

**ENVIRONMENTAL MANAGEMENT SITE-SPECIFIC ADVISORY BOARD
to the
U.S. DEPARTMENT OF ENERGY**

PUBLIC MEETING MINUTES

**Hyatt House Downtown
1268 Broad Street
Augusta, Georgia
May 8-9, 2019**

LIST OF ACRONYMS

CAB – Citizens Advisory Board
DOE – US Department of Energy
D&D – Deactivation & Decommissioning
DDFO – Deputy Designated Federal Officer
EM – (DOE) Office of Environmental Management
EMAB – Environmental Management Advisory Board
EM SSAB – Environmental Management Site-Specific Advisory Board
EPA – US Environmental Protection Agency
GAO – US Government Accountability Office
Hanford – (DOE) Hanford Site
HAB – Hanford Advisory Board
ICP CAB – Idaho Cleanup Project Citizens Advisory Board
IPL – Integrated Priority List
NAS – National Academy of Sciences
NNM CAB – Northern New Mexico Citizens’ Advisory Board
NNSA - National Nuclear Security Administration
Nevada SSAB – Nevada Site-Specific Advisory Board
OMB – The Office of Management and Budget
ORP – Hanford Office of River Protection
OR SSAB – Oak Ridge Site-Specific Advisory Board
Paducah CAB – Paducah Citizens Advisory Board
Portsmouth – (DOE) Portsmouth Site
PORTS SSAB – Portsmouth Site-Specific Advisory Board
SRS – (DOE) Savannah River Site
SRNL – Savannah River National Laboratory
SRS CAB – Savannah River Site Citizens Advisory Board
SWPF – Salt Waste Processing Facility
TRU – Transuranic Waste
WIPP – Waste Isolation Pilot Plant

PARTICIPANTS

Hanford Advisory Board: Susan Leckband, Chair; Shelley Cimon, Vice-Chair; Carrie Meyer, DOE Communications; James Lynch, Deputy Designated Federal Officer (DDFO); JoLynn Garcia, DOE HAB oversight; Dana Gribble, Staff

Idaho National Laboratory Citizens Advisory Board: Keith Branter, Chair; Trilby McAfee, Vice-Chair; Bradley Bugger, Federal Coordinator; Jordan Davies, Staff

Nevada Site-Specific Advisory Board: Frank Bonesteel, Chair; Steve Rosenbaum, Vice-Chair; Kelly Snyder, Deputy Designated Federal Officer (DDFO); Barbara Ulmer, Staff

Northern New Mexico Citizens' Advisory Board: Stanley Riveles, Chair; Max Baca, Member; Bridget Maestas, Staff

Oak Ridge Site-Specific Advisory Board: Dennis Wilson, Chair; Sara McManamy-Johnson, Staff; Melyssa Noe, Deputy Designated Federal Officer (DDFO)

Paducah Citizens Advisory Board: Bill Murphy, Chair; Victoria Caldwell, Member; Eric Roberts, Meeting Facilitator

Portsmouth Site-Specific Advisory Board: Bob Berry, Chair; Carlton Cave, Vice-Chair; Greg Simonton, Federal Coordinator; Julie Galloway, Staff; Rick Greene, Staff

Savannah River Site Citizens Advisory Board: Gil Allensworth, Chair; Douglas Howard, Vice-Chair; Michael Mikolanis, co-DDFO; de'Lisa Carrico, Federal Coordinator; James Tanner, Staff

DOE Headquarters:

Mark Gilbertson, Associate Principal Deputy Assistant Secretary for Regulatory & Policy Affairs, Office of Environmental Management (EM)

Jeff Griffin, Associate Principal Deputy Assistant Secretary for Field Operations

Steve Trischman, Director, Office of Budget and Planning, EM

Michelle Sneed, Director, Office of Secretarial Boards and Councils

Allison Mills, Deputy Director, Office of Secretarial Boards and Councils

Leonard Spearman, Senior Advisor to the Assistant Secretary for EM

David Borak, EM SSAB Designated Federal Officer, EM

Giancarlo Casalino, Contractor Staff, Office of Intergovernmental and Stakeholder Programs

Alyssa Harris, Contractor Staff, Office of Intergovernmental and Stakeholder Programs

MEETING MINUTES

The U.S. Department of Energy's (DOE) Environmental Management Site-Specific Advisory Board (EM SSAB or Board) Chairs met May 8-9, 2019 at the Hyatt House Downtown in Augusta, GA. Participants included EM SSAB officers and members, DOE staff, and contractor support staff. The meeting was open to the public and conducted in accordance with the requirements of the Federal Advisory Committee Act.

Day 1

Opening Remarks

Mr. Eric Roberts, contractor support for the Paducah and Portsmouth Advisory Boards and meeting facilitator, introduced himself and other members of the Savannah River Site (SRS) contractor staff. Before outlining the audio-visual logistics within the room, he explained that the entire meeting was being livestreamed on YouTube. He then introduced Mr. David Borak, EM SSAB Designated Federal Officer.

Mr. Borak welcomed the group and noted the importance of convening periodically to share local-level information and cross-pollinate lessons learned, best practices, and other timely information beneficial to the wider group. He then introduced Mr. Mike Budney, Manager of the SRS Operations Office.

Mr. Budney touched on the exciting work being carried out by the National Nuclear Security Administration (NNSA) at SRS and how staffing is being ramped up to support those efforts. In terms of liquid waste operations, he discussed the anticipated completion of a new Salt Waste Processing Facility (SWPF) by the end of calendar year 2019, anticipated to process six billion gallons each year, and the successful doubling of current capacity already, through tank closure cesium removal capabilities. He added that liquid waste progress will continue to accelerate, in conjunction with other improvements.

Mr. Budney transitioned to nuclear material updates and explained that three strings of material are being processed for the first time, all with the help of national laboratory staff and their technical expertise. In addition, significant progress has been made in regular environmental remediation, which includes coal ash deposits and project management accolades. Mr. Budney also cited progress in soil groundwater remediation innovation and the exciting prospect of an Advanced Manufacturing Collaborative, which would leverage academia, industry, and national laboratory counterparts to incubate new environmental management techniques.

Mr. Roberts concluded the Opening Remarks period by discussing logistics of the day and requesting around-the-table introductions from the EM SSAB Chairs themselves, asking them to recognize accompanying site representatives also in attendance.

EM Update

Mr. Mark Gilbertson, Principal Deputy Assistant Secretary for DOE's Office of Environmental Management (EM), provided the update and began by acknowledging EM's 30-year history and its point of departure: a letter from ten governors to Admiral Watkins communicating the need to establish an office responsible for managing the legacy of nuclear weapons production. Over the course of three decades, EM has successfully reduced its initial footprints from 107 sites and 3,100 square miles to sixteen and 300, respectively. He also acknowledged the Waste Isolation Pilot Plant's (WIPP) twenty years of ongoing operations, while noting the three tons of mercury removed from the Y-12 facility at DOE's Oak Ridge Site in Tennessee.

