminate and decommission--,
- (A) the tanks and other facilities of the Center in which the high level radioactive waste solidified under the project was stored,
 - (B) the facilities used in the solidification of the waste, and
 - (C) any material and hardware used in connection with the project, in accordance with such requirements as the Commission may prescribe.”

West Valley is not the largest waste site in the United States, but it does have the dubious claim to the most hazardous complex soup of chemical and radioactive elements. The nuclear waste problems at West Valley should be regarded as a valuable opportunity for a research and development pilot plant with the ultimate goal of finding answers and procedures for

¹ 2008 DEIS, Chapter 1, Section 1.1, Page 1.1

² The Department of Energy was organized and activated in 1977.

³ West Valley Demonstration Project Act, 42 USC 2021a

decommissioning and decontamination.

In 1987, the Coalition entered federal district court to prevent the federal Department of Energy (DOE) from disposing of WVDP generated wastes onsite without first performing an EIS to examine fully the impacts of onsite waste disposal. The case was settled under a Stipulation of Compromise Settlement (SOCS) whereby DOE agreed not to dispose of Class A, B, and C wastes onsite without first performing such an EIS. The 1996 *site-wide* closure DEIS was the result of this lawsuit and settlement agreement. The SOCS stated that “the parties hereby agree that the closure Environmental Impact Statement process – including the scoping process – shall begin no later than 1988 and that this process shall continue without undue delay and in an orderly fashion consistent with applicable law, with the objectives of the West Valley Demonstration Project, available resources and mindful of the procedural processes (including public input) needed to complete the aforesaid Environmental Impact Statement.”

The Coalition's position that the site is physically unsuitable for the long-term storage, i.e. whether called “disposal” or “stewardship,” of radioactive wastes, remains unchanged from when the position was taken eight years later, in 1996, after release of the information contained in the 1996 *site-wide* closure DEIS. In fact, the evidence of erosion at the site personally accumulated in the intervening years plus additional information including that of the State-sponsored Full Cost Accounting Study (full title: “The Real Costs of Cleaning Up Nuclear Waste: A Full Cost Accounting of Cleanup Options for West Valley Nuclear Waste”) have reinforced our position and added a strong life-cycle economic justification.

The 2008 DEIS document Violated the Intent and Purpose of NEPA and the Stipulation

The 2008 Draft Environmental Impact Statement [DOE/EIS-0226-D (Revised)] violates both the intent and purpose of the law and the established procedural regulations that lie at the heart of the National Environmental Policy Act (NEPA) public decision process, making it inadequate as a decision tool for the Department of Energy (DOE), New York State Energy Research and Development Authority (NYSERDA) and/or the public.

This DEIS is not a revision, since the title and purpose was changed from ‘Cleanup and Closure’ to ‘Long-term stewardship’. Nor is it a supplement to the 1996 Cleanup and Closure *site-wide* DEIS. This draft is an entirely new entity that attempts to replace the legitimate 1996 DEIS. It presents a preferred alternative which was not mentioned thirteen years ago in the 1996 DEIS: a “Decommissioning or Long-Term Stewardship” alternative that does not offer or present any cleanup decision for more than 98% of the site’s wastes; indeed, an implied deferral of such a decision, for up to 30 more years, is a violation of the NEPA regulations regarding full disclosure of environmental impacts and the 1987 SOCS, particularly so since no endpoint or final status is declared or defined for the preferred alternative.

DOE/NYSERDA’s selection of this preferred “no decision” alternative is a subterfuge to permanently extend the 46-year old, onsite waste disposal blunder at this site that has been known to be leaking for decades. In the course of this unprecedented 22 year-old NEPA process, it is now obvious that “temporary onsite waste management” has become *de facto* “onsite waste disposal”.

The view of the Coalition is that DOE did not like the site erosion analysis and resultant huge offsite radiation dose predictions made by its own DEIS contractor, Science Applications International Corporation (SAIC), in the 1996 *site-wide* DEIS. Therefore, following the promulgation of the Nuclear Regulatory Commission (NRC) lax License Termination Rule (LTR) in 1997 (10 CFR 20 Subpart E), which condoned onsite “stewardship” of long-lived wastes as a license termination option, DOE subsequently aborted the scientifically valid analysis of 1996 *site-wide* DEIS, rather than do the proper thing: making any necessary,

substantiated changes in a Final EIS (FEIS) to the 1996 DEIS and then issuing the analysis-appropriate, site-wide Record of Decision (ROD) in a timely fashion.

This 2008 document is the end-product of an illegitimate manipulation of West Valley's 1996 NEPA site-wide cleanup and closure DEIS that began following promulgation by the NRC in 1997 of a much less stringent license termination rule, Title 10 CFR Part 20 Subpart E, *aka* the "LTR." That manipulation involved starting a new segmented process that produced a 2003 Waste Management DEIS and replacement of the 1996 site-wide closure DEIS with the 2008 Long-term Stewardship DEIS. In previous documents (ex. the 2003 DEIS Waste Management DEIS), the SOCS had been listed as a regulatory requirement, however this DEIS fails to accord the Coalition its unique and merited super-stakeholder status.

Instead, DOE segmented the review process into an "interim actions" waste management component "to allow work to continue" (the 2004 Waste Management FEIS) and a subsequent decision document (this 2008 DEIS). However, lacking a *site-wide* waste disposition ROD, many of the *onsite* waste management interim actions – ex. NDA plastic cover and slurry wall, tank drying and North Plateau plume treatment walls – are segmentation. This approach is inappropriate under NEPA and the Coalition's 1987 Stipulation of Compromise Settlement.

