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**WASTE DISPOSITION AND RECYCLING SUBCOMMITTEE**

**WEDNESDAY, FEBRUARY 15, 2012 @ 4:30 P.M. ROOM 160**

**AGENDA**

- PRESENTATION – Cost Scenarios for Waste Disposition Alternative presented by Dennis Carr, Karen Price, Fluor-B&W
- DISCUSSION
- PLAN OF ACTION

ADJOURN



## WASTE DISPOSITION & RECYCLING SUBCOMMITTEE

MEETING SUMMARY

FEBRUARY 15, 2012 • 4:30 P.M.

THE OHIO STATE UNIVERSITY ENDEAVOR CENTER  
1862 SHYVILLE ROAD, PIKETON, OH 45661

**Subcommittee Members Present:** Dan Minter, Subcommittee Vice-Chair, Martha Cosby, Frank Halstead, Brian Huber

**SSAB Subcommittee Members Absent:** Will Henderson Subcommittee Chair, Shirley Bandy

**Other SSAB Members Present:** Dick Snyder Board Chair, Val Francis Board Vice-Chair, Gene Brushart, Stan Craft, Sharon Manson, Cristy Renner, Terri Ann Smith

**U.S. Department of Energy (DOE) and contractors:** Joel Bradburne, Greg Simonton, DOE; Rick Greene, Restoration Services, Inc. (RSI); Karen Price, Dennis Carr, Jerry Schneider, Marc Jewett, Jennifer Chandler, Fluor-B&W Portsmouth (FBP)

**Liaisons:** Maria Galanti, Ohio Environmental Protection Agency (EPA); Mike Rubadue, Ohio Department of Health (ODH)

**Support Staff:** Julie Galloway, Cindy Lewis, Eric Roberts, EHI Consultants (EHI)

**Public:** Steve Shepherd, Southern Ohio Diversification Initiative (SODI); John Knauff

**Minter** opened the meeting.

**1. Waste Disposition Information Portfolio presentation was delivered by Marc Jewett, Karen Price, FBP:**

Key Numerical Information for the Waste Disposal Alternatives

- Objectives for Tonight
- Recap: Information Being Provided For Both Alternatives
- Cost Comparison
- Cost Metrics
- Cost Comparison Capital/O&M Breakout
- Off-Site Alternative
- On-Site/Off-Site Alternative

- Waste Disposition for On-Site/Off-Site Alternative
- Alternatives Duration Comparison
- Duration: Key Factors
- Key Transportation Metrics
- Key Transportation Actuarial Risks
- Employment Comparison
- Key Metrics Summary
- Waste Volumes Summary
- Considerations for Re-industrialization

**2. Discussion:**

<b>Question/Comment:</b>	<b>Answer:</b>
<b>Snyder:</b> The RI/FS is due mid March.	<b>Jewett:</b> Yes and the ROD is due mid to late fall.
<p><b>Francis:</b> Does either the on-site or off-site include cleanup of the landfills?</p> <p>Mound was not cleaned up to re-industrial use.</p> <p>Do your cost estimates include boring soils?</p> <p>There are many factors to include in making the decision of on-site or off-site.</p>	<p><b>Jewett:</b> No, the cost is only for the D&amp;D and soil cleanup. The plumes and landfills are not included in these costs.</p> <p>There are three drivers for the waste to be shipped off-site:</p> <ol style="list-style-type: none"> <li>1. If it is not on the WAC</li> <li>2. If an on-site cell is not ready, because of scheduling.</li> <li>3. Anything that people do not want in an on-site cell</li> </ol> <p>The on-site soils include the site preparations for the footprint of the site.</p>
<p><b>Halstead:</b> The plant has been closed for 10 years and no one will bring in a business until it is all cleaned up.</p> <p>People do not want to store any processed gas on-site. You might want to rework the figures to ship all the processed gas off-site.</p>	<b>Jewett:</b> At Fernald 77% of the waste stayed on-site and 23% was shipped off-site.
<p><b>Minter:</b> On slide 14 was the highest risk the transportation.</p> <p>These are important factors to help make our decisions.</p>	<p><b>Jewett:</b> Yes.</p> <p>When you have a blueprint for success then that helps get the funding.</p>

<p>Finding the end use impacts what happens. What is the balance and how do we get there. The key is to find the balance.</p> <p>Recycling process should be done even if it cost more; it would save on the waste left to dispose of.</p>	
<p><b>Manson:</b> If there were an on-site cell, would industrial business still come?</p>	<p><b>Minter:</b> It does make a difference, it is important. It would help to have an end use.</p>
<p><b>Huber:</b> Has anyone looked into how much money is left for redevelopment?</p>	<p><b>Minter:</b> There are no funds for redevelopment in the budget. EM says that is not its mission.</p>
<p><b>Smith:</b> Many people do not want a nuclear footprint.</p>	

**3. Plan of Action:**

- Continue drafting the recommendation.

