

EXECUTIVE SUMMARY

The United States Air Force proposes to deactivate and dismantle up to 50 Peacekeeper Intercontinental Ballistic Missile (ICBM) Launch Facilities (LF) and 5 Missile Alert Facilities (MAF) located within the deployment area north and east of Francis E. Warren Air Force Base (AFB), Wyoming. The need for deactivation and dismantlement of the Peacekeeper missile system is to comply with the Strategic Arms Reduction Treaty (START) II, as modified by the Helsinki Agreement of September 1997. The Treaty ratification process is ongoing; the need to implement the Proposed Action would depend upon final ratification of the Treaty. To meet START limitations on warheads and launchers, the Department of Defense (DoD) has been demolishing particular ICBM systems and plans to demolish the facilities within the F.E. Warren AFB Peacekeeper deployment area. This environmental impact statement (EIS), prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA, and Air Force Instruction 32-7061, evaluates the potential environmental impacts of the proposed deactivation and dismantlement of the Peacekeeper missile system.

The deactivation process is scheduled to occur in four phases. Phase 1 is the removal of the missiles. Phase 2 is the removal of salvageable items from the LFs and MAFs and placing the LFs and MAFs in caretaker status. Phases 1 and 2 would be performed primarily by Air Force personnel with contractor support as needed. Phase 3 is a contractor operation involving the closure of MAF sewage disposal facilities, removal and/or closure in place of USTs, and the deactivation/dismantlement of certain portions of the LFs and MAFs. Phase 4 involves the disposal of property.

The Peacekeeper missile system includes 50 LFs (with one missile per LF) and 5 MAFs (with one MAF per missile flight of 10 LFs). The 400th Missile Squadron (400 MS) includes 5 flights, each composed of 10 LFs and 1 MAF. Under the Proposed Action, deactivation would occur at an average rate of one every three weeks and dismantlement is planned to occur over a 27-month period, with activities occurring throughout the year, as weather permits.

A number of facilities on F.E. Warren AFB support the 90th Space Wing (90 SW) mission. While the final disposition of these training and maintenance facilities has not yet been determined by the Air Force, most Peacekeeper missile facilities could be reused by the Minuteman (MM) III missile program. Consequently, potential on-base environmental impacts were assessed in a general manner.

PROPOSED ACTION

The Proposed Action involves activities at LFs and MAFs within the deployment area as well as F.E. Warren AFB.

LF Activities

An LF consists of a launcher and an associated launch facility support building (LFSB). All facilities are enclosed within a security fence. The sites average about 1.6 acres in size.

Phase 1 of deactivation is the removal of the missiles, including the reentry system (RS), missile guidance control system (MGCS), and rocket engines. Approximately one week is required to remove the missile components and transport them to the missile support base (MSB), or transfer and assemble missile components from the MSB to the deployment area. The RS and MGCS are first removed from the LF, then successive missile stages are removed ending with Stage I. Under the Proposed Action, one missile would be removed approximately every three weeks.

Phase 2 of the deactivation process involves the removal of salvageable items from the LFs. Ordnance would be removed and transported to the munitions area on F.E. Warren AFB. Classified and save list items would be recovered from the LFs. Air Force personnel would drain fluids from the fueling, coolant, and hydraulic systems (with exceptions for certain environmental control systems), remove electrical filters and switches, and remove the power supply batteries. Air Force security teams would perform periodic security checks of each location during site deactivation. Following deactivation activities, the gates would be secured and the sites would be placed in caretaker status. During the Proposed Action, an LF would be deactivated at an average rate of one every three weeks.

Phase 3 (dismantlement) includes demolishing the headworks of each LF silo and destroying the LFSB. Prior to demolition, various hazardous materials (such as residual fluids and filters, capacitors, and ballasts with polychlorinated biphenyls (PCB)) would be removed from the facilities. With the exception of one 4,000-gallon underground storage tank (UST) at Q-8, each Peacekeeper LF has a shallow-buried, 14,500-gallon UST for storing diesel fuel to power a back-up generator. The shallow-buried USTs (less than five feet from the ground surface) would all be removed in accordance with state and Federal regulations and disposed of off-site at approved facilities. Each LFSB contains a 315-gallon above ground storage tank, and a 60-gallon above ground lube oil tank.