Mr. Gilbertson then highlighted the vital role DOE's national laboratories play in environmental management, citing superb SRS coal ash removal work and ongoing sludge removal and tunnel filling progress at DOE's Hanford Site. Moving from the past and present, Mr. Gilbertson pivoted to the future, explaining that EM is interested in the strategic adoption of a modern, completion-centric approach to cleanup. Such a vision would include the following:

- Leveraging the latest scientific knowledge
- Incorporating lessons learned from three decades of experience
- Evaluating new technical approaches for the treatment and disposition of materials
- Improving decision-making via up-to-date schedules, costs, and data
- Increasing programmatic analysis (e.g. national priority and risk reviews)

As Mr. Gilbertson explained, a change in EM's vision would unfold within the smaller footprint comprised of sixteen sites; instead of just moving money from one site to another, EM will work to understand site-specific needs and risks. In addition, EM will continue to prioritize regulatory milestones, which are negotiated at the local level and should always be transparent. As he noted, transparency can always be improved. Mr. Gilbertson concluded his EM update by highlighting the following:

- End state contracting, which is a new approach that promotes bidding and evaluation efficiency, while adding flexibility through open-book negotiations
 - Risk management and cost-effectiveness will improve
 - Traditional community and small business clauses will remain the same
- Increased focus on operational efficiency and safety
- Greater prioritization of site legacy planning, implementation, and operations

Mr. Gilbertson paused for Chair questions, which included the following.

Dr. Riveles requested elaboration on EM Assistant Secretary Anne White's completion mindset, to include end state contracting, and the implications of ten-year strategic planning in New Mexico. In response, Mr. Gilbertson explained that ten-year scopes align with the end state contracting model. The strategic planning approach establishes a basis, which subsequently underwrites the options associated with it. All of this would also align with the overarching budget process and the need to elicit feedback from the public. Mr. Gilbertson stressed the importance of stakeholder input and encouraged Chairs to communicate suggestions for enhanced dialogue.

Ms. Leckband requested elaboration on end state contracting, specifically the likelihood of leaving an unfinished site, due to ten-year scopes, and how new contracting approaches would reconcile with Federal Facility Agreements. Using examples from the Hanford Site, Mr. Gilbertson explained that milestones will largely underwrite tasking, with the incorporation of variables as needed and agreed upon with regulators. Open-book negotiations will facilitate the overall process and permit strategic calibration.

Mr. Wilson requested insight on Department of Defense and Environmental Protection Agency (EPA) satisfaction with end state models. In response, Mr. Gilbertson highlighted the inherent benefit of having greater flexibility with program scope. Negotiations with contractors are more efficient and precise, and the incentive structures are ameliorated. Moreover, end state models accommodate uncertainty more effectively.

Mr. Allensworth requested elucidation on the priority level of H Canyon at SRS. Mr. Gilbertson explained that H Canyon maintenance funding exists, but due to competing budget interests (i.e. SWPF), minimal operating status is in effect. Moreover, an independent project team carries out need assessments, to ensure support commensurate with H Canyon's importance.

Mr. Baca requested clarification on the consensus of the Northern New Mexico Citizens Advisory Board (CAB) priorities and their ability to garner new resources, using infrastructure needs as a point of reference. He also asked if an annual report exists, highlighting CAB successes across the country. In response, Mr. Gilbertson explained that CABs have reached consensus many times, while advocating for greater funds to achieve greater results. He noted that while EM considers reliable infrastructure a prerequisite for optimal site performance, EM infrastructure improvement funds from Congress are limited to projects within sites.

Mr. Howard requested insight on EM's degree of prioritization for cybersecurity. Mr. Gilbertson explained that cybersecurity concerns are paramount and that technical teams operate at DOE Headquarters and individual sites, with significant funding to support their operations.

Mr. Rosenbaum asked for a status update on remedial plans to offset an aging workforce and the forecasted brain drain. In response, Mr. Gilbertson explained that brain drain is a top concern and that individual sites are developing staffing plans accordingly. Rejuvenating former or dormant internship programs was cited as a potential remedial step, and private sector wage competition was identified as a major hurdle.

Ms. Leckband asked for additional end state contracting clarification, specifically the potential for zero-sum funding dynamics due to unforeseen expenditures. Mr. Gilbertson explained that Integrated Priority Lists (IPLs) are integral planning tools, which identify site priorities by rank and consequently serve as baselines when variables lead to funding competition.

At this point, there was group discussion about the inherent benefits linked to open dialogue with entities like the EPA. Milestone transparency was discussed as a prerequisite for optimal cleanup mindsets; without benchmarks, clear budgets, and goals, public support would be difficult to garner.

Mr. Gilbertson noted that rolling milestones are ideal, since they adapt to changing dynamics and time-proximate budget outlooks. He cited Los Alamos and Oak Ridge as two sites employing the rolling method.

Ms. Cimon then acknowledged the importance of milestones, especially in the context of interim solutions to large-scale problems with extensive challenge horizons. She also noted the critical nature of regulatory frameworks and IPLs. She advised DOE to share IPL information early, to garner feedback and improve both risk reduction and budget formulation processes.

Mr. Allensworth then requested insight on DOE's response protocols to catastrophic issues. In response, Mr. Gilbertson explained that IPLs are used to formulate budget adjustments, both increases and decreases. He also cited the WIPP and SWPF examples, where additional funds altogether were formally requested, due to insufficient budget flexibility. In these cases, multiple stakeholders like the Office of Management and Budget (OMB) are involved, which makes the appropriation process inherently nuanced.

Mr. Gilbertson concluded the EM Update by underscoring the anticipated rise of programmatic liabilities, urging those in attendance to stay apprised of the concurrent Congressional testimony by EM Assistant Secretary Anne White. He noted that factors like end state contracting, brand new technical approaches, and the redefinition of high-level waste could all impact liabilities into the future.

Chairs' Round Robin

During this period, individual Chairs were given the opportunity to express any challenges, issues, or achievements of the local boards. Mr. Roberts recommended five minutes per person.

Savannah River Site Citizens Advisory Board (SRS CAB) – Gil Allensworth

Mr. Allensworth expressed excitement about SWPF potentially beginning operations this year. As he noted, that would significantly boost cleanup. In anticipation, new storage disposal units are being installed to take full advantage of additional cleanup productivity. At the same time, Defense Waste Processing Facility yields are also poised to increase, so aggregate productivity is set to grow substantially.

Mr. Allensworth then pivoted to infrastructure. He began by providing high-level context, noting that most facilities are approximately fifty years old and that some have original HVAC systems. Insufficient road maintenance was identified as an ongoing issue, since sand constitutes much of the bedrock, and H Canyon's tunnels present additional infrastructure challenges. As he noted, the potential for workload increases could exacerbate H Canyon's structural problems, and risk mitigation should be taken very seriously. H Canyon is underpinned by federal law, since its operations are critical to overall mission success. Its infrastructure needs should therefore be deemed a top priority for the site and DOE overall.