**Public Comment:**

**Knauff:** What would be the definition of acceptable waste? Who would be in charge to see that it is followed? Who would police the waste that goes in an on-site cell? What are the employment levels? There were only 41 people on the chart to tear everything down. A 100-acre site for a thousand years is not much return on the land.

**Brushart:** Six years is not that long to have the waste all shipped out. With all the waste off-site, wouldn't that help future industry? If it is only a time factor, then the health risk factor should be considered with on-site vs. off-site.

**Minter: Meeting adjourned**

Next meeting: Tuesday, March 13, 2012 at 4:30 p.m.

# Key Numerical Information for the Waste Disposal Alternatives

Marc Jewett

Fluor-B&W Portsmouth, LLC  
SSAB Subcommittee Meeting  
February 15, 2012

## Objectives for Tonight

- Provide the key numerical information supporting the waste disposition alternatives.
- Discuss a holistic path forward on how all the decisions work together to deliver the final plan for the site.

## Recap: Information Being Provided For Both Alternatives

1. Cost Summaries
2. Volumes of Materials
3. Duration of the Alternatives
4. Transportation Metrics
5. Transportation Risks
6. Employment Projections

*Please Note – All data presented are preliminary and subject to revision as the Waste Disposition RI/FS is finalized.*

# Cost Comparison





- All values are presented in Net Present Value dollars, as required by CERCLA guidance.\*
- Adopts OMB Circular A-94 Net Present Value factors, as required by CERCLA guidance.
  - Uses a real discount rate of 2% (accounts for both inflation and capital growth).
  - Applies 1000-year performance period for on-site disposal.
- Net Present Value – How much money must be placed in the bank today at a 2% effective interest rate to pay for the total cost of the alternative across all years.

*\* EPA 540-R-00-002, A Guide to Developing and Documenting Cost Estimates During the Feasibility Study, July 2000*

# Cost Comparison Capital/O&M Breakout

Cost Category	On-Site With Some Off-Site Disposal	All Off-Site Disposal
Capital	\$652 Million	\$1.62 Billion
Operations & Maintenance	\$16 Million *	**
<b>Total</b>	\$668 Million	\$1.62 Billion

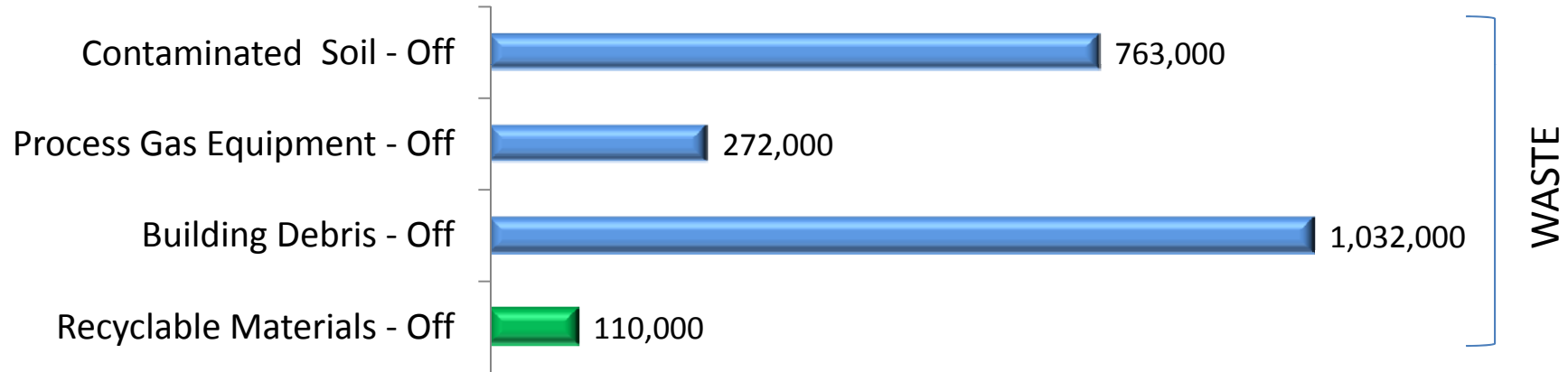
All costs are in Net Present Value dollars

\* O&M cost for on-site disposal based on 30-year active maintenance period with passive maintenance thereafter.

\*\* Long-term O&M costs for off-site disposal facilities are assumed to be covered by disposal fee.

