

**MISSILE DEFENSE AGENCY'S BALLISTIC
MISSILE DEFENSE SYSTEM DRAFT PROGRAMMATIC
ENVIRONMENTAL IMPACT STATEMENT**

October 21, 2004

Sheraton Hotel, Kuskokwim Room
Anchorage, Alaska

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MR. DUKE: Okay, let's go ahead and get started. I've got a little bit after 7:00 o'clock and we'll go ahead and start the formal presentations.

Tonight, I'd like to welcome you to the public hearing for the Missile Defense Agency's Ballistic Missile Defense System Draft Programmatic Environmental Impact Statement. This public hearing is being held in accordance with the National Environmental Policy Act, or NEPA. My name is Marty Duke and I am the Missile Defense Program Manager for the development of the Programmatic Environmental Impact Statement.

I would like to introduce Colonel Mark Graham, who is from the Missile Defense Agency's Office of General Counsel. Colonel Graham will talk about the Draft Programmatic Environmental Impact Statement, the NEPA process, and the BMDS capabilities and components. I also would like to introduce Mr. Peter Bonner and Ms. Deb Shaver, with ICF Consulting. Ms. Shaver was the ICF Consulting Program Manager and technical lead for the PEIS, and Mr. Bonner will facilitate tonight's meeting.

So I'd like to turn it over to Mr. Bonner who will review tonight's meeting agenda and discuss some administrative points on how to provide public comments on the Programmatic EIS

MR. BONNER: Hi. I'd also like to welcome you

to the public hearing tonight. First, let's define a couple of terms you're going to hear tonight. We'll refer to the Missile Defense Agency as the MDA, we'll review the Ballistic Missile Defense System or BMDS, and discuss the Programmatic Environmental Impact Statement or PEIS.

Therefore, at the hearing we're going to discuss the development of MDA, Draft BMDS PEIS. Everybody have all those acronyms down? We'll then discuss the proposed action, which is the implementation of an integrated BMDS. The activities involved in implementing this BMDS have been analyzed for their potential environmental impact. Finally, we will provide a forum to collect your public comments on the Draft PEIS.

To ensure MDA has sufficient time to receive oral comments this evening, we will use the following agenda that you see up on the screen. We will spend the next 30 to 40 minutes presenting information about the BMDS, the NEPA process, that's the National Environmental Policy Act, as Marty said. And the presentation will discuss the following: What is a programmatic EIS? What is the BMDS? How were potential impacts analyzed? What are the results of the analysis? And how does we submit comments on the Draft PEIS? We'll then take a 15-minute break during which if you would like to sign up at the registration table to make public comment, you can do it then. I see a number of you have already signed up to do that.

After the break, each speaker will be called in the order they signed up to come up and make their statements. Following the public statements MDA representatives will be available in the poster area to clarify the information provided during the presentation. Please note that questions or comments provided informally to MDA representatives in the poster area will not be officially recorded. However all questions can be formally submitted to MDA through one of the other available methods.

The most important aspect of tonight's meeting is the public comment portion. All public comments and statements provided tonight will be recorded for a transcript. We have a court reporter here doing that. Please remember that the Programmatic EIS is just a draft document. This is your opportunity to provide comments before it is finalized and before a decision is made. We are here to listen firsthand to your suggestions and concerns. Please limit your comments to five minutes to give everyone an opportunity to speak.

The real purpose of this meeting is to gather your comments. Your comments and questions will be recorded tonight and will be carefully considered in the preparation of the Final PEIS. If you wish to provide written comments as an alternative, forms are available at the registration table to do that. You may leave written comments at the registration table with us or you may mail, e-mail or fax those to the MDA

using the information provided. To allow time to consider them and respond to comments in the Final PEIS, all comments must be received no later than November 17, 2004.

Colonel Graham will now discuss the BMDS PEIS and the NEPA process. Thank you.

COL. GRAHAM: Thank you, Peter. Good evening everybody.

NEPA establishes our broad national framework for protecting the environment. NEPA requires Federal agencies to consider environmental impacts of proposed actions and reasonable alternatives to those actions early in their decision-making process. The NEPA process is intended to help public officials make decisions based on understanding environmental consequences and take actions that protect, restore, and enhance the environment.

In the past, the national approach to missile defense focused on the development of individual missile defense elements or programs, such as the Patriot, the Airborne Laser, and ground-based interceptors. These actions were appropriately addressed in separate NEPA analysis that MDA, its predecessor agencies, and executing agents prepared for these systems.

The aim of missile defense has been refocused by the Secretary of Defense to develop an integrated Ballistic Missile Defense System that would be a layered system of

components working together capable of defending against all classes and ranges of threat ballistic missiles in all phases of flight. Because the integrated Ballistic Missile Defense System is a large program made up of many projects implemented over time on a worldwide basis, MDA has determined that a programmatic NEPA analysis would be appropriate. Therefore, the MDA has prepared a Programmatic EIS to analyze the environmental impacts of implementing the proposed program.

A Programmatic EIS, or PEIS, analyzes the broad environmental consequences in a wide-ranging Federal program like the Ballistic Missile Defense System. A PEIS looks ahead at the overall issues in a proposed program and considers related actions together in order to review the program comprehensively. A PEIS is appropriate for projects that are broad in scope, are implemented in phases and are widely dispersed geographically. A PEIS thus creates a comprehensive, global analytical framework that supports subsequent analysis of specific activities at specific locations.

