

SUMMARY OF SCENARIO ENVIRONMENTAL IMPACTS

[TABS FINAL VERSION]

SCENARIO #TECH-0052RA6

TITLE: TECH-0052RA6 ARMY LAND C4ISR CENTER

GENERAL DESCRIPTION: Closes ARL Adelphi. Realigns ARL Adelphi, MD, ARI Fort Knox, KY, and Night Vision Lab, Fort Belvoir, by relocating and consolidating Information Systems, Sensors, Electronic Warfare, & Electronics, and Human Systems Research to Aberdeen Proving Ground (APG), MD. Realigns, Redstone Arsenal, and Night Vision Lab, Fort Belvoir, by relocating and consolidating Information Systems and Sensors, Electronic Warfare, and Electronics Development and Acquisition to APG, MD. Relocates. PM Acquisition, Logistics and Technology Enterprise Systems and Services (ALTESS) facility at 2511 Jefferson Davis Hwy, Arlington, VA to Ft. Belvoir, VA.

Proposal affects the following Army installations:

1. Aberdeen PG gains approximately 1,680 personnel and construction of approximately 1,234,000 SF MilCon.
2. Close Adelphi Laboratory
3. Picatinny Arsenal gains approximately 40 personnel and no MilCon.
4. Ft Meade gains approximately 90 personnel and no MilCon.
5. Realign Fort Knox, Fort Belvoir, Crystal City Lease and Redstone Arsenal.

ANALYST: COL CRABTREE

LAST UPDATE: 04/22/05

| Env Resource Area | #1 Gaining Installation Assessment Inst Name: Aberdeen Proving Ground | Analyst Comments (& data source(s) that drive assessment) |
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| Air Quality | Impact Expected. APG is currently over threshold limits for NOx and close to exceeding VOC threshold and in non-attainment for ozone 8-hour. Addition of operations and personnel may exceed major source thresholds for NOx and VOCs. Added operations will require New Source Review permitting, modification of Title V permit, and Air Conformity Analysis. | #213, 219 – In non-attainment for Ozone (EPA web site confirms non-attainment for Ozone 8-hour) #211 – Projected to exceed Major Source thresholds for Nox. #220 – Holds 2 Major Operating Permits (SIC code 9711) #222 – Emissions Credit Trading program available for NOx and VOCs #218 – No restrictions to operations reported due to air quality requirements |
| Cultural/Archeological/Tribal Resources | 78 Historic properties, 5 archeological resources identified to date and areas with high archeological potential, but no restrictions to mission reported. A very limited portion of the installation has been surveyed for cultural resources; therefore, the extent of the cultural resources on the installation and impacts to those resources is uncertain. Potential impacts may occur as result of increased times delays and negotiated restrictions, due to tribal government interest. Potential impacts may occur, since resources must be evaluated on a case-by-case basis, thereby causing increased delays and costs. | #233- A very limited portion of the installation has been surveyed for cultural resources (<5%) therefore the extent of cultural resources on the installation and impacts to these resources is uncertain. #235 – 78 Historic properties identified #229 – No known limitations to fee-simple ownership #230 – 5 archeological resources known on installation; no restrictions reported #231 – Native People sites identified #236 – No Programmatic Agreement with SHPO #201 – Operations are not restricted due to cultural/archaeological/tribal resources however, these resources were identified. #234 – 5 tribes have asserted interest in burial/sacred sites; in contact, but no formal consultation yet. #232 – Areas with high archeological potential identified. |