Mr. Allensworth went on to differentiate SRS from its peers. Unlike many other sites, SRS has ongoing missions and is not in shutdown mode. Instead, its scope is measured in decades, and

the waste ecosystem will continue to rely on its processing capacity. He continued by expressing concerns with the definition of interim storage, specifically its permanent storage interpretation. He then discussed public perception, as it relates to SRS missions, noting that most of the local community simply does not understand the technical nature of site operations and the differences between EM and NNSA. Oftentimes, discussions include both organization's talking points, and the blend produces a false sense of homogeneity, which has been difficult to remedy in the past.

Portsmouth Site-Specific Advisory Board (PORTS SSAB) – Bob Berry

Mr. Berry prefaced that since his site is on a path to completion, his discussion would resemble those from the past. He began by voicing collective reluctance to resume uranium bartering. His site used to generate funds by selling uranium on the open market, but price volatility raised too many budgeting issues. He then explained that Portsmouth's repurposing is moving forward, and he identified ongoing construction of the first waste cell and eight acres of land transfer as good indicators. A second land transfer is currently being coordinated and will include approximately 200 acres.

Mr. Berry continued by discussing the site's flexible trajectory. Whether its new missions will involve integrated heat systems or nuclear generation, there is excitement about what the future will hold, including the American Centrifuge Project. The site wishes to become a repurposing success, and since all regulatory decisions are already in place and there are no technical hurdles, this confluence bodes well for the future. In addition, the skilled workforce will help underwrite the site's probability of success. Moreover, the SSAB, economic development groups, elected officials, and Ohio delegation support ten-year completion.

Mr. Berry concluded his discussion by voicing collective support for the "Science of Safety" strategy, which boosts symbiosis between DOE, educational institutions, and local labor groups. He noted that the prospect of testing, developing, and implementing technological advancement in waste cleanup resonates among Portsmouth's many stakeholders, and despite the presence of trichloroethylene and neptunium – the latter potentially a one-off – site contamination levels remain low.

Paducah Citizens Advisory Board (Paducah CAB) – Bill Murphy

Mr. Murphy began by explaining that Paducah was the last uranium enrichment facility to halt operations. Since its shutdown was preceded by those at Oak Ridge and Portsmouth, lessons learned from these sites will continue to guide both decontamination and demolition efforts.

Minimization of mandatory costs, such as electricity and plumbing, will remain a priority, as operations continue to transition to educational status: the site will be used to communicate the historical importance and national security implications of energy innovation. Public tours are already underway and have been well received, and a virtual site tour is pending comprehensive security reviews.

Oak Ridge Site-Specific Advisory Board (ORSSAB) – Dennis Wilson

Mr. Wilson announced his site's participation in a community budget workshop, despite delays. He also explained that recent website updates and social media investments have been extremely promising. In fact, data analytics show webpage traffic increasing 500% over last year. This has bolstered public outreach and has been extremely helpful in new member recruitment.

Mr. Wilson explained that two new members have joined their board. In addition, one member had been invited to present at the Waste Management 2019 Conference, and other members will attend the National Environmental Justice Conference. He explained their monthly lifecycle, which includes executive committee meetings, board meeting, topic-specific tours, and environmental stewardship recommendations and proposals. Recommendations will also be considered on groundwater mercury remediation.

Mr. Wilson explained that accelerated mercury remediation will be a priority, as its realization would permit the elimination of multiple buildings. In addition, and due to recent progress, a key waste disposal site is filling up, while a second is in its approval stage. Despite several hurdles, he is hopeful the tri-party agreements will be in place to propel operations, and he concluded his remarks by telling the group how encouraging DOE's efforts have been. As he noted, DOE has paved the way for excess facility preplanning, and the recent groundwater update model is very promising – after four years of development and despite complex geophysical conditions.

Idaho Cleanup Project Citizens Advisory Board (ICP CAB) – Trilby McAfee

Ms. McAfee identified the Snake Plain Aquifer as the top priority. Hundreds of monitoring wells provide robust data, and board members are updated regularly. Other priorities include cleanup progress and milestones. She noted a high level of satisfaction with their site's milestone schema and explained that ICP CAB is planning for and considering both near and long-term funding requirements. In addition, a public relations subcommittee provides input from citizens around Idaho, so communication is reciprocal.

These positives were offset by several negatives. Ms. McAfee noted that a multi-billion-dollar facility and super compactor will be eliminated, along with roughly 300 employees. Moreover, the lack of identification of a high-level waste repository has been frustrating. Ms. McAfee noted that Washington, DC should aid with this by establishing a repository or improving infrastructure to keep waste where it is. She also explained their site's interest in increasing shipments to WIPP and encouraged a resolution on the reinterpretation of high-level waste.

Northern New Mexico Citizens' Advisory Board (NNM CAB) – Stanley Riveles

Dr. Riveles identified the consent order between the New Mexico Environment Department and DOE as a foremost priority, as it would decrease the probability of litigation and establish both priorities and milestones. Due to recent criticism, the board is developing recommendations to incorporate a robust roadmap and accompanying timeline, and budget figures will be added as benchmarks, not goals. As he noted, lifecycle planning will be used to show how goals will be reached, and milestone transparency will underpin the consent order.

Dr. Riveles also explained that his board has greater access to information, through contractor monthly and quarterly reports, and this will only strengthen institutional memory. In addition, discussions with New Mexico's Environment Department have taken place, and the sharing of information will only help the establishment of milestones and budgets for 2020. Dr. Riveles ended his discussion by reminding the group about his board's 2018 recommendation on the Defense Nuclear Facilities Safety Board and its future. As he stressed, the unanswered NNM CAB recommendation remains relevant.

Nevada Site-Specific Advisory Board (NSSAB) – Frank Bonesteel

Mr. Bonesteel began by citing two accomplishments: 1) all board members have attended site tours this year, and 2) public attendance at meetings has skyrocketed. He thanked DOE for its assistance with both. Transitioning to concerns, he identified the destruction of cultural resources or landscapes as the main focus of the SSAB. Greater community perspective would help, and he urged DOE to find a middle ground that incorporates historic preservation more strategically.

Mr. Bonesteel concluded his remarks by citing transportation concerns, specifically the likely exacerbation of degraded infrastructure, such as road failures, communication dead zones, and lack of emergency response and medical support (i.e. closure of the Tonopah Hospital).

Hanford Advisory Board (HAB) – Susan Leckband

Ms. Leckband announced that the Hanford Advisory Board will celebrate its 25th anniversary this year. She also noted that the board has issued more than 300 pieces of consensus advice, in addition to technical white papers. She explained that the site's Plutonium Finishing Plant is in the final stages of Deactivation and Decommissioning (D&D), and looking to the future, she identified waste stabilization as a priority, citing approximately 170 tanks beyond their intended design life. Ms. Leckband also noted that Tank-Side Cesium Removal (TSCR) remains an area of interest.

