

THE AUDIT TRAIL: PATIENTLY CREATING A CONSISTENT NARRATIVE

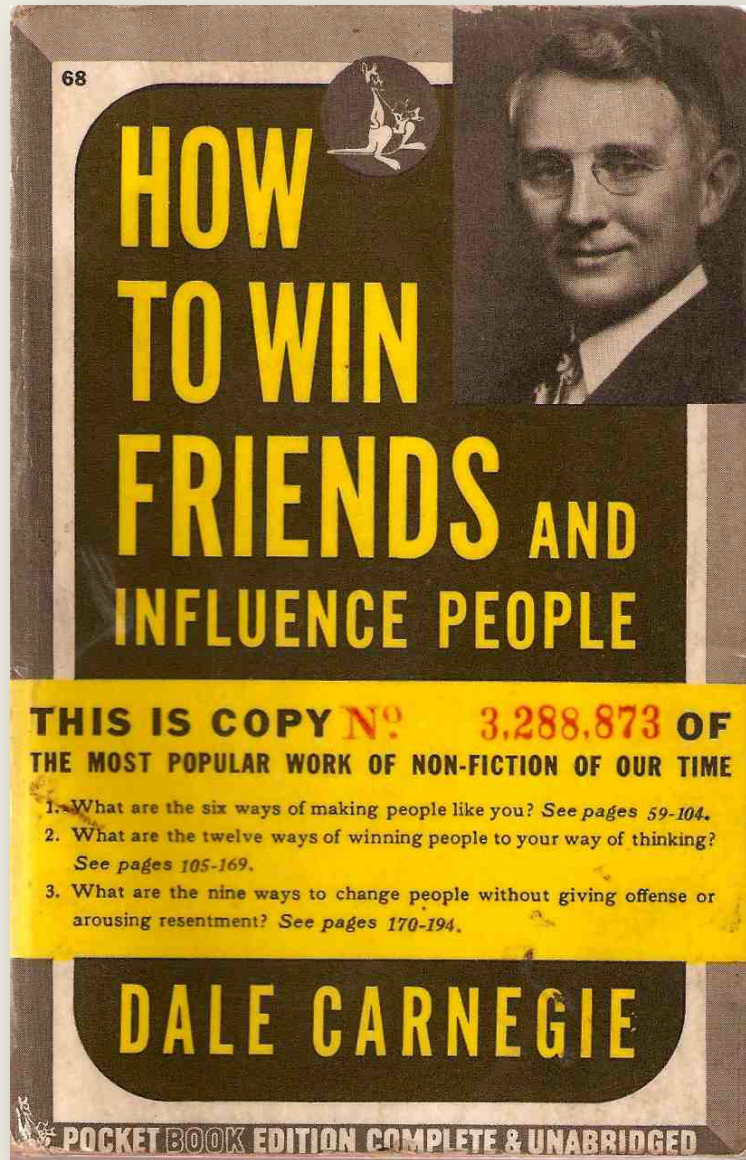
Jeff Larson

U.S. Government Accountability Office

**THE AUDIT TRAIL:
HOW TO WIN
THE AUDIT!**

**Jeff Larson
U.S. Government Accountability Office**

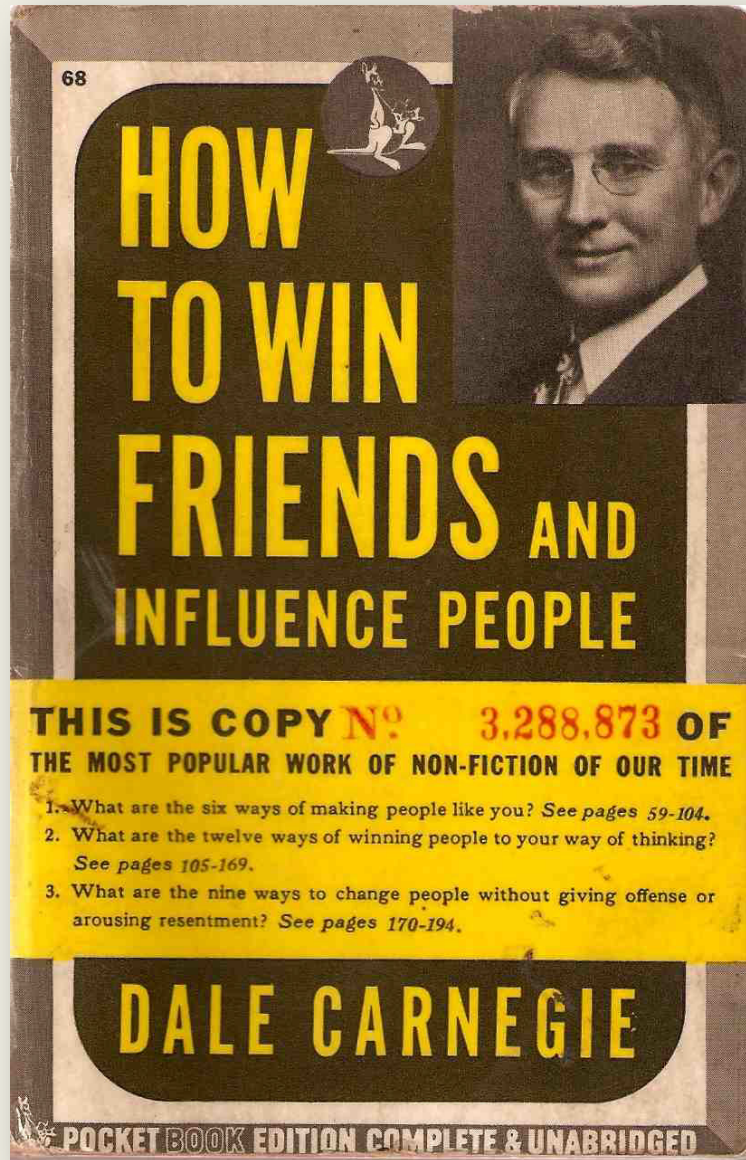
WIN FRIENDS AND INFLUENCE PEOPLE



Twelve Ways to Win People to Your Way of Thinking

1. The only way to get the best of an argument is to avoid it.
2. Show respect for the other person's opinions. Never say "You're Wrong."
3. If you're wrong, admit it quickly and emphatically.