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| Dredging | No Impact. | #227 – If new unit/activity requires dredging, then dredging may not be able to occur in the short term due to known dredging impediments. #226 – If the new unit/activity requires dredging, then UXO and endangered species surveys may be required. |
| Land Use Constraints/Sensitive Resource Areas | No Impact. Four SRAs identified but cause no restrictions. | #30 – 2,863 buildable acres reported, approximately 258 acres required. (based on approximately 6 Large Admin Organizations) #201 - Constraints listed include (4) limited ability to accept new or different missions due to availability of unconstrained land, (5) altered, modified or re-routed flight operations and/or flight patterns and (6) altered, modified or re-routed ground operations. #256 – 4 Sensitive Resource Areas identified but cause no restrictions CERL Encroachment Study – Moderate Encroachment Projected |
| Marine Mammals/Marine Resources/ Marine Sanctuaries | No impact. | #248, #250, #252, #253 - No restrictions #249 – TES listed include Shortnosed Sturgeon (<i>Accipenser brevirostrum</i>) (restricting Poole's Island Shoal waters around island) and Bald Eagle (<i>Haliaeetus leucocephalus</i>), (restricting Poole's Island areas near nest sites, APG Shoreline & Areas near nest sites- affecting 17.2 acres of installation) |
| Noise | No impact. No noise expected to be generated by this proposal. | #239 – 235,848 acres of Noise Zone 2 extend outside installation, which is moderately encroached by development. #202 – Installation has published noise abatement procedures for main installation and training range but not for auxiliary airfield. |

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| <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Threatened& Endangered Species/Critical Habitat</p> | <p>Installation has Federally listed species (Shortnosed Sturgeon, Bald Eagle), that affect 17.2 acres of the installation and restricts night time flying operations (protection buffers around nests) on 7.9% of installation. Additional operations may further impact threatened/endangered species leading to additional restrictions on training or operations.</p> | <p>#249 – TES listed include Shortnosed Sturgeon (<i>Accipenser brevorostrum</i>) (restricting Poole's Island Shoal waters around island) and Bald Eagle (<i>Haliaeetus leucocephalus</i>), (restricting Poole's Island areas near nest sites, APG Shoreline & Areas near nest sites- affecting 17.2 acres of installation) #259 – TES listed include Shortnosed Sturgeon (<i>Accipenser brevorostrum</i>) and Bald Eagle (<i>Haliaeetus leucocephalus</i>). The Bald Eagle has delayed operations due to protection of buffers around nests during nesting season on approximately 7.9% of installation. #260 – No critical habitat identified #261 – Biological Opinion for Bald Eagle restricts range operations #262 – Development restrictions reported. Eagles: Existing Biological Opinions have limited impacts as they impose a monitoring responsibility primarily; some sites are protected. The ongoing Biological Assessment and subsequent Opinion will include an incidental take statement and some mitigation limits for some of the SOCOM training functions is expected. The extent of the limits is unclear, as the BA is still in development. Sturgeon: APG has a BA and BO from NOAA containing no limitations. APG is to coordinate with them if specific projects pose a risk. #263, #264 – No candidate species/habitat reported #201 - TES have restricted operations by limiting night flying times.</p> |
| <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Waste Management</p> | <p>No impact.</p> | <p>#269 – Interim RCRA Subpart X OB/OD Permit, Permit has been submitted #265- Installation is a permitted hazardous waste RCRA Treatment Storage and Disposal (TSD) facility. #272 – Not a permitted solid waste disposal facility</p> |

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| Water Resources | <p>Minimal impact expected.</p> <p>Water quality is impaired by pollutant loadings. Significant mitigation measures to limit releases may be required to reduce impacts to water quality and achieve US EPA water quality standards.</p> | <p>#276 – Installation not located over a sole-source aquifer</p> <p>#278 – McCarren Amendment does not apply</p> <p>#293 – Potable water restrictions in FY99 (33 days), FY01 (134 days) and FY02 (147 days). Source restrictions to prevent exceeding withdrawal permits, FY99 (9% of time restriction in place), FY01 (37%), FY02 (40%) from CHPPM Water Resources Report.</p> <p>#291 – Installation uses one Gov’t owned on-installation plant and one publically owned off-installation plant for potable water.</p> <p>IREM indicates remaining capacity for potable water to support 33,500 more personnel</p> <p>#279 –Installation discharges to impaired waterway; nutrient discharges from installation further impair waterway but is not a source of potable water.</p> <p>#297 – Two Sewage treatment plants on site; 1 gov’t owned, 1 privatized.</p> <p>#282 – Industrial Gov’t owned wastewater treatment system located on installation.</p> <p>#822, 824, 825, 826, ISRII – no restrictions reported</p> <p>Final Stat Packages- Scenario increases current population by approximately 3%</p> |
| Wetlands | <p>No impact.</p> | <p>#251- Survey completed 04/92.</p> <p>#257 – Wetlands affect 0.3% of range and installation each but do not restrict operations.</p> |