The seriously deficient erosion modeling and dose analysis of this 2008 DEIS (also performed by SAIC) has been framed with a view toward satisfying the lax (in comparison to the pre-LTR decommissioning regulatory regime, which required cleanup for unrestricted use in order for license termination to be granted) long-term onsite disposal requirements of NRC's 1997 LTR. It will enable DOE effectively to vacate the site in 8 years following NRC's expected approval of a "concentration averaging" (*aka* WIR) designation for the HLW tanks and remaining sludges.

The long-term offsite peak annual radiation doses calculated for this 2008 DEIS – "on the order of 100 millirems per year"⁴ – are up to three orders of magnitude, or 1000 times, lower than the peak doses presented in Appendix D of the 1996 DEIS. No justification of this dramatic reduction in offsite doses is given, however 100 millirems happens to be the maximum allowable dose under subsection 20.1403(e) of the NRC's lax 1997 LTR for license termination under institution control should such control be lost. *The dose analysis of the 1996 DEIS showed radiation dose levels far in excess of the maximum dose levels that would allow license termination under the subsequent 1997 LTR.*

The hundreds of comments received on the site-wide 1996 DEIS were shabbily treated and disregarded. Many comments were ignored. Sentences were taken out of context and rephrased, and the presumed intent, therefore, often was misinterpreted. This treatment of the 1996 DEIS public comments is an insult to all of the people and organizations who took the time and energy to deal seriously and convincingly with the 1996 DEIS. All of these comments should be addressed individually and thoroughly and that review process legitimately concluded with an FEIS and ROD.

The Coalition by reference incorporates the entirety of the 1996 Comments into this comment. For sustainability reasons, the document is not reproduced here.

The Coalition asserts that the scoping comments preceding the site-wide 1996 DEIS and the public comments submitted on the site-wide 1996 DEIS do not represent or constitute NEPA requirements of public participation in the scoping and comment period for the 2008 DEIS. The charge for 1987 scoping and site-wide 1996 DEIS comments was for Cleanup and Closure, not for Long-Term Stewardship and a phased decision process.

We have absolutely no guarantee or hope that comments submitted in response to this

⁴ 2008 DEIS Summary Document, Page 27

2008 DEIS document will have any impact on the FEIS. Therefore, given our position that this DEIS is illegal and our lack of confidence that public comments will be taken seriously, we advocate for yet another Draft EIS with a 6 month public comment period, before the Final EIS, to verify the seriousness with which DOE, NYSERDA and SAIC have considered the comments and suggestions. And, please, do not respond to this comment by saying that you simply are following the prescribed script of NEPA.

Derelictions, Peadillos, Inefficacies and Failings of the 2008 DEIS

The Coalition is troubled by the fact that the 1996 DEIS shows a full site clean-up timeframe of 29 years while the 2008 DEIS shows a timeframe of 64 years for a full clean-up. If we have learned only one thing about cleaning up physically unsuitable nuclear waste sites, it is that delay usually translates into much higher cleanup costs. For example, had the Sr-90 leak in the process building been properly addressed when it occurred during NFS operations in the 1960s, or even several years later when the resulting North Plateau plume was publicly identified, the cleanup cost would have been orders of magnitude lower (perhaps less than a million dollars in the first case). A whopping \$1.5 to \$2 billion is estimated now to fully excavate this expanding area of contamination, which is reported in the 2008 DEIS to affect approximately 1 million cubic yards of contaminated soils.⁵ This is the largest single cost component of the 2008 DEIS's full cleanup alternative and represents an appalling situation which is the result of incompetent oversight of Nuclear Fuel Services' operations and waste management by the NYS public authority corporation, NYSERDA and its predecessor, and regulatory failure on the part of NRC and its predecessor, Atomic Energy Commission, and New York State's regulatory agencies, NYS Department of Health (DOH), NYS Department of Environmental Conservation (DEC) and NYS Department of Labor (DOL).

Continuation of onsite waste management at this aggressively eroding site would be extremely unsound policy that is not supported by the erosion modeling and long-term economic analysis presented in both DOE's 1996 site-wide DEIS and the 2008 independent, State-sponsored Full Cost Accounting Study.

The geology expert of the latter study, Dr. Michael Wilson, pointed out a number of weaknesses and mistaken assumptions in the 2008 DEIS concerning the site's hydrology and geology, including the following:

- 1) No estimate of the impact of climate change, ie prediction of 30% greater rainfall and excursions weather events;
- 2) Avoids rapid-rate episodic removal phenomena, such as landslide removal of slopes;
- 3) 21 degree slope angle is not stable as DEIS assumes;
- 4) Franks Creek and gully profiles are currently convex up, not convex down; this means they will more rapidly and greatly cut down than predicted;
- 5) No worst case for gully initiation;
- 6) Gully heads (new gullies) are increasing at an alarming rate: dozens in recent decades as opposed to the expected dozens in 100s of years;
- 7) No estimates of increased erosion due to changes in land use, i.e. farming practices and areas, deforestation, paving etc.;
- 8) Insufficient consideration of the significance of the effects of sapping.

The 2008 DEIS greatly underestimates the necessary erosion control measures and their costs. The FCAS recommends many additional erosion measures and concludes that their costs are well more than an order of magnitude greater than those estimated in the 2008 DEIS.

In a geology presentation to the CTF, Tucker stated that the SIBERIA erosion modeling

⁵ The \$1.5 billion estimate is from the Full Cost Accounting Study and is due to an earlier start and more aggressive cleanup schedule. The \$2 billion estimate is the cost component of 2008 DEIS's full clean alternative.

used in the 2008 DEIS incorrectly predicts smoothing of the glacial terrain rather than gully incision with sharp edges retreating at a 21 degree dynamic angle. He concluded that this modeling is not capable of predicting the future topography with sufficient accuracy to meet the requirements of the LTR."