4. Begin in a friendly way.
5. Start with questions to which the other person will answer yes.

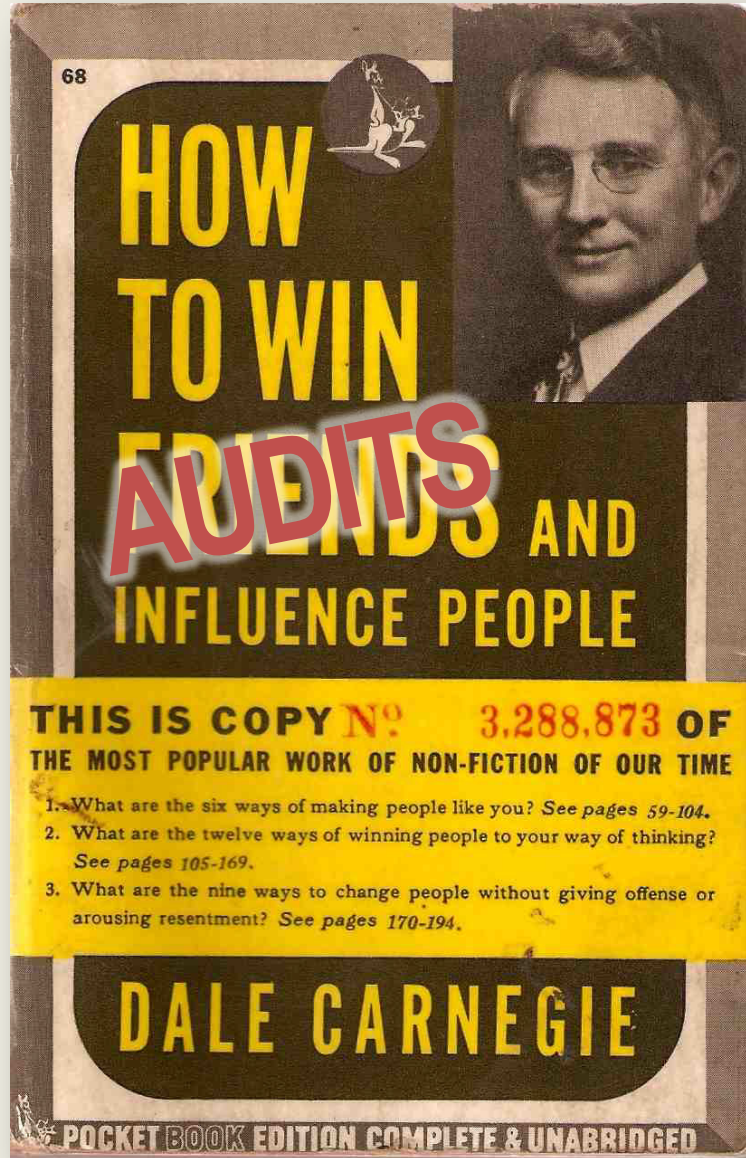
WIN FRIENDS AND INFLUENCE PEOPLE



(continued)

6. Let the other person do a great deal of the talking.
7. Let the other person feel the idea is his or hers.
8. Try honestly to see things from the other person's point of view.
9. Be sympathetic with the other person's ideas and desires.
10. Appeal to the nobler motives.
11. Dramatize your ideas.
12. Throw down a challenge.

WIN AUDITS AND INFLUENCE PEOPLE!