Ms. Cimon joined the discussion and commented on the implications of reclassifying high-level waste as nuclear waste. This could be precedent setting for all of Hanford's tank farms, and Ms. Leckband voiced concerns that such a reclassification could lead to more waste being disposed at the Hanford Site. She noted that the public should be involved, if the latter seems likely.

Waste Disposition / Regulatory Affairs Update

Mr. Gilbertson began by elaborating on the definition of high-level waste: DOE deliberation is ongoing, 5,000 public comments have been received, and Hanford, Idaho, Savannah River, and West Valley are the primary sites involved. He continued by reassuring everyone that disposition will take place within the regulatory framework and that the public will be involved. He went on to explain that the Energy Communities Alliance has been involved and that the organization's website would have additional information. He also explained that existing laws, regulations, agreements, and permit requirements would not be impacted.

Mr. Gilbertson discussed infrastructure concerns, noting the Department of Transportation and state entities will be critical partners, and there needs to be collective action to inform stakeholders of pressing infrastructure needs.

Ms. Leckband requested insight on Congressional resolve with respect to high-level waste repository action. Mr. Allensworth explained that although DOE and its senior leaders have taken decisive action, the issue's political nature precludes immediate resolution.

Ms. Cimon asked for clarification on EM Assistant Secretary Anne White's ten-year strategic framework and the possibility for accelerated cleanup efforts. Mr. Trischman explained that individual sites prepared acceleration proposals and that DOE is evaluating them for potential inclusion in its next budget request. As he noted, some would not require a budget, the public would be involved, and a communications plan has been developed. He noted that the latter is pending approval and that a strategy team is being considered.

Dr. Riveles requested insight on sensitivity variance, with respect to a site's willingness to house waste material. As an example, he cited the SRS 10,000-year timeframe. Mr. Allensworth noted that SRS is not interested in becoming a de facto interim storage site and that the 10,000-year scope should not be misinterpreted as tacit approval of all storage proposals. Ms. Leckband joined the conversation and explained that vitrification will continue at Hanford, huge disposal sites already exist, and it is understood that waste will remain there in perpetuity.

Mr. Gilbertson then added that performance assessments are needed at each site, to fully account for the geological setting, special environmental considerations, waste signatures, and migration possibilities. Monitoring will be key, and as he noted, the public will need to be involved to build its confidence with ongoing risk management and waste management performance.

Mr. Allensworth continued the discussion, asking for clarification on DOE standard operating procedures when dealing with state lawsuits, in this case South Carolina. Mr. Gilbertson noted that even though NNSA was sued, EM has been involved to facilitate the overall process. This includes conversations with multiple stakeholders, in addition to negotiations that will resolve immediate concerns without precluding future mission-oriented activities.

Mr. Baca pivoted back to infrastructure concerns, explaining that an inventory of needs could facilitate communication between DOE and the Department of Transportation, consequently raising overall awareness. Mr. Gilbertson explained that although historical information exists, future shipment activity is difficult to predict; uncertainty limits inter-departmental synergy.

In response to a question by Ms. Leckband, Mr. Gilbertson then clarified the calculus that led to EM's cleanup portfolio decreasing from 3,000 to 300 sq. miles. Mr. Wilson followed by asking Mr. Allensworth to shed light on difficulties surrounding state environmental committee input. Mr. Allensworth explained that budget cuts have led to decreased EPA participation. He added that a good relationship with the South Carolina Department of Health & Environmental Control exists at the CAB level. Mr. Gilbertson closed the session by thanking the Chairs and stressing the importance of continued public outreach and education.

Budget and Planning Update

Mr. Steve Trischman began by reviewing the budget trends, which included fiscal years 2018-2020, the latter being a budget request. As he noted, there is a defense account and two non-defense accounts, and this structure precludes lateral movement of funds. He also explained that there is competition within DOE, due to the limited nature of funds, and this has led to higher enacted figures. Mr. Trischman went on to explain that expenditures lag, since contractors need to be hired and work does not begin immediately.

Mr. Trischman continued by reviewing site-specific budget numbers and explaining that most of the present year totals exceed requests. In discussing the 2020 request, he noted that SWPF will accelerate liquid waste treatment at SRS, leading to a completion horizon of 10-11 years. At the same time, the WIPP ventilation system will be key for transuranic waste (TRU). He went on to stress the importance of vitrification at Hanford, with a target start year of 2023. Mr. Trischman also discussed Oak Ridge operations, highlighting the Outfall 200 Mercury Treatment Facility, which is at the edge of Y-12 and captures mercury from buildings slated for demolition.

Transitioning to EM's ongoing completion mindset, Mr. Trischman lauded closure of the D-Area Ash Project at SRS, along with the successful land transfers at Portsmouth. He also highlighted the demolition of the vitrification facility at West Valley and the Toxic Substances Control Act Incinerator at Oak Ridge. Moreover, he explained that foreign waste material continues to be processed at H Canyon, while the next salt waste disposal unit gets constructed at SRS.

Mr. Trischman moved to budget categories: nuclear materials; high-level radioactive tank waste; TRU and solid waste; facility D&D; soil and groundwater; and site services. Transitioning to SRS specifically, he noted its \$1.643 billion request and EM's priorities: complete removal of materials at the 235-F facility, which produced or processed plutonium; commencement of SWPF operations; tank farm and salt-stone treatment unit preparation; human resource staffing and associated readiness; and construction of the Advanced Manufacturing Collaborative Facility, which will be housed at the University of South Carolina's Aiken Campus.

Mr. Trischman transitioned to Washington State, which has a combined budget of \$2.1 billion. \$1.392 billion is slated for the Office of River Protection (ORP), which will support the low-activity component of the waste treatment plant and provide upgrade funds for the 222-S Laboratory, 242-A Evaporator, and Effluent Treatment Facility. These funds will also support the Tank-Side Cesium Removal System, ongoing retrieval of single shell tanks, and the AX-102 Farm.

In terms of Hanford's Richland Site, Mr. Trischman stressed the importance of ongoing remediation, groundwater, and D&D work, while also noting continuing support for the 324 Building, which is a hot cell facility. Ms. Cimon then asked if funding for the test bed initiative could lead to zero-sum impacts for the Washington State budget, and Mr. Trischman explained that no budget conflicts are anticipated in the foreseeable future, since funding would be kept in a separate control point.

Mr. Trischman then discussed Idaho's budget request, which was \$348 million. It will permit excavation of buried waste, with shipments to WIPP or disposition as low-level waste. At the same time, these funds will allow for continued testing of the Integrated Waste Treatment Unit, which is designed to treat sodium barium waste. Finally, closure of the Advanced Mixed Waste Treatment Unit is slated to begin in 2020.

Oak Ridge was next, and Mr. Trischman explained that its budget request is \$429 million, split between Uranium Enrichment D&D and defense expenditures. The former will fund the completion of the East Tennessee Technology Park, soil and groundwater remediation, processing of contact and remote-handled legacy TRU waste, U-233 materials processing, mercury treatment, and construction of the next disposal cell.

