2.0 BACKGROUND

General background information for the South of Runway 18-36 Area is provided in this section. Additional information for the South of Runway 18-36 Area is provided in the focused feasibility study (FFS) report (URS 2005).

2.1 SITE HISTORY

Military presence on Adak began in 1942 with its occupation as a staging area to mount a counter-offensive to dislodge the Japanese from Attu and Kiska Islands. The Navy presence at Adak was officially recognized by Public Land Order 1949, dated August 19, 1959, which withdrew the northern portion of Adak Island, comprising approximately 76,800 acres, for use by the Navy for military purposes. The Navy also used the base to conduct a variety of Cold War-era military activities. Naval Air Facility Adak was on the list of Department of Defense installations recommended for closure in 1995, and that recommendation became final when Congress did not disapprove the list. The active Navy mission ceased, and the base operationally closed on March 31, 1997.

From April 1997 through September 2000, critical facilities such as the power plant, airfield, and environmental cleanup systems were operated by the Navy through a caretaker contractor. In June 1998, the Navy entered into a lease with the Adak Reuse Corporation (ARC), the designated local redevelopment authority that authorized ARC to use or sublease property in the developed core of the military reservation for commercial reuse purposes. In October 2000, ARC commenced operation of community facilities such as the airfield and utility systems in support of reuse activities under the authority of this lease.

In September 2000, the federal government entered into a land transfer agreement with TAC, a Native corporation, as documented in the Agreement Concerning the Conveyance of Property at the Adak Naval Complex, Adak, Alaska. This agreement set forth the terms and conditions for the conveyance of approximately 47,000 acres of the former Adak Naval Complex property to TAC. The actual conveyance or transfer of property occurred on March 17, 2004. The land transfer included all of the downtown area, housing units, and industrial facilities. Excluded from this transfer were any offshore islands, islets, rocks, reefs, and spires; those fixtures and equipment owned by the United States and associated with the airfield; those improvements owned by the United States and managed by the Federal Aviation Administration (FAA); and those improvements owned by the United States and managed by the Fish and Wildlife Service. TAC transferred the portion of the former Naval Air Facility known as Adak Airport and associated facilities and aviation easements, not including FAA navigation aids or weather
reporting equipment, to the State of Alaska. As a result of the land transfer agreement, TAC owns the South of Runway 18-36 Area.

The transferred land has institutional controls currently in place as specified in the Interim Conveyance document. The institutional controls that have been implemented at the former Adak Naval Complex through the final institutional control management plan (ICMP) (U.S. Navy 2004) include:

1. Land use restrictions, primarily limited to areas designated for commercial or industrial use
2. Notification to the Navy of intrusive soil excavation activities deeper than 2 feet
3. Groundwater restrictions that prohibit use of the downtown aquifer as a drinking water resource

These institutional controls are discussed in more detail in Section 2.7.

2.1.1 Site Regulatory History

Investigation and cleanup of petroleum-contaminated sites at the former Adak Naval Complex have been ongoing since 1986. Adak was initially proposed for placement on the National Priorities List (NPL) in 1992 and was officially listed in 1994. The Navy, as lead agency, entered into a three-party Federal Facilities Agreement (FFA) with the U.S. Environmental Protection Agency (EPA) and Alaska DEC as well as a two-party State-Adak Environmental Restoration Agreement (SAERA) with the Alaska DEC to facilitate investigation and cleanup activities.

In 1993, the Navy, EPA, and Alaska DEC signed the FFA, which incorporates the EPA’s cleanup process under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). The CERCLA exclusion of petroleum as a hazardous substance required that cleanup of petroleum-related chemicals would follow State of Alaska regulations. Therefore, the FFA stated that petroleum-contaminated sites, such as those containing underground storage tanks (USTs) and leaking underground fuel lines, would be evaluated under a separate two-party agreement between the Navy and the State of Alaska. This agreement, the SAERA, was signed in April 1994.