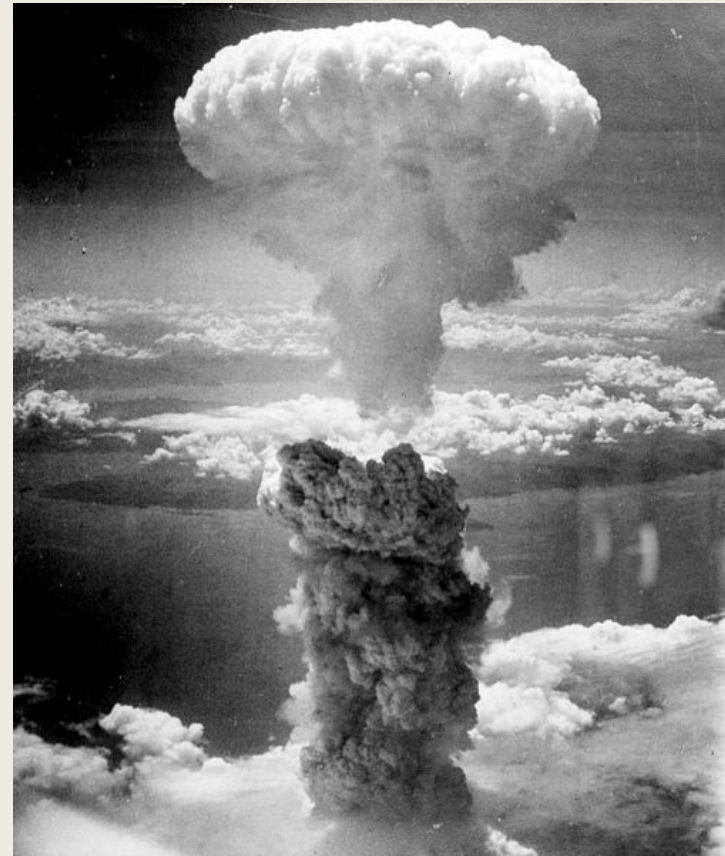


Be

1. Concise
2. Consistent
3. Direct
4. Specific
5. Patient

CASE STUDY

Cleaning up the Department of Energy's