The Coalition is troubled by the fact that the 1996 site-wide Closure DEIS shows an erosion estimate that breaches the burial grounds within 1000 years, while the 2008 DEIS maintains the burial grounds will remain intact. There is no clear consensus among erosion experts that support the controversial erosion estimates in the 2008 DEIS. Therefore, decisions regarding the suitability of the site for long-term storage or stewardship cannot be justified based on the current information and analyses included in the 2008 DEIS.

The Coalition understands that the Main Plant stack ventilation system does not work, that the system is reliant upon back-up ventilation and that this has been an on-going years-long condition (possibly as far back as 1996) and assert that the DEIS wordsmithed and obfuscated this situation with "*Permitted portable outdoor ventilation enclosures are used to provide the ventilation necessary for the safety of personnel working with radioactive materials in areas outside permanently ventilated facilities or in areas where permanent ventilation must be augmented. One ambient air sampler continued operating in 2006 to monitor air near the onsite lag storage area.*" (DEIS 3.7.2). The Coalition presumes that this 'one ambient air sampler' was NOT in operation prior to 2006 and that it is now the only air sampler on duty. The ventilation system and air sampling procedures must be upgraded, fixed and guaranteed to protect workers and staff.

One aspect of living in Western New York is our unique weather patterns. Weather predictability is based on multiple models with a monumental amount of minute-by-minute readings and data in huge three-dimensional samples. Yet, weather forecasters admit that accuracy of predictability falls only within a range of four hours. Erosion modeling necessarily has to contain models of predictable weather event trends. A few days cannot be transformed to 100 or 1000 years of predictability. Tornado predictability⁶ relies on historical averages. 17 tornados in 20 years is not an adequate predictor of the fact that Western New York has had four tornados in the past month.

The onsite geomorphological impacts of recent excursionary meteorological events that occurred in August 2009 are significant. They should be carefully evaluated as part of a wider examination of the impacts that could be expected at the West Valley site from regional extreme weather events, both those that have already occurred and those that might be expected based on regional climate change trends. Such an evaluation is lacking in the 2008 DEIS, this must be corrected in the FEIS. Our comments on this issue are presented in Attachment 1 and are to be considered in toto as an integral part of these comments.

The Coalition is troubled by the fact that the 4 volumes (1369 pages) of the 2008 DEIS deal with less than 2% of the radioactive materials situation at West Valley nuclear facility. While minor sources of contamination are included in this 2%, the Coalition expected a *site-wide* EIS

⁶ 2008 DEIS Chapter 3. The frequency and intensity of tornadoes in western New York are low in comparison to many other parts of the United States. An average of about two tornadoes of short and narrow path length strike New York each year. From 1950 to 1990, 17 tornadoes were reported within 80 kilometers (50 miles) of the WNYNSC (WVNS 2004a). The probability of a tornado striking a 2.6-square kilometer (1-square mile) section of the WNYNSC was estimated to occur once every 10,000 years. For wind speeds less than or equal to 54 meters per second (121 miles per hour) (or a hazard probability level of 2.5×10^{-5}), straight-line winds are the more likely cause; for higher wind speeds, tornadoes are more likely. Straight-line winds are the dominant form of severe weather at recurrence intervals of less than 100,000 years (McDonald 1981).

that addresses, rather than leaves open and unresolved, waste disposition for more than 98% of the site's wastes. Every source of contamination is significant and a threat to public health and safety and the integrity of the environment.

Cost estimates for 2008 DEIS alternatives DO NOT mention and we assume DO NOT include a basic Cost/Benefit Analysis item of an asset referred to as Cost Avoidance, as in the case of dealing with a catastrophic release of radioactivity from the WV site. The noticeable absence of this item skews the possible true costs of an errant, stubborn strontium plume and aggressive erosion of the burial grounds, in particular.

In 1983, the Coalition was informed of a plutonium/kerosene leak from the NDA. We later learned that 11,000 gallons of this concentrated plutonium-laden kerosene had been buried in the NDA in the 1960's. DOE, in 1986, exhumed two holes and retrieved dry drums with ruptured welds and originally sealed with duct tape. We would like to know where that plutonium went and how many other drums and holes contain the same or other radioactive brews.

The decision-process for the illegitimate "Phase 2" is non-existent

The Supplemental Analysis, presumably being developed currently by DOE, is not mentioned in the 2008 DEIS as a decision tool, let alone whether any NEPA public participation will be accorded it. Given the unjustified termination of the 1996 site-wide DEIS, we can reasonably presume that any Supplemental Analysis will be formulated to justify DOE/NYSERDA's continuation of their "interim actions" (both prior to and after the illegitimate 2003 Waste Management DEIS) which are not part of the 1996 DEIS and improper under NEPA. Together with the 2008 DEIS's planned "phase 1" onsite waste management activities, these "interim actions" constitute a *de facto* onsite waste management decision, which will easily lead to a publicly unreviewable final decision of onsite disposal in "phase 2" of the 2008 DEIS.

There is no evidence of a commitment to any further degree or level of clean up or decommissioning beyond the use of institutional control in "phase 2".

Public participation opportunities during Phase 2 are not provided, indeed are not even mentioned. DOE's refusal to commit to a full NEPA review process for the final determination most of the site's wastes under this "wait until later" approach, in the face of a serious human health and environment threat, is not only unconscionable but does not satisfy NEPA or the 1987 SOCS.