The dismantlement technique would include explosive demolition of the headworks to the depth of the launcher equipment room (LER) floor (approximately 21 feet). This depth complies with START protocols that require explosive demolition to at least six meters (19.5 feet) or mechanical demolition to at least eight meters (26.0 feet). For explosive demolition, everything above the floor of the LER, including the launcher closure door, would be removed for salvage or become rubble. Concentric holes would be drilled vertically in the concrete of the headworks for emplacement of explosives.

To limit environmental impacts, the Air Force has produced specifications for explosive demolition that prescribe maximum noise levels, ground attenuation, and debris criteria. The dismantlement contractor would be required to use the minimum amount of explosives necessary to implode the concrete and steel into the launch tube. The demolition of each LF would be designed to preclude the ejection of large pieces of debris outward from the launch tube. The Air Force estimates that the amount of rubble produced from destroying the upper 26 feet of the headworks would be sufficient to fill the launch tube to the elevation of the former floor of the LER.

The next sub-phase of the process would be an observation/verification period. A 90-day period would follow the demolition of the headworks. A contractor would place a steel-reinforced, 2-foot thick, 14-foot diameter, concrete cap over the launch tube, at a depth of

approximately 28 feet. A plastic liner would be placed above the cap to limit infiltration of precipitation into the tube. Verification would likely be conducted by satellite observation, but onsite visits by representatives of the Commonwealth of Independent States would also be possible. After the observation period, the remaining excavations would be filled with rubble and gravel, backfilled, compacted, and contoured to leave a slightly mounded gravel surface to meld with existing gravel contours.

The cathodic protection system control would be removed during dismantlement. The Hardened Intersite Cable System (HICS), which connects the LF to the MAF, has marker posts that define the path of the cable. The HICS would be abandoned in place, and the marker posts could be removed after the HICS easements have been relinquished. Power companies own the transformer pole and service connections to the LF; removal of the poles is their responsibility. Azimuth markers would be removed only at a landowner's request. The azimuth markers would be buried in place unless the landowner requested removal; the Air Force would then excavate and remove the markers for burial as launch tube fill. The security fence would remain in place throughout dismantlement.

Phase 4 is the disposal of property. The Air Force has no plans to retain any of the dismantled LF sites. After all START requirements have been met, the General Services Administration would dispose of the real property during Phase 4. The disposal process is covered in Public Law 100-180, Section 2325 (10 United States Code (USC) § 9781). First priority of consideration is to adjacent landowners, who would be offered the property at fair market value.

MAF Activities

A MAF is located within a fenced area averaging about 5.5 acres. All MAFs are enclosed by a security fence, except for a buried antenna consisting of two intersecting rings (each about four feet in diameter) buried four feet below surface, a dual-celled sewage lagoon, and a helicopter pad. Because Phase 1 only applies to LFs, the deactivation at the MAFs would start with Phase 2.

Phase 2 of the deactivation process involves the removal of salvageable items from the MAFs. All five Peacekeeper MAFs would remain operational until the last missile in the 400 MS is removed, then deactivation would proceed with a MAF being active until all LFs in its flight have been deactivated. Classified items would be recovered from the launch control center (LCC) at each MAF, and office and living quarter items would be recovered.

Air Force personnel would drain fluids from the fueling, coolant, and hydraulic systems (with exceptions for certain environmental control systems), remove electrical filters and switches, and remove the power supply batteries. The only asbestos believed to remain is in insulation on some pipes behind false ceilings of the launch control support building (LCSB) and in the garage furnace room on two walls. Reusable equipment would be placed in the supply system for use by F.E. Warren AFB and other bases. Air Force security teams would perform periodic security checks of each location during site deactivation. Following deactivation activities, the gates would be secured and the sites would be placed in caretaker status.