Hanford Nuclear Reservation, Hanford, WA



THE PROBLEM: 177 HANFORD WASTE TANKS

1940s-50s

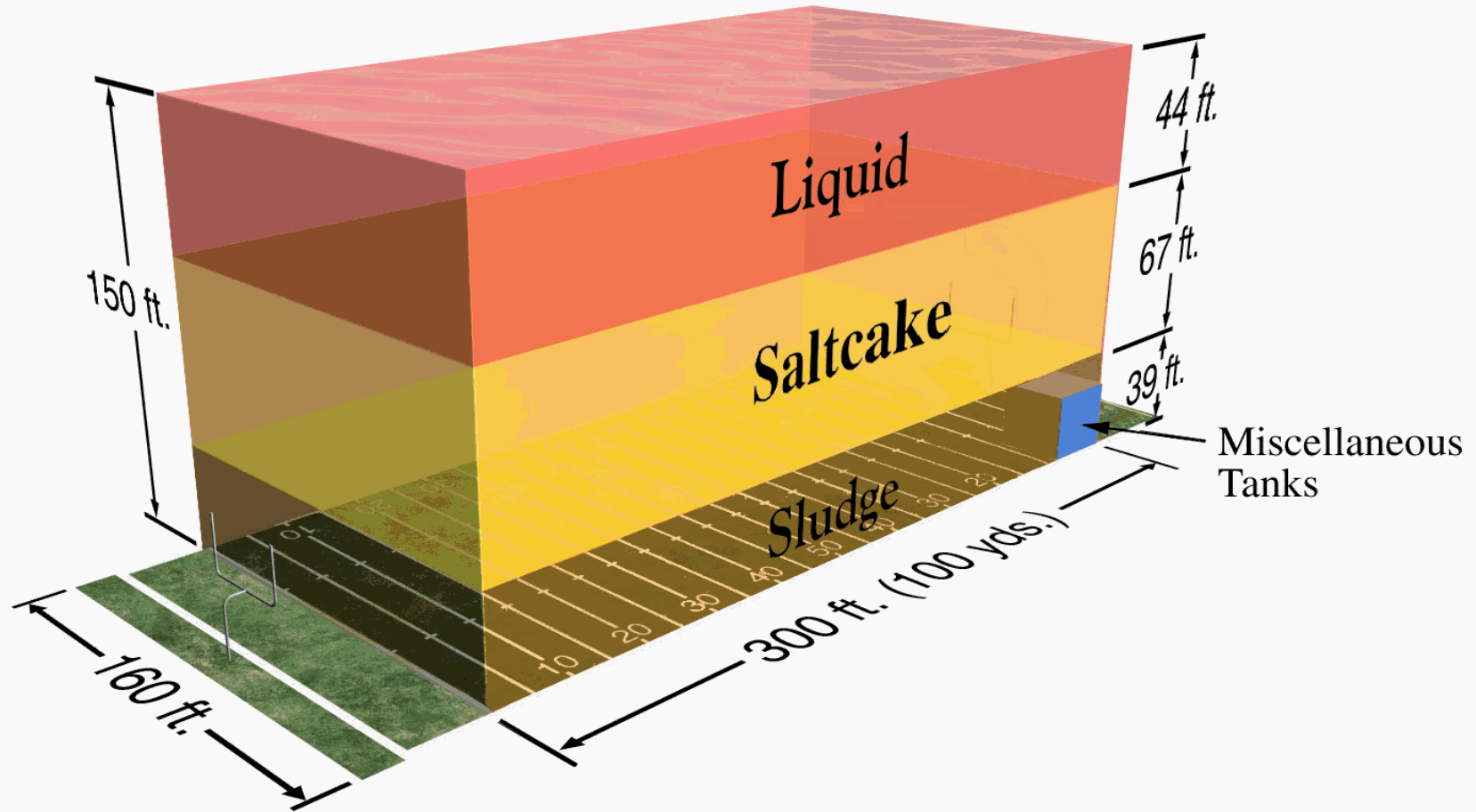


THE PROBLEM: 177 HANFORD WASTE TANKS