SUBJECT: SUMMARY OF SCENARIO ENVIRONMENTAL IMPACTS (CONTINUED);**SCENARIO # *TECH-0052RA6***

| Env Resource Area | #2 <i>Gaining</i> Installation Assessment Inst Name: Picatinny Arsenal | Analyst Comments (& data source(s) that drive assessment) |
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| Air Quality | Impact Expected. The receiving installation is in severe Non-Attainment for Ozone. Added operations will require New Source Review permitting and Air Conformity Analysis. | #213 – In severe Non Attainment for O3 (1 hr and 8 hr). #211 - No permit or major source thresholds projected to be exceeded (based on 1% increase in emissions at Picatinny) #212- No exceedences reported for top 5 HAPs #218/ISR - no AQM impact to mission. #220 – Title V Major Operating Permit |
| Cultural/Archeological/Tribal Resources | 54 historic properties listed. A very limited portion of the installation has been surveyed for cultural resources; therefore the extent of cultural resources on the installation and impacts to these resources is uncertain. Minimal impact expect since no new construction is required. | #230 –No archaeological resources identified #231 - Native people sites identified #234 – But no tribes assert interest #232 – Areas with high potential for archaeological #233 - 5% of installation surveyed #235 - 54 historic properties, 3 not in distrs #236 - No programmatic agreement ISR/230/201 - No impact to mission |
| Drudging | No impact | #227 – N/A |
| Land Use Constraints/Sensitive Resource Areas | No impact | #30 - Buildable Acres - 2700 available; none required. #254 / 256 - no constraints reported CERL Study - moderate encroachment projected. |
| Marine Mammals/Marine Resources | No Impact | #248-250, 252, 253 – N/A |
| Noise | No impact | #239 -No noise contours off-installation |
| Threatened & Endangered Species/Critical Habitat | Installation has two Federally listed species (bog turtle, Indiana bat) that restricts operations on 70% of installation. Restrictions include limitations on tree felling. Additional operations may further impact threatened / endangered species leading to additional restrictions on training or operations. | #249 - N/A #259 - 2 TES species include Bog Turtle and Indiana Bat. Indiana Bat affects 70% of installation; limitations on tree-felling due to Indiana Bat. #260-264 - None |
| Waste Management | No impact | #269 - Has RCRA Subpart X permit #265 - Permitted RCRA TSC Facility #272 – No SWDF on installation |

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| Water Resources | Installation / range is located over the recharge zone of a sole-source aquifer, which may result in future regulatory limitations on training/operations. | #276 – Installation located over recharge zone of sole-source aquifer. #278 – No McCarren Amendment restrictions #279 - No discharge to impaired waterway #293/ISR - no restrictions IREM - Water infrastructure can support an additional 1973 personnel. #291 –1 on-installation govt owned production plant #297 – 1 on-installation dom ww treatment plt #822 - No ind ww treatment plant |
| Wetlands | No impact | #251 - wetlands survey completed 9/94 #259 - no wetlands reported |