# Off-Site Alternative

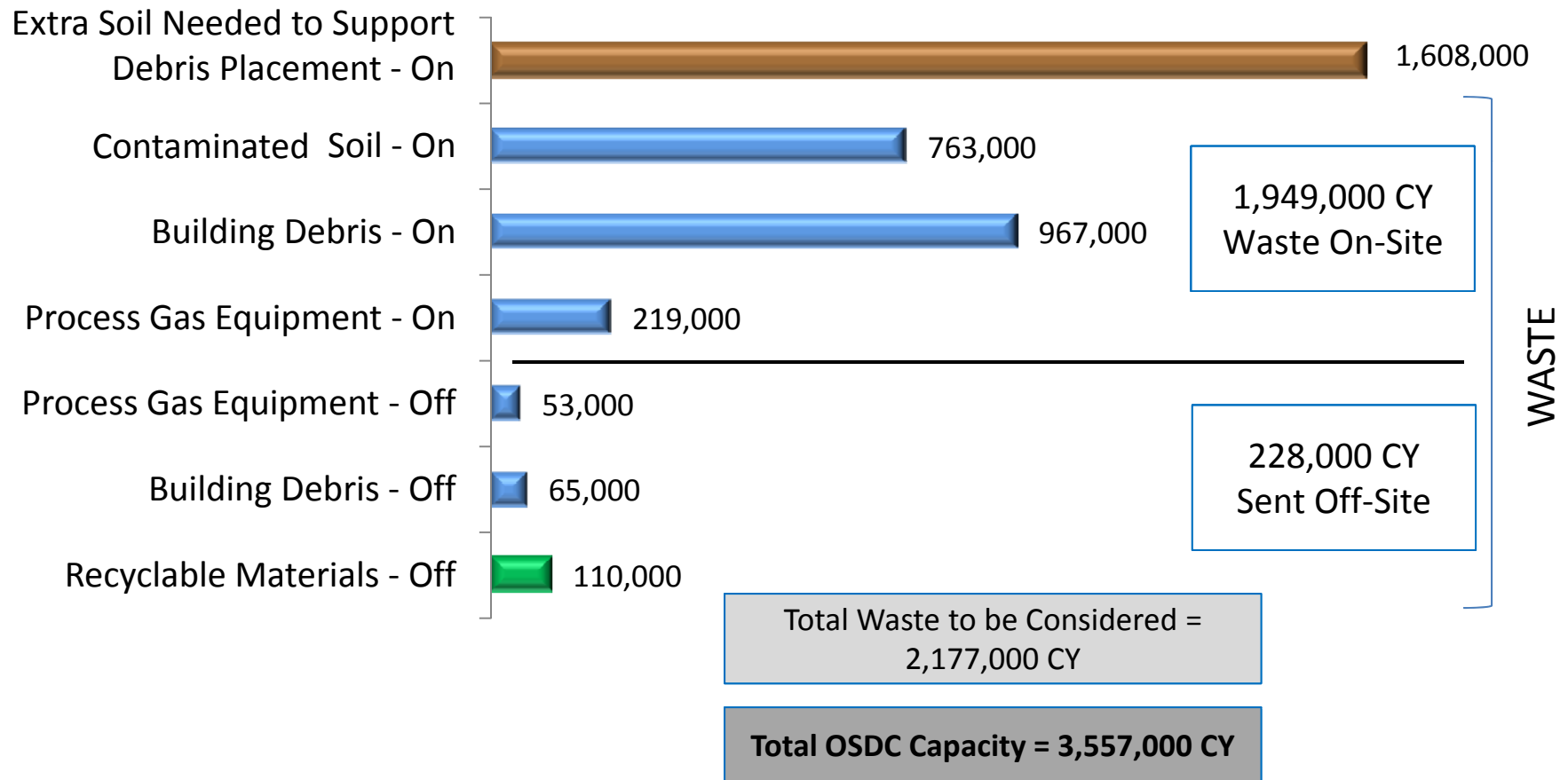
(volumes in cubic yards)