The Programmatic EIS is intended to serve as a tiering document for subsequent specific Ballistic Missile Defense System analyses and includes a roadmap for considering impacts and resource areas in developing future documents. This roadmap identifies how a specific resource area can be analyzed and also includes thresholds for considering the significance of environmental impacts to specific resource

areas. This means that ranges, installations, and facilities at which specific program activities may occur in the future could tier their documents from the PEIS and have some reference point from which to start their site specific analyses.

The Ballistic Missile Defense System Programmatic EIS analyzes the potential environmental impacts of developing, testing, deploying, and planning for decommissioning for the proposed program. The Programmatic EIS evaluates proposed Ballistic Missile Defense System technology, components, assets, and programs and considers future development and application of new technologies.

The proposed action considered in the BMDS Programmatic EIS is for the MDA to develop, test, deploy, and to plan for decommissioning activities for an integrated Ballistic Missile Defense System using existing infrastructure and capabilities, when feasible, as well as emerging and new technologies to meet current and evolving threats. When feasible, the MDA would use existing infrastructure to implement the BMDS and would incorporate new technologies and capabilities as they become available. This would ensure that the program could provide defense both for current and future ballistic missile threats.

The purpose of the proposed action is to incrementally develop and deploy a Ballistic Missile Defense

System, the performance of which can be improved over time, and that layers defenses to intercept ballistic missiles of all ranges in all phases of flight. The proposed action is needed to protect the United States, its deployed forces, friends, and allies from ballistic missile threats.

In this Programmatic EIS, MDA considers two alternative approaches to implementing the Ballistic Missile Defense System in addition, of course, to the No Action Alternative. The alternative approach is the use of weapons from land-, sea-, air-, and space-based platforms.

Alternative 1 is to develop, test, deploy, and plan to decommission an integrated Ballistic Missile Defense System that includes land-, sea-, and air-based weapons platforms. The BMDS envisioned in Alternative 1 would include space-based sensors, but would not include space-based defensive weapons.

Alternative 2 is to develop, test, deploy, and plan to decommission an integrated Ballistic Missile Defense System that includes land-, sea-, air-, and space-based weapons platforms. Alternative 2 would be identical to Alternative 1, with the addition of space-based defensive weapons.

The Council on Environmental Quality requires -- the regulations require that when in implementing NEPA, you also require the consideration of the No Action Alternative. Under the No Action Alternative, the MDA would not develop,

test, deploy or plan for decommissioning activities for an integrated Ballistic Missile Defense System. Please note that under the No Action Alternative, MDA would continue existing development and testing of individual elements as stand-alone defensive capabilities. Individual systems would continue to be tested but would not be subjected to system integration tests.

Alternatives 1 and 2 provide different weapons platforms options for implementing an integrated Ballistic Missile Defense System while the No Action Alternative continues the traditional approach of developing individual missile defense elements, such as Airborne Laser, Patriot missiles or ground-based interceptors.

I will now address how MDA characterizes the Ballistic Missile Defense System into relevant components and lifecycle activities that could be considered to provide a programmatic review of the environmental impacts of implementing the proposed action.

MDA's goal is to develop an integrated Ballistic Missile Defense System that will provide a layered defense. The Ballistic Missile Defense System would be capable of destroying threat ballistic missiles in the boost, midcourse and terminal flight phases and would defend against short, medium, intermediate, and long-range threat ballistic missiles. Finally, the Ballistic Missile Defense System would integrate

sensors and weapons through a command control, battle management, and communications network, or C2BMC. With this capability the integrated Ballistic Missile Defense System would establish a defense against threat ballistic missiles.

The Ballistic Missile Defense System is a complex system of systems. To be able to perform a meaningful impact analysis, we considered the Ballistic Missile Defense System in terms of its components: weapons, sensors, C2BMC, and support assets. These components are the building blocks that can be assembled with specific functional capabilities and operated together or independently to defeat threat ballistic missiles. Testing was considered for each component; however, the integrated missile system that we would propose needs to be tested at the system level and was analyzed separately using realistic system integration flight test scenarios. Now, let's look at each of these components.

First component is weapons. Weapons would provide defense against threat ballistic missiles. They include interceptors, directed energy weapons in the form of high-energy lasers that would be used to negate threat missiles. Interceptors would use hit-to-kill technology, either through direct impact or directed fragmentation. Ballistic Missile Defense System weapons are designed to intercept threat ballistic missiles in one or more phases of flight and could be activated from land, sea-, air-, or space-

based platforms.

Ballistic Missile Defense System sensors would provide the relevant tracking data for threat ballistic missiles. Sensors detect and track threat missiles and assess whether a threat missile has been destroyed. Sensors provide the information needed to locate and track a threat missile to support coordinated and effective decision-making against the threat.

There are four basic categories of sensors considered for the Ballistic Missile Defense System. They are radar, infrared, optical, and laser sensors. Radars send a signal out and detect the same signal as it bounces off an object. Infrared sensors are passive sensors that detect and track heat or infrared radiation from an object. Optical sensors are also passive sensors but they collect light energy or radiation emitted from an object. Laser sensors use laser energy to illuminate and detect an object's motion. Lasers and radars emit radiation while infrared and optical sensors detect radiation that has been emitted. Ballistic Missile Defense System sensors would operate from multiple platforms, such as land, sea, air, or space.