Phase 3 of the deactivation process is dismantlement of the MAFs. The Phase 3 activities would include removing any remaining hazardous materials from the facilities, and retrieving salvageable materials, such as scrap metal. Each MAF contains several storage tanks. There are five tanks used to contain diesel fuel: a 14,500 gallon UST (buried approximately 45 feet deep), two 1,000-gallon above ground storage tanks (AST), a 100-gallon AST, and a 2,500-gallon UST. One 2,000-gallon motor gasoline AST is located at each MAF and there is also a 65-gallon AST containing lube oil. The ASTs would be removed and the USTs would be closed (removed or filled with inert material) in accordance with state and federal regulations. The shallow-buried USTs (less than five feet from the ground surface) that contain fuel would all be removed and disposed of off-site at approved facilities. Each MAF has a shallow-buried tank used to store up to 1,000 gallons of water; these tanks would be abandoned in place for potential reuse. The cathodic protection system control would be removed during dismantlement. The sewage lagoons at the MAFs would be sampled and closed in accordance with federal and state regulations. There is one water well at each MAF (with the exception of S-1 which has two water wells); well closures would be in accordance with state requirements or left in place based on requests from landowners.

The MAF waste disposal system removes and disposes of all sewage from the LCSB, launch control equipment building (LCEB), and the LCC. Wastewater is discharged to the sewage lagoon by gravity flow drain lines and pumps. The sewage lagoon is located outside the security fence. Solids in the lagoon are oxidized by bacterial action into an inert sludge, and sewage water is lost through evaporation. The lagoon contents, both liquids and sludge, would be sampled prior to dismantlement. The liquids would be properly handled, which may include discharging sufficiently clean wastewater to surface waters, based on test results. Sludge disposal would also be dependent on test results. The dismantlement contractor would drain the lagoons, level and grade the lagoons and berms for proper drainage, and stabilize and seed the site with grasses; all of these actions would be done in accordance with Wyoming regulations.

The MAF buildings would not be demolished, but would be left as a part of the real property. The LCC interior and walls of the LCSB were painted with lead-based paint. USTs and sub-surface concrete and steel at MAFs likely have a coating that contains PCBs. These coatings would be handled in accordance with federal and state requirements.

Phase 4 is the property disposal of the LF and MAF sites. The government owns the parcels upon which the LFs and MAFs are located, and holds a variety of easements near the LF and MAF sites that support the Peacekeeper missile system. The Air Force has no plans to retain any of the dismantled sites. After all START requirements have been met, and upon determination by the Secretary of the Air Force, the General Services Administration would dispose of the real property during Phase 4, and the easements would be terminated. The disposal process is covered in Public Law 100-180, Section 2325 (10 *United States Code* (USC) § 9781). The first priority of consideration is to adjacent landowner(s), who would be offered the property at fair market value.

ALTERNATIVES

Two Implementation Alternatives (Mechanical Demolition of the Headworks and Removal of the HICS) and the No Action Alternative are considered in this EIS. Although the No Action Alternative is the environmentally preferable alternative regarding short-term environmental impacts, the Proposed Action is the preferred alternative for minimizing long-term impacts.

Under the Mechanical Demolition of the Headworks Implementation Alternative, the amount of excavation would be greater than the Proposed Action because of START II requirements. The deeper excavation could pose a storage problem given the limited space on the missile sites, and the stockpiled excavation materials would also be subject to wind and water erosion. This alternative would also be more costly and time-consuming, with possible delays in meeting the dismantlement schedule.

The second Implementation Alternative is Removal of the HICS. The removal of approximately 570 miles of cable would require digging a trench of several feet in width and up to seven feet in depth, and refilling the trench. The removal operations would disrupt grazing and other agricultural operations during the cable removal activities. Removal of the cable beneath water bodies and beneath roads would cause significant impacts. This alternative would also result in wind and water erosion of soil, with adverse impacts to nearby water bodies (such as wetlands), and could disturb wildlife, especially in sensitive habitat areas or during nesting or migration periods.

