ADEC File No.

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 673D AIR BASE WING
JOINT BASE ELMENDORF-RICHARDSON ALASKA

27 Jan 11

MEMORANDUM FOR ALASKA DEPT OF ENVIRONMENTAL CONSERVATION
ATTENTION: MR. LOUIS HOWARD

RECEIVED
JAN 28 2011
DEPT. OF ENVIRONMENTAL CONSERVATION

FROM: 673 CES/CEANR
6326 Arctic Warrior Drive
JBER AK 99506-3240

SUBJECT: 2010 Annual Land Use Control (LUC) Monitoring Letter for DP98 and Operable Units (OUs) 1, 2, 4, 5, and 6

References: (a) DP98 Record of Decision, Section 12.2.3.4, dated May 2004
(b) OU6 Explanation of Significant Differences, Section 4.3.1.3, dated Mar 2007
(c) Memorandum to the Site File for OUs 1, 2, 4, and 5, Section 4, dated Jan 2010

1. This letter serves as the annual monitoring report on the status of LUCs in place at DP98 and at OUs 1, 2, 4, 5 and 6. The specific LUCs in place at each site are provided below. An evaluation of the implementation of these requirements is provided in **bold** following each specific LUC.

DP98:

Groundwater - The use of contaminated groundwater throughout DP98 for any purpose including, but not limited to, drinking, irrigation, fire control, dust control or any other activity, is prohibited.

Soil - Excavating, digging, or drilling is restricted to reduce the possibility of migration or exposure to contaminants that exceed chemical-specific applicable or relevant and appropriate requirements (ARARs). If contaminated soil that exceeds chemical-specific ARARs is excavated, it cannot be transported to or disposed of at another location on base. Excavated soil will be transported to a disposal facility in the lower 48 states, which is acceptable for disposal of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) waste. No dewatering of excavations or trenches will be allowed unless contaminated water is treated prior to use or disposal. Any excavations or drilling greater than ten feet below ground surface will require engineering controls to prevent downward migration of contamination and to protect the groundwater aquifer.

The current land use will be maintained to reduce the possibility of exposure to contaminants.

Evaluation – ***A land use control inspection was performed and land use controls are in place and continue to be effective at DP98. A demonstration project to stimulate biogeochemical transformation and chemical reduction processes of chlorinated***

solvents began in 2010. Three (3) test cells with four (4) temporary monitoring points were constructed in May 2010. Each test cell was injected with an organic substrate and/or chemical amendment. Baseline groundwater samples were taken in May and the first round of groundwater samples were collected in September 2010. Two (2) additional rounds of groundwater samples will be collected in 2011 and evaluated to determine if this cleanup technology for chlorinated solvents is effective in a cold-weather environment.

OU 1:

Site LF59

Soil - Restrict land use and designate area for recreational use only.

Groundwater - Enforce base policy prohibiting installation of groundwater wells into the shallow aquifer. Secure existing water supply and groundwater monitoring wells.

Evaluation – ***A land use control inspection was performed and land use controls are in place and continue to be effective at LF59.***

OU 2:

Site ST41

Groundwater - Restrict access to groundwater and groundwater development at the site. Designate the affected area for outdoor/recreational use and unmanned industrial use, excluding the development of commercial aquaculture. Continue enforcement of base policy prohibiting installation of groundwater wells (other than for monitoring purposes) into the shallow aquifer underlying OU2. Prohibit unauthorized access to existing water supply and groundwater monitoring wells.

Evaluation – ***A land use control inspection was performed and land use controls are in place and continue to be effective at ST41.***

OU 4:

Site FT23

Groundwater - Restrict access to the contaminated groundwater throughout OU 4 until cleanup levels have been achieved. OU4 is designated "Airfield Use Area" for aircraft operations and maintenance, to include active and inactive runways, taxiways, and parking aprons for aircraft.

Soil - Institutional controls on land use (also called LUCs) will continue to restrict access to the contaminated shallow soils throughout OU 4 until cleanup levels have been achieved.