The former Adak Naval Complex was divided into two operable units (OUs), OU A and OU B, for investigation and cleanup activities. OU A includes CERCLA and petroleum sites, and OU B includes ordnance explosive sites. A total of 180 sites were evaluated within OU A. The
FFA listed 84 CERCLA sites, and the SAERA listed 128 petroleum sites. The number of CERCLA sites plus the number of petroleum sites is greater than 180, because some sites that were originally listed as CERCLA sites were evaluated under SAERA and some sites were evaluated under both CERCLA and SAERA. In May 1997, the Navy and Alaska DEC agreed to integrate the cleanup decision process for petroleum sites with the cleanup decision process being conducted for hazardous substance release sites under CERCLA. As a result, the Record of Decision (ROD) for OU A was prepared for both the petroleum-contaminated sites and the hazardous-substance-release sites. The ROD was signed by the Navy, the EPA, and the Alaska DEC in 2000.

The OU A ROD selected final or interim remedies for each of the 128 petroleum-contaminated sites identified on Adak Island. The interim remedy, free-product recovery, was selected for 14 sites that contained measurable quantities of free-phase petroleum product. In addition, the OU A ROD specified that these 14 sites would require future remedy selection pursuant to the two-party SAERA. To clarify regulatory authority, the OU A ROD was amended in 2003 to remove these petroleum sites and 48 others with further action from CERCLA authority. Therefore, final remedies for the 14 petroleum-contaminated sites will be selected in accordance with Alaska State regulation 18 AAC 75.325 through AAC 75.390 which provides the regulatory procedures and requirements for petroleum cleanup decisions.

This DD addresses one of the 14 free-product recovery sites. The 10 sites where the remaining petroleum-related chemicals pose no risk to human health or the environment above target health goals, provided that institutional controls remain in effect, were previously addressed in a separate DD (U.S. Navy and ADEC 2005b). This site is one of the three sites where petroleum-related chemicals pose a potential risk to human health or the environment above target health goals. The other two sites (the Naval Mobile Construction Battalion [NMCB] Building T-1416 Expanded Area and the Solid Waste Management Unit [SWMU] 62 New Housing Fuel Leak site) will be addressed in separate DDs. The NMCB Building T-1416 Expanded Area DD will be executed in 2006. The SWMU 62 New Housing Fuel Leak site DD will be issued later in 2006. The SWMU 17 Power Plant No. 3 site was originally included as one of the sites where petroleum-related chemicals pose a potential risk to human health or the environment above target health goals, because the initial draft FFS prepared in August 2004 (using information current through November 2002) concluded that contaminants in sediment in Yakutat Creek posed a potential unacceptable risk. Because risks were only slightly above target health goals, the data used to evaluate the ecological risk were more than 6 years old and samples were collected before the upgradient contaminant sources were remediated, the Navy performed additional sediment sampling in Yakutat Creek in June 2005. Risks were recalculated using the additional data. As a result, the revised risk assessment concluded that contaminants in Yakutat Creek are unlikely to pose a significant risk. The SWMU 17 Power Plant No. 3 site DD will be issued in a separate DD based on these conclusions later in 2006.
2.1.2 Site Release History

In September 1990, an abandoned 6-inch diameter jet petroleum (JP)-5 fuel line located near the southeast corner of runway 18-36 was uncovered during the installation of a new fuel line adjacent to Main Road (Figure 2-1). Residual product was observed in the excavated trench indicating that a fuel release had occurred at the site (EMCON 1996). The fuel line was left in place. Subsequent site investigation activities indicated the presence of petroleum hydrocarbons in subsurface soil and groundwater over a large area South of Runway 18-36 Area. Measurable quantities of free product have been periodically observed in and recovered from groundwater monitoring wells at the site.

All known or presumed releases of petroleum hydrocarbons at the South of Runway 18-36 Area have occurred in the subsurface. Petroleum hydrocarbons have not been reported associated with surface soils at the site. Potential sources of the petroleum hydrocarbons present at the site include various pipelines that crisscross the site, as identified on Figure 2-1. In addition to the 6-inch diameter JP-5 fuel line discussed above, several additional pipelines present at the site may be sources of potential releases. These include one 8-inch diameter motor vehicle gasoline (mogas) pipeline (the more northerly of the two 8-inch diameter mogas pipelines), one 4-inch diameter mogas pipeline, and one 10-inch diameter aviation gasoline (avgas) pipeline that were cleaned and closed in 2003; one 8-inch diameter mogas pipeline that was abandoned in the late 1950s, and a 12-inch diameter diesel fuel transfer pipeline that was also abandoned in the late 1950s.