The data collected by the sensors would travel through the communication system to command and control centers where a battle management decision on whether to use a defensive weapon would be made. C2BMC would integrate and

coordinate equipment and operators through command and control and integrated fire control centers. C2BMC would enable military commanders to receive and process information, make decisions and communicate those decisions regarding the engagement of threat missiles. The C2BMC would include fiber optic cable, computer terminals, and antennas and would operate from land-, sea-, air-, and space-based platforms.

The last category of support assets; or, excuse me, the last category of components is support assets. Support assets would be used to facilitate development, testing and deployment of Ballistic Missile Defense System components. Support assets are one of three types: support equipment, infrastructure or test assets. Support equipment includes general transportation and portable equipment such as automobiles, ships, aircraft, rail and generators. Infrastructure includes docks, shipyards, launch facilities and airports. Test assets include test range facilities, targets, countermeasure devices, simulants and observation vehicles.

Now that we have discussed the components, Mr. Marty Duke will describe how they can be integrated into the Ballistic Missile Defense System.

MR. DUKE: This slide depicts the integration of the various components of the proposed BMDS that Colonel Graham just discussed. The use of multiple defensive weapons

and sensors operating from a variety of platforms integrated through a single C2BMC system would create a layered defense allowing several opportunities to intercept and destroy the threat missile. For example, one weapon could engage a threat missile in its boost phase, represented here in the red, and another could be used to intercept the threat missile in later phases if initial intercept was unsuccessful in the boost phase. So we could intercept in the midcourse or in the terminal phase.

Components are incorporated into the BMDS through the lifecycle phases of the system acquisition process. These lifecycle phases are development, testing, deployment, and decommissioning. New components would undergo initial development testing, while existing components would be tested to determine their readiness for use. Work on a given technology would stop if testing failed to demonstrate effectiveness or if functional capability requirements changed. Components and elements would be deployed as testing demonstrates that they have capabilities of defending against threat ballistic missiles.

In most cases, a component would be deployed when testing demonstrates that it is capable of operating within the integrated BMDS and the associated safety and health procedures are developed and adequate. This process concludes with decommissioning, which would occur when and where

appropriate.

To determine environmental impacts, this PEIS analyzed the proposed BMDS components by considering the various lifecycle phase activities of each component, as well as the operating environments in which the activities are taking place. This slide tries to depict the multi-dimensional complexities involved in considering the impacts of implementing an integrated BMDS. In terms of its components, as we have here, the weapon, sensors, C2BMC, support assets, against their lifecycle activation activities, against their operating environment.

Because of the complex nature of this project, an analysis strategy was developed to effectively, yet efficiently, consider the broad range of environmental impacts from the proposed BMDS. First, the existing condition of the affected environment was characterized for the locations where various BMDS activities are proposed to occur.

Next, MDA determined the resource areas that could potentially be affected by implementing the proposed BMDS.

Finally, impacts of the BMDS were analyzed in four steps. In Step 1, we identified and characterized lifecycle phase activities. In Step 2, we identified activities with no potential for impact and dismissed them from further analysis. In Step 3, we identified similar activities across

lifecycle phases and combined them for analysis. And in Step 4, we conducted the impacts analysis for all remaining activities. The first three steps were used to characterize and reduce the number of unique lifecycle activities, thereby reducing the redundancy in preparing the impact analysis.

The affected environment includes all land, air, water, and space environments where proposed BMDS activities are reasonably foreseeable. The affected environment has been considered in terms of the broad ocean area, the atmosphere, and nine terrestrial biomes. A biome is a geographic area with similar environments or ecologies. Climate, geography, geology and distribution of vegetation and wildlife determine the distribution of the biomes. These biomes encompass both U.S. and non-U.S. locations where the BMDS could be located or operated.

The resource areas considered in this analysis are those resources that can potentially be affected by implementing the proposed BMDS. NEPA analyses generally consider the resource areas listed on the screen, except for orbital debris. Because missile defense development and test activities include the launch and intercept of missiles, space-based communications and other satellites, and potential for space-based interceptors, MDA also considered orbital debris and its impacts on the Earth.

This PEIS discusses all resource areas,

provides a methodology for analysis, and suggests thresholds of significance to provide the reader with a roadmap for performing future site-specific analysis tiering from the PEIS. These discussions outline the type of information that would be needed to conduct site-specific analyses and identify the steps necessary to ensure that potential impacts are appropriately considered. The resource areas, highlighted on the slide with a red star, require site-specific information for analyses and are those more effectively addressed in subsequent tiered analyses for specific activities.

Once we decided how to consider the affected environment and the resource areas of concern, we used the four-step process I mentioned earlier. In Step 1 of the impacts analysis, MDA identified and characterized the activities associated with each BMDS component. Each lifecycle phase has activities applied to each component.

For example, development can include planning, research, systems engineering, and site preparation and construction. Testing can include manufacturing, site preparation and construction, transportation, activation, and launch activities. Deployment can include manufacturing, site preparation and construction, transportation, activation, launch, operation and maintenance, upgrades, and training. And finally, decommissioning includes demilitarization and disposal.