SUBJECT: SUMMARY OF SCENARIO ENVIRONMENTAL IMPACTS (CONTINUED);**SCENARIO # *TECH-0052RA6***

| Env Resource Area | #3 <i>Gaining</i> Installation Assessment Inst Name: <i>Fort Meade</i> | Analyst Comments (& data source(s) that drive assessment) |
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| Air Quality | Impact expected. Ft Meade is in Non-attainment for Ozone (Moderate) and PM 2.5. Added operations will require New Source Review permitting and Air Conformity Analysis. | #213 – Installation is in Non-attainment area for Ozone and PM2.5. #211 - No permit/Major Source thresholds projected to be exceeded (based on 1% increase in emissions at Ft Meade) #220 - Synthetic Minor operating permit #218/ISR2 - No mission impact indicated |
| Cultural/Archeological/Tribal Resources | One cultural/archeological site is reported which is restricted from disturbance by training, operations, or construction. 15 historical properties are listed. The installation has not been surveyed for cultural resources (0%); therefore, the extent of cultural resources on the installation and impacts to these resources are uncertain. Cultural / archeological resources currently restrict operations. Additional operations may impact these resources and result in further restrictions on training or operations. | #230 - 1 Arch site with training & construction restrictions #231,234 - No Native People's sites or interest asserted #232- High potential for arch resources #233 – 0% surveyed #235- 15 historic properties #236 - Has Programmatic Agreement ISR2 – No Adverse impact to mission |
| Dredg-ing | No impact. | #226-228 – No restrictions |
| Land Use Constraints/Sensitive Resource Areas | No impact. | #30 - Buildable Acres - 1,270 acres available, none req'd. #254, 256 - No SRAs #201/ ISR2 – No impacts/restrictions CERL Study – moderate encroachment projected |
| Marine Mammals/Resour ces/ Marine Sanctuaries | No impact. | #248,249,252,253 – No restrictions #250 - Fresh water section of Little Patuxent River fish spawning area is restricted from disturbance. |
| Noise | No impacts | #239 – No noise contours extend off installation. |
| Threatened& Endangered Species/Critical Habitat | No Threatened and Endangered Species are listed at Ft Meade, however, two Biological Opinions have been issued that impose restrictions on installation and range operations. Additional operations may further impact sensitive habitats and may lead to additional restrictions on training or operations.. | #259, 260 – No TES or critical habitat #261,262- 2 Biological Opinions (Conserve Forested Wooded Lots, Preserve Sensitive Habitat) impose restrictions on the installation & training ranges, and impede development. #263, 264 – No candidate species, or Critical Habitat ISR2 shows no impact. |

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| Waste Management | No impact | #269 – Installation does not have RCRA Subpart X permit |
| Water Resources | No impact | #276, 278, 279, 293 – No water restrictions #824, 825 Adequate water available IREM - infr can support 83K more people. #291 – Has 1 potable water production plant on-installation #297 – Installation uses 1 On Military Installation plant for sewage treatment #282 - No industrial ww treatment plant |
| Wetlands | No impact. | #251- Survey completed 06/1996 #257 - 3% of installation is wetland restricted |

SUBJECT: SUMMARY OF SCENARIO ENVIRONMENTAL IMPACTS (CONTINUED);**SCENARIO # *TECH-0052RA6***

| Env Resource Area | #1 <i>Losing</i> Installation Assessment Inst Name: <u>Adelphi Laboratory</u> | Analyst Comments (& data source(s) that drive assessment) |
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| Air Quality | Potential positive impact. Installation is in severe Non-Attainment for Ozone. | #213,219 –Severe Non-Attainment for Ozone (1-hour), proposed/projected for Non-Attainment for Ozone (8-hour). #211 - No permits reported. #220 – No Operating Permit. #218/ISR – No mission impact/No restr. |
| Cultural/Archeological/Tribal Resources | Two archeological sites identified, with restrictions on testing and/or operations. Surveys and consultation with SHPO will be required to ensure protection of cultural resources on installation. | #230,232,233- 95% surveyed with 2 archeological/sacred sites that restrict testing/operations. #231,234 - No native peoples sites, no interest asserted. #235 - No historic properties #201 – No mission operations constraints. #236 – No Programmatic Agreement. ISR2 - Arch sites adversely impact mission |
| Dredging | No impact | #227 –N/A. #226 – N/A |
| Land Use Constraints/Sensitive Resource Areas | Restoration and/or monitoring of contaminated media will likely be required after closure in order to prevent significant long-term impacts to the environment. | #30 – 5.2 buildable acres reported; Subsequent scenario specific data call response indicates required construction is supportable. #254– No restrictions/coordination required. #256 – No SRAs CERL Study – moderate encroachment projected DERA – \$1.2M spent through FY03, estimated CTC is zero –DERPARC website indicates site clean up complete, no future funds committed. |
| Marine Mammals/Mar | No impact | #248, #249, #250, #252, #253 - No restrictions |
| Noise | No Impact. | #239 - No noise contours off-installation. |
| Threatened& Endangered Species/Critical Habitat | Federally listed species includes Bald Eagle. Continued management and/or deed restrictions will be necessary to insure future protection of Federally listed species. | #259 - 1 Federally listed species (bald eagle), which restricts 5% of installation. No disturbance at nesting area during breeding season. #260-264 - No habitat/candidate species ISR2 shows no impact. |