NRC/DOE application of the lax LTR provisions will allow the West Valley site to be "decommissioned" (i.e., the license to be terminated) under that rule's long-term "stewardship" provisions with little or no further waste removal from the site, other than the high-level glass logs. In contrast, the 1982 LLRW disposal facility site performance regulations 10 CFR 61, which include a prohibition on the use of institutional control as a waste management tool for a period greater than 100 years, would not have allowed use of the site for radioactive waste disposal. Onsite "stewardship" may have a more marketable connotation than "disposal," but they are no different in the event of loss of future funding and/or institutional control.

The Coalition is troubled by the fact that NYSERDA has so many significant problems with this document (ref. Forward in the DEIS) and, yet, subscribes to and defends it. This public authority corporation has not acted responsibly or in good faith with the people of New York State. NYSERDA's Quantitative Risk Analysis details the probabilities only for the 30-year period for Phase 2 decision-making. It also does not commit to a clean-up decision thereafter. The extensive computations of probabilities do not deal subjectively or judiciously with the possibilities of climate change or potential subsequent catastrophic weather-related events. In fact, New Orleans survived hurricane Katrina, but suffered greatly because of the failure of the levees (engineered barriers).

Similarly, the Paterson administration's principal State agencies charged with protecting the public interest at this site, namely the DOL (previously), the DOH, and the DEC, have not acted to ensure that both DOE and NYSDERDA adhere to existing, applicable environmental laws and regulations. The LTR should not have been allowed to be applied at West Valley. Knowing full well that the generic EIS which supported the NRC's LTR rulemaking did not consider West Valley's unique problems, and that the 1980 WVDPA calls for a site-specific clean-up criteria determination by NRC, these agencies did not challenge NRC's 2002 final policy statement which applied the LTR to the West Valley site. Instead they let the far more stringent, pre-LTR Atomic Energy Act decommissioning framework, previously applicable to West Valley and which essentially required thorough site cleanups for unrestricted future use prior to license termination, to fall by the wayside. Given the fundamental failures of proper procedure by governmental agencies, represented by the Sr-90 plume and the improper manipulation of the review process at this site, we are not optimistic about the future performance of these agencies.

According to NYSDERDA's Source Term Analysis, the original commercial low level waste deposited in the SDA essentially has been "held for decay" in unlined, unengineered clay trenches and has been losing its toxicity more rapidly than have the DOE and defense wastes.

	TOD Curies	1993 Curies	2093 Curie Est.
	"Time of Deposit"		
Commercial	1,030,000	172,000	35,000
	73.1%	71.1%	56.6%
DOE	188,000	49,800	21,200
	13.3%	20.6%	34.3%
Fed	65,800	6,640	1,890
	4.7%	2.7%	3.1%
State/Loc	1,869	639	177
	0.1%	0.3%	0.3%
Unknown	124,000	12,800	3,570
	8.8%	5.3%	5.8%
	1,409,669	241,879	61,837
	100.0%	100.0%	100.0%

The percentage of DOE and defense waste is increasing percentage-wise and, therefore, puts the SDA in the questionable status of becoming a larger responsibility of the federal government, and a diminishing responsibility of NYS. Whether or not DOE considers the SDA to be a critical responsibility under WVDPA, DOE and, therefore, DOD are responsible for a growing share of the SDA radioactive contents. That responsibility for those DOE and DOD defense wastes cannot be deeded to NYS. In fact, the United States in the form of the DOD and DOE cannot escape continuing liability as PRP's under CERCLA for this waste until it is properly remediated. We, therefore, demand that the SDA should NOT be carved out of the DOE decommissioning plan and the environmental impact process, as it has been with the 2008 DEIS, which is not the NEPA-required *site-wide* analysis.

DOE submitted an alarming "WVDP Phase 1 Decommissioning Plan Dose Modeling" proposal to NRC last October that independently assigns predicted acceptable doses (on the order of 25 mrem) to individual "areas of interest" (eg., stream bed sediments) using an unspecified exposure scenario. This "limited dose assessment" proposal contained proposed DCGLs and cleanup level goals "as if the area of interest would be the only area to which a future resident or recreationist might be exposed." [Recreationist (i.e. parkland exposure

scenario) and resident (farmer) are the low and high extremes of the exposure scenario range.] The NRC must not allow any Decommissioning Plan proposal made by DOE to proceed outside of or prior to the conclusion in the form of a ROD of the legally required NEPA site-wide dose assessment covering all areas and wastes that are onsite, i.e. the 1996 site-wide DEIS."

In general and with specific reference to Appendix N, "N-2 N.3 Scenarios Considered but Not Analyzed", the Coalition since 1980 has been objecting to presented probabilities that either are "Low Risk-High Consequence" or "High Risk-Low Consequence", when in fact the possibilities are somewhere in between the extreme end points. This practice of presenting risk extremes seems to have taken an even more extreme twist, namely, that of not dealing with risks to the public at all.

With reference to Appendix N, the DEIS contains a scenario regarding a commercial aircraft crash, but does not offer a scenario regarding a military flight. There are daily and multiple contrails over western New York indicating that military flight patterns do exist. When a member of the Coalition questioned a NYSERDA director about an airplane crash, the answer was "But, it is a no-fly zone" and then stated further that "it is unlikely because the impacted radioactive site would have to be vaporized to be dangerous". The World Trade Center and the Pentagon were no-fly zones. The 911 crashes in Pennsylvania and the February 2009 plane crash in Clarence created infernos that smoldered for days. We think NYSERDA's casual dismissal of this potentially serious threat demonstrates a lack of prudence and discretion that should be accorded to the taxpayers and citizens of New York State.