2.2 PHYSICAL CHARACTERISTICS

Adak Island experiences a polar maritime climate characterized by persistently overcast skies, high winds, frequent and often violent storms, and a narrow range of temperature fluctuation throughout the year. The average total annual precipitation for Adak Island is about 60 inches, most of which falls as rain in the lower elevations. Average monthly precipitation varies from a low of about 3 inches during June and July to a high of 7 to 8 inches during November and December. Snowfall averages over 100 inches a year at sea level.

The South of Runway 18-36 Area consists of the lowland area surrounding the southern portion of Runway 18-36 (Figure 1-2). It extends from the East Canal of the airport ditch system on the east to South Sweeper Creek on the west and south to Sweeper Cove. To the east this site adjoins to another large petroleum release site; the NMCB Building T-1416 Expanded Area. The primary physical features on the site include the southern portion of Runway 18-36, Main Road, the northern end of Transit Road south to the Transit Road Bridge, and the southern portion of the West Canal and the Crossover Canal of the airport ditch system. The canals that constitute the airport ditch system are engineered structures used to divert surface water from the
vicinity of Runway 18-36. Because the site is within the low-fly zone established for the airfield, no buildings are located within the site boundaries.

Groundwater is found as a regional aquifer beneath the site. The water table is approximately 5 to 10 feet below ground surface (bgs). Groundwater flow in the lowland area occupied by the site is complex and controlled to a large extent by the water level in the East and West Canals. In general, groundwater flow is toward the nearest surface water body: East Canal, West Canal, South Sweeper Creek, or Sweeper Cove (Figure 2-2). Nearshore groundwater in the vicinity of Sweeper Cove and South Sweeper Creek is tidally influenced, while mechanical pumping of water from the West Canal into South Sweeper Creek influences groundwater elevations near the airport ditch system. Because of the multidirectional groundwater flow in the vicinity, the East Canal, the West Canal, South Sweeper Creek, and Sweeper Cove are all considered to be downgradient surface water bodies.

South Sweeper Creek is located at the western boundary of the site and receives surface water and groundwater from approximately 30 percent of the Sweeper Cove drainage basin. The mouth of South Sweeper Creek forms an estuary where it discharges into Sweeper Cove. The shoreline of Sweeper Cove is sandy near the discharge of South Sweeper Creek. The East Canal and the West Canal of the airport ditch system are steeply sloped, manmade channels lined with tundra grass. The Crossover Canal is totally contained in underground culverts that allow water to flow between the East and West Canals. These canals provide drainage and water level control surrounding Runway 18-36. Water in the East Canal flows through the Crossover Canal and into the West Canal, where it is transferred through turbine pumps into South Sweeper Creek. This renders the airport ditch system an isolated, intrastate, and non-navigable waterway. Therefore, west canal is not considered an ecological endpoint, as is South Sweeper Creek and Sweeper Cove. South Sweeper Creek and Sweeper Cove are considered navigable waters of the United States.

### 2.3 DESCRIPTION OF CONTAMINANTS AND MEDIA IMPACTED

Decisions documented in this DD are based upon information gathered from various environmental field investigations performed by the Navy at the site between 1989 and 2001, as indicated in Table 2-1. These investigations included a site investigation, release investigations, and a remedial investigation to evaluate subsurface conditions and investigate potential sources of contamination. Results of these investigations indicated that petroleum-related chemicals and selected volatile organic compounds (VOCs) were present in samples of subsurface soil, groundwater, sediment, and surface water collected from several locations at the South of Runway 18-36 Area. In addition, the concentrations of petroleum hydrocarbons in both soil and groundwater exceeded the applicable Alaska DEC cleanup levels. However, Alaska regulations
have not established numerical cleanup criteria for individual petroleum hydrocarbons in surface water and sediment.