Evaluation – ***A land use control inspection was performed and land use controls are in place and continue to be effective at FT23. Due to construction of a parking lot, a***

large portion of the site was paved over in 2010. Well W-15 was abandoned because of damage sustained in 2009.

Site SD24

Groundwater - Restrict access to the contaminated groundwater throughout OU 4 until cleanup levels have been achieved. OU4 is designated "Airfield Use Area" for aircraft operations and maintenance, to include active and inactive runways, taxiways, and parking aprons for aircraft.

Soil - Institutional controls on land use (also called LUCs) will continue to restrict access to the contaminated shallow soils throughout OU 4 until cleanup levels have been achieved.

Evaluation – ***A land use control inspection was performed and land use controls are in place and continue to be effective at SD24.***

Site SD25

Groundwater - Restrict access to the contaminated groundwater throughout OU 4 until cleanup levels have been achieved. OU4 is designated "Airfield Use Area" for aircraft operations and maintenance, to include active and inactive runways, taxiways, and parking aprons for aircraft.

Soil - Institutional controls on land use (also called LUCs) will continue to restrict access to the contaminated shallow soils throughout OU 4 until cleanup levels have been achieved.

Evaluation – ***A land use control inspection was performed and land use controls are in place and continue to be effective at SD25.***

Site SD28

Groundwater - Restrict access to the contaminated groundwater throughout OU 4 until cleanup levels have been achieved. OU4 is designated "Airfield Use Area" for aircraft operations and maintenance, to include active and inactive runways, taxiways, and parking aprons for aircraft.

Soil - Institutional controls on land use (also called LUCs) will continue to restrict access to the contaminated shallow soils throughout OU 4 until cleanup levels have been achieved.

Evaluation – ***A land use control inspection was performed and land use controls are in place and continue to be effective at SD28.***

Site SD29

Groundwater - Restrict access to the contaminated groundwater throughout OU 4 until cleanup levels have been achieved. OU4 is designated "Airfield Use Area" for aircraft

operations and maintenance, to include active and inactive runways, taxiways, and parking aprons for aircraft.

Soil - Institutional controls on land use (also called LUCs) will continue to restrict access to the contaminated shallow soils throughout OU 4 until cleanup levels have been achieved.

Evaluation – ***A land use control inspection was performed and land use controls are in place and continue to be effective at SD29.***

OU 5:

Site ST37

Groundwater - Institutional controls (also called LUCs) that prohibit use of the upper aquifer will ensure that people will not be exposed to contaminated groundwater until cleanup goals are achieved.

Evaluation – ***A land use control inspection was performed and land use controls are in place and continue to be effective at ST37.***

OU 6:

Site WP14
Groundwater - Institutional controls on land use and water use, as specified in the Base General Plan, restricts access to the contaminated groundwater throughout WP14. Installation of wells in the contaminated plume for residential, industrial, and agricultural uses are prohibited by the Base General Plan.

Evaluation - A land use control inspection was performed and land use controls are in place and continue to be protective at WP14.

Site LF04
Groundwater (South) - Access to groundwater at LF04 South will be institutionally controlled. LF04 is currently designated as a "restricted use area" in the Base General Plan. This designation provides for recreational use of the parcel (e.g., cross country skiing) and for construction of unmanned facilities such as a parking lot, storage building, or taxiway, but prohibits the construction of any sort of manned facility such as an office building or a residence. Drilling into the shallow aquifer is also restricted by the Base General Plan to prohibit residential or agricultural use of contaminated groundwater.

Soil (North) - Access to soil at LF04 North will be institutionally controlled. LF04 is currently designated as a "restricted use area" in the Base General Plan. This designation provides for recreational use of the parcel (e.g., cross country skiing) and for construction of unmanned facilities such as a parking lot, storage building, or taxiway, but prohibits the construction of any sort of manned facility such as an office building or a residence.