IMPACTS OF THE PROPOSED ACTION, IMPLEMENTATION ALTERNATIVE, AND NO ACTION ALTERNATIVE

The following text summarizes impacts that will likely occur from proceeding with deactivation and dismantlement, with mitigation measures provided subsequent to the impact summary. Impacts can be adverse (negative) or beneficial. The intensity of an adverse impact can be *significant* or not *significant*. Beneficial impacts are not characterized as to their level of significance. Impacts are typically *adverse*, but *beneficial* effects can result if the action measurably improves the current condition. *No impact* is specified in cases in which a resource would not be affected because certain resource elements (e.g., oil and gas wells, floodplains, or low-income or minority populations) are not present in the area of the Proposed Action or an Implementation Alternative. No impact could also occur under the No Action Alternative if there were no changes to the existing environment. Where applicable, impacts are also defined as permanent or long-lasting (long-term) or temporary and of short duration (short-term). For this project, short-term impacts are defined as those lasting approximately three years (the estimated timeframe for completing the project), while long-term impacts would last more than three years (beyond the construction and demolition activities). Some impacts may be significant in the short-term but not significant over a longer duration; the difference in impact intensity is noted where applicable.

Mission and Operations

Regardless of whether dismantlement of the Peacekeeper missile system occurs, the 90 SW would remain the host unit at F.E. Warren AFB. The 37th Helicopter Flight would remain the only flying mission on base. Under the Proposed Action, helicopter flights to the Peacekeeper deployment area would no longer occur. Helicopter operations to the MM III missile sites, training, local support for search and rescue operations, and emergency flights to major hospitals in Colorado would not be affected by the Proposed Action. The base would retain the same number of helicopters, although the total number of operations would be slightly reduced. Military flights at the Cheyenne Municipal Airport would also not be affected by the Proposed Action.

Under the No Action Alternative, the mission and operations of the 90 SW would remain the same. Helicopter operations to support the Peacekeeper deployment area would also remain the same. The Implementation Alternatives would result in similar impacts as under the Proposed Action.

Socioeconomics

Under the Proposed Action, there would be no significant impacts to population. Personnel reductions would not cause significant impacts to employment, while workforce requirements and construction expenditures for the deactivation would result in small short-term benefits to local employment and income. There would be a beneficial impact to landowners and county governments from the disposal of the MAF and LF sites. Impacts to housing, education, utilities, and rural electric cooperative members would not be significant. There would be no change to socioeconomic resources under the No Action Alternative.

Under the Implementation Alternatives, impacts to socioeconomic resources would be similar to those under the Proposed Action. Both Implementation Alternatives, mechanical demolition and cable removal, may result in slightly greater short-term beneficial impacts to employment than would the Proposed Action, but the cable removal could have adverse, but not significant, short-term impacts to the affected landowners due to the potential disruption of agricultural activities. There would be no long-term impacts.

Environmental Justice

Under the Proposed Action or Implementation Alternatives, no environmental justice impacts have been identified, as there are no minority or low-income populations located near the dismantlement activities. There would be no impact under the No Action Alternative.

Transportation

Under the Proposed Action, contractor personnel and equipment traveling to LFs and MAFs during the dismantlement process would not generate a significant increase in traffic on the road network in the deployment area over a 2½-year period. No change in the level of service (LOS) on area roads or the frequency of accidents are projected to occur during the short- or long-term. Construction traffic on deployment area roads during wet

conditions could cause short-term significant impacts to the integrity of gravel roads. No significant impacts to road conditions and traffic would result from ceasing Federal funding for extra maintenance and snowplowing.

The No Action Alternative would not result in a noticeable change from the present LOS. If mechanical demolition of the headworks occurred, more construction equipment would be needed (but the LOS is not predicted to change) and stress on area roads would be greater than under the Proposed Action. If the HICS were removed, additional vehicles would travel on area roads and could involve the temporary excavation of roads where the HICS passes under the road. Detours of traffic would be required for a longer period of time than under the Proposed Action resulting in a short-term significant impact on travel time and the LOS of area roads.

Land Use

Long-term land use impacts caused by the Proposed Action are not expected to be significant; a small increase in arable land would occur. There would be no significant adverse short-term impacts to land use in the immediate vicinity of the LFs and MAFs. Construction site activities would occur within the boundary of the sites, with the exception of certain activities performed at a landowner's request (e.g., removal of azimuth markers). After completion of dismantlement activities, the Air Force plans to dispose of the property. Reuse of the land is subject to Federal regulations.