Once lifecycle activities were identified, it was determined that some of those activities had no potential for impact. Activities such as planning and budgeting, systems engineering and tabletop exercises are generally categorically excluded in various Department of Defense NEPA regulations and, therefore, not further analyzed in this PEIS. Other activities for specific components, such as transportation, maintenance and sustainment, and manufacturing, were not analyzed in this PEIS because they have been evaluated in previous NEPA analyses and found to have no significant environmental impacts.

The remaining activities were then examined to determine which activities had similar environmental impacts. For example, impacts associated with site preparation and construction in the development phase would be similar to or the same as impacts from site preparation and construction activities in the deployment phase. Under Step 3, similar activities occurring in different lifecycle phases were identified and considered together to reduce redundancy.

The final step was to determine the impact associated with each remaining activity under the proposed action. The significance of an impact is a function of the nature of the receiving environment and the receptors in that environment.

For example, an interceptor launch creates the same emissions no matter where it is launched. Whether those

emissions cause impacts and the significance of those impacts depend upon the environment into which they are released. The PEIS analyzes these emissions by component for each resource area and lifecycle activity where a potential for impact was identified. Impacts were distinguished based on the different operating environments, land, sea, air, and space. The analysis also considered specific impacts for individual biomes where activities could occur.

The impacts of system integration tests were considered separately from the impacts of individual component testing because integration testing would involve using multiple components in the same tests. To deal effectively with integration testing MDA looked at two generic systems integration flight test scenarios which involved different numbers of launches and intercepts.

The impacts analysis for Alternative 1 considers the use of land-, sea-, and air-based platforms for BMDS weapons. The analysis includes the use of space-based sensors, but not space-based weapons. The analysis is specific for each resource area based on the impacts from the activities associated with the BMDS component.

The impacts analysis for Alternative 2 includes the use of interceptors from land-, sea-, air- and space-based platforms for BMDS weapons. The impacts associated with the use of interceptors from land, sea, and air platforms would be

the same as those discussed for Alternative 1; therefore, the analysis for Alternative 2 focuses on the impacts of using interceptors from space-based platforms. Therefore, the fundamental difference between Alternative 1 and 2 is that Alternative 2 includes the analysis of space-based platforms for interceptors.

The cumulative impacts of implementing the BMDS were also considered. Cumulative impacts are defined as impacts that result from the incremental impacts of the proposed action when added to other past, present, and reasonably foreseeable future actions. Because this proposed action is worldwide in scope and potential application, only activities similar in scope have been considered for cumulative impacts.

Under Alternative 1, worldwide launch programs for commercial and government programs were determined to be activities of similar scopes. Therefore, the impacts of BMDS launches were considered cumulatively with the impacts from other worldwide government and commercial launches.

Alternative 2 includes placing defensive interceptors in space, which involves adding additional structures to space for extended periods of time. The International Space Station was determined to be an action that is international in scope and has a purpose of placing structures in space for extended periods of time. Therefore,

the impacts of the use of space-based weapons platforms were considered cumulatively with the impacts of the International Space Station.

The next few slides provide broad summaries of the impacts analysis by BMDS component and Test Integration for Alternatives 1 and 2, the No Action Alternative, and the cumulative impacts for Alternatives 1 and 2. Please note that the results are extremely high level suitable for this presentation. Additional details have been provided in some of the posters that you've seen in the hallway in the back. The impacts analysis may also be found in the Executive Summary Impact tables and in Section 4 of the Draft PEIS.

It is important to note that no environmental showstoppers were found in this programmatic impact analysis. As the next few slides show there are potential impacts associated with the various activities needed to implement the BMDS. However they would be appropriately addressed in subsequent tiered NEPA analyses along with the mitigation actions as required to ensure less than significant impacts.

This slide shows a summary of the broad potential for environmental impacts associated with BMDS weapons activities as examined for each resource area for Alternatives 1 and 2. Please note that this is a very high-level depiction of the results of the analysis and additional details of the weapons analysis may be found in the Executive

Summary of the Draft PEIS. However, one can see from these slides general activities and resource areas that should be considered in subsequent tiered NEPA analyses.

This slide shows the impacts summary for BMDS sensors. Note that the impacts are the same for Alternatives 1 and 2 and include space-based sensor platforms. This summary also shows how MDA's categorization of activities helped to simplify the analysis. For example, the activities of radar would not impact air quality because the only emissions resulting from radars would be from supporting diesel generators, which are addressed under support assets. However, radars generate electromagnetic radiation, which could potentially impact biological resources.

Although C2BMC is the glue that enables the integrated BMDS to function effectively as a system, this component creates little potential for environmental impacts.

Impacts associated with support assets are mainly those that would be caused by site preparation and construction of infrastructure and by using test assets such as countermeasures and stimulants during testing.

Test integration, overall, has the most potential for impacts because it includes the use of several components during increasingly realistic test scenarios. Although this programmatic analysis showed the potential for impacts, the existing environment at the proposed test location

and the specific test activities planned will determine the nature and extent of the impacts.

The No Action Alternative would continue the development and testing of individual weapons, sensors, C2BMC, and support assets and would not include integration testing of these components. The environmental impacts of the No Action Alternative would be the same as the impacts resulting from continued development and testing of individual missile defense elements.

