



PORTSMOUTH EM SITE SPECIFIC ADVISORY BOARD

•OSU Endeavor Center • 1862 Shyville Road • Piketon, Ohio 45661 • (740) 289-5249 •

Proposed Agenda for the June 7, 2012 Board Meeting

Chair Richard H. Snyder	6 p.m. Call to Order, Introductions Review of Agenda Approval of May Minutes	
Vice Chair Val E. Francis		
Board Members Shirley A. Bandy L. Gene Brushart Al Don Cisco Martha A. Cosby Ervin S. Craft Franklin H. Halstead Adrian C. Harrison Carl R. Hartley William E. Henderson II Brian F. Huber Sharon E. Manson Daniel J. Minter Michael E. Payton Cristy D. Renner Brandon K. Wooldridge Connie E. Yeager Kathy J. Zimmerman-Woodburn	DDFO Comments Liaison Comments Presentations <i>Advanced Technology's and Planning Perspectives</i> Nate Ames, Director of Nuclear Fabrication Consortium, Edison Welding Institute <i>Process Gas Equipment Breakdown</i> Greg Simonton, Department of Energy, Federal Coordinator Administrative Issues Subcommittee Updates Public Comments Final Comments from the Board	--15 minutes --10 minutes --30 minutes --30 minutes --25 minutes -- 5 minutes --15 minutes --10 minutes
Deputy Designated Federal Official Joel Bradburne	Adjourn	
DOE Federal Coordinator Greg Simonton		

Support Services
EHI Consultants, Inc.
1862 Shyville Road
Piketon, OH 45661
Phone 740.289.5249
Fax 740.289.1578

DEPUTY DESIGNATED FEDERAL OFFICIAL PRESENTATION

Joel Bradburne, Site Lead
U.S. Department of Energy



**Portsmouth Site Specific Advisory Board
June 7, 2012**

Agenda

- ▶ Plant Updates
- ▶ Regulatory Progress
- ▶ Public Outreach
- ▶ Mid-Year Review
- ▶ Upcoming Events