Under the No Action Alternative, no short-term impacts would occur because current land use would not be affected. Long-term impacts would involve continuance of the current land uses, with the missile sites being retained by DoD. If mechanical demolition was implemented for dismantlement, adverse short-term land use impacts could occur from the construction activities. However, the long-term land use impacts would be the same as if explosive demolition occurred. Removal of the HICS would significantly affect land use in the short-term because of the short growing season and the disturbance of miles of ground to excavate the cable system. Long-term impacts of cable removal on land use would not be significant.

Hazardous Materials and Waste Management

Various hazardous materials and wastes are found at the LFs and MAFs. Although many hazardous materials would be removed during deactivation, small amounts of hazardous substances would remain during the dismantlement. Some wastes and hazardous materials (such as PCB coatings) would remain as part of the site, if they do not present a future hazard to human health or the environment, and if the action is approved by the appropriate state or Federal agency. The Air Force believes it is in the best interest of the environment to leave the PCB coatings and some other materials in place due to the disturbance required to remove the materials and transport them to a disposal facility. For disposal of the property, a disclosure statement would be issued noting the potential for coatings (such as PCBs) on buried USTs, piping, and concrete.

No significant short-term or long-term risks to the environment, or to human health and safety, have been identified from the proposed dismantlement of the Peacekeeper systems

and the management of hazardous materials or wastes. The safety of workers and the public would not be jeopardized, as dismantlement operations would be managed in accordance with standard Air Force and industry practices. No unique or unusual hazards would be associated with the dismantlement. Hazardous materials and wastes could be safely removed, and the potential for pre-existing contamination (for example, from past spills) would be minimal. Long-term hazardous material usage and hazardous waste generation would decrease at F.E. Warren AFB after dismantlement of the Peacekeeper missile system. Sampling would be conducted during deactivation and dismantlement to ensure that the sites do not have contamination above levels of concern.

There would be no significant adverse impacts from hazardous materials or hazardous waste under the No Action Alternative. The Implementation Alternatives would have varying impacts. The mechanical demolition option would increase the amount of heavy construction activities and the associated safety risks. Removal of the HICS would increase the potential for spills of hazardous materials and increase the potential for accidents, since additional time and work would be required for the removal.

Geological Resources

The Proposed Action would affect geological resources. Explosive demolition would cause ground acceleration, but damage to nearby structures would be unlikely given the specified limits on peak particle velocity. Based on their distance from the LFs, no oil and gas wells would be affected. Impacts on topography, mineral resources, and soils would not be significant. Soil used for fill material must be of acceptable quality, with engineering characteristics of minimal shrink and swell potential and adequate compaction capability, so that the compaction of the soil would minimize the potential for future subsidence. Excavation to clean deep-buried tanks would be required. To prevent subsidence, the excavated material and fill would need to be properly compacted when the excavations are refilled. These areas were previously disturbed when the tanks were installed, and impacts to soils would not be significant with mitigation. Geological hazards would not be affected by the deactivation activities. Geological resources would not be adversely affected under the No Action Alternative. The Implementation Alternative of mechanical demolition would cause slightly greater impacts to soils than under the Proposed Action, but these impacts would still not be significant. If the HICS were removed, significant soil erosion could occur.

Water Resources

Impacts to water resources could occur due to demolition of the LFs. Physical disturbances or material releases into surface water or groundwater can degrade the quality and quantity of water in the area. Under the Proposed Action, short- or long-term impacts to the recharge system due to the dismantlement would not be significant. Wells would not likely be significantly impacted from the explosive demolition event. Groundwater quality near deactivated LFs is projected to not be significantly affected by dismantlement. In groundwater adjacent to the LFs, localized nitrate levels are projected to increase temporarily, but there would be no significant impacts to aquifers. Impacts to surface water during dismantlement and demolition would not be significant with the use of best

management practices to limit sedimentation impacts, as required in stormwater management plans and erosion control specifications. The appreciable distance between the missile facilities (4 to 7 miles) minimizes the unlikely possibility that water resource impacts at two or more sites would result in a cumulative impact on a well, aquifer, or surface water body. No floodplain impacts would occur because no sites are in floodplains. Water demand in the deployment area would be less than historic levels given the lack of need for MAFs, loss of missile system personnel, and lack of maintenance activity water requirements.