The 2008 DEIS incorrectly defines West Valley TRU wastes as having a concentration of 100 nCi/g or greater. While the 1970 definition of TRU as 10 nCi/g or greater was raised to 100 nCi/g in the 1984 Amendments to the Nuclear Waste Policy Act, the 1980 WVDPA defines TRU waste as 10 nCi/g or greater. This TRU concentration definition remains applicable to all Project TRU wastes. For example, the Drum Cell facility contained drums that assayed above this 10 nCi/g threshold. (This information was provided at a quarterly VIP meeting.) Were any of these drums shipped offsite as LLRW during the "interim actions"?

Two LLRW disposal options are offered for the wastes removed from the site: use of both DOE and commercial waste facilities, and an all-commercial waste facilities option. We favor a third option: an all federal disposal facility option, using the most physically suitable federal sites for long-term waste storage. For example, the Nevada Test Site is a more physically suitable long-term storage site than is the Waste Control Specialists facility (WCS) site in Andrews, TX which, lying above the edge of the Ogallala aquifer, has stirred scientific controversy within the state regulator over its suitability for long-term waste disposal. Why should less physically optimal, private disposal sites, such as Harold Simmons' WCS facility, be sited for long-term waste disposal and profit from high upfront fees when, after a short 30 year period of waste disposal operations, these sites will become government responsibilities with the taxpayers assuming all the long-term waste management costs anyway? Political connections and large political campaign contributions appear to figure prominently in the answer to this question.

This DEIS perpetuates the misleading concept of "orphan waste"; these are wastes for which it is supposed that no waste storage facility is available. This "orphan waste" myth is being used as the main excuse in DOE's contention that it is not possible to implement the site-wide full cleanup option now. We don't believe this "orphan waste" claim is completely honest in regard to GTCC wastes. We say this because other sites with GTCC wastes have been closed.

For example, the silos at DOE's huge Fernald site contained large activities of "K-65 residues". These very hot, radium-bearing residues resulted from highly concentrated uranium ores (the Belgian Congo's Shinkolobwe pitchblende). They are in essence GTCC wastes. Some of these Manhattan Project/Cold War residues were also left in a silo at the NFSS. A NAS/NRC

expert panel, convened at the request of former Congressman John LaFalce, concluded in their 1995 report entitled "Long-Term Management of the K-65 Residues at the Niagara Falls Storage Site" that the K-65 residues are "indistinguishable in hazard from high-level waste". This panel also recommended that these high activity wastes be stabilized by vitrification or other equally durable means.

After vehement public opposition in Utah forced Envirocare (now Energy Solutions) to remove its Clive facility from DOE consideration as a disposal site for the GTCC "K-65 residues", DOE turned to Nevada for disposal of these wastes, which prompted the Nevada Attorney General to threaten a lawsuit to prevent use of the NTS. With the 2006 Fernald site closure deadline approaching and Fernald contractor Fluor Daniel anxious to pocket a \$288 million work acceleration bonus, in 2005 DOE contracted with WCS for "temporary storage" of the Fernald K-65 residues even though the WCS facility did not have a disposal license. Three years later, in May of 2008, the State of Texas granted WCS a disposal license for these GTCC, stabilized (cement-flyash) Fernald wastes.

The purpose of this example is not to condone DOE's site selection in this case but to point out that where there's the will there usually is a way, including a proper way to treat and relocate wastes in a timely fashion from physically unsuitable sites, among which West Valley is uniquely unsuitable, to the most physically suitable sites.

The Environmental Impact Process for West Valley has been tortuous. A 1987 scoping did not result in a Draft EIS until 1996. We suspect that 9 years is some kind of a record, not necessarily one to be proud of. Thirteen years later, that draft is resurrected and presumed to be a revision. We disagree. In the meantime, an ill-conceived segmentation of the process results in a new Draft EIS on Waste Management in March 2003, an FEIS in January 2004 and another record – 17 months until a Record of Decision is issued. We do not think that DOE and NYSERDA want to do anything more than persist in spending taxpayer money by studying the nuclear site and hope that in the meantime we will go away. We have not and we will not go away until the West Valley tanks and burial grounds and lagoons and strontium plume are exhumed and secured in monitored, retrievable above-ground storage.

If DOE is going to put people, future generations and the Lakes Erie and Ontario environments at risk, DOE is morally obliged to tell these involuntary risk bearers the purpose(s) for which they will be exposed to the hazards from West Valley. Lacking any forthcoming explanation or policy statement, the Coalition rightfully assumes that if DOE's purpose is to minimize only the short-term cost, but not the long-term risks and costs, of dealing with nuclear waste in order to promote nuclear energy, the taxpayers should be accorded the right to expect honesty and forthrightness from their decision makers.

The Coalition is submitting the bulk of its comments on September 8, 2009, but has advised both DOE and NYSERDA of our intention to 'revise and extend' our comments once the additional information requests previously made to DOE and NYSERDA are responded to under the terms of the 1987 Stipulation of Compromise Settlement. The Coalition expects full NEPA consideration of these additional comments, per our earlier advisements.

Steering Committee for the Coalition on West Valley Nuclear Wastes

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4/17/ 1979 Entry in Carol Mongerson's Journal regarding radiation leak.
"Civilization will die so slowly that no one generation will know what they have missed."