The decision not to deploy a fully integrated BMDS could result in the inability to respond to a ballistic missile attack on the U.S. or its deployed forces, allies, or friends in a timely and successful manner. Further, this alternative would not meet the purpose or need of the proposed action or the specified direction of the President and the United States Congress.

We examined the impact of worldwide launches for cumulative impacts. Launches can create cumulative impacts by contributing to global warming and ozone depletion. Potential launch emissions that could affect global warming include carbon monoxide and carbon dioxide, or CO₂. Unlike CO₂, carbon monoxide is not a greenhouse gas, but it can contribute indirectly to the greenhouse gas effect. The cumulative impact on global warming of emissions from BMDS launches would be insignificant compared to emissions from other industrial

sources, such as energy generation. The BMDS launch emissions load of CO₂ and carbon monoxide would only be five percent of the emissions load from worldwide launches. In addition, CO₂ and carbon monoxide from 10 years of BMDS and worldwide launches combined would account for much less than one percent of CO₂ and carbon monoxide emissions from U.S. industrial sources in a single year.

Chlorine is of primary concern with respect to ozone depletion. Launches are one of the man-made sources of chlorine in the stratosphere. The cumulative impacts on stratospheric ozone depletion from launches would be far below the effects caused by other natural and man-made sources. The emission loads of chlorine from both BMDS and other launches worldwide occurring between 2004 and 2014 would account for about half of one percent of the industrial chlorine load from the U.S. in a single year.

The orbital debris produced by BMDS activities would generally be small in size and would consist primarily of launch vehicle hardware, old satellites, bolts and paint chips. It may also be possible for debris from an intercept to become orbital debris. However, orbital debris produced by BMDS activities would occur in low-earth orbit where debris would gradually drop into successively lower orbits and eventually reenter the atmosphere. Therefore, orbital debris from BMDS activities would not pose a long-term hazard to the

International Space Station or other orbiting structures. In addition, collision avoidance measures would further reduce the potential for orbital debris to damage orbiting structures, such as the International Space Station.

I would like to reiterate that our impacts analysis indicated no expected areas of significant impacts on the environment. However, many resource areas showed potential for impacts indicating that these areas need to be considered in any subsequent analyses tiered from this PEIS.

Okay, this is the conclusion of the summary of our findings. Now, I'd like to turn to Peter Bonner who will discuss some of the administrative comments -- points on making the public comments.

Peter.

MR. BONNER: Thank you, Marty. Now that we've reviewed the proposed BMDS and the potential impacts from its implementation, let's discuss the PEIS schedule. The PEIS development process started with the Notice of Intent, or NOI, which was published in the Federal Register on April 11th, 2003. MDA released the Draft PEIS in September. The public comment period for the Draft PEIS, currently underway, will continue through November 17th, 2004. After that time, the MDA will consider all comments received and incorporate appropriate changes in the Final PEIS. A release date for the Final PEIS is estimated for December 2004 or January 2005. After the

release of the Final PEIS there will be a 30-day waiting period before the MDA can issue the Record of Decision, or ROD, one more acronym.

There are a number of ways in which you can provide comments on the Draft BMDS PEIS. You may provide your comments orally or in writing. Oral and written comments will be given equal consideration in preparing the PEIS - the Final PEIS.

If you would like to make a public statement at Tonight's meeting, we encourage you to sign up at the registration table and fill out a speaker's card. Each speaker will be given five minutes to make a statement. The five minutes are your time. If you need significantly more time than the five minutes, I'd ask that you yield to another speaker and then come back at the end after the final speaker has finished to continue your input.

As mentioned earlier, public statements by Tonight's speakers will be recorded by the court reporter to ensure that we accurately capture your comments on the Draft PEIS. There is also a toll-free telephone number on which you might submit comments. Please refer to your handouts for the toll-free phone number. Another option is to submit your comments in writing. There are four ways to do this. First, you may leave written comments that you brought with you tonight with the person at the registration table. Second, you

can use the comment forms that are available at the registration table to write down your comments. You may either turn those in tonight or you may fax or mail them to MDA using the addresses and toll-free tax number -- toll-free fax number, not tax number, that appear on the comment forms. You may also e-mail your comments to MDA using the addresses listed in the handouts and on the MDA BMDS PEIS web site.

Finally, you may submit comments through the PEIS web site using an electronic comment form. To ensure that your comments are adequately considered in the Final BMDS PEIS, they must be received no later than November 17th.

The information on the screen lists the various ways you could submit your comments. This information is also listed on the comment forms at the registration table and handouts available near the posters.

Please visit the BMDS PEIS web site for additional information. The web site provides descriptions of topic areas that we touched on this evening, as well as links for obtaining additional information. The materials handed out tonight are also posted on the BMDS PEIS web site.

We encourage you to sign up to receive a hardcopy of the Executive Summary of the Final PEIS and a CD-ROM containing the entire document when it becomes available. To do this, please fill out the appropriate form at the registration table. You can also request a copy of the

Executive Summary or CD-ROM of the entire document by sending an e-mail to us, to the address listed in the handout materials and on the screen. The Final PEIS will also be available in pdf format to download from the BMDS PEIS web site and hardcopies will be placed in local libraries. A list of these libraries is available on the BMDS PEIS web site.

If you haven't signed up to receive these materials, please do so during the break out in the registration area.

Marty.