Plant Updates



06/07/2012



PROCESS BUILDING D&D

06/07/2012



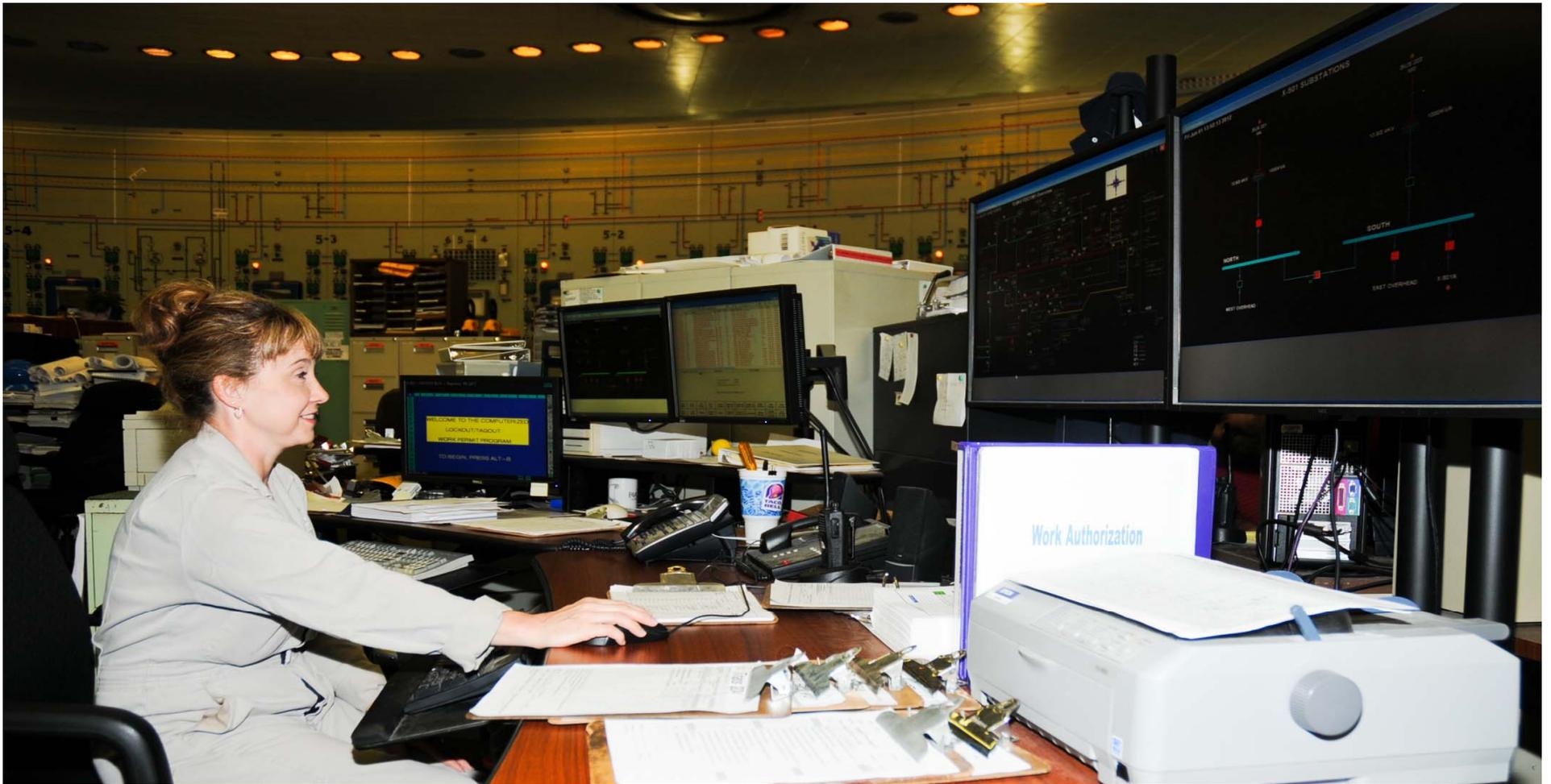
BALANCE OF PLANT

06/07/2012



BALANCE OF PLANT

06/07/2012

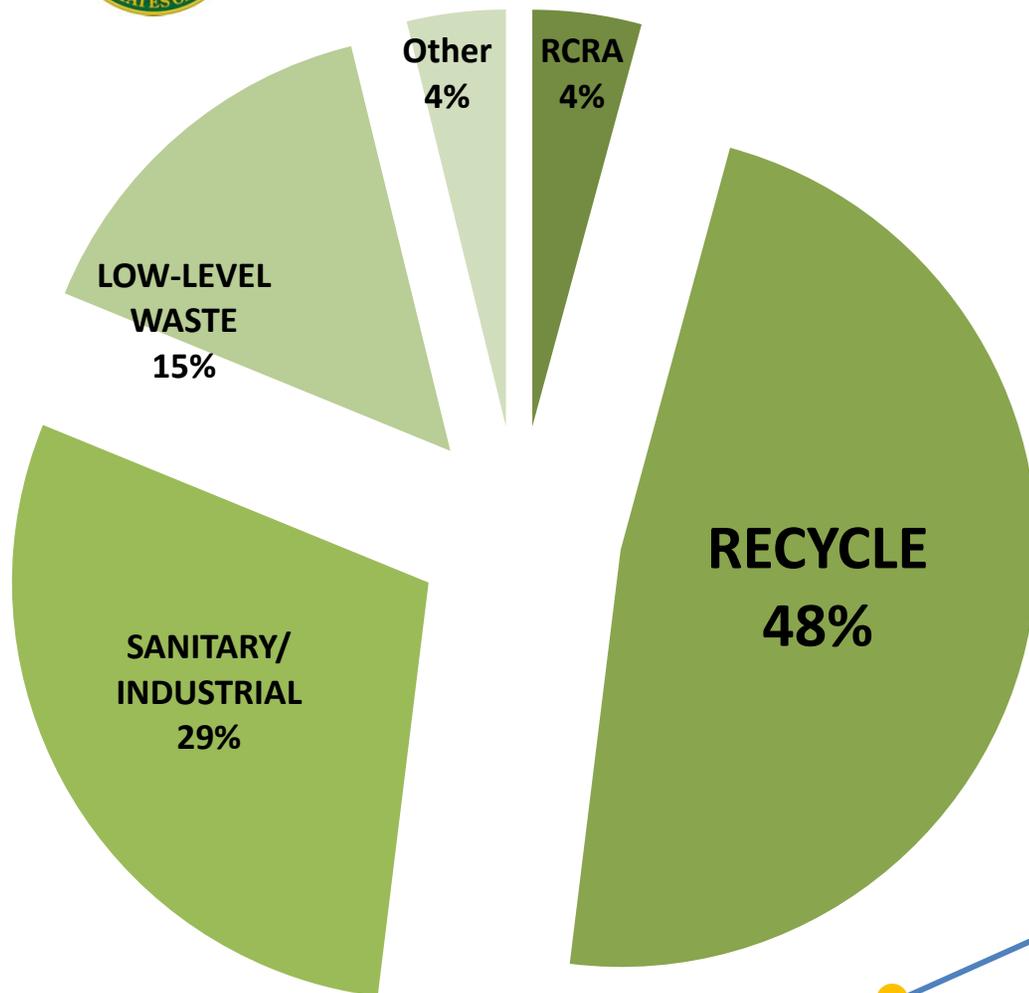


BALANCE OF PLANT

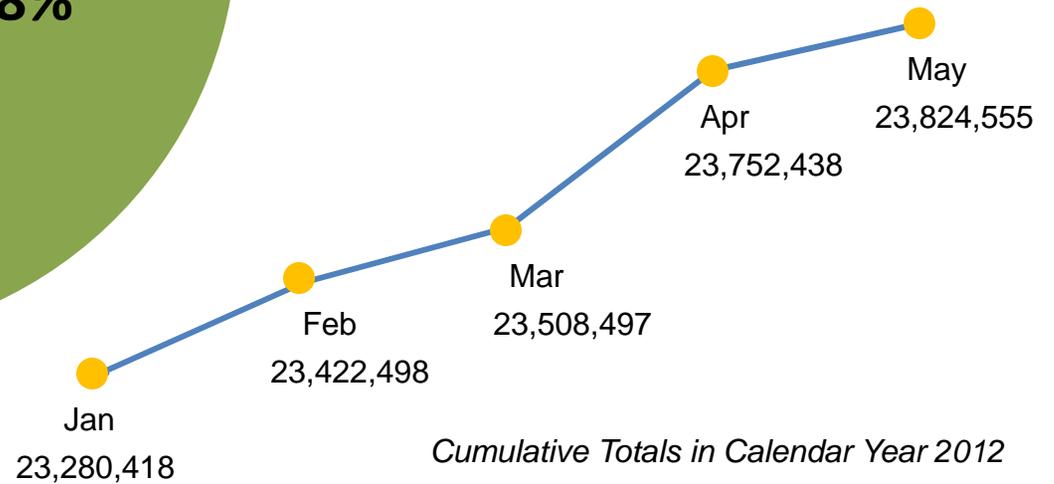
06/07/2012



Waste Disposition



More than
23.8
million pounds
of material removed
from the site since
March 29, 2011.





Environmental Remediation

**Groundwater
Treated:**

**34.6 Million
Gallons**



**TCE
Removed:
426 Pounds**



DUF6 Conversion Plant



06/07/2012



Regulatory Progress

Process Building D&D	Evaluation of Alternatives, Informational Meetings and Workshops	Proposed Plan	Public Comment Period	Record of Decision	Work Begins
Waste Disposition	Evaluation of Alternatives, Informational Meetings and Workshops	Proposed Plan	Public Comment Period	Record of Decision	Work Begins
RCRA Soil Decision	Implement Ongoing Corrective Measures (already in place from previous decisions)			Evaluation of Alternatives	

PUBLIC OUTREACH



06/07/2012



Public Outreach



Since January 31, 2012
3,500 people visited this site
from 29 different countries



www.portsvirtualmuseum.org



Mid-Year Review





Mid-Year Review

ports SSAB Recommendations

10-01	Request for an End Use Study for the Portsmouth Gaseous Diffusion Plant
10-02	Recommends Integrating the Community's Core Values and Long-Term Goals for Economic Development
10-03	Proposed Request for a Comprehensive Engineering Evaluation for Constructing an Asset Recovery Facility at the Portsmouth Reservation for Recycling Metals from the D&D using a melting/smelting process
10-04	Recommends that a meeting be held with official representatives of all counties, cities, villages, and townships within the five county areas of Adams, Jackson, Pike, Ross and Scioto to discuss the current D&D activities and future land use possibilities to help insure that constructive public comments are obtained
10-05	PORTS Site Tour and Development of Educational/Informative Materials
10-06	Waste Disposition of Process Building Decontamination and Decommissioning Project Activities
11-01	Siting Criteria for a Potential CERCLA Cell
11-02	The Construction of a Multi-purpose Facility for DOE and Community Needs
11-02A	Addendum to 11-02
11-06	Recommendation on Continued Investigation of a Potential On-Site Disposal Cell and Location

ports SSAB

**RECOMMENDATION 10-01:
Request an End Use Study for the
Portsmouth Gaseous Diffusion Plant**



<i>Scenario Preferences</i>	<i>Votes</i>
Nuclear Power Plant	495
Green Energy Production	475
Industrial Park	421
National Research & Development Center	418
Warehousing	179
Training & Education	160
Metal Recovery	152
Multi-Use Southern Ohio Educational Center	143
Greenbelt	131



**RECOMMENDATION 10-02:
Integrating the Community's Core Values and
Long-Term Goals for Economic Development**



*Since March 29, 2011

\$4.2 Million
from recycling through SODI

\$2.1 MILLION
for community projects

\$2.1 Million
to taxpayers and site





**RECOMMENDATION 10-04:
Involvement of Community Leaders**



ports SSA B

RECOMMENDATION 10-05:
PORTS Site Tour and Development of
Educational/Informative Materials



Educational Outreach



Monthly Public Tours





**RECOMMENDATION 11-02:
The Construction of a Multi-purpose Facility
for DOE and Community Needs**

**RECOMMENDATION 11-02A:
Addendum to 11-02**



Department of Energy

Portsmouth/Paducah Project Office
1017 Majestic Drive, Suite 200
Lexington, Kentucky 40513
(859) 219-4000

NOV 8 2011

PPPO-03-1307322-12

Mr. Richard Snyder, Chair
Mr. Val Francis, Vice Chair
Portsmouth EM Site Specific Advisory Board
1862 Shyville Road
Piketon, OH 45661

Dear Sirs:

RECOMMENDATION 11-02: THE CONSTRUCTION OF A MULTI-PURPOSE FACILITY FOR U.S. DEPARTMENT OF ENERGY AND COMMUNITY NEEDS

Reference: Letter to J. Bradburne from R. Snyder and L. Parker, "Recommendation 11-02: The Construction of a multi-purpose facility for U.S. Department of Energy (DOE) and community needs", dated July 8, 2011

This correspondence is written in response to the U. S. Department of Energy (DOE) Office of Environmental Management (EM) Portsmouth Site Specific Advisory Board (SSAB) Recommendation 11-02. The department acknowledges the SSAB's recommendation.