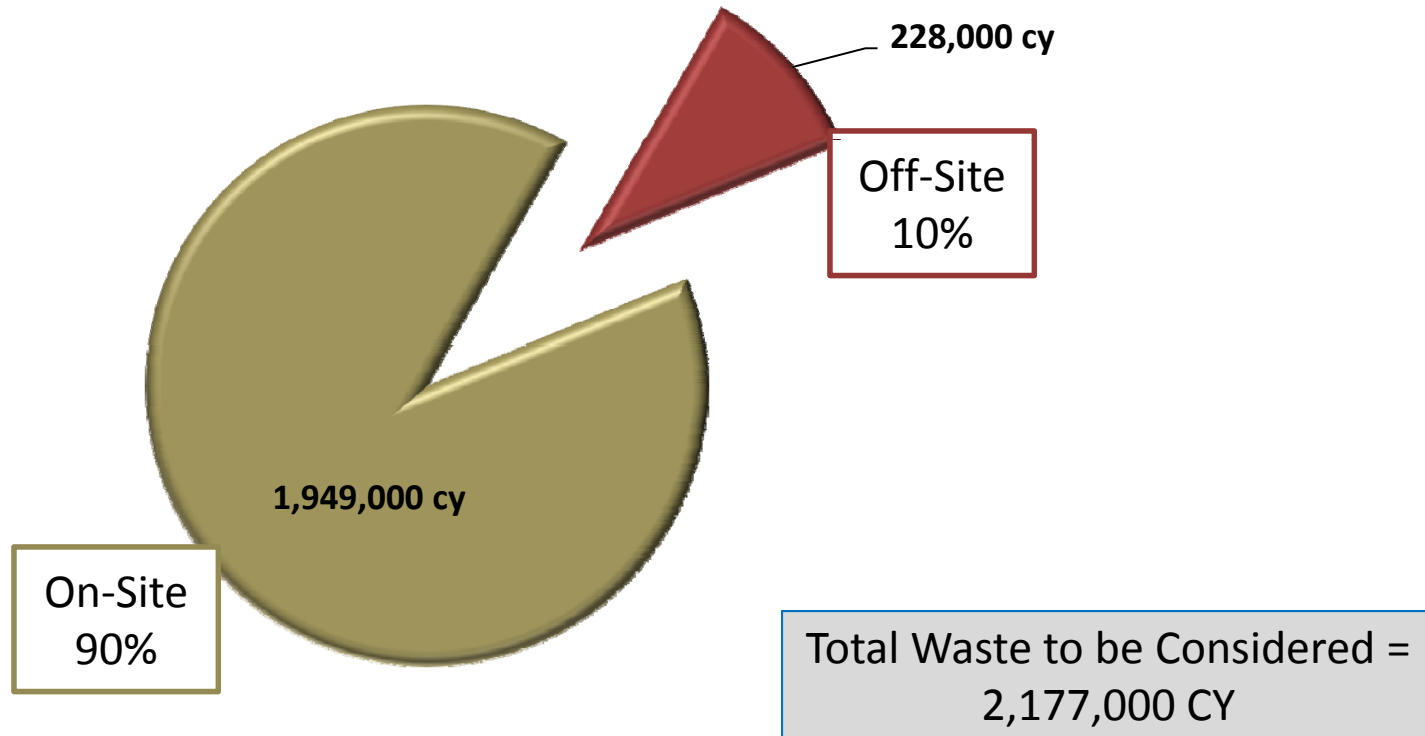
Total Waste to be Considered =  
2,177,000 CY

# On-Site/Off-Site Alternative

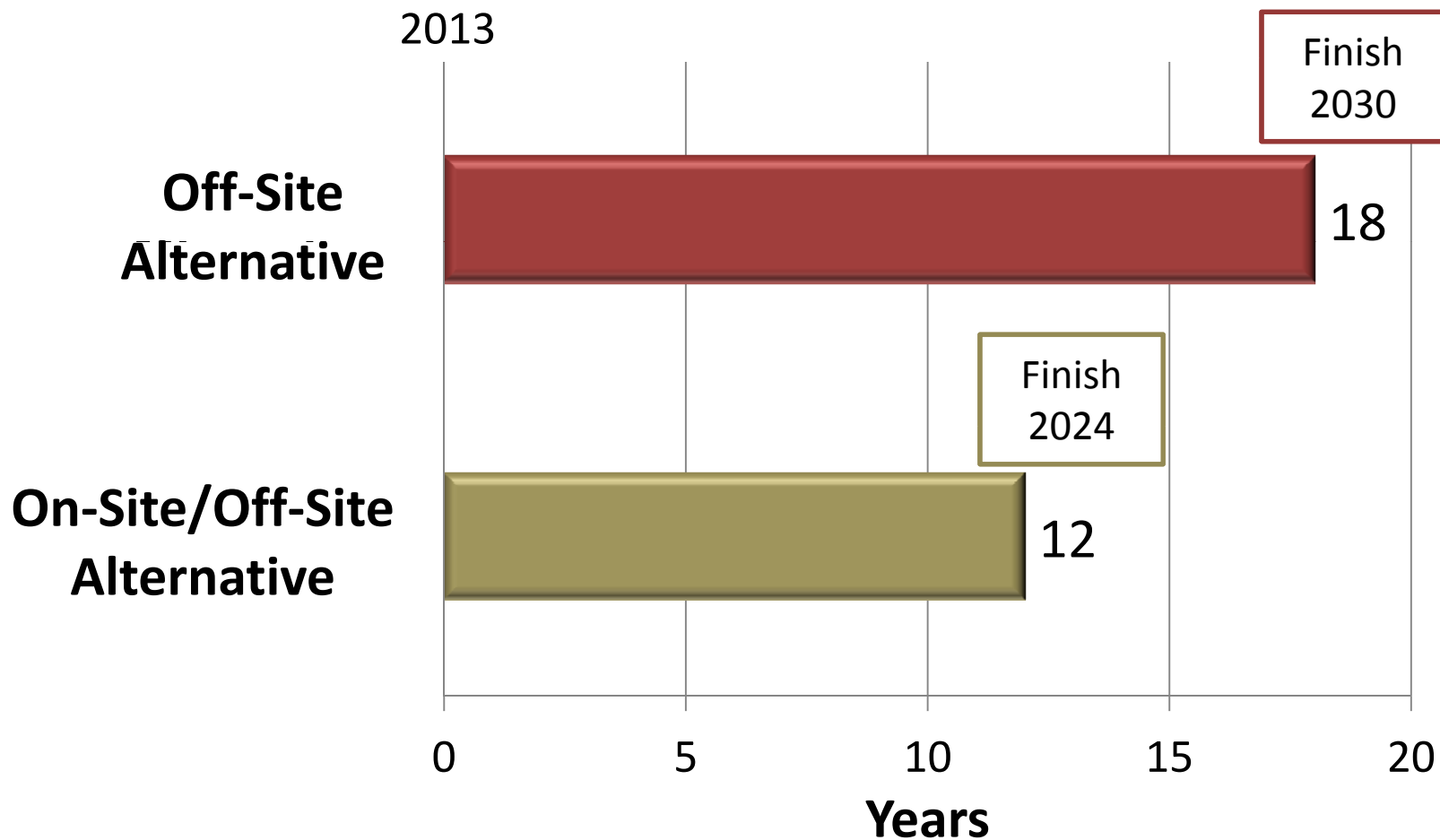
(volumes in cubic yards)