MR. DUKE: Okay. Our purpose of being here tonight is really to listen to you, to hear your comments on our Draft PEIS. No decisions will be made on the PEIS tonight. We'll take your comments, all the comments we have received during the comment period of oral, written, faxed and consider those in the Final PEIS. But, again, as Peter mentioned we need all comments in by November 17th.

So let's go ahead and take about a 10- or 15-minute break and then we'll come back. It allows us to set up for the public statement period. After the public statement period we'll be available to answer additional questions you may have out at the poster area, okay?

Thank you.

(Off record)

(On record)

MR. BONNER: Let's get started again. I have the list of registered speakers and I'll call each person to the front of the room to the microphones provided to make their comment. Please limit your remarks to five minutes. As we said, if you have additional comments to make after the five minutes, if you could wait until the last speaker speaks and then we'll bring you back up again.

To help you keep track of the time, after about four minutes I will hold up my very expensive and fancy sign here that says you've got a minute left. This should help you find a comfortable place to wrap up your comments. If you have a written version of your comments, we ask you provide it to us to facilitate keeping an accurate record of them. When providing your public statement, please remember to state your name and, if you have an affiliation, give us that too. And if you speak clearly for the meeting recorder that would be helpful.

Okay. If you do not wish to give an oral statement here tonight, please consider providing comments to using one of the available methods we talked about earlier. We tried to develop a lot of avenues for you to give us your comments. Thanks again for your participation in this process.

Have Jean Bodeau come up.

MS. BODEAU: Hello, my name is Jean Bodeau and I have no affiliation with an organization. I'm a professional

geologist and engineer and I've worked as an environment consultant in Alaska for almost 20 years. I now work in health care. Some of the work I've done as a consultant is I've managed several million dollars worth of military contracts, mostly for the Air Force.

I oppose the entire program on both philosophical and concrete grounds, with specific points as follows:

First, it doesn't address the real threat, i.e., terrorist with low tech devices that could come over borders, by sea, suicide bombers. I understand the Iraqi insurgents now are trying to get more weapons of mass destruction. This project, to me, seems totally divorced from the realities that we're facing as a country and takes funds away from the real threats.

Two, the sequencing on the whole program seems backward. The EIS is late and the project is premature. Furthermore, the technology doesn't appear to work, yet it is already being deployed.

Three, NEPA does not seem, to me, to be a big enough vehicle to evaluate the program. It should include international input because the implications of this project are global. And I noticed on your map out there Antarctica is not included on the map. I'm sure you looked at it but...

Fourth, the PEIS, with all due respect, I know

a lot of work went into it, is - in my opinion it's crap. I've worked on these things quite a bit and I know that you can manipulate your data, manipulate your analyses to come out with exactly the results you desire. And I think that's what's been done here. It ignores or glosses over potential concerns and it put many other assessments off to future assessment to the site-specific assessments, the tiered impact - or the tiered assessments that you mentioned.

I noticed on the summary and in the documents, I've looked through those. I got them in the mail and I appreciate those being sent out in advance. There is a huge number of no significant impacts listed. And I think that this issue is a big enough and hugely important issue that it deserves more than a cursory analysis of the environment impacts.

I have some more specific concerns, things that the PEIS does not adequately address. Number one, exposure to increased levels of toxic pollutants from a dramatic increase in missile launches. Liquid propellants containing hydrazine, nitrogen tetroxides and other compounds that are highly toxic. In addition, ammonium perchlorate, which is used in solid propellants, it blocks the formation of key thyroid elements that are critical for growth and development, especially in fetuses and children, and this was not considered.

Another concern is that the risk to health and

safety of DMD missile accidentally shooting down civilian and friendly military aircraft was not considered.

Third, it neglected to look at space debris from high altitude midcourse missile intercepts or destruction of satellites, and it really glossed over potential impacts of debris falling to earth. It just wrote them off as being burned up in the atmosphere.

Another concern is that it didn't really look at the many rocket launches that are needed to test and deploy and maintain the space interceptors.

Five of the specific points, the program could contribute to the proliferation to the weapons of mass destruction and an arms race in space. The response of other nations to the BMDS has not been considered.

Six, radioactive fallout from intercepted missiles has not been considered. The effects of war are normally excluded from analysis by NEPA; however, this proposed BMDS action is very likely to provoke a worldwide WMD arms race and force other nations to prepare to launch a massive retaliation against the U.S. should war ensue. And I believe that radioactive fallout needs to be looked at and not written off as a no significant impact.

Seven, also missing is an assessment of impacts to the environment, human health and welfare and future generations, which would result from the monstrous financial

burden of this program and taking resources away from other critical aspects of our nation.

And, last, the BMDS PEIS does not really include a No Action Alternative. Your No Action Alternative does not include the option of not deploying any of these, there's just dropping the program right now. And I think that we need to have a true No Action Alternative considered as part of this.

I am going to submit additional written comments. Thank you for the opportunity.

MR. BONNER: Thank you. Have Steve Cleary come up.

MR. CLEARY: Hi. Thanks for having me. My name is Steve Cleary, I'm the Executive Director for the Alaska Public Interest Research Group, my acronym is AKPIRG. That's another acronym for everybody tonight.

I, like Jean, am in favor of the No Action Alternative, but would also like a real No Action Alternative, which would save us tens to hundreds of billions of dollars if we didn't deploy the system.