2.4 CLEANUP ACTIVITIES PERFORMED TO DATE

Cleanup activities that have been implemented at the South of Runway 18-36 Area include:

- Soil capping
- Sediment removal
- Replacement of crossover canal with metal culverts and contaminated soil excavation
- Installation of a product interception device
- Pipeline cleaning and closures
- Free-product recovery
- Natural attenuation monitoring

A summary of the cleanup activities performed at the site is provided in Table 2-2. In addition, results of the free-product recovery activities performed at the site are provided in Table 2-3. Additional information on the cleanup activities performed at the site is provided in the FFS (URS 2005).

Soil Capping

In August 1998, petroleum aesthetic corrective action work was completed in the South of Runway 18-36 Area. Corrective action activities included capping 270 feet of stained soil within the West Canal south of the Crossover Canal, and removing a section of wooden pipeline (BEESE 1998). The south end of West Canal was lined with geotextile and backfilled with clean pit run (quarry material) and covered with topsoil (Figure 2-1).

Sediment Removal

Removal, treatment, and disposal of polychlorinated biphenyl (PCB)-contaminated sediment from South Sweeper Creek were completed from April to August 1999. Approximately 5,400 cy were removed and treated. Sampling was conducted during excavation activities to confirm
removal to the required cleanup level. Results of sampling are included in the resulting closure report (BEESC 1999).

**Replacement of Crossover Canal with Metal Culverts and Contaminated Soil Excavation**

Airport ditch culvert installation activities occurred from May to September 2001 to reduce the potential for contamination to seep into the airport ditch drainage system (BEESC 2001a). The activities included installing two metal culverts north of the west ditch portion of Crossover Canal from the existing culverts in the South of Runway 18-36 Area to the south end of the West Canal. Approximately 70 cubic yards (cy) of petroleum-contaminated soil on the south bank of the Crossover Canal were removed for treatment and disposal. The area around the newly installed culverts and the former Crossover Canal ditch section were backfilled with clean material (Figure 2-1).

**Installation of a Product Interception Device**

During August 2001, a product interception device was installed along the bank of South Sweeper Creek to prevent release of petroleum into the creek by eliminating an observed seep (BEESC 2001a). This product interception device was installed adjacent to and east from the Transit Road Bridge.

**Pipeline Cleaning and Closures**

During June 2003, the cleaning and closure of three pipelines that cross the South of Runway 18-36 Area was completed (GeoEngineers 2003). The closed 10-inch avgas, 8-inch mogas, and 4-inch mogas pipelines are shown on Figure 2-1.

**Free-Product Recovery**


**Natural Attenuation Monitoring**

To evaluate the potential for natural processes to attenuate petroleum-related chemicals at the South of Runway 18-36 Area, natural attenuation monitoring was conducted in the six monitoring wells that were sampled at the site during 2002 as part of the annual groundwater monitoring activities. Analyses were performed on the groundwater samples for natural
attenuation indicator parameters. These natural attenuation indicator parameters consist of dissolved oxygen (DO), nitrate/nitrite, ferrous iron, sulfate/sulfide, dissolved methane, alkalinity, chloride, and oxidation-reduction potential (ORP). Typically comparisons are made relative to upgradient locations versus source area and down-gradient locations. Because no wells are located at the site such that groundwater samples represent upgradient conditions, comparisons were made relative to downgradient wells where petroleum-related chemicals have not been reported in groundwater samples. Taken as a body of evidence, the natural attenuation parameters measured at the South of Runway 18-36 Area indicate both aerobic and anaerobic conditions were present at the site during the 2002 sampling event. Aerobic conditions predominate in the areas beyond the limits of the dissolved petroleum plumes, while anaerobic conditions predominate within the dissolved petroleum plumes. These conditions indicate that biologic degradation of petroleum hydrocarbons is occurring within groundwater beneath the South of Runway 18-36 Area.