# Waste Disposition for On-Site/Off-Site Alternative



# Alternatives Duration Comparison



## Duration: Key Factors

- Alternatives implementation schedule driven by funding availability not by material movement.
- Feasibility study assumed level funding profile.
  - Similar to Fiscal Year 2012.
  - \$475 million per year total site funding.
  - Meets 2024 end date for lowest cost alternative.

# Key Transportation Metrics



## Rail Cars to Utah

Off-Site: 15,000 rail cars

On/Off-Site: 260 rail cars



## Trucks to Nevada

Off-Site: 9,700 trucks to NNSS

On/Off-Site: 4,500 trucks to NNSS



## Local Trucks

Off-Site: 16,000 trucks to local landfill

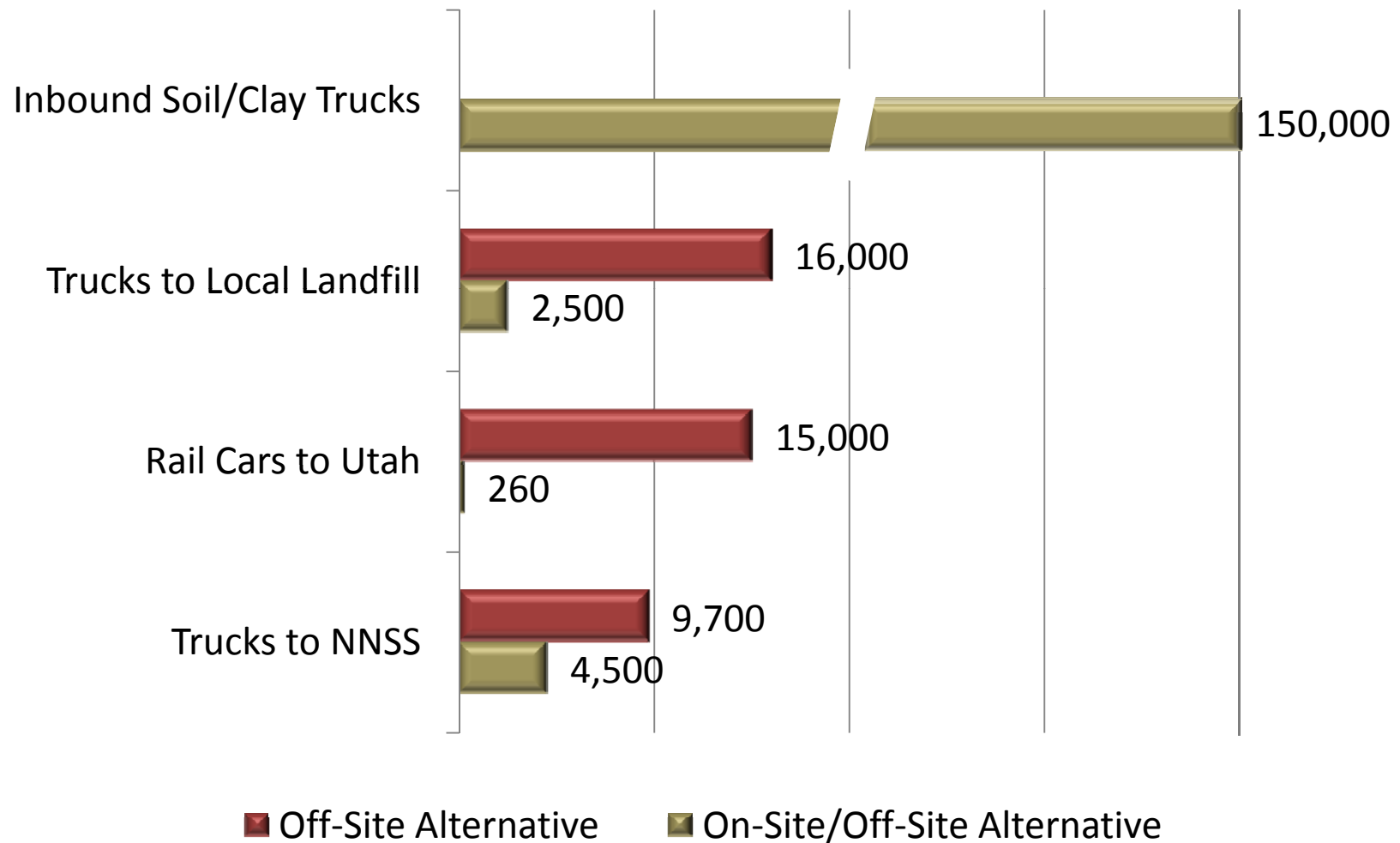
On/Off-Site: 150,000 trucks clay/rock to OSDC