The DOE Portsmouth Project Office (the department) agrees that the SSAB's recommended multi-purpose facility could potentially benefit the department and the community. However, the department cannot fully agree to such a development until more information is available to determine what is practical and cost efficient.

The department and its contractors are working in concert with the community to establish a future site configuration vision. The department is also evaluating its space needs for the current decontamination and decommissioning (D&D) mission and its projected long-term site requirements.

That determination is being made in a changing climate where contractors are transitioning, facilities have just been returned to the department from the United States Enrichment Corporation, regulatory guidance is being developed and future site missions are being evaluated.

The department will consider all aspects of the recommendation – work space, a central location for public meetings related to plant developments, a permanent home for the Environmental Information Center (EIC), and a location for the preservation and display of plant artifacts and other historical elements. DOE will also explore partnerships in this effort.

The department will consider all aspects of the SSAB recommendation – work space, a central location for public meetings related to plant developments, a permanent home for the Environmental Information Center (EIC), and a location for the preservation and display of plant artifacts and other historical elements. DOE will also explore partnerships in this effort.



RECOMMENDATION 10-03:
Request for a Comprehensive Engineering Evaluation for Constructing an Asset Recovery Facility for Recycling Metals from the D&D using a melting/smelting process

RECOMMENDATION 10-06:
Waste Disposition of Process Building Decontamination and Decommissioning Project Activities

RECOMMENDATION 11-01:
Siting Criteria for a Potential CERCLA Cell

RECOMMENDATION 11-06:
Continued Investigation of a Potential On-Site Disposal Cell and Location





Upcoming Events



Public Site Tour



SSAB Full Board Meeting

6:00 p.m. at Endeavor Center

**MARK YOUR
CALENDAR!**

*For a full list of SSAB activities,
check out the website at
<http://www.ports-ssab.energy.gov>*



PORTSMOUTH EM SITE SPECIFIC ADVISORY BOARD

MINUTES OF THE THURSDAY, JUNE 7, 2012, SSAB MEETING • 6:00 P.M.

Location: The Ohio State University Endeavor Center, Room 160, Piketon, Ohio

Site Specific Advisory Board (SSAB) Members Present: Vice Chair Val Francis; Gene Brushart, Al Don Cisco, Martha Cosby, Ervin Craft, Franklin Halstead, Adrian Harrison, Carl Hartley, Brian Huber, Sharon Manson, Daniel Minter, Kathy Zimmerman-Woodburn

SSAB Members Absent: Chair Richard Snyder; Shirley Bandy, William Henderson, Michael Payton, Cristy Renner, Terri Ann Smith, Connie Yeager, Brandon Wooldridge

U.S. Department of Energy (DOE) and Contractors: Johnny Reising, Greg Simonton, DOE; Rick Greene, Restoration Services, Inc. (RSI); Julie Galloway, Cindy Lewis, EHI Consultants (EHI); J.D. Chiou, Deneen Revel, Karen Price, Jim Thompson, Fluor-B&W Portsmouth (FBP)

Liaisons: Maria Galanti, Ohio Environmental Protection Agency (EPA); Joe Crombie, Ohio Department of Health (ODH)

Facilitator: Eric Roberts, EHI Consultants

Public: Nate Ames, Edison Welding Institute (EWI); Mark Johnson, Tri-State Building and Construction Trades Council (TSBTC); David Manuta, Manuta Chemical Consulting, (MC2); David Hurd, Operators Local 18; Carl Henderson, Todd Madden, Barbara Nelson

Approved by Richard Snyder, Board Chair

Richard Snyder

Call to Order:

Francis: I would like to call the meeting to order. I would also like to welcome our new members.

Roberts: I would like to welcome everyone, and I will be facilitating the meeting. There will be a public comment period after the presentations. The board should stay within its defined scope and follow the meeting ground rules adopted.

June Agenda:

Roberts: Are there any modifications or proposed changes to the June agenda?

- **Halstead:** I make a motion to approve the June agenda, **Manson:** I second the motion
 - **Motion carried, agenda approved**

May Minutes:

Roberts: Are there any modifications or proposed changes to the May minutes?

- **Halstead:** I make a motion to approve the May minutes, **Cosby:** I second the motion
 - **Motion carried, minutes approved**

DDFO comments provided by Greg Simonton, Federal Project Coordinator

Agenda

- Plant Updates
- Process Building D&D
- Balance Of Plant
- Waste Disposition
- Environmental Remediation
- DUF6 Conversion Plant
- Regulatory Progress
- Public Outreach
- Mid-Year Review
- Upcoming Events

A copy of the DDFO presentation is available on the SSAB web site (www.ports-sab.energy.gov)

Question/Comment:	Answer:
<p>Brushart: There was a front-page article in the Portsmouth Times and Chillicothe Gazette regarding the final cascade shut down in the X-326 Process Building today.</p> <p>Sarah and I attended a public tour of the plant with Sandy Childers a couple of weeks ago. They said if you signed up for</p>	

<p>a tour and then cannot make it, please let someone know. There are about 150 people on standby. It is a great program and it should be extended.</p>	
---	--

Federal Project Coordinator comments provided by Greg Simonton, Federal Project Coordinator:

Simonton: I will hold my comments until my presentation.

Liaison comments provided by Maria Galanti, Ohio EPA

Galanti: We received final comments on the X-100 building Removal Action Work Plan on Tuesday, so approval of the removal work plan will be out tomorrow morning. The Remedial Investigation/Feasibility Study (RI/FS) waste disposition document is on the horizon. I highly recommend that as soon as it has been submitted to us, you should get a copy of the summary take a look at. It is the feasibility study of on-site/off-site alternatives. The preliminary Waste Acceptance Criteria (WAC) will be included in the report.

Liaison comments provided by Joe Crombie, ODH

Crombie: None at this time.

Presentations:

Advanced Technologies and Planning Perspectives presented by Nate Ames, Director of Nuclear Fabrication Consortium, Edison Welding Institute (EWI):

- EWI- Quick Snapshot
- EWI- Centers and Consortia
- EWI Laser Decontamination Technology
- Portsmouth D&D Challenges
- Increased Recycling Opportunity
- Technical Applicability to Portsmouth D&D Effort
- Long Term Environmental & Safety Impacts
- Sustainable Business Opportunity
- Potential Partnerships
- Questions

A copy of the Advanced Technologies and Planning Perspectives presentation is available on the SSAB web site (www.ports-ssab.energy.gov)

Question/Comment:	Answer:
<p>Francis: What is a 600 ton head, what does it do? Can you clean beams in place?</p>	<p>Ames: It goes on top of a nuclear reactor vessel it is about a 10-inch thick plate or round chunk that gets heated and then beat into shape, which takes a 100 to 200 ton press at 600 degrees celsius. Yes, you can clean beams in place.</p>