Mr. Trischman transitioned to Ohio and identified a \$426 million budget request for Portsmouth. These funds will underwrite ongoing equipment removal from three large processing buildings, construction of the onsite disposal cell, and continued operation of the DUF6 facility, which is responsible for the handling of depleted uranium hexafluoride.

Kentucky's Paducah was next, and its budget request totals \$277 million. This will fund cleanout of multiple buildings, with emphasis on C-400. It will be demolished, and the trichloroethylene plume underneath will be removed. The other buildings have extended cleanout horizons, and these will shrink if Uranium Enrichment D&D funds become available for accelerated cleanup operations at either Paducah or Portsmouth, or both.

Mr. Trischman discussed New Mexico's budget next. Carlsbad's \$398 million budget request is slated to support approximately ten shipments each week, with a targeted increase to seventeen, contingent on infrastructure improvements. At the same time, these funds will build the Safety Significant Ventilation System and construction of a new shaft, which will augment overall waste handling. Moreover, the site's IPL will help steer expenditures.

New Mexico's Los Alamos Site will be fueled by \$195 million, kickstarting two of three TRU processing lines, which will prepare waste for WIPP. The funds will also underwrite completion of the RDX plume and its associated hydraulic barrier. Furthermore, at Sandia, operations will include installation of groundwater wells.

Mr. Trischman then discussed West Valley operations in New York State. The budget request is \$78 million, and this will fund deactivation work at the main plant, with the hope of demolition in the current contract period, along with demolition of the remaining excess facilities. At the Separations Process Research Unit, the \$15 million earmark will permit off-site shipment of any remaining waste.

Nevada's \$61 million budget request will fund ongoing remediation work, including closure of some corrective action units, along with the installation of additional monitoring wells and the ongoing operation of the waste disposal facility. In the meantime, Utah's Moab Site will receive \$36 million, which will allow the movement of mill tailings to Crescent Junction. Mr. Trischman then noted California's Energy Technology Engineering Center and its \$18 million fund request,

followed by the slated demolition projects at Lawrence Livermore National Laboratory – the first building forecasted for demolition is P80, which is a pool-type reactor facility.

Ms. Leckband requested clarification on the budget request process, specifically origination and the stakeholders involved. Mr. Trischman explained that his references encapsulate the entire deliberative process, with OMB as the originator. As he noted, DOE negotiates budget targets, once they are disseminated by OMB, and the Administration subsequently releases its official budget request for the fiscal year in question. Budget request figures from individual sites are interwoven throughout this process, with DOE as the representative negotiator. This includes additional funds, referred to as “plus ups,” which raise Administration requests.

Ms. Leckband asked if WIPP is still slated to accept Hanford TRU, especially in relation to the Land Withdrawal Act. Mr. Trischman explained that WIPP will continue to accept TRU, citing an extended timeframe of approximately three decades or more. Ms. Cimon requested insight on TRU characterization, in relation to WIPP capacity and its funding requirements. Mr. Gilbertson explained that Hanford waste characterization remains a priority and that human health and safety will be primary considerations. In closing, he noted that WIPP is believed to have the requisite capacity to handle Hanford waste treatment loads.

Ms. Cimon then asked for insight on potential understaffing at WIPP, due to hiring competition from the oil and gas industry. Mr. Gilbertson explained that even though increased demand for labor and other inputs will lead to greater costs, understaffing is not a major concern and project scopes should therefore remain the same.

Mr. Trischman elaborated on the “plus up” slide from his PowerPoint, noting that Oak Ridge received an additional \$238 million. Among other things, these funds will speed up excess facility work at Y-12, boost progress at the Mercury Treatment Facility, and facilitate infrastructure modernization overall. He transitioned to Richland, which received an additional \$207 million. These funds will underwrite continuation of D&D at the Plutonium Finishing Plant and stabilization of PUREX Tunnel 2. Furthermore, these funds will permit planning for 100-K West Basin characterization and watering, along with other infrastructure needs.

Mr. Trischman went on to note that ORP received an additional \$134 million, in order to continue design of its high-level waste facility. He then transitioned to Idaho, which received an extra \$84 million, largely for the Integrated Waste Treatment Unit. The funds will also allow for additional shifts at the Advanced Mixed Waste Treatment Facility and more D&D of excess facilities at Idaho National Lab.

Portsmouth received an additional \$60 million, which reduced the incentives to barter uranium. In addition, Los Alamos was allotted an extra \$28 million, which has boosted cleanup progress, specifically TRU waste processing and continued work on the site’s chromium plume. Lawrence Livermore received an additional \$28 million, West Valley saw a \$14 million plus up, Moab got an additional \$10 million, the Energy Technology Engineering Center received \$3 million more, and Brookhaven saw \$10 million.

Mr. Trischman concluded by noting the \$105 million budget request decrease at Savannah River, which could impact SWPF operations. He also noted, in response to a question from Mr. Wilson, that funding levels do not always denote completion, since some projects have longer horizons while others are near-term. In reference to the latter, he cited Oak Ridge's East Tennessee Technology Park as an example.

Mr. Allensworth noted his personal frustration with the FY2019 lower-than-requested SRS budget total. He juxtaposed the total with either the parity or increases realized at other sites and stressed SRS operational justification for budget request parity.

Public Comment Period

There was one public comment made online by Mr. Dennis Foreman, a member of the PORTS SSAB. Mr. Foreman thanked the Chairs for their volunteerism working on their local boards and on a national board. He made a suggestion to the board for a national recommendation that calls for majority votes of any board - instead of a 2/3rds majority vote - and that the majority vote would be sufficient for the passage of a recommendation to DOE. Mr. Foreman explained that the Portsmouth community has rejected the construction of an on-site waste disposal facility which would be just over 1,000 feet from local residents. He explained the PORTS SSAB recommendation 18-02 had eight members vote in favor of opening the Record of Decision and only six opposed, but because of this 2/3rds rule, it did not pass. Mr. Foreman wrote that the national board and all local boards should function as local governments do, as most organizations do, that a majority of votes is sufficient for passage. He said conflicts of interest were brought up to the national level from the PORTS SSAB and that boards should be a reflection of our communities and what the community sees as their best interest is, because the people in these communities bear the decisions in the community forever. Mr. Foreman wrote that Neptunium was recently found in an air monitor at a local school in his community. Further, he stated that independent data has verified that elevated levels of enriched uranium has been discovered inside the school and that transuranic and other radiological constituents from the plant are contaminating our neighbors and our children. Mr. Forman wrote that because much of the off-site contamination has been shown to come from fugitive dust created by constructing the disposal cell on contaminated land, the local health department has called on DOE to suspend cell construction activities until a thorough analysis can occur. He wrote that he was going to propose a recommendation to the PORTS SSAB that mirrors the public health department position calling for activities to be suspended at the cell.

Budget and Planning Update (Continued)

In response to a question from Dr. Riveles, requesting elucidation on the juxtaposition between EM's completion mindset and consistent budget figures, Mr. Gilbertson explained that improved utilization of funds – as opposed to greater funds – will help realize completion goals and overall efficiency gains, all while improving risk management.