On/Off-Site: 2,500 trucks to local landfill

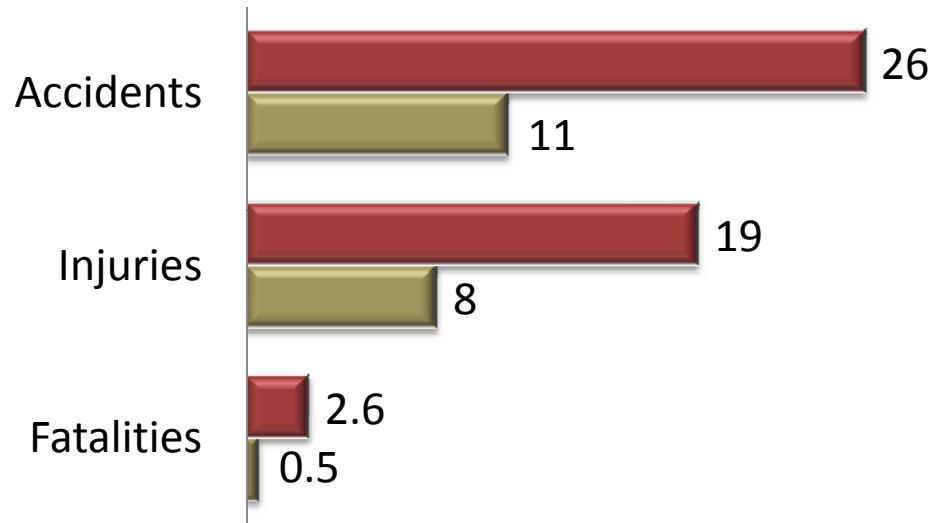


# Key Transportation Metrics

(Unit: Individual Trucks/Rail Cars)