<p>How is the contaminant captured after it is stripped off the item?</p> <p>What is your suggestion and who would you see taking the lead on this? Are you looking for DOE to take the lead?</p> <p>Have you consulted any national or international researchers on this?</p>	<p>In order to keep from damaging the item, we stay very cold. You suck off and capture the waste in a bag or metal container. We have not done anything with contaminants yet.</p> <p>I do think DOE would be the first step. Then I think commercial business would follow.</p> <p>We did consult a man from Wisconsin. DOE funded his project in 1996-1997 to laser everything embedded in the paint. Things have changed now. Technology has come a long way in 20 years.</p>
<p>Halstead: Would this be a good technique for removing contaminants?</p> <p>Any company that used ice blasting with CO2 could be helpful and give you information.</p>	<p>Ames: Yes, that is why we are here. This process will only take off the layers that you want removed from an object.</p>
<p>Minter: What would be the cost?</p>	<p>Ames: Our cost would be minimal. However, I do not know what the cost of the process would be. For example, a crushed beam that has been stripped is about 70 cents a pound, if you can sell it as a beam, it would be \$8.00 per pound.</p>
<p>Galanti: Have you ever done any work with Trichloroethylene (TCE)?</p>	<p>Ames: I will have to check on that.</p>
<p>Cisco: You lift the layers off the item then capture it somehow.</p>	<p>Ames: Yes, you suck it off and capture the waste in a bag or metal container.</p>
<p>Simonton: Do you collaborate with The Ohio State University (OSU)?</p>	<p>Ames: OSU welding leases space from us, but we do not work with them.</p>

Process Gas Equipment Breakdown presentation delivered by Greg Simonton, DOE Federal Project Coordinator:

- Waste Acceptance Criteria (WAC)
- Recap
- Process Gas Equipment
- Contaminants
- Impacts
- Technical WAC
- Administrative WAC
- Cost Comparison
- WAC Considerations
- Questions

A copy of the Process Gas Equipment Breakdown presentation is available on the SSAB web site (www.ports-ssab.energy.gov)

Question/Comment:	Answer:
<p>Francis: Where are the converters going? Are they just being stored?</p> <p>Would it make sense that with the discussions we had with EWI tonight that their participation would fall in the \$952 Million range?</p>	<p>Simonton: They are being staged right now. I am not sure where they will go.</p> <p>I do not know if I can answer that. It is not as if we have that cash in a pile to pay for shipping off-site. It is just that you would save money by not having to ship everything off-site.</p>
<p>Crombie: Did you find these people to be flexible with the prices?</p>	<p>Simonton: I am sure you can negotiate a better rate.</p>
<p>Halstead: Has it not been decided, that all processed gas equipment because of the TSC in the 326 building will be shipped off to Nevada? I was told that it would be.</p>	<p>Simonton: I will have to ask for verification on that.</p>
<p>Brushart: We were told that there is five or six landfills on-site now. Are those going to be dug up and moved or what is the plan?</p>	<p>Simonton: FFE Inc. (FFE) did say it would be hard to develop on the site with the existing landfills. However, nothing has been decided yet.</p>

Administrative Issues:

Community Engagement Subcommittee Update by subcommittee Vice Chair Gene Brushart:

Brushart: The Site Legacy Subcommittee met on May 8, 2012. We had a presentation by Margaret Hutzel on the Annual Site Environmental Report (ASER) summary. We discussed writing a recommendation showing support for the ASER project.

Manson: I recommended the school should submit the project for recognition to the Ohio School Board Association. This is the first time this state has ever done any project like this before.

Roberts: The students did some artwork that was included in the ASER report. EHI is working with the school to see if we can get some of the artwork to hang in the SSAB office.

Environmental Cleanup & Land Preparation (ECLP) Subcommittee Update by Subcommittee Vice Chair Frank Halstead:

Halstead: The ECLP subcommittee met on May 8, 2012. Karen Price answered some questions that had been asked regarding the landfills. There is no plan in the future for any of the five landfills to be cleaned up.

Waste Disposition Subcommittee Update by Vice Chair Dan Minter:

Minter: The Waste Disposition subcommittee met on May 8, 2012. Dennis Carr delivered a presentation on process gas equipment. We also discussed the National Chairs Draft Recommendation on Budget that Cristy Renner had helped write.

Executive Subcommittee Update by Eric Roberts:

Roberts: The Executive subcommittee met on May 31, 2012. The board members that attended are not here tonight. Therefore, I will go over the information. We are working on the Annual Executive Planning Session for August 24-25. Portsmouth has been asked to help plan the National Chairs meeting in Washington, D.C. this fall, because Portsmouth will be hosting the chairs' meeting in fall of 2013.

Public Comment:

Manuta: My name is David Manuta, President of Manuta Chemical Consulting, Inc., former chief scientist at the plant. A comment on the converters, back when the plant was running the issue was that high assays were being pushed through the converters. With the shutdown, you do not have the temperature control like you did when the plant was operating. That means the vapors can condense. I do not know how much of that has been cleaned, but if solid contaminants remain in the converters, they will need to stay inside the building.

Final Comments from the board:

Halstead: I passed out a letter that I wrote and would like all the members to read. The community has spoken and said no processed gas equipment on-site. Let us conclude it at the next subcommittee meeting and get moving on a recommendation, whether it is for or against an on-site waste cell.

Francis adjourned the meeting.

Next Meeting Thursday, July 12, 2012, 6 p.m.

Action Items:

- EHI will have copies of the draft recommendation 12-03 at the subcommittee meeting.
- EHI will work with Picketon High School to see if artwork from the ASER project can hang in the SSAB office.
- EHI will work with the Community Engagement subcommittee to write a recommendation in support of the ASER project.



WASTE ACCEPTANCE CRITERIA

June 7, 2012

Presented by **GREG SIMONTON**
Federal Project Coordinator
U.S. Department of Energy



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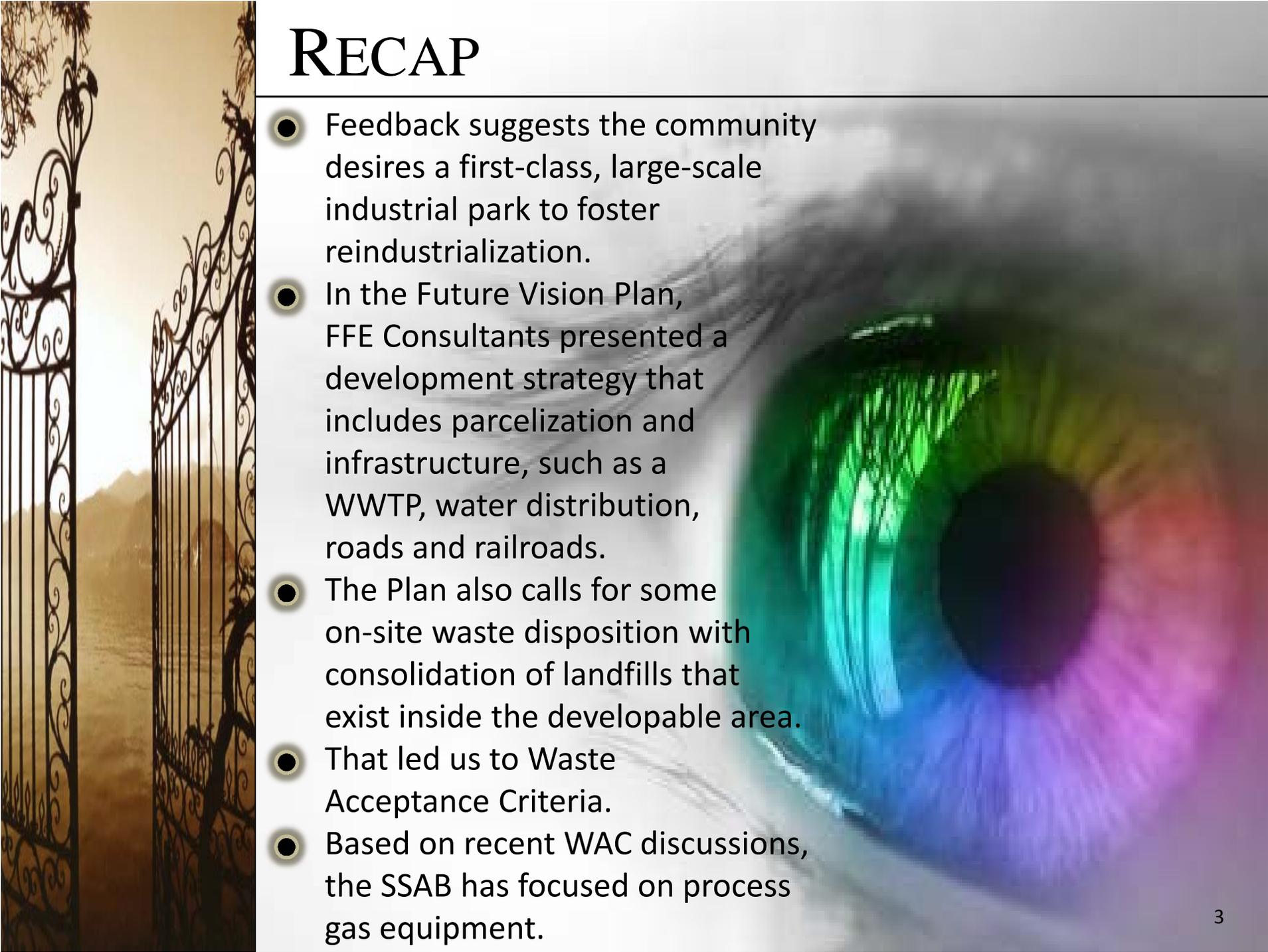
1 RECAP