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| Waste Management | Special waste management areas at the installation include a permitted hazardous waste TSD Facility. Restoration, monitoring, sweeps, access controls and/or deed restrictions may be required for these areas to prevent disturbance, health and safety risks and long-term release of toxins to environmental media. | #269 – No RCRA Subpart X Permit #265 – Has permitted hazardous waste TSD Facility #272 – No SWDF |
| Water Resources | Environmental media issues at the installation include 1,1,2,2-tetrachloroethane (PCA), Explosives and TCE in ground water, and TCE in surface water. Restoration and monitoring of contaminated sites will likely be required after closure to prevent significant long-term impacts to the environment. | #276,278,279 – No restrictions #293 – No water use restrictions have been reported #825/826 indicates adequate water available #291,297 - 1 off-installation public water production plant, and 1 off-installation public domestic ww treatment plant #282 – No industrial ww treatment plant #275 – Groundwater contamination includes 1,1,2,2-tetrachloroethane (PCA), Explosives and TCE. #281 – Surface water contamination includes TCE. |
| Wetlands | No impact. | #251 – Installation was surveyed in 8/1990 #257 – 19% of installation is restricted due to wetlands - no R&D in wetland areas (at Blossom Point Site). |

SUBJECT: SUMMARY OF SCENARIO ENVIRONMENTAL IMPACTS (CONTINUED);

SCENARIO # *TECH-0052RA6*

| Env Resource Area | #2 <i>Losing</i> Installation Assessment (installations not closing) Inst Name: FORT KNOX, FORT BELVOIR, CRYSTAL CITY LEASE, REDSTONE | Analyst Comments (& data source(s) that drive assessment) |
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| Air Quality | No impact. | Impact to realigning installations is considered neutral or positive to all 10 environmental areas. |
| Cultural/ Archeological Resources | No impact. | |
| Dredging | No impact. | |
| Land Use Constraints/Sensitive Resources | No impact. | |
| Marine Mammals/Marine Resources | No impact. | |
| Noise | No impact. | |
| Threatened & Endangered Species/Critical Habitat | No impact. | |
| Waste Management | No impact. | |
| Water Resources | No impact. | |
| Wetlands | No impact. | |

15

SUBJECT: SUMMARY OF SCENARIO ENVIRONMENTAL IMPACTS (CONTINUED);
 SCENARIO **TECH-0052RA6**

IMPACTS OF COSTS

| Env Resource Area | Gaining Installation Inst Name: Aberdeen PG, Picatinny, & Ft Meade | Losing Installation Inst Name: Adelphi Laboratory, FORT KNOX, FORT BELVOIR, CRYSTAL CITY LEASE AND REDSTONE |
|----------------------------|--|---|
| Environmental Restoration* | None | None |
| Waste Management | None | Adelphi Lab: -Restoration/monitoring of Hazardous Waste Sites - \$500K-\$10M |