# Key Transportation Actuarial Risks

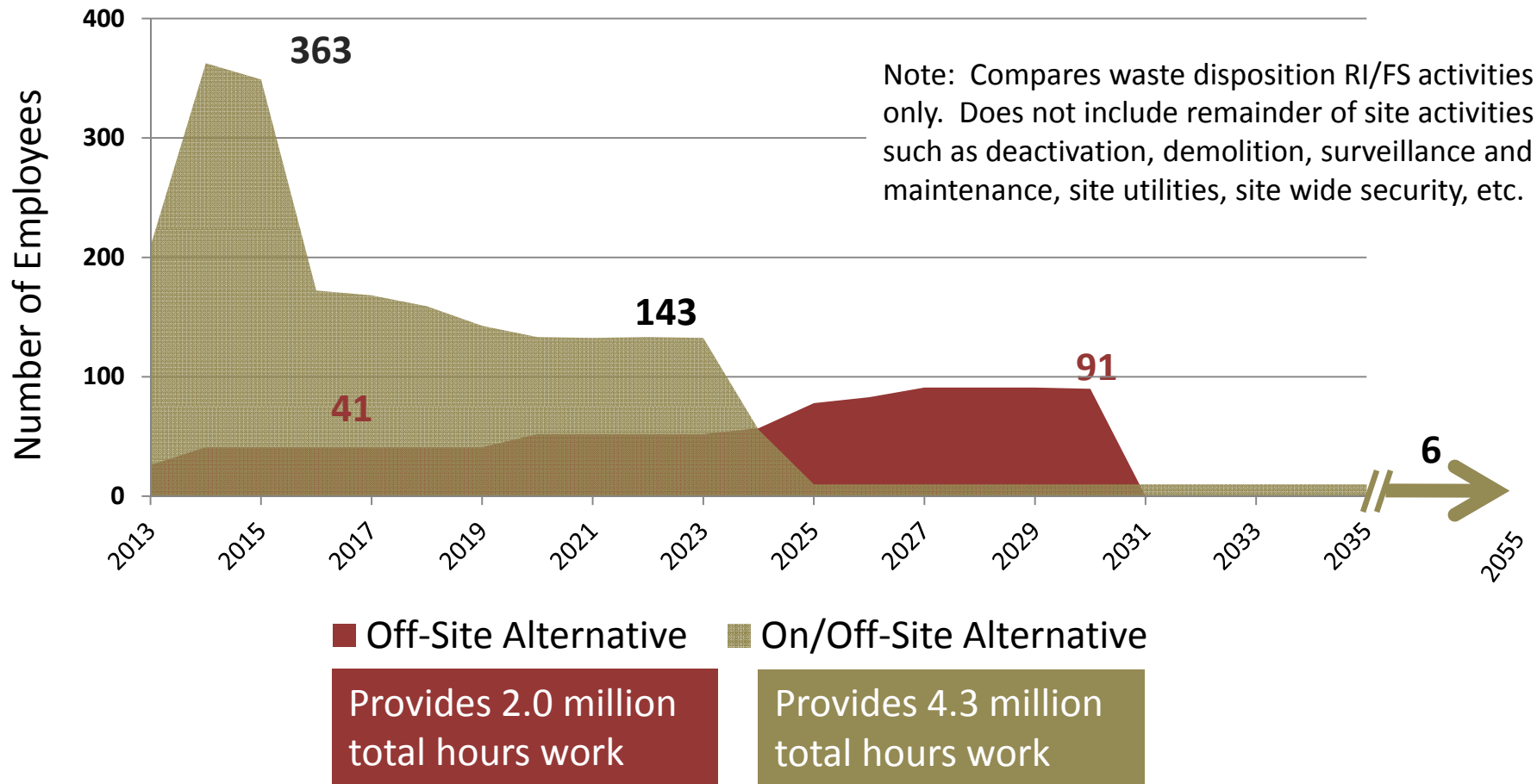


- Off-Site Alternative
- On-Site/Off-Site Alternative

	Off-Site Alternative	On/Off-Site Alternative
Truck Miles	43 million	24 million
Rail Miles	55 million	950 thousand

Accident, injury, and fatality numbers are published actuarial statistics for truck and rail car transportation. They are based on number of miles traveled.

# Employment Comparison



# Key Metrics Summary

Information compiled for PORTS SSAB use by Fluor-B&W  
Portsmouth, LLC from DRAFT version of RI/FS

	Off-Site Alternative	On-Site/Off-Site Alternative
<b>Cost</b>	\$1.62 Billion	\$668 Million
<b>Material Distribution</b>	100% Off-Site	10% Off-Site 90% On-Site
<b>Schedule</b>	18 years	12 years
<b>Transportation</b>		
- Local trucks	16,000 local trucks	152,500 local trucks
- Trucks to NNSS	9,700 trucks	4,500 trucks
- Rail cars	15,000 rail cars	260 rail cars
- Truck miles	43 million miles	24 million miles
- Rail miles	55 million miles	950 thousand miles
- Statistical accidents	26	11
- Statistical injuries	19	8
- Statistical fatalities	2.6	0.5
<b>Employment</b>		
- Duration	18 years	12 years
- Labor hours	2.0 million hours	4.3 million hours

# Waste Volumes Summary

(Unit: Cubic Yards)