2 PROCESS GAS EQUIPMENT

3 CONTAMINANTS

4 IMPACTS

5 WAC CONSIDERATIONS

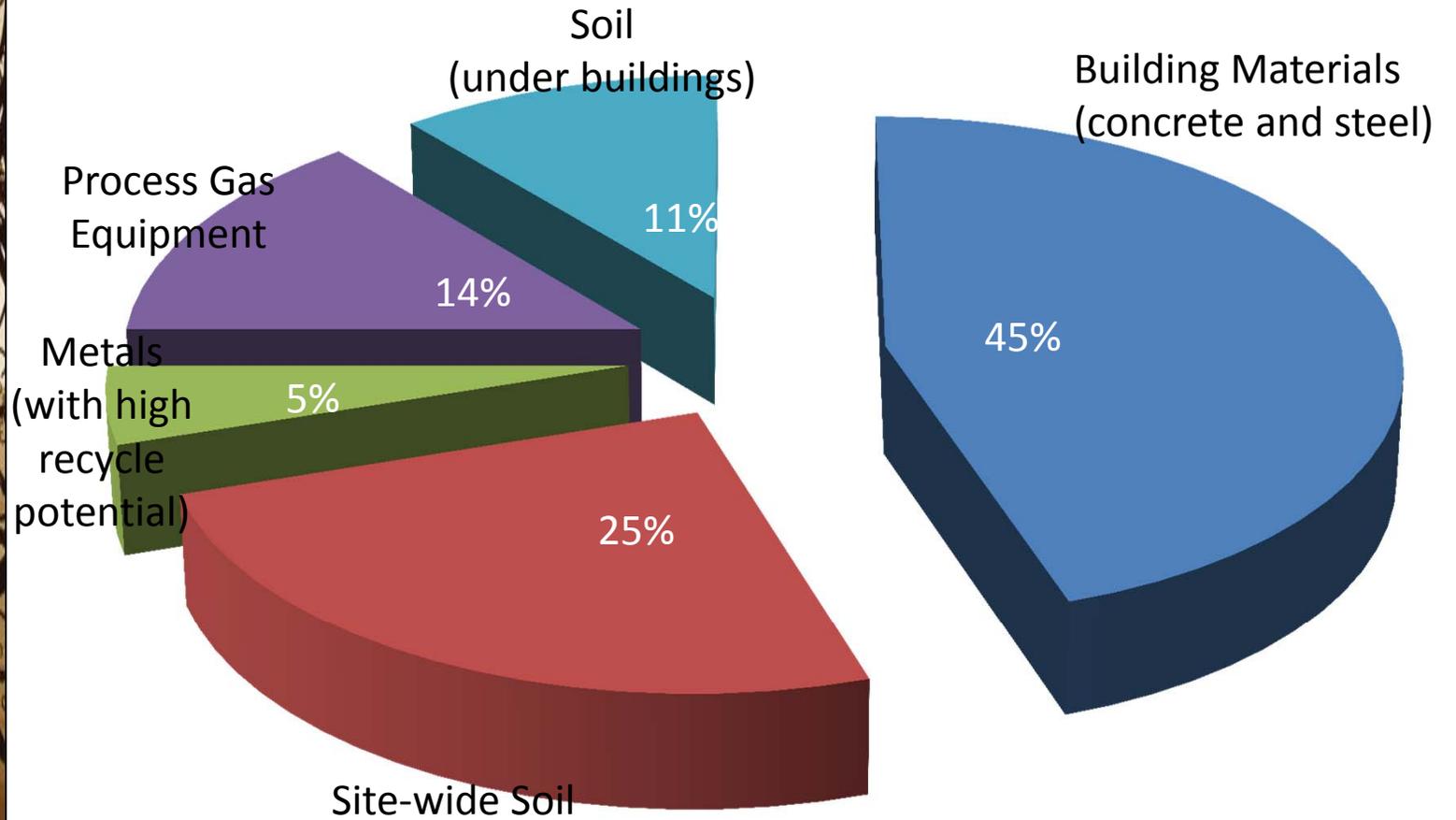


RECAP

- Feedback suggests the community desires a first-class, large-scale industrial park to foster reindustrialization.
- In the Future Vision Plan, FFE Consultants presented a development strategy that includes parcelization and infrastructure, such as a WWTP, water distribution, roads and railroads.
- The Plan also calls for some on-site waste disposition with consolidation of landfills that exist inside the developable area.
- That led us to Waste Acceptance Criteria.
- Based on recent WAC discussions, the SSAB has focused on process gas equipment.