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| <p>Environmental Compliance</p> | <p><u>Aberdeen:</u> -Air Conformity Analysis - \$25K-\$75K -New Source Review Analysis and -Permitting - \$100K-\$500K -Archeological/tribal resources inventory - \$25-\$100 per acre. - Historical building/structure inventory - \$500 - \$1,500 per structure -Evaluation to determine if arch/tribal site is significant - \$15K - \$40K per site - Evaluation to determine if historic buildings/structures are significant. -Conduct Tribal government to government consultation \$500 to \$2,000 per meeting -Develop Programmatic Agreement - \$10,000 -Endangered Species Management (includes monitoring) \$20K-\$2M -Install Best Management Practices to reduce non-point source runoff from training areas and ranges and protect impaired waterways -\$100K-\$3M -Realignment NEPA (EIS) \$1M.</p> <p><u>Picatinny:</u> - Air Conformity Analysis - \$25K - \$75K - New Source Review Analysis & Permitting - \$100K - \$500K -Endangered Species Management (includes monitoring) \$20K-\$2M -Re-alignment NEPA (EA - based on <1K personnel) - \$100K</p> <p><u>Ft Meade:</u> -Air Conformity Analysis -\$25K-\$75K -New Source Review -\$100K-\$500K -Re-alignment NEPA (EA - based on <1K personnel) - \$100K</p> | <p><u>Adelphi Lab:</u> Environmental Baseline Survey (EBS) \$300K-500K.</p> <p>Access controls / caretaker management - \$500K - 1M (annually).</p> <p>Asbestos / lead paint removal - \$200K - \$1M.</p> <p>Land Use controls management / enforcement in perpetuity - \$50K - \$100K per year.</p> |
| <p>COBRA Costs:</p> | <p><u>Aberdeen:</u> -Air Conformity Analysis - \$50K -New Source Review - \$100K -NEPA (EIS) \$1M</p> <p><u>Picatinny:</u> - Air Conformity Analysis - \$50K - New Source Review - \$100K - NEPA (EA) - \$100K.</p> <p><u>Ft Meade:</u> -Air Conformity Analysis \$50K -New Source Review \$100K -NEPA (EA) - \$100K</p> | <p><u>Adelphi Lab:</u> -EBS plus disposal EIS - \$1.3M.</p> |

Environmental Impact Summary

Aberdeen Proving Grounds

This recommendation moves additional personnel and causes new construction at Aberdeen Proving Ground, which is located in a region that is currently in Non-attainment for Ozone. These events will require an Air Conformity Analysis to evaluate the impact to Air Quality and a New Source Review and modification of Title V permit due to new construction and mission increase. Aberdeen has 78 Historic properties, and 5 archeological resources identified and reports areas with high archeological potential, but no restrictions to mission reported. A very limited portion of the installation has been surveyed for cultural resources; therefore, the extent of the cultural resources on the installation and impacts to those resources are uncertain. Potential impacts may occur as result of increased times delays and negotiated restrictions, due to tribal interest in archeological sites. APG has two federally listed species (Short-nosed Sturgeon, and Bald Eagle), that affect 17.2 acres of the installation and restricts night time flying operations (protection buffers around nests) on 7.9% of installation. Additional operations may further impact threatened/endangered species leading to additional restrictions on training or operations. Water quality is impaired by pollutant loadings. Significant mitigation measures to limit releases may be required to reduce impacts to water quality and achieve US EPA water quality standards. No adverse impact to any other environmental resource area is expected.

Adelphi Laboratories

This recommendation closes Adelphi Laboratories. Adelphi Laboratories has archeological sites so consultations with the State Historic Preservation Office to ensure that sites are continued to be protected along with access controls and caretaker management will be required. There is no projected IRP, DERA or MMRP-funded cleanup at Adelphi. Adelphi Laboratories has groundwater contaminated with 1,1,2,2-tetrachloroethane (PCA), explosives and TCE and surface water contaminated with TCE. Restoration and monitoring of contaminated sites will likely be required after closure to prevent significant long-term impacts to the environment. No adverse impact to any other environmental resource area is expected.

Picatunny Arsenal

This recommendation moves additional personnel to Picatunny Arsenal, which is located in a region that is currently in severe Non-attainment for Ozone. This move will require an Air Conformity Analysis to evaluate the impact to Air Quality and a New Source Review and permitting effort to accommodate the additional mission. No adverse impact to any other environmental resource area is expected.

Ft Meade

This recommendation moves additional personnel to Ft Meade, which is located in a region that is currently in moderate Non-attainment for Ozone. This move will require an Air Conformity Analysis to evaluate the impact to Air Quality and a New Source Review and permitting effort to accommodate the additional mission. No adverse impact to any other environmental resource area is expected.

Fort Belvoir, Fort Knox, Crystal City Lease and Redstone

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Since installations are only losing personnel, no adverse impacts to any environmental resource areas are expected.

This recommendation will require spending approximately \$2.95M for environmental compliance costs. These costs were included in the payback calculation. This recommendation does not otherwise impact the costs of environmental restoration, waste management, and environmental compliance activities.