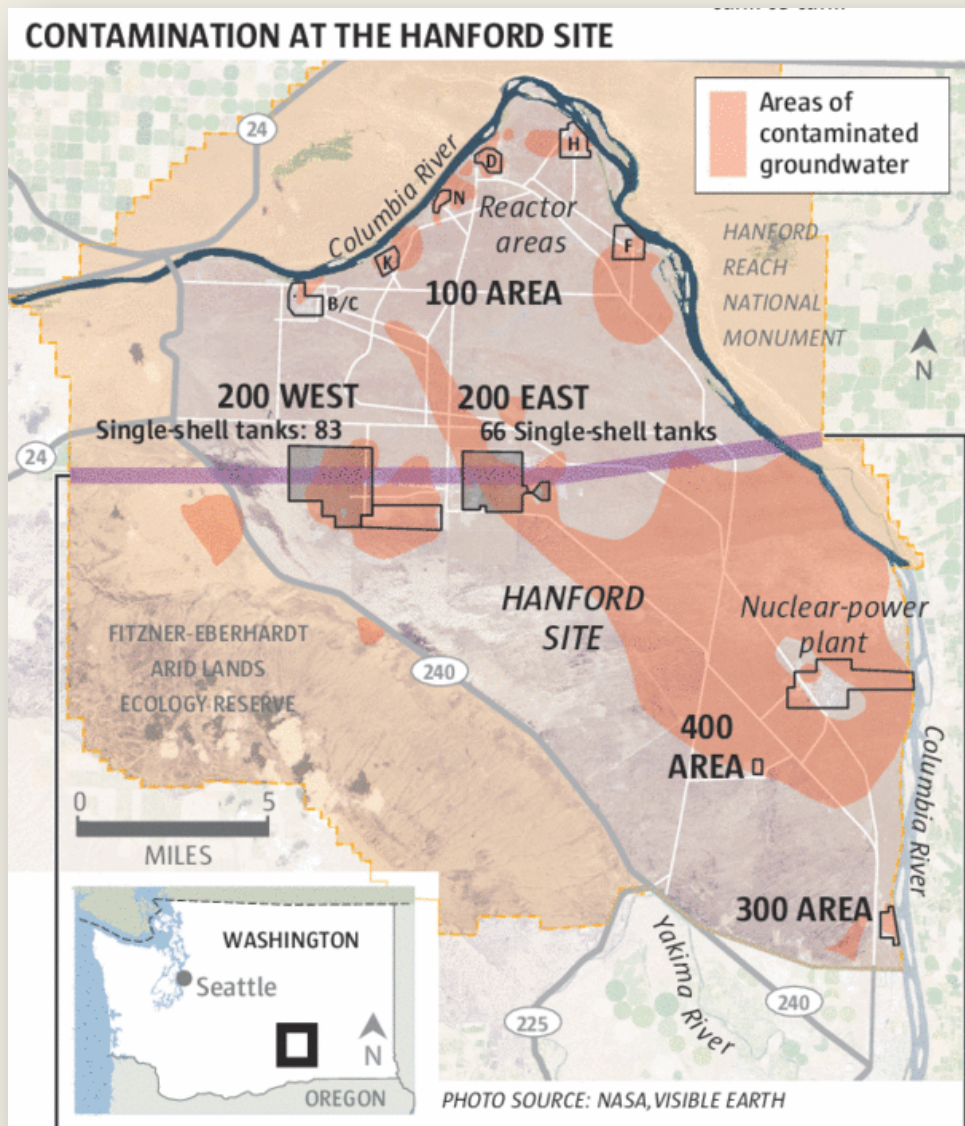
1960s-80s



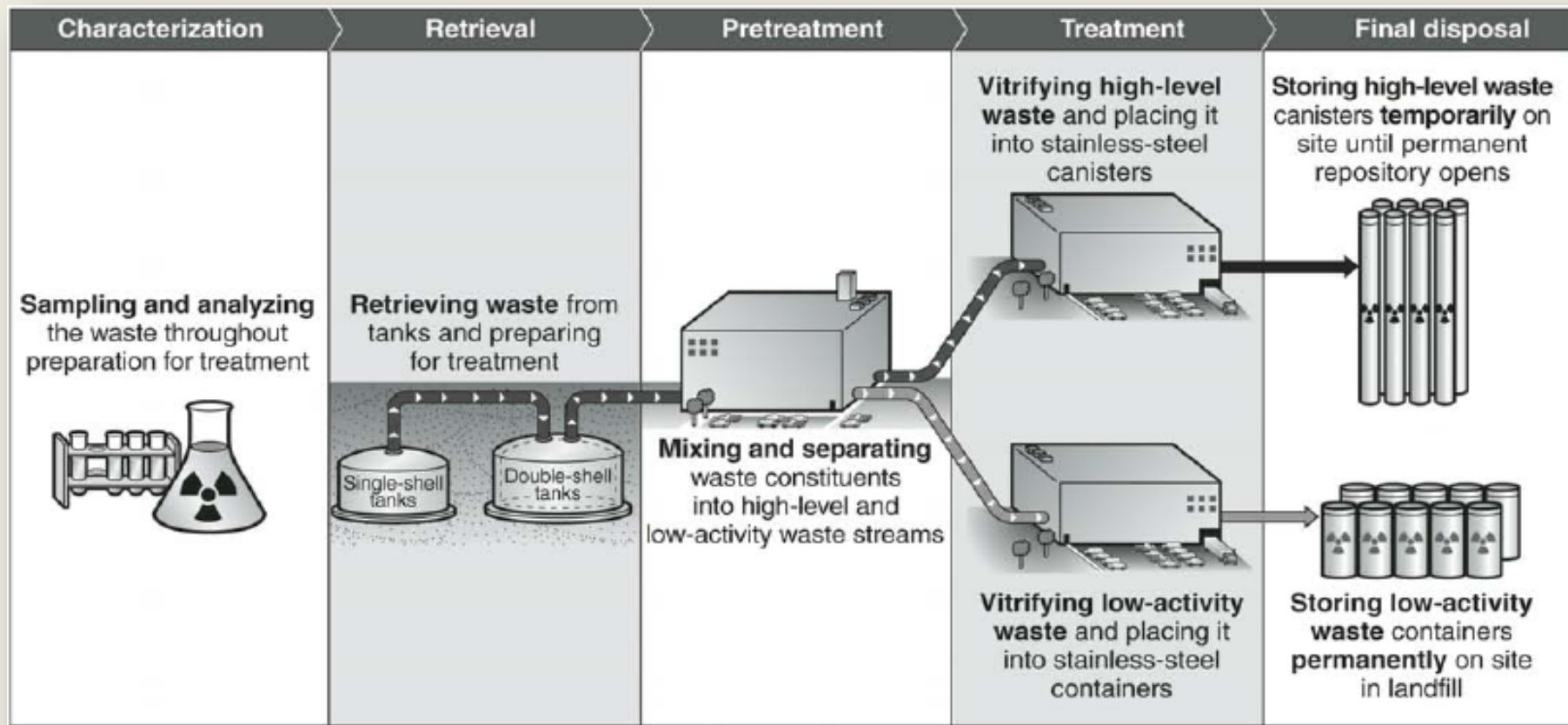
THE PROBLEM: 56 MILLION GALLONS OF WASTE