The No Action Alternative would involve the continuance of existing impacts, such as site runoff and need for water associated with caretaker activities; no new water resource impacts would occur. The Implementation Alternative of mechanical demolition is unlikely to noticeably modify the local hydrology because of the common presence of unconsolidated upper Tertiary aquifers throughout the deployment area. Alluvium below the aquifer would not be adversely affected by mechanical demolition. The HICS Removal Implementation Alternative could cause significant impacts in areas where it lies beneath surface water and wetlands, and passes through floodplains.

Air Resources

The air quality at F.E. Warren AFB and the deployment area would not be appreciably impacted by activities associated with the Proposed Action. Some short-term adverse impacts to air quality would result from the dismantlement activities at the LFs and MAFs, and a slight long-term beneficial impact would result from the cessation of operations (e.g., from decreased travel to and from the missile field). Removal of refrigerants (R-12 and R-22)—chlorofluorocarbons—from coolant systems would decrease the possibility of leaks. The air quality would be impacted (but not significantly) along transportation routes and at intermittent periods at distinctly separate sites within the deployment area.

The No Action Alternative would have some long-term emissions associated with the continued operation and maintenance of sites, but levels would be similar to existing emissions. The Implementation Alternatives for mechanical demolition or HICS removal would cause more emissions than under planned dismantlement activities; these increased levels of emissions would not significantly affect air quality.

Noise

Certain activities that would be associated with the Proposed Action or Implementation Alternatives could influence the noise environment. Impacts on the environment would be related to the magnitude of noise caused primarily from the LF headworks demolition (blast noise), and from vehicle and equipment noise associated with dismantlement of the Peacekeeper system. Blast noise could cause a slight annoyance to a few nearby residents, rattle windows and walls slightly, and momentarily startle wildlife. The noise environment would not be significantly affected from the short-term increase in noise associated with the Proposed Action activities. There would be no long-term adverse noise impacts because the sound levels within the deployment area and F.E. Warren AFB would return to current levels. Noise-sensitive receptors, such as churches and hospitals, would not likely be adversely affected by the blasting and traffic noises.

Under the No Action Alternative, no impacts would occur because future noise levels near the missile facilities would be similar to current conditions. If mechanical demolition was implemented, noise impacts would not be significant, but would be more annoying to nearby residents than if explosive demolition was implemented. Removal of the HICS would increase the amount of construction equipment needed, thus increasing ambient noise levels above those projected if the HICS were left in place. The HICS extends for many miles and may pass by sensitive receptor locations; therefore, there is a potential for significant noise impacts depending on the proximity and level of the noise and the type of receptor.

Biological Resources

Impacts to biological resources at the LFs and MAFs would result primarily from the explosive demolition and ground restoration activities associated with the dismantlement action. Final disposition of Peacekeeper facilities on base is not yet known; however, no impacts to important or crucial habitats or species are expected since the Peacekeeper facilities are located on previously disturbed land within the built up portion of the base. Dismantlement activities would include ground-disturbing excavation, the explosive demolition of the LFs, stockpiling soil, and grading. The effects of dismantlement activities would adversely, but not significantly, impact both plants and animals during demolition, excavation, grading and filling. No long-term significant adverse impacts are projected to occur. The activities would not lead to degradation of important or crucial habitats or risk the viability of threatened or endangered plants or animals, or of candidate species. No wetlands would be filled as a result of dismantlement activities. Runoff flowing into wetlands would flow across well-vegetated areas, and thus would not result in significant adverse impacts. No significant impacts from noxious weeds would occur with continued management practices.

The No Action Alternative would result in the continuation of the existing, non-significant biological resource impacts from missile system and operation and maintenance activities. If mechanical demolition of the headworks occurred, slightly more area would be excavated than under the Proposed Action, but the impacts would not be significant. The Implementation Alternative of removing the HICS would potentially disturb terrestrial and aquatic wildlife to a significant degree.