RECAP

WASTE STREAMS



~2.2M yd³ of waste volume



1

RECAP

2

PROCESS GAS EQUIPMENT

3

CONTAMINANTS

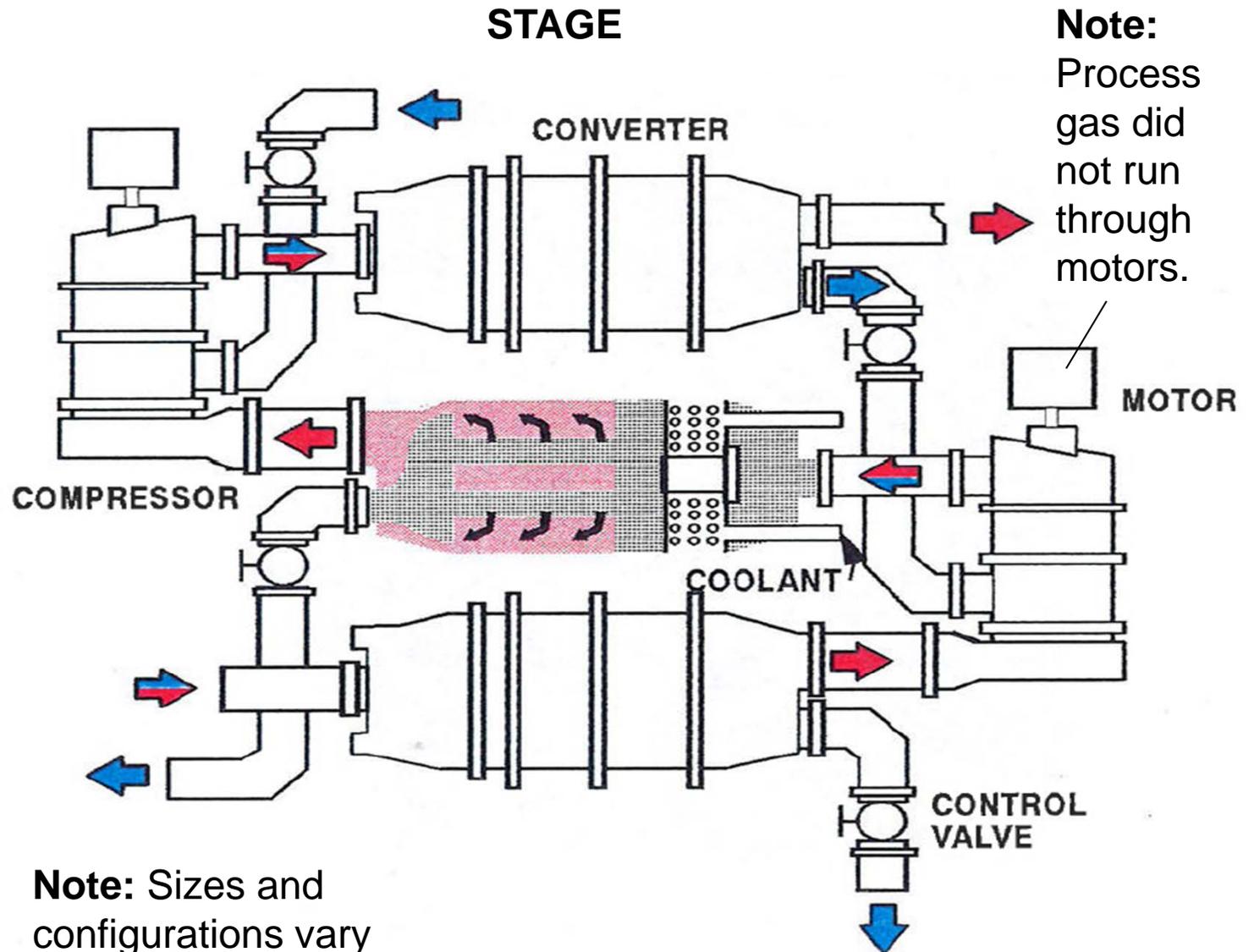
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IMPACTS

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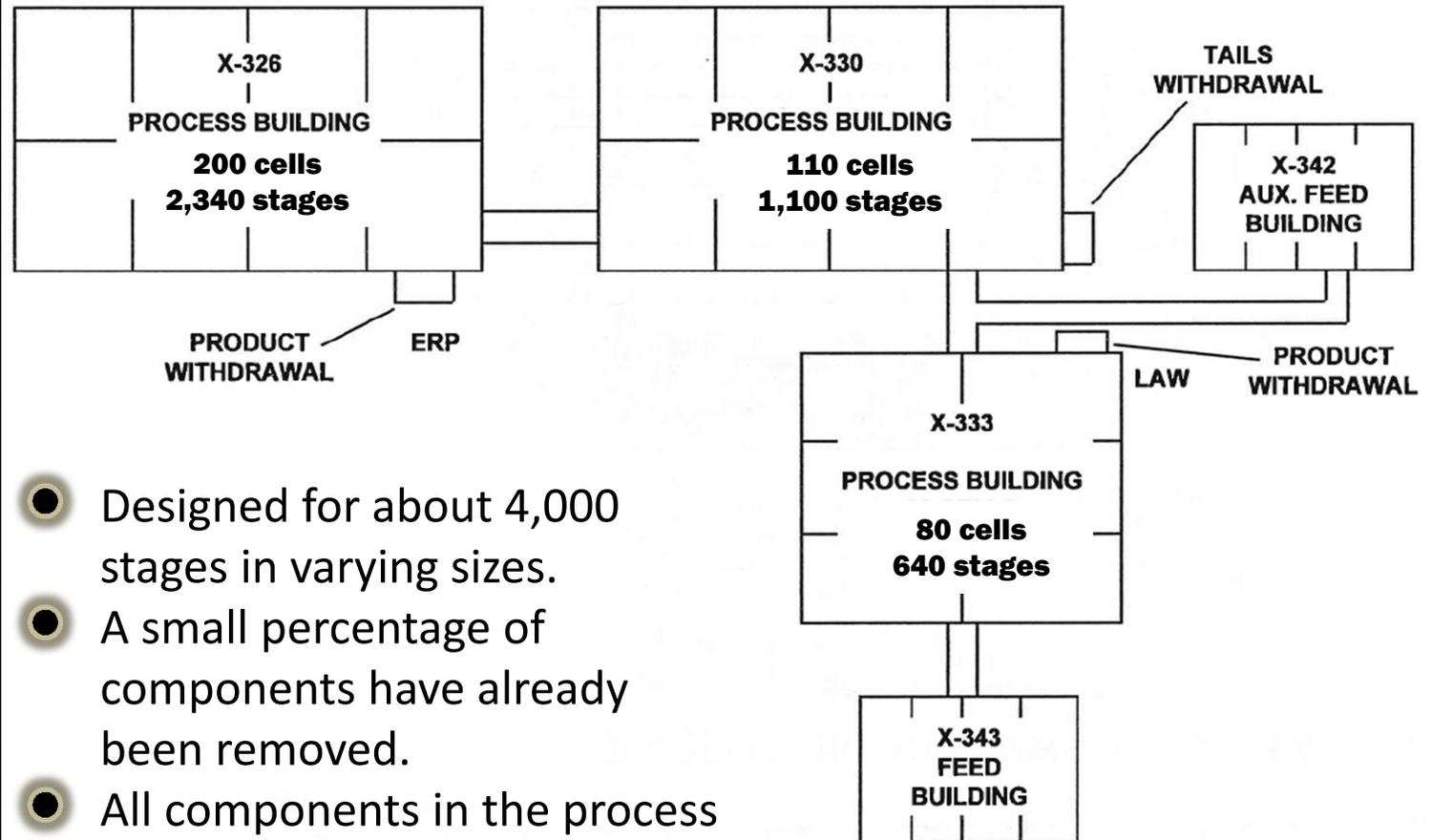
WAC CONSIDERATIONS

PROCESS GAS EQUIPMENT



Note: Sizes and configurations vary throughout cascade.

PROCESS GAS EQUIPMENT



- Designed for about 4,000 stages in varying sizes.
- A small percentage of components have already been removed.
- All components in the process gas system are considered radiologically contaminated in varying degrees.