I remember from last time, part of about the radar, somebody from Valdez was worried about that it was going to set off airbags in cars, set off fire extinguishers, some kind of weird effects of the radar, but I didn't see any mention of that in there and I didn't get a chance to read the

whole thing. I just read the executive summary. So I would like to hear more about that.

But I think a lot of us are concerned about the integration of all these systems when all the systems aren't here. We hear about the sea-based radar that's going to be swung around and come on up and be sitting outside by Shemya, but we have five missiles in the ground, maybe six by now, and we're going to start deploying that by September, but yet this isn't due until -- you know, the Record of Decision isn't going to be until February, so the integration of the system doesn't seem to have happened, yet it all seems to be going forward and this Programmatic EIS doesn't seem to have a whole lot of effect on that.

So, again, I am here tonight to speak in favor of the No Action Alternative. I do also believe that deployment of the missile defense would spur a global arms race and cause nations to devote resources, simply because we are, to this weaponization of space.

I'm also concerned that we'll be exporting it to non-U.S.A. locations, Canada, United Kingdom and other places who might see us as a world superpower and want to, you know, receive our favors and so they would acquiesce to this system.

Specific to Alaska, I have a lot of questions about the Kodiak Launch Complex. I'm really concerned about

the aborted launch that happened at Kodiak, I believe it was two years ago November and Kodiak itself is a significant enough population center to be concerned about it, but if we start launching missiles from Fort Greeley, which is near Fairbanks, near Delta Junction, that have to be aborted, there's significant population centers there, not to mention the TransAlaska Pipeline.

Something that was mentioned in the presentation and in the PEIS, it talks about a robust testing program. It mentioned in the PEIS that the test are going to dictate which further things happen. We haven't seen a realistic test yet and that concerns us here in Alaska, particularly when, you know, like I said, an aborted launch could have such a disaster effect on our state.

It's unclear from the PEIS, and I'm looking at Section 2.242, whether or not the Kodiak Launch Complex is going to be a launch test and defensive operational asset or if it's going to launch things into orbit, or if it's just a test center. So it's confusing for the folks on Kodiak and for us here in Alaska what is actually going to happen out on the island.

It talks about a safety zone that would be established around the laser during activation. This is also in the PEIS, Pages 250 to 254. There's a lot of small plane traffic and a lot of small boat traffic around Kodiak and other

places in Alaska. It has us concerned about the laser and its effects on our economy and on the human resources, or humans, I should say, of Alaska.

The hydrazines that Jean mentioned were the same things that I believe came from when the space shuttle crashed and landed in Texas and there was a very large mobilization to get people not to touch those things. And if that's the same chemical that's going up with each of these launches and potentially coming back down, then those will be grave consequences indeed.

A lot of the missile defense system has been sold up here in Alaska for the economic benefits. And I know the Programmatic EIS also takes in social and economic benefits and I could think of a lot better ways for us to spend these hundreds of billions of dollars that will eventually be spent on this system that isn't going to work and is also addressing the least likely threat.

So I thank you for the opportunity to speak in favor of the No Action Alternative. Thanks.

MR. BONNER: Thank you. Can I have Greg Garcia come up? Greg.

MR. GARCIA: Yes, hello. My name is Greg Garcia, I'm a member of Alaskans for Peace and Justice, as well as No Nukes North. There's just a few brief things I'd like to say about this. I mostly want to comment on it as a policy

issue. I realize that, you know, the purpose of this is to take testimony about the actual environmental impact of this and I'm not really all that knowledgeable. I've looked at a lot of the materials about it, about the environmental aspects and, frankly, you know, I'm not probably qualified to interpret a lot of the things that are said there.

However, I do definitely oppose the space-based weapons platform that are mentioned in Alternative 2. Certainly, you know, be opposed to putting weapons in space. I'd like to see something quite a bit less than the No Action Alternative, I'd really like to see something rolled back in a way and dismantling and using these resources, the financial resources that were wasted on this on much more pressing needs in this country.

As many people have mentioned, it does protect us from what's the least likely attack scenario. There's way too many other things going on that are threats where the resources that are being expended here could be used. For example, roughly four percent of the cargo containers coming into the United States from foreign countries are inspected in any way, and that's mostly just inspecting the paperwork, not even actually doing an actual physical inspection. And we could certainly create a lot of jobs that way, as well as by building this system. So it doesn't seem like a very good cost benefit there.

I feel that this system makes us less safe. In one way by leading to an increased arms race as we have pulled out of the 1972 ABM treaty. I think that was a mistake. By pulling out of that treaty I think we've stimulated China to increase its production of intercontinental ballistic missiles and possibly the spin off there is that India and Pakistan may be increasing their weapons as well in order to have a defense against China.

The idea to dominate space seems to be at the heart of this, that's fairly, clearly spelled out in United Space Command documents and this seems to be kind of a component of that. And it would seem to me that the desire to dominate space is just a new era of colonialism.

In conclusion, I feel that this entire system is based on corporate welfare, that the legislative process that takes place in Washington, D.C. seems to be dominated by huge multinational corporations that want to build the system and so they have managed to lobby and provide the funding for the campaigns for the Congress people, Senators and Representatives who have approved for this program to take place, so that they get to become even more fabulously wealthy than they are now by building a system that, frankly, doesn't work.