Attachment: Recent Excursionary Events

Attachment 1 – Recent Excurionary Events

Knowing that WVES does not have reliable -- 24/7/365 -- weather data collection equipment, NYSERDA has been negligent to depend on the DOE (WVES) for collection of onsite weather data (needed to evaluate climate change). NYSERDA has no weather equipment of its own. Storm-related utility power outages combined with blown breakers onsite and inadequate battery backup of the DOE contractor's rain gauge (only 1.5 hours according to an 8/19/09 WVES event timeline) resulted in the loss of rainfall data for over 15 hours during the most intense thunderstorms of Sunday afternoon and Sunday night into Monday morning. In response to a NYSERDA email request for precipitation data following the storms, a WVES staffer responded that the storm total was unknown due to site-wide power outage, and concluded that "(t)hese power outages are killing my met data records. No Storm water sampling this week." This is a frank admission that the DOE weather station is not only set up to miss the most important precipitation data of violent, heavy thunderstorms (when utility power is most likely to go out) because it lacks adequate power backup, but that this has happened often enough over the years to render this station's precipitation data virtually useless for the purpose of evaluating erosion impacts, let alone making a contribution to regional climate change studies.

The region-wide collection of complete weather datasets that capture all such excursionary events is essential to enable the NEPA-required, accurate prediction of long-term erosion impacts at this site. As the site owner from the site's inception, NYSERDA should have ensured that this site's weather data collection, if by powered deices, was not interrupted by power outages, i.e., that reliable backup power sources were in place to cover extended utility power outages. NYSERDA should have had its own equipment to collect the site's weather data. Why has NYSERDA depended on DOE for this important site data, knowing the collection failings?

According to the Albany, New York National Weather Service office, the universal (spring-powered) weighing rain gauge is optimal for climatology use. This is because of a vacuum that accounts for the effects of wind, allowing more of the actual rainfall to enter the gauge. These gauges are very precise in measuring rainfall intensity as the weighing mechanism at the bottom of the collector can be used to measure depth and time simultaneously. Recording is carried out much in the same way as the older versions of the tipping bucket gauges.

The 3-day August 8-10, 2009 thunderstorms event in the Cattaraugus Creek watershed produced excursionary rainfall intensities and totals for the local area. A new high flow record for Cattaraugus Creek was set; this was accompanied by a 5-foot flood surge that swept downstream through Gowanda. The 3-day event was preceded by approximately 2" of rainfall (exactly 1.81" onsite) on Wednesday 8/5/09 which left area soils well-wetted, if not saturated -- a very important factor in what was to follow.

Doppler radar data collected by the National Weather Service Buffalo Office estimated that approximately 4" of rain fell in the West Valley area during the 8/9 Sunday 24 hour period.⁷ However, doppler rainfall estimates can be in error by as much as 50% or more.⁸

Fortunately, a conscientious NWS spotter located 20 miles to the west in Perrysburg in the western Cattaraugus Creek corridor where the greatest rainfall intensity occurred during this 3-day storm event, using an official NWS manual rain gauge, determined that 5.98" of rain fell in a single hour and a half period Sunday evening, and a total of 7.27" fell for the 24

⁷ initial conversation of Jim Rauch with Steve McLaughlin, NWS Buffalo

⁸ Jim Rauch conversation with David Zaff, NWS Buffalo, 9/3/09

hour period Sunday. The maximum intensity was estimated by NWS Buffalo to be approximately 5" per hour; this rate was based on the ground truth measurements by the spotter in Perrysburg which enabled NWS Buffalo to adjust its radar image storm total estimates upward by approximately +1 inch. Based on this adjustment, the West Valley nuclear site received between 6" and 7" of rainfall for the 3 days, Saturday through Monday.

The resulting onsite erosion damage was significant; some of these effects were personally witnessed during an 8/19/09 tour of site by representatives of the Coalition, the Seneca Nation of Indians, the WV Citizen Task Force, and the League of Women's Voters. The account (with images) of the storms and onsite damage that is posted at http://nuclear.bfn.org/WV_erosion_8-09.htm, the Powerpoint presentation ID: 20235.ppt "WVDP Dams After August Storms Events, Photographs taken on August 10 and 11, 2009, provided to James Rauch September 4, 2009" by WVES, and the two sets of erosion photos provided by NYSERDA to Joanne Hameister on September 7, 2009 are incorporated into these comments by reference.

"Over the course of a couple of hours late Sunday evening, roughly between 1030PM and 1230AM, some of the highest short-term rainfall totals ever recorded in western New York occurred ... with as much as 5 inches per hour near Perrysburg and Silver Creek".⁹ NWS Buffalo Office meteorologist Tom Niziol was reported in the Buffalo News to say that such intensity is more typical of hurricane areas in the southern states. This was clearly an excursionary rainfall event for this area, likely the result of climate change and indicative of worse events to come.

While the Perrysburg spotter's data are impressive, the uncorrected NWS Buffalo doppler radar storm total image indicates that the greatest rainfall total, and likely greatest intensities, for this 3-day event occurred in an area (the gray rectangle) centered on the intersection of Hopper and Hanover Roads near the Silver Creek Reservoir in Chatauqua Co., approximately 5 miles west of the Perrysburg spotter's location, where possibly just under 9" total fell (using nearby Perrysburg +1" ground truthing adjustment of the doppler estimate). See **Figure 1**, attached. The Perrysburg spotter's three-day total was 7.87 inches, and her August total was 13.08" (normal is ~4").

NWS Buffalo has posted two excellent summaries with photos and animations of the two exceptional Sunday storm events:

An overview -

http://www.erh.noaa.gov/buf/svrwx/web_080809_Derecho/indexderecho_1.html

Flood event - http://www.erh.noaa.gov/buf/svrwx/web_090810_Flashflood/indexflood.html

The flood event summary contains satellite photos that show the massively soil-laden runoff plumes from Cattaraugus Creek and Eighteen Mile Creek (and other smaller creeks) extending out into Lake Erie and eastward to Buffalo, down the Niagara River, and out into Lake Ontario. See **Figure 2**, attached. These photos demonstrate one example of the expected flow patterns that radioactive wastes from West Valley will take when the inevitable breaching of West Valley's waste facilities occurs. No opportunity for disagreement about computer simulations and predictions, just a real-world demonstration provided free of charge by "Mother Nature."