THE PROBLEM: OVER 60 LEAKING TANKS



THE SOLUTION: WASTE TREATMENT PLANT

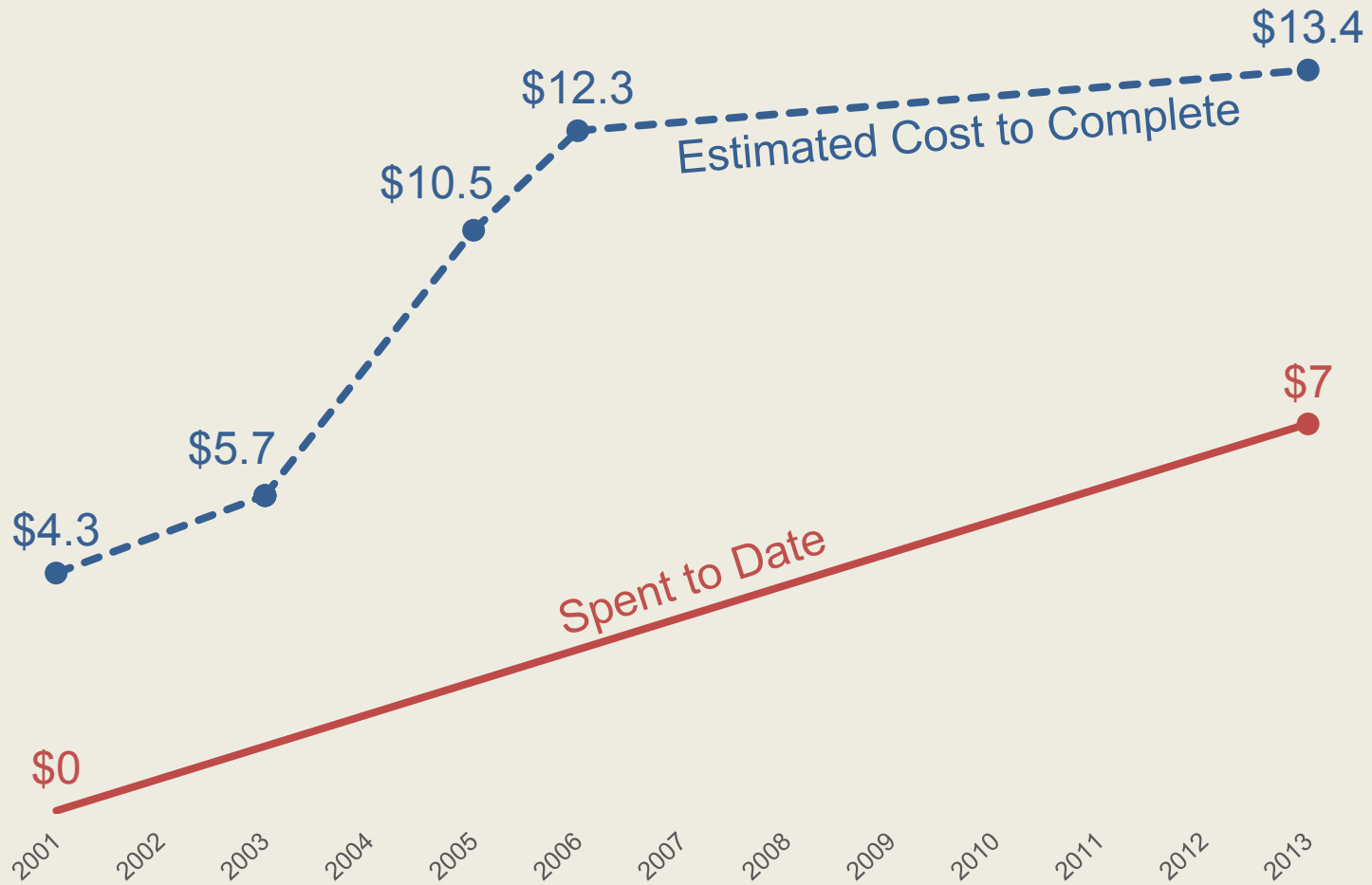


THE SOLUTION: WASTE TREATMENT PLANT



THE SOLUTION?

Project costs under the latest contract (\$ billions)



2013 [GAO-13-38]

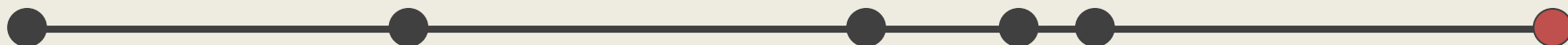
Findings:

- DOE's continued use of a "fast-track" management approach has resulted in costly reworking and schedule delays.
- DOE faces significant technical challenges in successfully constructing and operating the WTP.

Recommendation:

- Do not resume construction on the WTP's most complex facilities until critical technologies are tested and verified as effective and the facilities' design has been completed.

DOE Response: TBD



1993 (GAO/RCED-93-99)

Findings:

- DOE is moving ahead with design and site work for the plant before uncertainties are resolved and before a complete design is prepared. DOE is managing the plant's construction on a "fast track" schedule, which involves starting construction before the facility's design is substantially finished.
- Technical uncertainties raise several concerns about the waste disposal program's cost, schedule, and management.

Recommendation:

- Begin construction of the plant only after the design is sufficiently complete that DOE can demonstrate that the plant can be started and operated efficiently.

DOE Response:

- DOE continued the fast-track approach.



1998 (GAO/RCED-99-13)

Findings:

- Construction will begin well before all of the design work is completed; we are concerned.
- The technology has been tested only on small amounts of Hanford waste in laboratories; DOE retains a significant part of the risk for the success of this technology which could raise the cost of project.

Recommendation:

- Fully implement the Department's management and oversight plan for the Hanford tank waste project, including ensuring that the oversight team is fully staffed with the expertise required.

DOE Response:

- DOE continued the fast-track approach.



2004 (GAO-04-611)

Findings:

- A “fast-track” process is not compatible with controlling costs and schedules.
- DOE has continued to encounter significant technical and other problems; we believe that further cost increases, as well as schedule delays, are likely.

Recommendation:

- Avoid a fast-track, concurrent approach to the design, technology development, construction, and testing of such plants.

DOE Response:

- DOE continued the fast-track approach.



2006 (GAO-06-602T)

Findings:

- DOE's "fast-track" approach is not recommended for designing and constructing one-of-a-kind, complex nuclear facilities because, among other things, it increases the risk of encountering problems that can adversely affect a project's cost and schedule.
- Many technical problems with the project are taking considerable more time and money than expected to address and correct; project costs are increasing rapidly.