Mr. Baca requested clarification on the budget formulation process, specifically the parties involved and the probability of additional infrastructure funds. Mr. Trischman noted that the budget process takes place at the intersection of multiple stakeholders, such as Federal and Congressional staff, along with members of the Administration. With respect to infrastructure spending, he explained that although certain infrastructure has atrophied, places like Hanford have separate contractors dedicated to its maintenance. Furthermore, WIPP has benefited from a separate infrastructure line item, while Richland has benefited from infrastructure plans.

In response to a question from Mr. Bonesteel, Mr. Trischman explained that budget fluctuation is inherent over the long-term, since capital projects or other demands can lead to budget spikes. Mr. Allensworth joined the conversation and noted that despite ongoing budgetary frustrations, SRS requests have been reasonable, given critical infrastructure like H Canyon.

After a short break, Mr. Roberts and Mr. Borak transitioned to recommendation reviews, starting with the inclusion in all future recommendations of a few paragraphs from the 2016 EM SSAB transition paper – which includes information on membership and priorities.

Recommendation #1

In reference to Government Accountability Office (GAO) reporting, Ms. Leckband suggested that milestone schemas should be defined. For instance, the nature of interim, minor, and major milestones should be clearly differentiated, and if variables like risk or funding are part of the calculus, they need to be listed. In addition, milestone information should be available online (i.e. information clearinghouse), as changes can occur regularly and sometimes number in the hundreds.

In response to a follow-up question, Mr. Borak explained that each site has different milestones and reporting requirements. The use of rolling milestones was then discussed, and Mr. Borak noted that during a budget year, specific milestones apply, but if budgets change, milestones established for future years can be renegotiated. Moreover, the same renegotiation process applies to party agreements.

Mr. Howard continued the conversation by asking if sites would be able to access each other's milestones, and although this was confirmed as the proposed vision, it remained unclear whether milestone schemas would be generic or not. Former use of a report card system was discussed, and reinvigorating this approach was noted as a possibility by Ms. Leckband. Dr. Riveles then identified milestone schema standardization as the main goal.

Ms. Leckband continued by asking if the recommendation was clear. Mr. Trischman explained the current milestone evaluation process, noting that discrepancies inevitably arise because of the divergence between individual site and DOE Headquarters procedures; if the GAO requests cite reports from both, there will likely be variance. He concluded by endorsing the recommendation, in response to Ms. Leckband's original question.

Dr. Riveles then summarized the GAO's third recommendation, which calls for EM cleanup milestone reporting, in accordance with the National Defense Authorization Act and including both original and negotiated information from all sites. Ms. Leckband then explained that the proposed EM SSAB recommendation omitted the GAO's recommendation, since its suggestion seemed to reside outside the EM SSAB purview.

Ms. Caldwell then voiced concerns about recommendation language related to cleanup delays and consequent milestone adjustments. According to her, it could give the false impression that milestones are being missed, and this could mislead the public. Ms. Leckband agreed and noted that these lines were not a response to the GAO report and could be eliminated. Mr. Roberts then added that it would be prudent to differentiate between baseline and regulatory milestones, which can be linked to penalties and are also known as enforceable milestones.

Ms. Linda Suttora, Acting Director of EM's Regulatory, Intergovernmental, and Stakeholder Engagement Office, then elaborated on the milestone system. As she noted, EM tracks the enforceable milestones, via an electronic database, and unfortunately, some sites incorrectly label some of their rolling milestones as enforceable; this has led to systemic incongruity and is now being resolved. At the same time, a national team has been assembled to realize consistency in milestone nomenclature. In addition, she explained that milestone changes will be catalogued, to include the nature of changes, the new milestone, and any renegotiation results. Furthermore, as she noted, a quarterly milestone scorecard would eventually be made public, with the database employing a more nuanced system for reporting delays.

In response to immediate group feedback, Ms. Suttora explained that EM's systematic review of the milestone process was going to institute six differentiating terms, which will make the data dictionary more robust and the overall process more standardized. The group deliberated quickly and decided to update the recommendation to reflect Ms. Suttora's abovementioned updates. She also explained that the updated data dictionary would be provided to the GAO, by the end of this September, followed by the full project at the end of this December.

Recommendation #2

Ms. Cimon began by explaining the recommendation's impetus: an independent assessment by the National Academies of Sciences (NAS), which analyzed DOE's science and technology for cleanup operations. Dr. Riveles commented on the report's interesting nature and questioned its conclusion that Savannah River National Laboratory (SRNL) is the only lab devoted to cleanup technology. If this is true, and as a corollary, the complex would benefit from additional cleanup technology research and development. He also expressed that the recommendation addressed questions outside the NAS report scope but endorsed the proposed EM SSAB recommendation's first of six sub-recommendations.

Ms. Cimon noted that all but one of the six sub-recommendations were derivatives of the original report and that a system to gauge progress was lacking. Mr. Bonesteel joined the discussion and requested elucidation on the term cross-cutting, followed by Mr. Rosenbaum's suggestion to add language related to hazardous materials within the first sub-recommendation. Ms. McAfee then

cited concerns about the applicability of the sixth sub-recommendation, as it was not derivative, and a group discussion ensued about its *raison d'être*: Hanford's Phoenix System as a potential database model.

Dr. Riveles then cautioned the group, arguing that the recommendation was not consistent with the NAS assessment. Ms. Leckband responded by stressing the recommendation's added value, as opposed to its matching precision, and promoted it as a springboard to inform stakeholders on science and technology best practices. Dr. Riveles then voiced his approval of this approach but cautioned keeping language that promotes public dialogue about cleanup technology, as it could lead to redundancy. The recommendation needed group revision, according to Dr. Riveles, and the group agreed to revise it that day.

Recommendation #3

Mr. Rosenbaum began by introducing the infrastructure-related recommendation, noting its applicability and scalability to all sites along with his authorship. Mr. Borak then explained that there was no formal process for developing recommendations, but that DOE would explore institutionalizing one. Ms. Leckband followed-up by providing insight on her experiences with the informal drafting of recommendations, noting the incubation of consensus among members. Mr. Roberts then set the stage for feedback on the present recommendation.

Mr. Allensworth began by requesting domain clarity on the first point, which was linked to transportation route remediation. Mr. Rosenbaum explained that the draft recommendation encompassed endogenous and exogenous infrastructure – relative to sites – and that such an approach would be consistent with the current political climate and multitude of stakeholders poised to get involved. Ms. Leckband joined in discussion and voiced concerns about this recommendation being outside the Board's purview, while Mr. Baca disagreed, endorsing its overall applicability and highlighting its advocacy benefits.

Mr. Allensworth argued that the recommendation was outside EM's scope, cautioning the group about potentially establishing a vein that could siphon off limited budget funds. He followed-up by championing infrastructure readiness within sites. Mr. Baca then seconded the zero-sum fund concerns, and Mr. Borak followed by reminding the Board about its limited scope, which covers EM operations only and explaining that the proposed recommendation would be inconsistent with EM SSAB common practices, rules, and guidelines.