In addition to the natural attenuation monitoring performed at the South of Runway 18-36 Area, natural attenuation monitoring was performed at 10 sites on Adak in May and June of 2003 (USGS 2005). The site closest to the South of Runway 18-36 Area that was monitored during this investigation was the Former Power Plant Building T-1451. The report concluded that the natural attenuation parameter data that have been collected to date demonstrate that biodegradation plays a significant role in natural attenuation in the downtown area of Adak Island.

2.5 LAND USE

The land that makes up South of Runway 18-36 Area has been extensively altered since the military first arrived on Adak Island during World War II. This area was part of a back-beach lagoon prior to the arrival of military forces. The lagoon was filled with sand and rock and was converted to a military airstrip and fuel receipt and distribution center to support the United States’ Aleutian campaign during World War II. The South of Runway 18-36 Area is crossed by six former underground fuel transfer pipelines that are part of this fuel distribution system (Figure 2-1). After the war, the area continued to be used for these purposes until the military drawdown on Adak resulted in a reduction of fuel usage and air traffic (URSG 1999a).

Future land use at South of Runway 18-36 Area is classified for either aviation or public facilities reuse (ARC 2000) (Figure 2-3). The portion of the site north and west of Main Road is designated for aviation reuse. The portion of the site between Main Road and Sweeper Cove is designated for public facilities reuse. This area includes roads and harbor facilities present in the vicinity of the South of Runway 18-36 Area.
2.6 GROUNDWATER USE

According to Alaska regulations (18 AAC 65.350), groundwater is considered to be a drinking water source unless it can be demonstrated that the groundwater is not currently being used as a drinking water source and groundwater is not a reasonably expected potential future source of drinking water. Groundwater has not historically been used as a drinking water source on Adak Island, nor is it currently being used as such. Future human use of groundwater on Adak Island as a drinking water source is not expected because of the following:

- Surface water from Lake Bonnie Rose is used as the sole drinking water source on Adak Island.
- The Interim Conveyance document issued by the United States to TAC imposes institutional controls that prohibit the future use of the downtown groundwater aquifer as a drinking water source.

Institutional controls, as described in the Institutional Controls Management Plan for Adak Island, are currently in place to prevent the use of the downtown aquifer as a future drinking water resource. These institutional controls include a prohibition of well drilling and excavation for the purpose of installing a private or public domestic use well and a requirement to notify the Navy prior to any excavation deeper than 2 feet. Although institutional controls are in place preventing the use of the downtown aquifer, groundwater is still considered a potential future source of drinking water according to the Alaska DEC if potable water could be obtained from a well installed at the site. However, because saltwater was shown to intrude into nearshore groundwater in the vicinity of the South of Runway 18-36 Area in the Saltwater Intrusion Investigation Report (URS 2001), groundwater is not considered a reasonably expected potential future drinking water source at the site. Therefore, groundwater cleanup levels identified for this sites are 10 times those presented in Table C of Alaska Regulation 18 AAC 75.345(b)(1).

2.7 INSTITUTIONAL CONTROLS

Institutional controls are measures to prevent or limit exposure to hazardous substances left in place at a site, or assure effectiveness of the chosen remedy until cleanup levels are achieved. Institutional controls are placed on property where contaminants remain at levels above regulatory requirements for cleanup, and where exposure pathways, if they exist, may cause harm to human health and the environment. For the South of Runway 18-36 Area addressed in this DD, the institutional controls specified in the Interim Conveyance document include land use restrictions, excavation restrictions, and groundwater restrictions. The land use restrictions and excavation restrictions are discussed in more detail below.
2.7.1 Land Use Restrictions

The Alaska Oil and Hazardous Substances Pollution Control regulations (18 AAC 75) require cleanup of hazardous substances that have been released into the environment to a degree that is determined to be protective of human health and the environment. The purpose of institutional controls is to ensure compliance with land use assumptions used to establish cleanup levels. Residential land use, including permanent or temporary living accommodations, childcare facilities, schools, playgrounds, and hospitals are prohibited at the South of Runway 18-36 Area by the Interim Conveyance document.