Thank you.

MR. BONNER: Thank you. Have Christine

Reichman come up.

MS. REICHMAN: Hello, I'm Christine Reichman. Just here on my own. I'm an amateur church musician and a mother. I'd like to go on record opposing the construction of these new weapons. I prefer the No Action Alternative, bad as it is, given only three choices. I oppose the new weapons system being discussed because it is destabilizing ecologically with space debris radioactive material and other pollutants. Because it's destabilizing economically using resources that we should be using for helpful things for our civilization. Because it's destabilizing politically, because it encourages aggression by us and towards us. It's not just the physical environment that is endangered, though it certainly is, it is also our cultural environment. New weapons increase distrust among people, create new enemies, reinforce old prejudices against peaceful needs. We can refuse to be each other's enemies.

Thank you.

MR. BONNER: Thank you. Have Tom Macchia come up.

MR. MACCHIA: Thanks for the opportunity to make a few comments.

I guess my first question about this is I'm really kind of concerned and troubled that we're talking about an Environmental Impact Statement for a program that's already

begun -- that's already started to deploy. I thought that standard procedure was to make decisions about environmental impact, then decide whether we were going to employ [sic]. So that was one question.

I work in health care and used to work as a researcher, so all of you who are doing work on this have my sympathy. I understand that when you're given a job you try to do the best you can with it, and you try to get some sort of an answer. In a lot of cases to make your bosses happy. And given that we have an administration that 5,000 scientists have accused of elevating junk science, and totally ignoring real science, and given that the Union of Concerned Scientists have said that this whole idea is rather preposterous and will never work. I'm also a member of -- I work in health care, I'm a member of physicians for social responsibility and they done some very excellent critiques of both the environmental impacts of this and of the whole idea. And so rather than try and duplicate their science, which I am not qualified to do, I'll just say they speak very well for me as well as far as science goes.

If this were free, at best it would be foolish. Given the fact that it's costing us so many valuable dollars, and continues to grow exponentially in terms of its budget, it's a dangerous farce, and I certainly support the No Action option.

MR. BONNER: Thank you for your comments. Have Myrna Hammond come up.

(No response)

MR. BONNER: Is Myrna here? She had to leave? Okay.

Would anyone else like to come up and speak and provide input or feedback?

MR. SOLLENBERGER: I'll come up.

MR. BONNER: Okay.

MR. SOLLENBERGER: I wrote something that I was going to (indiscernible - away from microphone)

MR. BONNER: Could you give us your name?

MR. SOLLENBERGER: Bruce Sollenberger.

MR. BONNER: Bruce. What was the last name again?

MR. SOLLENBERGER: Sollenberger is the last.

MR. BONNER: Sollenberger, thank you.

MR. SOLLENBERGER: What I wrote is any activity can be subjected to one basic question; will it work and are there alternative activities that are better use of resources? It may be possible at the cost of 500 million to a billion dollars to develop a system that can detect some missile and intercept them. Given the complexity of the system, it will be vulnerable at a number of levels. These include jamming of the ionospheric layer used to detect missiles using multiple

warhead systems, several missiles launched at once.

Implementation will undoubtedly trigger an arms race and force neighbors, such as the former Soviet Union, to adopt countermeasures. It is my view that a far better use of resources is met by a policy of mutual disarmament combined with treaties involved with not attacking and mutual aid and respect. Ultimately the question must be asked, is a protection-based program the best we can do? Or is a program of reduction of antagonism between nations not more cost effective? A billion dollars can buy a lot of aid. North Korea, for example, is starving at present. Their reaction to such a system may be to sell their nuclear weapons to a terrorist source. I believe this is a former likely way that the U.S. may be threatened. This system does nothing to address such a treat.

My thesis is that escalation of an arms race benefits no one. Rather we must deescalate the world's weaponry. We cannot live with it any longer. Sooner or later an accident will set it off and bring it down upon us.

Thank you.

MR. BONNER: Thank you. Okay. Any other comments from those who haven't spoken or others from those who have?

(No audible responses)

MR. BONNER: Marty.

MR. DUKE: Well, I would like to again thank each and every one of you for taking your time and your effort to review the document and providing the comments for us tonight. We have your comments, we'll go back and look at each comment that you gave and consider it. And if we need to include more information in the Final PEIS, expand the areas that you're concerned about, then we'll do that.

Again, I appreciate you coming out, we take your comments seriously and thank you for your participation.

MR. BONNER: If you have any further questions, feel free to stay.

MR. DUKE: Yeah, we're going to be outside, if you have any more questions.

(Off record)

C E R T I F I C A T E

UNITED STATES OF AMERICA)

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STATE OF ALASKA)

I, Joseph P. Kolasinski, Notary Public in and for the state of Alaska, and reporter for Computer Matrix Court Reporters, LLC, do hereby certify:

THAT the foregoing MEETING FOR DRAFT PEIS was transcribed by under my direction and reduced to print to the best of our knowledge and ability;

THAT the meeting was recorded electronically by myself on October 21, 2004;

I further certify that I am not a relative, nor employee, nor attorney, nor of counsel of any of the parties to the foregoing matter, nor in any way interested in the outcome of the matter therein named.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal this 28th day of October 2004.

Joseph P. Kolasinski
Notary Public in and for Alaska
My Commission Expires: 3/12/2008