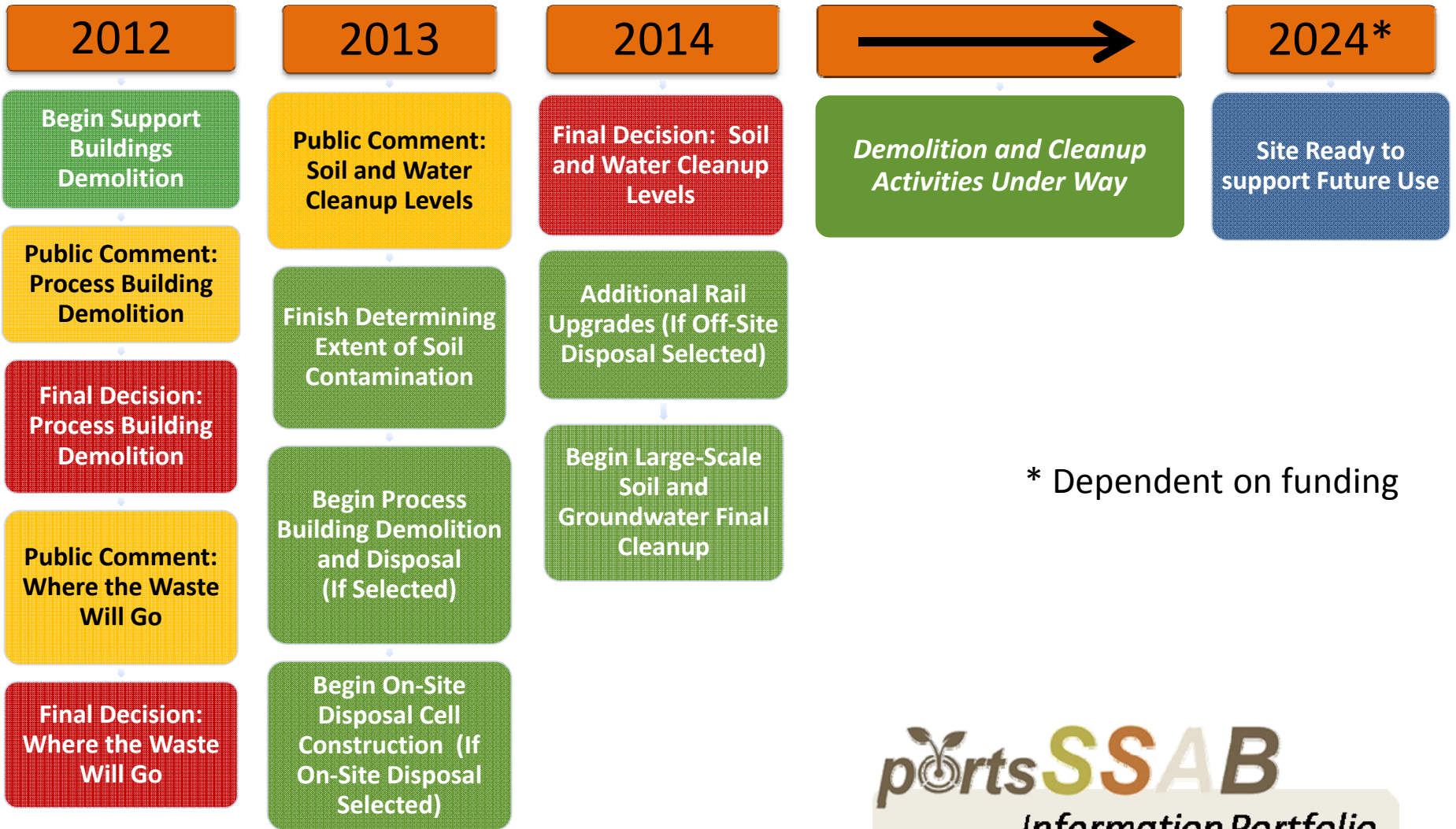
	Off-Site Alternative	On-Site/Off-Site Alternative
Soil	0	763,000
Building Debris	0	967,000
Process Gas Equipment	0	219,000
<b>ON-SITE WASTE SUBTOTAL</b>	<b>0</b>	<b>1,949,000</b>
Soil	763,000	0
Building Debris	1,032,000	65,000
Process Gas Equipment	272,000	53,000
Recyclable	110,000	110,000
<b>OFF-SITE WASTE SUBTOTAL</b>	<b>2,177,000</b>	<b>228,000</b>
<b>WASTE TOTAL</b>	<b>2,177,000</b>	<b>2,177,000</b>

Information compiled for PORTS SSAB use by Fluor-B&W Portsmouth, LLC from DRAFT version of RI/FS

<b>ON-SITE WASTE SUBTOTAL</b>	<b>1,949,000</b>
<b>Additional Soil for Debris Placement</b>	<b>1,608,000</b>
<b>OSDC CAPACITY</b>	<b>3,557,000</b>

## Considerations for Re-industrialization

1. Clean-up levels
2. Locations of landfills and plumes – relationship to re-industrialization
3. Existence & location of potential OSDC
4. Final grade of available parcels
5. Available/remaining utilities
6. Rail infrastructure / access to main lines
7. Access to site
8. Others:
  - Utility rates
  - Tax structure
  - Land cost
  - ... ?
  - ... ?
  - ... ?



\* Dependent on funding