PROCESS GAS EQUIPMENT



X-333	X-330	X-326
Converters – 652 (~44M pounds) Compressors – 655 (~24.5M pounds)	Converters – 1,132 (~21M pounds) Compressors – 1,109 (~16M pounds)	Converters – 2,340 (~10M pounds) Compressors – 2,361 (~11M pounds)
Total weight of all X-333 PGE: ~102M pounds	Total weight of all X-330 PGE: ~68M pounds	Total weight of all X-326 PGE: ~34M pounds
Total volume of all X-333 PGE: ~159,000 yd³	Total volume of all X-330 PGE: ~118,000 yd³	Total volume of all X-326 PGE: ~37,000 yd³

159,000

118,000

37,000

$$314,000 \text{ yd}^3 \quad / \quad 2.2\text{M yd}^3 = 14.2\%$$



1

RECAP

2

PROCESS GAS EQUIPMENT

3

CONTAMINANTS

4

IMPACTS

5

WAC CONSIDERATIONS



CONTAMINANTS

- The following contaminants exist in the process gas equipment in each of the three process buildings (X-333, X-330, X-326):

- ✓ **Uranium**

- ✓ Uranium-233; Uranium-234; Uranium-235;
Uranium-236; Uranium-238

- Uranium Decay Products**

- ✓ Thorium
 - ✓ Thorium-230
- ✓ **Thorium-228**
- ✓ **Technetium-99**

TRACE TRANSURANICS

- ✓ **Americium-241**
- ✓ **Neptunium-237**
- ✓ **Plutonium**
 - ✓ Plutonium-238; Plutonium-239; Plutonium-240
- ✓ *Trace transuranics in the cascade are believed to be in extremely small quantities.*



CONTAMINANTS

- Precise volumes of these contaminants are unknown because the analysis of characterization data is ongoing.
- Estimated hold-up volumes will be included in the upcoming Remedial Investigation/Feasibility Study (RI/FS).



1

RECAP

2

PROCESS GAS EQUIPMENT

3

CONTAMINANTS

4

IMPACTS

5

WAC CONSIDERATIONS



TECHNICAL WAC

- WAC specifies the criteria waste must meet before, during, and after disposal to ensure protection of human health and the environment for placement of any waste in OSDC.
- Ohio EPA must approve the criteria and methodology used to determine WAC.
- WAC approved by Ohio EPA will include requirements for:
 - radioactivity and chemical concentration limits in material for disposal
 - waste evaluation and characterization standards
 - waste physical characteristics
 - waste packaging, safe handling, and transportation
 - specifically prohibited items,
 - ARARs
 - quality assurance and quality control
 - nuclear safety
 - security



ADMINISTRATIVE WAC

Ohio EPA Director's Final Findings & Orders (DFF&O)

- “Waste Acceptance Criteria” (“WAC”) means the criteria developed by Respondent ***with community input*** and approved by Ohio EPA which specify standards that must be met by each waste prior to its acceptance into any on-site disposal facility, if such a facility is selected as a remedy pursuant to these Orders.

“The criteria must specify: waste evaluation and characterization standards, waste physical characteristics standards, waste packaging standards, waste safe handling standards, waste transportation standards, activity criteria and chemical concentration criteria.”

- A Preliminary WAC is incorporated into the Proposed Plan, which is then followed by a Public Comment Period and the Record of Decision.

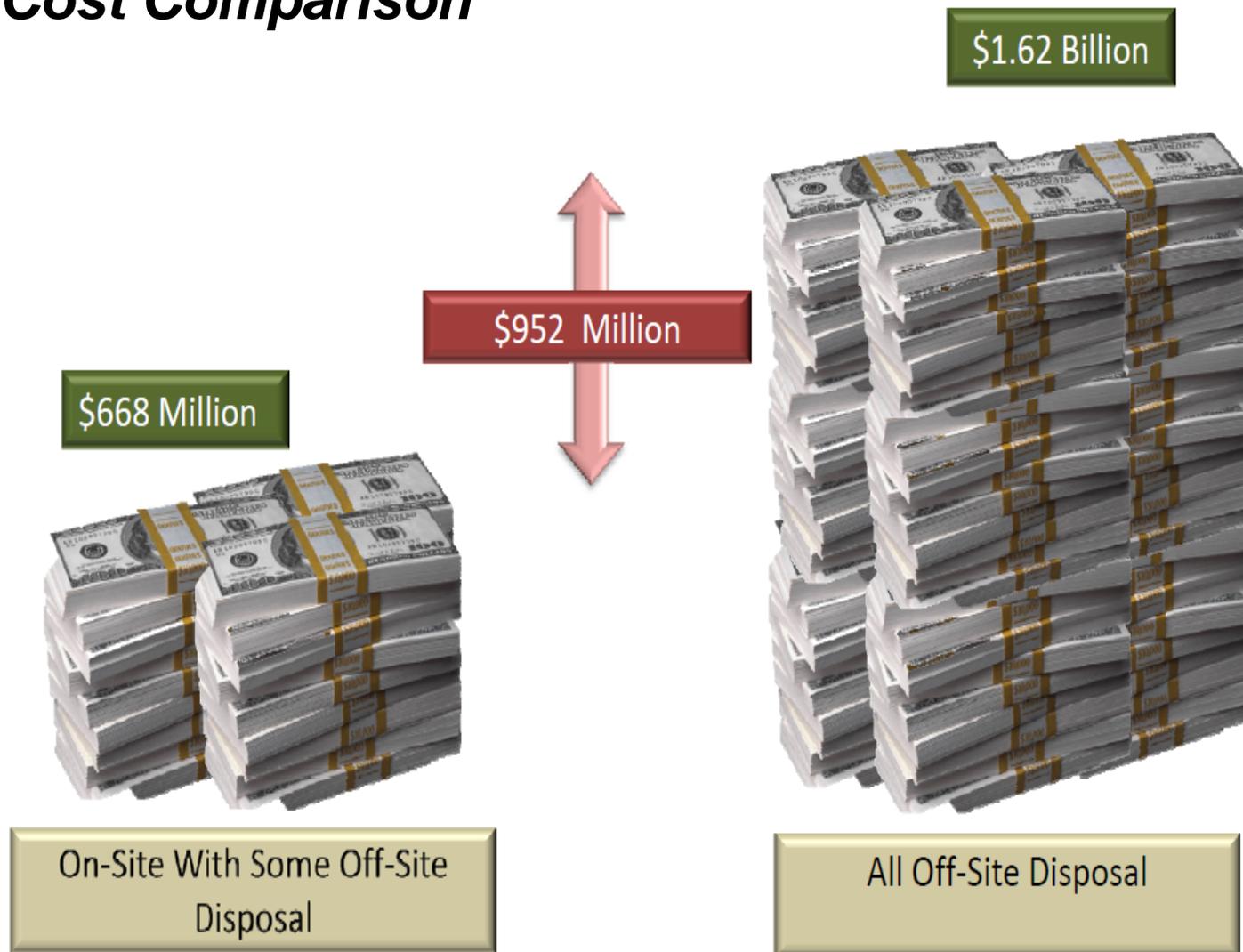


IMPACTS

- The cost variance specifically for on-site vs. off-site shipment of PGE from the process buildings has not been determined.
- Overall cost estimates for waste disposition alternatives have been established, which have been reported to SSAB.
- Although PGE is 14% of the waste volume, a direct correlation between volume and cost cannot be drawn.