Evaluation – ***A land use control inspection was performed and land use controls are in place and continue to be protective at LF04. The bluff area of LF04 has gated access and access to the base of the landfill is controlled by the Base and the Port of Anchorage.***

Site SD15

Perched aquifer groundwater - Institutional controls on land and water use, as specified in the Base General Plan, restrict access to the contaminated groundwater throughout SD15. Installation of wells in the contaminated plume for residential, industrial, or agricultural use are prohibited by the Base General Plan.

Evaluation – ***A land use control inspection was performed and land use controls are in place and continue to be protective at SD15.***

Site LF02

Groundwater - Access to soil at LF02 will be institutionally controlled. LF02 is currently designated as a "restricted use area" in the Base General Plan. This designation provides for recreational use of the parcel (e.g., cross country skiing) and for construction of unmanned facilities such as a parking lot, storage building, or taxiway, but prohibits the construction of any sort of manned facility such as an office building or a residence. Drilling into the shallow aquifer is also restricted by the Base General Plan to prohibit residential or agricultural use of contaminated groundwater.

Soil - Access to soil at LF02 will be institutionally controlled. LF02 is currently designated as a "restricted use area" in the Base General Plan. This designation provides for recreational use of the parcel (e.g., cross country skiing) and for construction of unmanned facilities such as a parking lot, storage building, or taxiway, but prohibits the construction of any sort of manned facility such as an office building or a residence. Drilling into the shallow aquifer is also restricted by the Base General Plan to prohibit residential or agricultural use of contaminated groundwater.

Evaluation – ***A land use control inspection was performed and land use controls are in place and continue to be protective at LF02. Sample results for potential contaminants of concern in groundwater and seeps indicate that this site has reached cleanup goals. In August 2010, groundwater and seep samples were collected and evaluated for diesel-range organics (DRO)/gasoline-range organics (GRO), as well as total aromatic hydrocarbons (TAH)/total aqueous hydrocarbons (TAqH) per Alaska Department of Environmental Conservation's (ADEC) request. Preliminary results for GRO/DRO samples collected at all four monitoring wells and one seep, as well as, TAH/TAqH for one seep at LF02 indicate no exceedances of cleanup levels. ADEC has agreed that with two clean rounds for these contaminants, we can proceed toward no further action for this site.***

Site LF03

Groundwater/Soil - Access to groundwater and soil at LF03 will be institutionally controlled. LF03 is currently designated as a "restricted use area" in the Base General Plan. This designation provides for recreational use of the parcel (cross country skiing, etc.) and for construction of unmanned facilities such as a parking lot, storage building, or taxiway, but prohibits the construction of any sort of manned facility such as an office

building or a residence. Drilling into the shallow aquifer is also restricted by the Base General Plan to prohibit residential or agricultural use of contaminated groundwater.

Soil - Access to groundwater and soil at LF03 will be institutionally controlled. LF03 is currently designated as a "restricted use area" in the Base General Plan. This designation provides for recreational use of the parcel (cross country skiing, etc.) and for construction of unmanned facilities such as a parking lot, storage building, or taxiway, but prohibits the construction of any sort of manned facility such as an office building or a residence. Drilling into the shallow aquifer is also restricted by the Base General Plan to prohibit residential or agricultural use of contaminated groundwater.

Evaluation – ***A land use control inspection was performed and land use controls are in place and continue to be protective at LF03. No activities were conducted at this site.***

2. The Air Force ensures compliance with LUCs by conducting periodic monitoring and completing site inspections. Separate controls are in place and enforced by the Air Force to prevent inappropriate soil and groundwater exposure at these sites. The Air Force currently requires all projects resulting in soil disturbance of greater than four inches below ground surface to follow 3rd Wing Instruction 32-1007, Safeguarding Utilities from Damage, dated 17 Aug 07 and 3rd Wing Instruction 32-7003, Land Use control Management, dated 16 Feb 07. Both instructions require the proponent to obtain an approved Base Civil Engineer Work Clearance Request (3 WG Form 3) prior to conducting work on the Base.

3. If you require additional information, or if you have any comments or questions, please contact me at (907) 552-2875.

GARY D. FINK, YF-02
Chief, Environmental Restoration