Although this was not the maximum total short-term event total possible for the Cattaraugus Creek watershed, the intensities of these thundercells were quite possibly new maxima for the local area and the associated runoff surges created a new record high flow for

⁹ NWS Buffalo, 8-31-09

Cattaraugus Creek. According to records of The Pennsylvania State Climatologist (a service of Penn State University): "On July 17, 1942, a great flood developed over the Smethport area, resulting in an estimated 34.50" of rain--in just one day, including 30.60" in only six hours, setting a world record. The official observing site, Smethport Highway Shed, reported only 13.08" for the entire month, because the flood consumed the gauge [sic] after 6.68" of rain. The total results from the substitution of the official estimated amount for the amount measured. In July 1947, portions of Erie suffered a twenty-inch one-day deluge, although the reporting site received substantially less precipitation. The most rainfall officially recorded in July at an official reporting site is 17.89" at Wild Creek Reservoir, Carbon County in 1945--also during that same decade."

[http://pasc.met.psu.edu/PA_Climatologist/fod/paex.html]

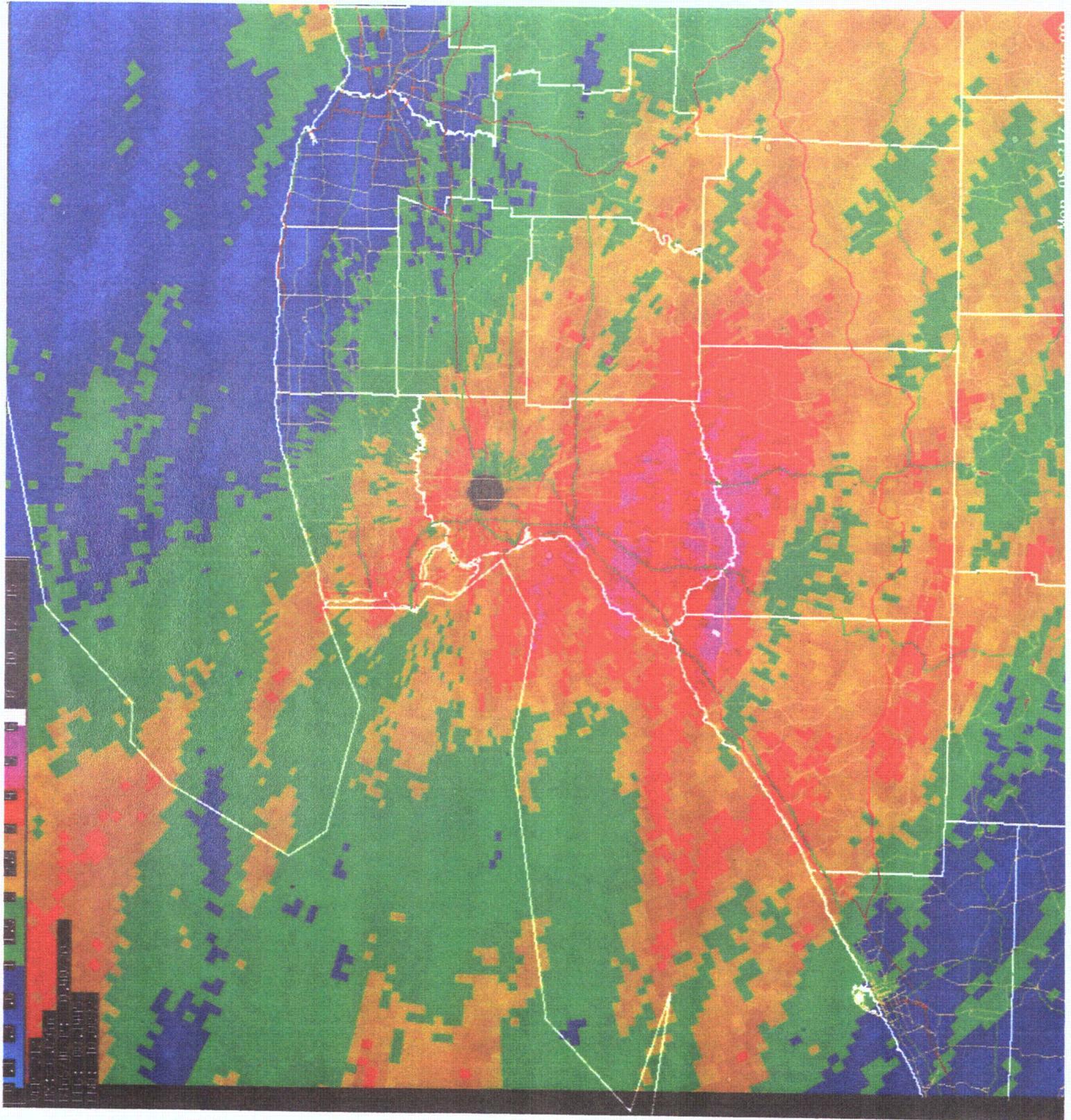
Had the one-day 20" 1947 Erie, Pa rainfall event (intensity maxima unknown) or the over 30" that fell in Smethport on July 17, 1942 (with prolonged intensities of at least 5" per hour) occurred in the West Valley vicinity last month, the onsite erosion resulting from more than three times the volume of runoff of our August event would have been much more severe. The reservoir berms, which experienced damage in the August 2009 event, may not have held, releasing a further massive surge to Buttermilk Creek; the knickpoint advances witnessed on Erdman Brook (multi-stepped lobe just a few yards from and oriented toward the foot of the SDA slope) and Franks Creek (advanced ~20 feet) would have been much greater; the slides on Buttermilk Creek would have further cut back the plateau; and so on.