Recommendation:

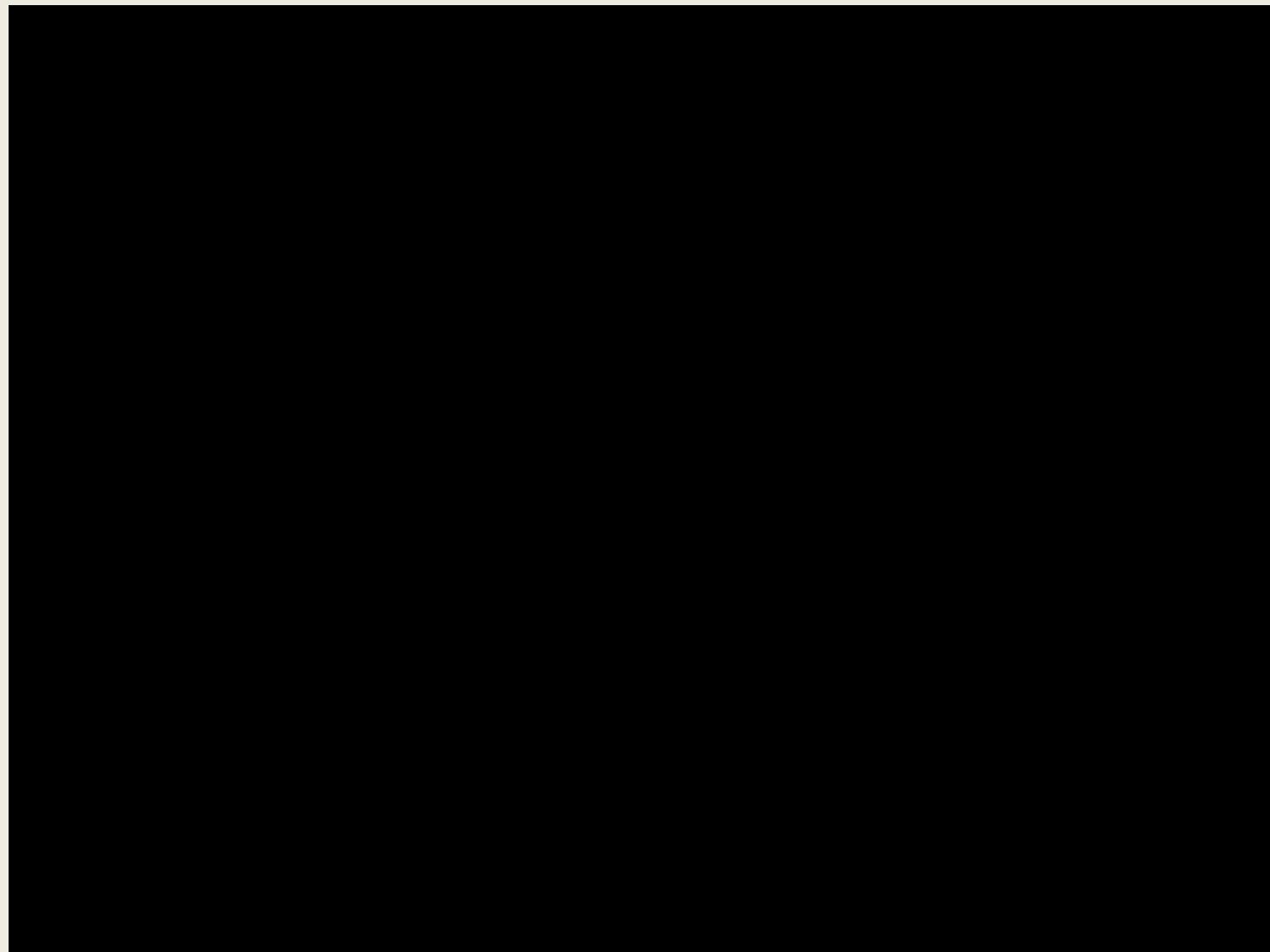
- Discontinue using a fast-track, design-build approach to completing the project and consider the feasibility of completing at least 90 percent of the facility design or facility component design before restarting construction.

DOE Response:

- DOE slowed construction



2006 (GAO-06-602T)



2007 (GAO-07-336)

Findings:

- Modifying the design of a facility after construction has already begun can be expensive and time consuming.
- DOE does not have a basis for defining the acceptable level of technological risk for each project or proceeding with construction.

Recommendation:

- Develop comprehensive standards for systematically measuring and communicating the readiness of project technologies.

DOE Response:

- Developed a technology readiness guide and added guidance limiting construction before design and technical issues are resolved.



2013 [GAO-13-38]

Findings:

- DOE's continued use of a "fast-track" management approach has resulted in costly reworking and schedule delays.
- DOE faces significant technical challenges in successfully constructing and operating the WTP.

Recommendation:

- Do not resume construction on the WTP's most complex facilities until critical technologies are tested and verified as effective and the facilities' design has been completed.

DOE Response: TBD



SUMMARY OF FINDINGS

Six Reports from 1993-2013 (20 years)

- DOE and its contractor are employing a “fast track” approach which is risky and should be avoided.
- Significant unresolved technical issues are causing the schedule to slip and the cost estimate to increase.
- We recommend that DOE stop its “fast track” approach and instead resolve technical issues before construction begins/continues.