2.7.2 Excavation Restrictions

There are two types of soil excavation restrictions implemented at the former Adak Naval Complex through the Interim Land Conveyance document: (1) excavation notifications and (2) absolute excavation prohibitions. Excavation notification is required for proposed excavations below 2 feet at each of the institutional controls sites, including the South of Runway 18-36 Area. The notifications are evaluated by the Navy to determine whether a proposed project at a site is consistent with the land use assumptions. The notifications are an additional tool for the Navy to receive timely information to monitor land use restrictions. The primary purpose of the Excavation Notification is to apprise the Navy of changes to land use. Excavation notification also ensures that contaminated materials excavated during site development activities are properly managed.

At some sites, such as former landfills, or where the remedy in place is a protective cover, excavation by non-Navy personnel is absolutely prohibited. Absolute excavation prohibitions are not applicable to the South of Runway 18-36 Area. Excavation for the purpose of digging a domestic use well in the downtown area is also prohibited. Excavation prohibitions have been implemented through the Interim Conveyance document and the final ICMP (U.S. Navy 2004).
Figure 2-1
Potential Petroleum Sources at the South of Runway 18-36 Area
Table 2-1

Summary of Environmental Field Investigations, South of Runway 18-36 Area

<table>
<thead>
<tr>
<th>Date</th>
<th>Investigation Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>Phased site investigation to evaluate the extent of petroleum fuel released in the vicinity of Tank Farm A (URS 1990, 1991)</td>
</tr>
<tr>
<td>1994</td>
<td>Release investigation in the vicinity of Tank Farm A to supplement the 1989 investigation (EMCON 1994)</td>
</tr>
<tr>
<td>1994</td>
<td>Release investigation to evaluate the extent of fuels released in the vicinity of the Main Road Pipeline (URS 1994)</td>
</tr>
<tr>
<td>1996</td>
<td>Release investigation work plan to summarize site conditions (EMCON 1996)</td>
</tr>
<tr>
<td>1999</td>
<td>Preparation of a site summary report to present all site data collected to that point (URSG 1999a)</td>
</tr>
<tr>
<td>2001</td>
<td>Remedial investigation to delineate the lateral extent of dissolved-phase petroleum-related chemicals in groundwater at the site (URS 2005)</td>
</tr>
<tr>
<td>Date</td>
<td>Cleanup Activity</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1997–2004a</td>
<td>Free-product recovery (total of 215 gallons recovered)</td>
</tr>
<tr>
<td>1998</td>
<td>Petroleum aesthetic corrective action that included capping stained soil within West Canal south of Crossover Canal and removing a section of wooden pipeline</td>
</tr>
<tr>
<td>1999</td>
<td>Removal, treatment, and disposal of PCB-contaminated sediment from South Sweeper Creek</td>
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<td>2001</td>
<td>Installation of two metal culverts in the airport ditch system from existing culverts in Crossover Canal to the south end of West Canal including removal of 70 cubic yards of petroleum-contaminated soil</td>
</tr>
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<td>2001</td>
<td>Installation of product interception device along the bank of South Sweeper Creek near Transit Road Bridge</td>
</tr>
<tr>
<td>2002</td>
<td>Natural attenuation monitoring</td>
</tr>
<tr>
<td>2003</td>
<td>Cleaning and closure of three pipelines: 10-inch avgas, 8-inch mogas, and 4-inch mogas</td>
</tr>
</tbody>
</table>

*Intermittent operation*

Notes:
avgas - aviation gasoline
mogas - motor vehicle gasoline
PCB - polychlorinated biphenyls
# Table 2-3
Free-Product Recovery Data South of Runway 18-36 Area

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<th>Date</th>
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<th>Date</th>
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<td><strong>2004 TOTAL</strong></td>
<td><strong>6.2</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total quantity of product recovered at the site = 215 gallons
### Table 2-3 (Continued)
**Free-Product Recovery Data South of Runway 18-36 Area**

Notes:

--- = Recovery system not operating

1. Recovered using passive skimmers only
3. Bimonthly total estimated due to frozen fluid in product recovery tank
3.0 IDENTIFICATION OF CHEMICALS OF POTENTIAL CONCERN

Petroleum hydrocarbons, semivolatile organic compounds (SVOCs), VOCs, and lead have been detected in soil, groundwater, surface water, and sediment at the South of Runway 18-36 Area. The concentrations of contaminants in these media at this site were compared to Alaska DEC cleanup criteria and/or human health and ecological risk-based screening criteria to identify the chemicals of potential concern (COPCs). The COPCs in soil, groundwater, surface water, and sediment are presented below.