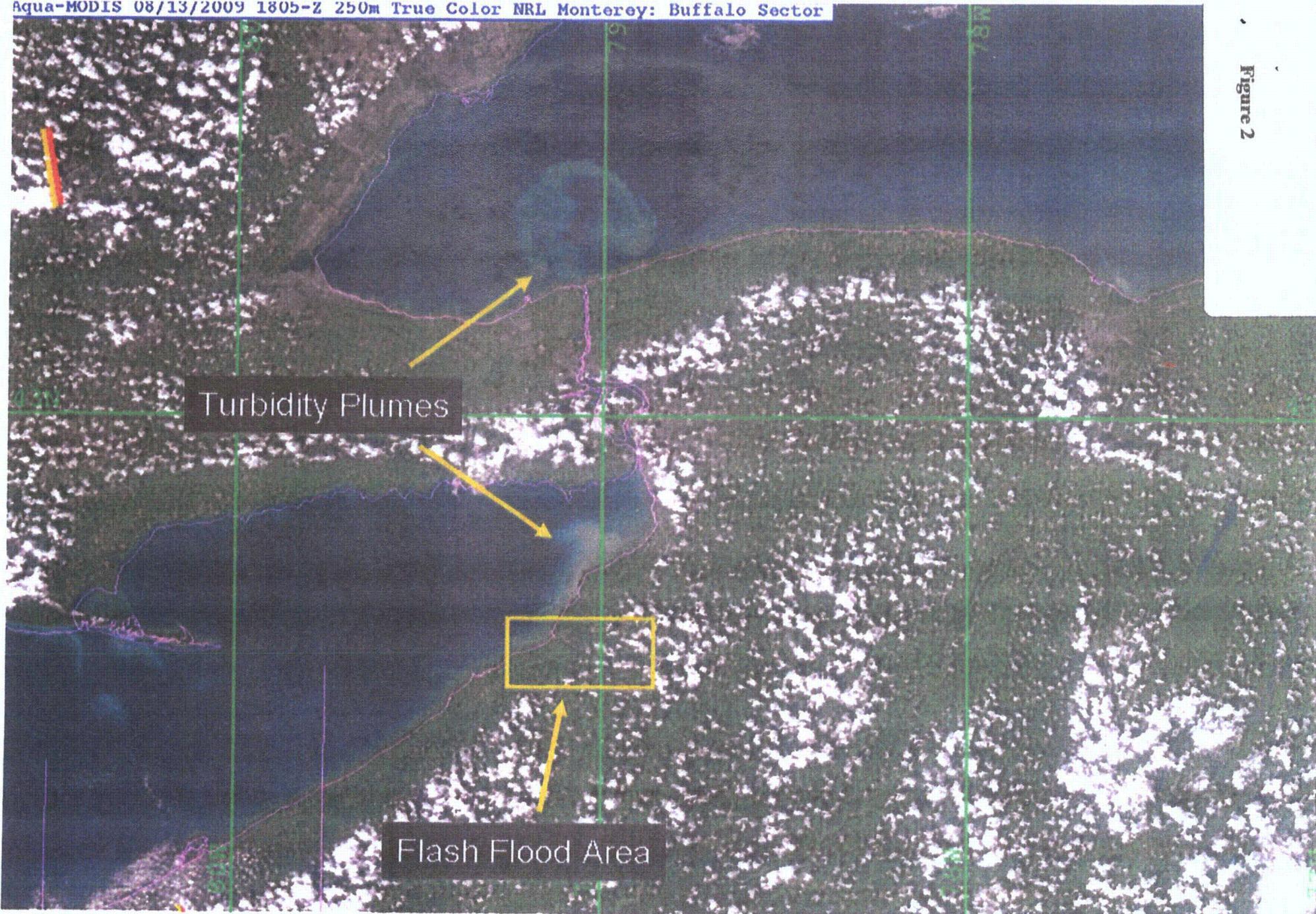
In the 1950s the 30-year moving average annual precipitation for Buffalo was ~36"; it is now over 40". While part of this change may be attributed to the station's move from its downtown location to the airport location in 1943, Buffalo's climate definitely has become wetter. The latest DOE EIS for the West Valley site, unwisely approved for release by NYSERDA, does not consider or attempt to evaluate the accelerated erosion impacts resulting from such climate change. It is simply foolish to ignore climate change, especially its excursionary aspects. It is precisely these excursionary storm events that will hasten the inevitable breaching of the burial grounds and other facilities at West Valley. The 150 to 300 year worst-case predictions for breaching of the burial grounds may turn out to be conservative.

This severe erosion event should be a reality wake-up call to policymakers in Albany who for too long have ignored the unique physical unsuitability of the West Valley site for radioactive waste disposal (or "long-term management"). All attempts to control erosion in this young, unstable glacial till-filled valley will inevitably fail. That reality should prompt the State to move expeditiously to plan the complete excavation and removal of the site's radioactive materials in the near term, not ten or more years from now. Whether that plan is accomplished via federal stimulus money, a separate federal funding mechanism, a State bond act or a combination of these, a commitment to full excavation must be made without further delay.

Figure 1

Uncorrected NWS Buffalo radar
5 form total image for 8/8/09 through
8/10/09





MODIS full color Image at 2:05PM EDT August 13, 2009, 3 days after the floods. Turbidity plumes are clearly evident in the lighter green colors on the east end of Lake Erie as well as the mouth of the Niagara River where it empties into Lake Ontario.