Mr. Roberts suggested rewording the recommendation, to document Board concerns about the suboptimal state of broader infrastructure, kickstarting a long-term conversation in the process. Ms. Caldwell agreed and suggested the adoption of a generic stance, to transition away from a site-specific alignment. She also elucidated DOE's role in the recommendation, which led to consensus on DOE being an inter-agency interlocutor on exogenous infrastructure remediation.

Mr. Allensworth requested clarification on DOE's vetting of the recommendation, and Mr. Rosenbaum and Mr. Bonesteel collectively explained that Nevada's SSAB approved it, while DOE's guidance was to present it for national consideration.

Kelly Snyder, DDFO for the NSSAB, shed additional light on the subject, explaining that the recommendation was drafted and presented to the local board, and at that stage, the decision was made to present it at the national level – noting that it was never presented at the local level for DOE response.

Mr. Baca then endorsed submission of the recommendation, citing a broader responsibility to voice constituent concerns, the significant marginal impact Board sponsorship would have, relative to individual letters, and the need to preempt any future incidents that could raise questions from the public – in the absence of a submitted recommendation. Mr. Baca concluded his portion of the discussion by voicing opposition for the recommendation, should the national board deem it a zero-sum threat to EM cleanup funds.

Ms. Caldwell provided additional feedback, arguing that the recommendation needed to become more nuanced. For instance, she cited itemization as an option, where specific highways or other infrastructure liabilities would be listed for remedial awareness. In addition to scope narrowing, she also endorsed the idea of presenting it in collective action fashion, as opposed to individual members acting alone.

Mr. Roberts followed with a synopsis of the discussion thus far: 1) ongoing dialogue with DOE is a core strength of the Board; 2) the transportation term was potentially a misnomer, as waste shipment is more appropriate; 3) DOE shipment safety protocols would be valuable information for future consideration; 4) contingency planning for infrastructure liabilities would be valuable, along with the establishment of DOE points of contact to identify issues; and 5) remaining within the Board's purview should remain a priority.

Mr. Berry added that interviews with actual drivers could aid infrastructure liability mapping, and Mr. Roberts agreed. Mr. Rosenbaum followed by stressing the strategic importance of the recommendation, noting that something akin to a public record of these infrastructure concerns would preempt public censure, should a waste shipment incident occur.

Ms. McAfee joined the conversation and suggested coordination of a DOE presentation at a future meeting, with the aim of illuminating its standard operating procedures for transportation. Mr. Borak then noted that DOE has an office dedicated to this technical area, even though DOE does not have jurisdiction over infrastructure issues dealing with transportation. Mr. Baca then reiterated that submitting a recommendation with zero-sum budget outcomes would be foolish, while at the same time endorsing the idea of future consultations with actual drivers.

Mr. Borak reminded the group that the opportunity cost of drafting and submitting out-of-scope recommendations is neglect of EM-specific topics and decreased Board credibility.

Ms. Leckband endorsed the idea of DOE presenting its transportation criteria at a future meeting, urging board members to have questions ready, and Dr. Riveles added his support. After a vote, the group opted for a DOE transportation presentation in the future, to gain greater perspective, thereby deferring the decision to rewrite or abandon it entirely. Finally, in closing, Mr. Roberts

explained that two teams needed to remain, in order to rewrite the first two recommendations, while reminding everyone about that night's reception.

Day 2

Mr. Roberts began by reviewing the day's agenda and requesting personal introductions by the EM SSAB Chairs, Vice Chairs, and its Designated Federal Officer. Mr. Jeff Griffin, EM-3, followed with his own introduction, noting more than three decades of experience at SRNL.

DOE HQ News and Views

Mr. Borak began by thanking everyone for their attendance and underscoring the special nature of the EM SSAB Chairs Meeting. He continued by citing the inclusion of EM's organizational chart in the meeting package, noting Ms. Betsy Connell as EM-4, Mr. Gilbertson as EM-2, and Ms. Linda Suttora as Acting Director of EM's Regulatory, Intergovernmental, and Stakeholder Engagement Office. Mr. Borak went on to explain that he was also appointed Designated Federal Officer for DOE's Environmental Management Advisory Board (EMAB). He then explained EMAB's two charges for this fiscal year: accelerate cleanup completion and closure and solidify EM organizational readiness and sustainability.

He then provided a forecast of EM SSAB future meetings, listing the October 2019 Sun Valley, Idaho, spring 2020 Nevada, and fall 2020 Santa Fe meetings. Mr. Borak concluded by thanking the SRS host for coordinating the present EM SSAB meeting.

Ms. Leckband then suggested joint meetings between EMAB and EM SSAB members, citing the potential for synergistic gains, and Mr. Borak followed by explaining that EMAB meetings occur twice a year: once at a site and once in Washington, DC. Mr. Allensworth then pivoted, seeking clarification on SRNL reporting protocols; Mr. Griffin explained that SRNL reports to EM-4 in the interim – instead of his EM-3 office, which is the regular channel – since his recent departure from that lab necessitated recusal.

Field Operations Update

Mr. Griffin began by explaining that he is EM's Associate Principal Deputy Assistant Secretary for Field Operations. As he noted, while site managers report to him, the broader field mission includes amplifying the Assistant Secretary's vision so that EM priorities are properly reflected in site priorities; this includes end state contracting, consistency in contract accountability, safety and security, further technology development, and opportunities for accelerating work.

In terms of end state contracting, Mr. Griffin explained that the overall approach is brand new and that the first contracts will be placed at Hanford, comprising the Central Plateau and tank closure contracts, with proposals currently undergoing evaluation. He then highlighted the new

method's inherent value, citing both efficiency and flexibility gains. As he stressed, the former contract award lifecycle was too long, and once contracts were awarded, the inherent rigidity of the schema led to operational limitations. Instead, the new approach incorporates two steps, the first of which focuses on selecting the best human resources and the second on setting the stage for open-book negotiations – which leads to a more catered outcome. Furthermore, end state contracting's Indefinite Delivery/Indefinite Quantity model better adapts to budget, technical, regulatory, and community changes, and its ten-year horizon affords iterative, process-enhancing negotiations.

After briefly discussing the abovementioned Hanford contracts, Mr. Griffin explained that the Nevada, Oak Ridge, Portsmouth, and Savannah River end state contracts are being readied, while West Valley contracting decisions remain on hold. He went on to note that contracts continuing under the former schema will benefit from Performance Evaluation Measurement Plans, which permit strategic recalibration and incentivize programmatic progress, all while accommodating scope increases and enabling contractor assurance system evaluation.

Mr. Griffin then transitioned to a discussion of fee awards. As he noted, while site managers are still the fee determining officials that decide on contractor fees, the rationale for determining the fee will become more transparent and collaborative, with an overarching goal of standardization. As he noted, these process improvements will take time. In addition, safety, security, and quality assurance will remain a distinct priority, regardless of contracting changes and even if high-level adjustments occur, such as moving from operational status to deactivation. Any elimination or reduction of redundant or anachronistic elements, will not jeopardize safety and security. Ultimately, as Mr. Griffin noted, the goal is to realize optimal levels of oversight and interface between field offices and contractors. This will depend on the quality of contractors and their assurance systems, and the overall process will lead to the distillation of lessons learned, best practices, and enhanced organizational intuition, more broadly.