IMPACTS

Cost Comparison





1

RECAP

2

PROCESS GAS EQUIPMENT

3

CONTAMINANTS

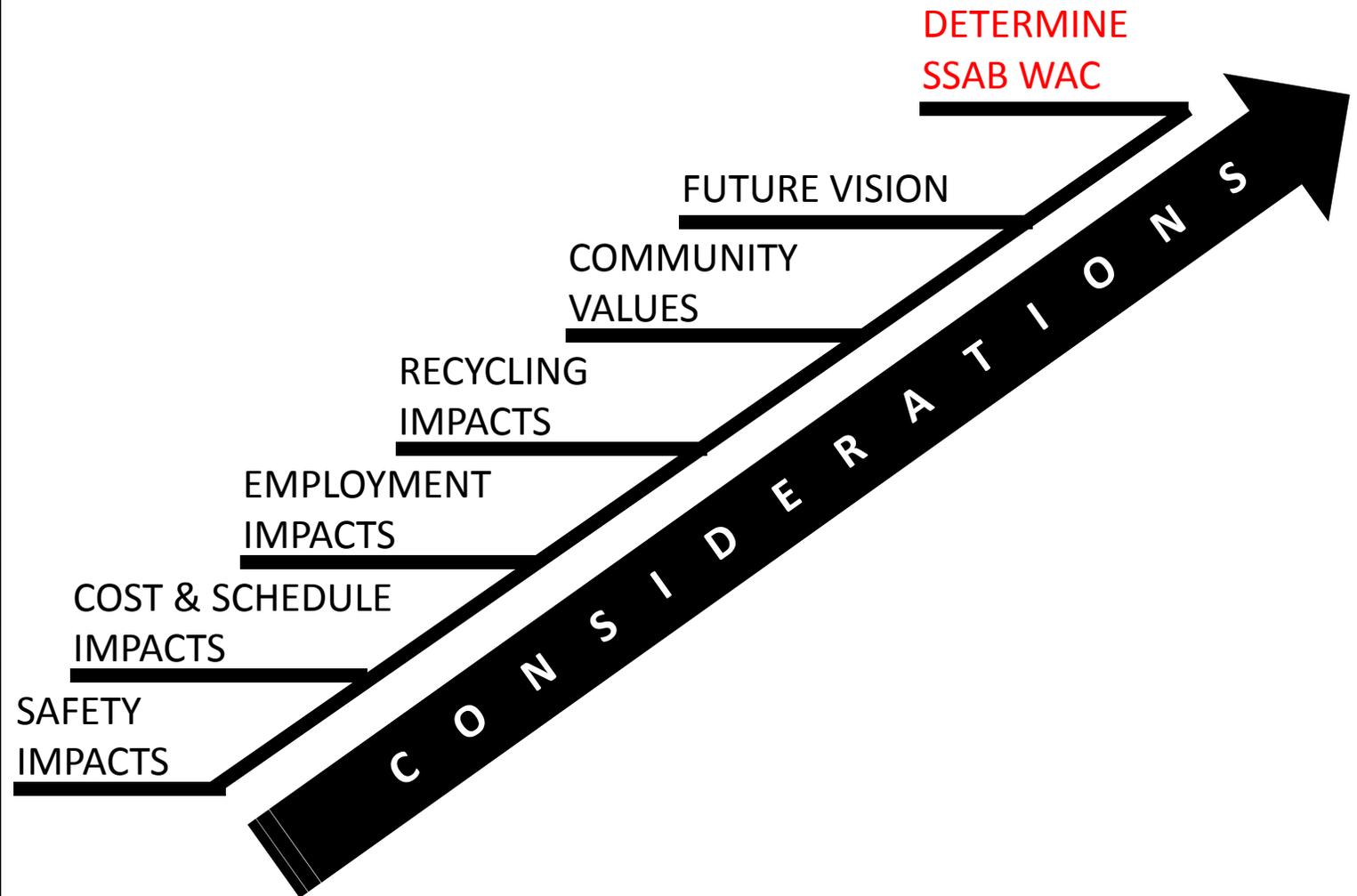
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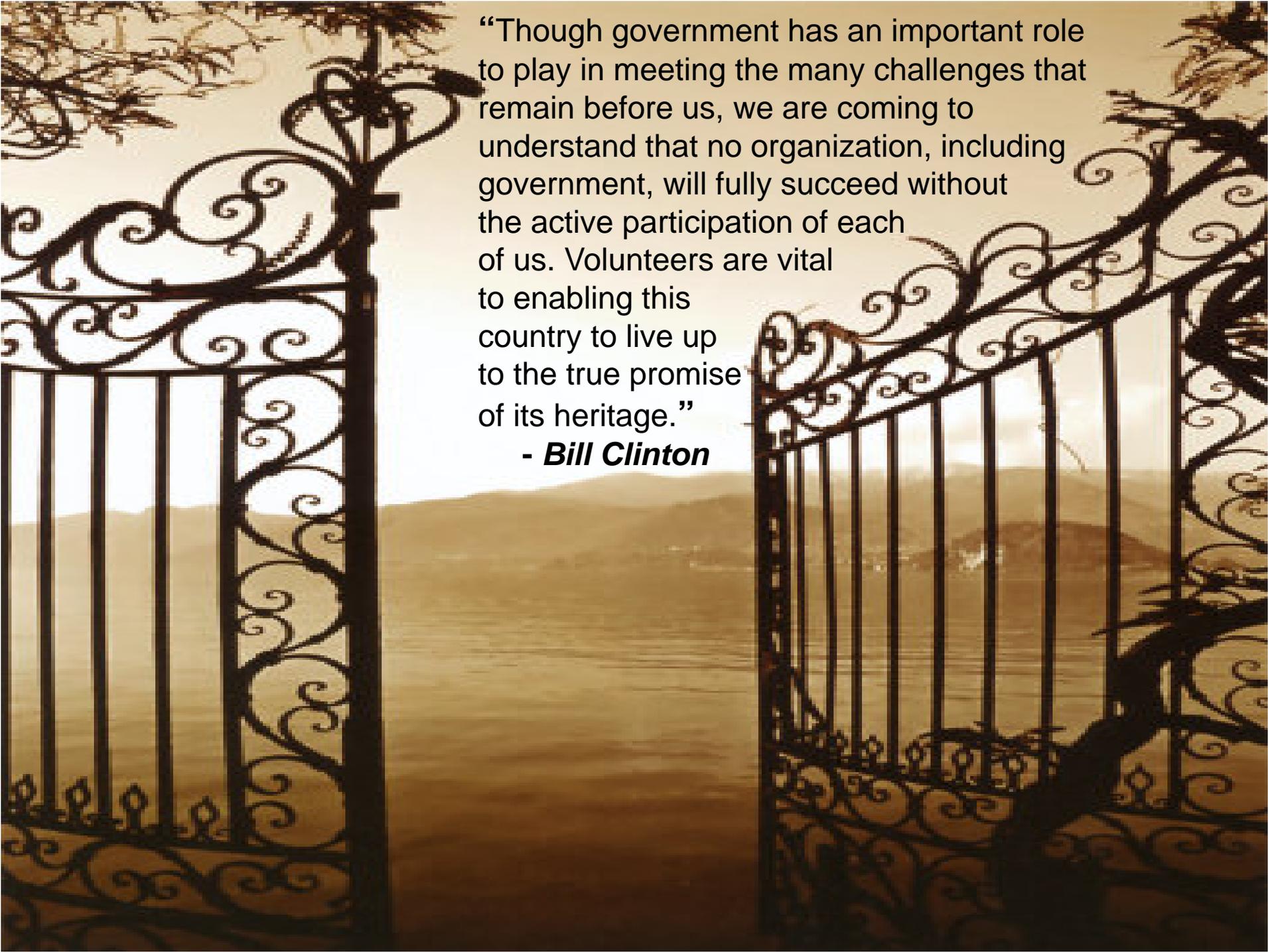
IMPACTS

5

WAC CONSIDERATIONS

WAC CONSIDERATIONS





“Though government has an important role to play in meeting the many challenges that remain before us, we are coming to understand that no organization, including government, will fully succeed without the active participation of each of us. Volunteers are vital to enabling this country to live up to the true promise of its heritage.”

- **Bill Clinton**

QUESTIONS