Cultural Resources

Excavation, grading, and soil compaction for demolition necessary to support the proposed dismantlement action would not likely degrade archaeological resources because the dismantlement would occur on areas of previously disturbed ground on the Peacekeeper sites. There are no known Native American religious or cultural sites within the deployment area. It is unlikely any degradation or destruction of non-Peacekeeper system structures listed or eligible for listing on the National Register of Historic Places would occur within the deployment area. The Air Force will coordinate the Historic American Building Survey (HABS)/Historic American Engineering Record (HAER) documents for the Peacekeeper missile system with the Wyoming State Historic Preservation Office (SHPO); any additional mitigation would be determined through the National Historic

Preservation Act Sections 106 and 110 consultation process. A Programmatic Agreement is being prepared to provide stipulations for the Air Force, SHPO, and the Advisory Council to accomplish mitigation of adverse effects from dismantling the Peacekeeper missile system. With mitigation, impacts to Cold War resources would be adverse, but not significant.

The No Action Alternative would not affect cultural resources. The Implementation Alternatives would take place on previously disturbed land and would not likely impact unknown cultural resources; the same consultation process would occur as for the Proposed Action.

Mitigations

The following mitigations should be implemented to avoid or minimize adverse impacts to particular environmental resources:

- Coordinate the timing of the explosive demolition events with the Burlington Northern-Santa Fe and Union Pacific Railroads for the two LFs located within about ¼ mile of the rail lines.
- Limit damage to public roads by having all contractor-operated heavy equipment use the current approved Air Force missile access route system and observe weight limits to the maximum extent practicable.
- Notify the appropriate District One or Two Offices of the Wyoming Department of Transportation (WYDOT) and county road offices three weeks prior to demolition of an LF to allow for time to plan detours and notify the public.
- Perform sampling of soils at the LF and MAF sump outfall points, sewage lagoons (water samples at lagoons will also be taken), and potentially other locations, to identify hazardous constituents at the most probable point of contamination. Develop a sampling plan of action and work with the State of Wyoming to determine the type and extent of sampling for characterizing potential contamination sources prior to dismantlement activities.
- Sample wastewater and sludge at the MAF lagoons to determine constituent levels for performing proper closure of the wastewater treatment facilities by landfarming of biosolids.
- Survey subsurface structures within 2,000 feet of an LF prior to commencing dismantlement activities. The condition of a structure, if known, would be noted. A post-blast survey should be done to determine whether explosive demolition affected the structure.
- Use erosion control measures, such as silt fences and watering soil stockpiles in dry conditions, to prevent potentially significant erosion during excavation to clean-up deep-buried tanks.
- Protect public and environmental interests through preparing and implementing a blasting and safety plan. The plan will include provisions to limit the demolition activity to times when the meteorological conditions favor rapid dissipation of

pollutants, and restrict the demolition activity when winds blow in the direction of sensitive receptors.

- Prepare and implement a blasting and safety plan that would include provisions for modifying blasting techniques (e.g., elect to use millisecond delays) to satisfy stringent limits if houses, structures, or dams are located close to demolition sites; this would reduce the intensity of airblast and ground vibration. The plan would also address the repair of windows or other items inadvertently damaged by a demolition blast.
- Avoid blasting at LF S-9 during peak fall migration due to the high volume of birds and the potential for startling the birds into flight along hunting areas. Blasting should also be scheduled to avoid impacting breeding and nesting waterfowl near this site.
- Avoid blasting prior to 9 a.m. between March and June at all sites to avoid impacts to the sharp-tailed grouse during breeding and nesting seasons.
- Coordinate with the United States Fish and Wildlife Service regarding surveys of raptor nests and roosts, and threatened, endangered, or candidate species within the Peacekeeper missile system deployment area.
- Ensure that noxious weed control is maintained at completed sites awaiting disposition.
- Coordinate the HABS/HAER reports being prepared for the Peacekeeper missile system with the SHPO.
- Continue Sections 106 and 110 consultation with the SHPO and Advisory Council to determine the appropriate level of mitigation for this action.

CUMULATIVE IMPACTS

The cumulative impacts of the Proposed Action or an Implementation Alternative occurring concurrently with landowner activities, and from construction of the 4th Command and Control Squadron facility and the MM III Service Complex, were assessed within the EIS. Although impacts for several resources under the Proposed Action or an Implementation Alternative may not be individually significant, when the impacts are considered together, significant cumulative impacts could result. However, no significant cumulative impacts from the Proposed Action or an Implementation Alternative were identified.