Mr. Griffin then transitioned to technology development, which is underwritten by a separate Congressional budget account for EM and averages approximately \$25 million. He then noted that the broader framework is hindered by inadequate program management processes, which include project selection, prioritization, and portfolio management. He also noted that paradigm shifting will be necessary, in order to properly incentivize programmatic pragmatism, instead of scientific research or other theoretical pursuits. While the latter are important, EM's mission requires a different incentive structure.

Mr. Griffin acknowledged the efforts of Mr. Kurt Gerdes, who currently manages the technology development program, and explained that ongoing site visits have allowed Mr. Gerdes to survey the scene and begin a thorough evaluation of technology funding efficacy. In turn, this baseline will feed fiscal strategic planning and ultimately move EM closer to optimal fund distributions. All of this was seconded by the NAS Independent Assessment on Technology.

Mr. Griffin then pivoted to EM's evolving alternatives analysis, which focuses on mapping what is feasible at each site, in order identify and select the optimal strategies for accelerated cleanup. Although challenging, the analysis will underpin realistic trajectories, while maximizing a site's potential and progress. This will involve cleanup activity sequencing, environmental liability

reduction, and the evolving calculus that informs optimal WIPP shipment levels. He noted that public input will be integral to the ongoing process and concluded by providing brief updates on SRS, Richland, Oak Ridge, and ORP operations.

Ms. Cimon then requested elucidation on the roles of risk reduction, compliance agreements, and public transparency. As Mr. Griffin explained, the first two will be integral to the second step of end state contracting, since negotiations with regulators will likely be involved. In addition, the coordination of community and industry days – before and after contract awards – will imbue transparency. He also explained that an information database is being considered, which will weigh both the pros and cons of ongoing database administration.

Ms. Leckband stressed the importance of strategically communicating ten-year contracting scopes, when some operational horizons are much longer. As she explained, when end states have not been agreed to, focusing on tasks should be the alternative. She added that stakeholders are very concerned about this and followed with a request for more information on fee advisory participants and alternatives analysis.

As Mr. Griffin explained, the fee advisory board is comprised of federal staff members only, even though contractors have a voice. In terms of alternatives analysis, he noted that akin to a thought exercise, if you begin with a baseline and juxtapose it with zero-constraint scenarios, comparative analytical synthesis will distill feasibility spectra.

Mr. Howard followed by requesting insight on EM's delay in adopting end state methodologies. In response, Mr. Griffin explained that although there is no simple answer, the delay was linked to the very complicated nature of so many cleanup challenges, their lengthy challenge horizons, the understandable adoption of abundant caution, challenge heterogeneity, and the fact that any uncharted territory requires a critical mass of iteration to offset the consequences of technical unfamiliarity and inadequate intuition. Furthermore, when faced with century-long timeframes, in certain cases, the adoption of end state logic became nearly impossible.

After explaining that the public's interest in accelerated cleanup has contributed to a burgeoning completion mindset, Mr. Griffin also explained that public input is also important during dispute resolutions; communication keeps all sides informed and builds trust. In addition, he responded to Dr. Riveles' question about the lack of end state contracting at Los Alamos, noting that the present contract is in its infancy and therefore not due in the current period.

Mr. Griffin then responded to inquiries about the fee advisory board and contractor assessment, explaining that the overall process aims to sustain proper communication between DOE and site managers, to grasp grading, the multitude of considerations, technical safety violations, and other variables, all in an effort to comprehensively grasp each site manager's fee algorithm.

Mr. Griffin then pivoted to Ms. Cimon and explained that even though Los Alamos was not on his end state contracting list, it and other sites were good candidates. The list was comprised of near-term awards, and under the current Los Alamos contract, elements of completion are still possible, prompted by EM's strategic emphasis on completion.

Ms. Leckband continued the discussion, requesting insight on the interaction, or lack thereof, between DOE and its contractors and the public or boards during open negotiations. Mr. Griffin then explained that task orders are negotiated during open negotiations, and stakeholder input will be an integral variable in that process. As he noted, communities need to help DOE grasp what the end states will really look like.

Mr. Allensworth then asked Mr. Griffin to reconcile end state contracting with the enduring nature of certain DOE sites. As Mr. Griffin explained, end state language is meant to define the EM mission at a specific site, without encapsulating its entirety. He went on to note that the concern was valid and called for greater terminological precision in the future. Mr. Griffin concluded by agreeing that funding is a critical variable in Portsmouth's algorithm for end state candidacy, contractor sequencing being an added component.

Public Comment Period

No comments were made by members of the public.

Closing Remarks & Adjournment

After reminding the group to complete the meeting evaluation form, Mr. Roberts thanked all those involved in administering the meeting, along with the two teams that edited the first and second recommendations.

The first recommendation was then discussed, and Ms. Leckband began by explaining that the background section was left untouched. She then noted that DOE's Ms. Suttora was instrumental in developing language to transition from specific milestones to more consistent language about complex-wide, data dictionary terms. As she noted, since different people use different milestone references, this inevitably leads to confusion.

In the recommendation's second sub-recommendation, the last line was completely removed, and its milestone language was altered to reflect Ms. Suttora's concerns. In addition, language was added to emphasize that the public should be afforded access to the abovementioned data dictionary. After a few grammar corrections, Mr. Roberts reminded everyone that the EM SSAB overview was being added at the end, and the group decided to label it "Who We Are." After a quick vote, the edited version was approved by the Board for further consideration by the local boards.

With respect to Recommendation #2, Ms. Cimon noted that the first sub-recommendation now referenced hazardous, not radioactive, waste material. She also noted that the bullet section was modified to reflect language from the NAS report, specifically the area related to technology development for cleanup solutions. After briefly discussing bullet number changes, she reminded the group that the sixth bullet had been removed but still warranted consideration as a separate topic altogether. After a grammatical edit and quick vote, the group approved the edited recommendation.

Ms. Leckband then took the opportunity to acknowledge the group's dedication to a bigger cause and commended everyone for successful collective action. As she went on to note, the younger generations will benefit from EM SSAB stewardship, and the Board's continued efforts will maintain a sustainable system for them to carry forward. This was followed by multiple thank you messages from other members, with a special thank you to the SRS hosts.

Mr. Wilson followed by announcing the end of his term, and Mr. Berry acknowledged the group, especially Mr. Gilbertson's participation. Mr. Cave joined the discussion and noted the expertise and knowledge of all EM SSAB members, placing emphasis on their passion and dedication.

After closing remarks from additional members, Mr. Borak reminded everyone that the approved recommendations needed to be presented to their boards for consideration, offering his assistance if needed. He thanked the group one last time, and the 2019 Augusta meeting adjourned.