DOE's Responses

- 1993, 1998, 2004: DOE continued “fast-track” construction
- 2006: Slowed construction
- 2007: Added guidance limiting construction before design and technical issues are resolved.
- 2013: ???

BE CONCISE & CONSISTENT

1993

1998

2004

2006

2007

2013

GAO Findings

DOE is managing the plant's construction on a "fast track" schedule, which involves starting construction before the facility's design is substantially finished.

Construction will begin well before all of the design work is completed; we are concerned.

DOE's "fast-track" process is not compatible with controlling costs and schedules.

DOE's "fast-track" approach is increases the risk of encountering problems that can adversely affect a project's cost and schedule.

Modifying the design of a facility after construction has already begun can be expensive and time consuming.

DOE's continued use of a "fast-track" management approach has resulted in costly reworking and schedule delays.

Technical uncertainties raise several concerns about the waste disposal program's cost, schedule, and management.

The technology has not been tested only; DOE retains significant risk for the success of this technology which could raise the cost of project.

DOE has continued to encounter significant technical and other problems; further cost increases, as well as schedule delays, are likely.

Many technical problems with the project are taking considerable more time and money than expected to address and correct.

DOE does not have a basis for defining the acceptable level of technological risk for each project or proceeding with construction.

DOE faces significant technical challenges in successfully constructing and operating the WTP.

BE CONCISE & CONSISTENT

1993

1998

2004

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2013

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DOE is managing the plant's construction on a "fast track" schedule, which involves starting construction before the facility's design is substantially finished.

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Modifying the design of a facility **after construction has already begun** can be expensive and time consuming.

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DOE does not have a basis for defining the acceptable level of technological risk for each project or proceeding with construction.

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Modifying the design of a facility after construction has already begun can be expensive and time consuming.

DOE's continued use of a "fast-track" management approach has resulted in costly reworking and schedule delays.

Technical uncertainties raise several concerns about the waste disposal program's cost, schedule, and management.

The **technology has not been tested** only; DOE retains significant risk for the success of this technology which could raise the cost of project.

DOE has continued to encounter **significant technical** and other problems; further cost increases, as well as schedule delays, are likely.

Many **technical problems** with the project are taking considerable more time and money than expected to address and correct.

DOE does not have a basis for defining the acceptable level of **technological risk** for each project or proceeding with construction.

DOE faces **significant technical challenges** in successfully constructing and operating the WTP.

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GAO Findings

DOE is managing the plant's construction on a "fast track" schedule, which involves starting construction before the facility's design is substantially finished.

Construction will begin well before all of the design work is completed; we are concerned.

DOE's "fast-track" process is not compatible with **controlling costs and schedules**.

DOE's "fast-track" approach is increases the risk of encountering problems that can **adversely affect a project's cost and schedule**.

Modifying the design of a facility after construction has already begun can be **expensive and time consuming**.

DOE's continued use of a "fast-track" management approach has resulted in **costly reworking and schedule delays**.

Technical **uncertainties** raise several concerns about the waste disposal program's **cost, schedule,** and management.

The technology has not been tested only; DOE retains significant risk for the success of this technology which **could raise the cost of project**.

DOE has continued to encounter significant technical and other problems; further **cost increases,** as well as **schedule delays,** are likely.

Many technical problems with the project are taking considerable **more time and money than expected** to address and correct.

DOE does not have a basis for defining the acceptable level of technological risk for each project or proceeding with construction.

DOE faces significant technical challenges in successfully constructing and operating the WTP.

BE DIRECT & SPECIFIC

1993

1998

2004

2006

2007

2013

GAO Recommendations

Begin construction of the plant only after the design is sufficiently complete that DOE can demonstrate that the plant can be started and operated efficiently.

Fully implement the Department's management and oversight plan for the Hanford tank waste project, including ensuring that the oversight team is fully staffed with the expertise required.

Avoid a fast-track, concurrent approach to the design, technology development, construction, and testing of such plants.

Discontinue using a fast-track, design-build approach; consider the feasibility of completing at least 90 percent of the facility design or facility component design before restarting construction.

Develop comprehensive standards for systematically measuring and communicating the readiness of project technologies.

Do not resume construction on the WTP's most complex facilities until critical technologies are tested and verified as effective and the facilities' design has been completed.

DOE Responses

DOE continued "fast track" construction

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DOE slowed construction

DOE added guidance limiting construction before design and technical issues are resolved

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BE DIRECT & SPECIFIC

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GAO Recommendations

Begin construction of the plant only after the design is **sufficiently complete** that DOE can demonstrate that the plant can be started and operated efficiently.

Fully implement the Department's management and oversight plan for the Hanford tank waste project, including ensuring that the oversight team is **fully** staffed with the expertise required.

Avoid a fast-track, concurrent approach to the design, technology development, construction, and testing of **such plants**.

Discontinue using a fast-track, design-build approach; **consider the feasibility** of completing at least **90 percent** of the facility design or facility component design before restarting construction.

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BE PATIENT