3.1 SOIL

A chemical was identified as a COPC if its concentration exceeded the Alaska Method Two cleanup levels established to prevent migration of contaminants from soil to groundwater in the over 40 inches of rainfall zone (18 AAC 75.341, Tables B1 and B2) or if it was identified as a COPC in the human health risk assessment. No COPCs were identified for soil in the ecological risk assessment, because concentrations of petroleum hydrocarbons were less than the ecological risk-based screening criteria. The following is a listing of the COPCs identified at the South of Runway 18-36 Area:

- 2-Methylnaphthalene
- Naphthalene
- Benzene
- Ethylbenzene
- Diesel-range organics (DRO)
- Gasoline-range organics (GRO)

Concentrations of benzene, DRO, ethylbenzene, and GRO in soil at the site exceeded the most stringent Alaska DEC Method Two soil criteria in one or more samples. Benzene and ethylbenzene were included as COPCs for the site, because their concentrations in soil exceeded the most stringent Alaska DEC Method Two soil criteria in one or more samples. However, they were not included as a COPC in the human health risk assessment because the magnitude of the exceedances was low, because of infrequent detection, or because of infrequent exceedance of the screening criteria. 2-Methylnaphthalene and naphthalene were included in the list above because they were identified as COPCs in the human health risk assessment even though their concentrations did not exceed the most stringent Alaska DEC Method Two soil criteria.
3.2  GROUNDWATER

A chemical was identified as a COPC if its concentration exceeded the Alaska DEC groundwater cleanup levels [18 AAC 75.345(b)(2)] or if it was identified as a COPC in the human health risk assessment. The following is a listing of the COPCs identified at the South of Runway 18-36 Area:

- 2-Methylnaphthalene
- Naphthalene
- Acetone
- Benzene
- Ethylbenzene
- DRO
- GRO
- Xylenes

All chemicals that exceeded the Alaska DEC groundwater cleanup levels (benzene, DRO, and GRO) in one or more groundwater samples were also included as COPCs in the human health risk assessment. 2-Methylnaphthalene, acetone, ethylbenzene, naphthalene, and xylenes were included in the list above, because they were identified as COPCs in the human health risk assessment even though their concentrations did not exceed the Alaska DEC groundwater cleanup levels.

3.3  SURFACE WATER AND SEDIMENT

A chemical was identified as a COPC in surface water if its concentration exceeded the risk-based screening concentration (RBSC) for ecological receptors or the Alaska DEC water quality standards (18 AAC Chapter 70). The human health risk assessment concluded that the exposure pathways to surface water at the South of Runway 18-36 Area were insignificant. Therefore, no chemicals were identified as COPCs based on the human health risk assessment. The following is a listing of the COPCs identified for surface water at the South of Runway 18-36 Area:

- Indeno(1,2,3-cd)pyrene
- DRO
- GRO
- Total aromatic hydrocarbons (TAH)
- Total aqueous hydrocarbons (TAqH)
TAH and TAqH exceeded the Alaska DEC water quality standards, and GRO and indeno(1,2,3-cd)pyrene were identified as COPCs for the site because they were identified as COPCs in the human health risk assessment.

A chemical was identified as a COPC in sediment if its concentration exceeded the RBSC for ecological receptors. The human health risk assessment concluded that the exposure pathways to sediment at the South of Runway 18-36 Area were insignificant. Therefore, no chemicals were identified as COPCs based on the human health risk assessment. The following is a listing of the COPCs identified for sediment at the South of Runway 18-36 Area:

- 2-Methylnaphthalene
- Fluorene
- Phenanthrene
- DRO
- GRO