

Executive Summary

The Site Inspection for the South Area of Operable Unit 9 (OU9) was conducted to evaluate whether chemical contamination is present at the facilities identified in the *South Area Preliminary Assessment* and to categorize each facility according to the potential threat to human health and the environment (risk). To evaluate the presence of contamination at the facilities, a field investigation was performed. The results of the field investigation are documented in this report. This report also includes the results of the investigation performed to evaluate the nature and extent of contamination associated with the reconstruction of the Industrial Wastewater Treatment Plant and the Industrial Wastewater Collection System (IWCS). The results of both investigations are used to make recommendations to direct future investigation and remediation efforts toward facilities that appear to represent the greatest risk. Facilities where no contamination was observed are recommended for no further action. Sites with significant contamination are recommended for further action as part of OU9 or other remediation programs. Facilities with limited contamination or where areas of the facility were inaccessible for investigation and an exposure pathway could not be identified, further investigations will be deferred until more information about the site can be collected and/or sampling of the facility is more readily accessible. These facilities will continue to be part of OU9.

The South Area of OU9 is located in the southwest portion of Hill Air Force Base and includes a majority of the industrial operations located at the Base. Aircraft maintenance facilities, an Air Force Fighter Squadron Base, administrative areas, a wastewater treatment plant, Base maintenance facilities, and residential areas are located in the South Area. The South Area consists of 118 Solid Waste Management Units (SWMUs) identified by Utah Department of Environmental Quality. The SWMUs are exclusive of other Operable Units or investigation/remediation programs. Operable Units 3, 7, and 8, as well as portions of the Underground Storage Tank Program, are located in the South Area.

The field investigation for the South Area was phased. The first phase of investigation consisted of site reconnaissance and data research. For the site reconnaissance, personnel visited each facility and attempted to identify potential areas of contamination as documented in the *South Area Preliminary Assessment*. In addition, existing environmental data was analyzed to identify areas of known contamination. A preliminary risk assessment was also performed to develop risk-based screening levels (RBSLs) for contaminants found in the South Area. The site reconnaissance, data research, and risk assessment is documented in the Work Plan for this investigation.

The second phase of investigation consisted of subsurface soil sampling using a hydraulic probe, hollowstem auger, and hand auger exploration equipment. The Cone Penetration Test (CPT) was also used to delineate site lithology. A total of 612 exploration points were

excavated. In addition, 142 soil samples have been obtained during the Industrial Wastewater Collection System and Industrial Wastewater Treatment Plant reconstruction. Approximately 1,448 total soil samples, and 60 groundwater samples were obtained during both investigations. Groundwater samples were also obtained to evaluate groundwater quality. Twelve monitoring wells were installed and sampled. Thirty-six groundwater screening samples were obtained with the hollowstem auger and CPT exploration equipment. The analytical results were compared to the pre-calculated RBSLs to categorize the facilities and areas. The following is a brief summary of the categorization of the facilities and areas investigated.

Category 1 Facilities

Facilities designated as Category 1 are facilities that appear to pose an imminent threat to human health. No facilities were designated as Category 1.

Category 2 Facilities

Facilities and areas designated as Category 2 were found to have contamination levels exceeding residential or industrial RBSLs. Facilities or areas that could not be fully investigated because of disruption of the facility mission were also placed in this category. Facilities in each subgroup are listed below.

Category 2A includes those facilities where contamination levels exceeded industrial RBSLs. Facilities in this category will be further investigated as part of OU9. The following facilities are categorized as 2A facilities:

- **Facility 454**
- **Pond 7**

Category 2B includes those facilities that require further characterization under the SI investigation. This is a work plan category, and facilities categorized as 2B in the Work Plan were investigated and placed in another category.

Category 2C includes facilities requiring further characterization under the IWTP/IWCS Upgrade project. This is a work plan category and most facilities categorized as 2C in the Work Plan were investigated and placed in another category.

Category 2D includes facilities where contamination concentrations were found to be below industrial RBSLs but above residential RBSLs or a complete investigation would be difficult and cause major disruption to the facility mission. In addition, if industrial RBSLs were exceeded at the facility in a single or multiple soil sample(s), the exceedance could not be verified by other soil samples, and an exposure pathway was not present, the facility was categorized as a 2D. Any further investigation will be deferred at these facilities until site use changes, more information about the site can be collected, and/or sampling of the facility is more readily accessible. The following facilities are categorized as 2D facilities: 1, 1A, 5, 25, 30, 37, 39, 40, 42, 43, 45, 46, 48, 49, 56, 100, 202, 205, 206,

214, 220, 214, 227/228, 233, 236, 238, 256, 257, 260, 265, 267, 268/269, 270, 279, 287/15090, 295, 505, 507, 509, 510, 515, 576, 589, 590, 592, 597, 800, 847, 893/896/897, and 911. In addition, the following IWCS Sites were categorized as 2D: IWCS Line (South of Facility 32), Oil/Water Separator 4 (Facility 55), Manhole 40 (Southeast of Facility 236), Lateral Connection (Facility 265), IWCS Line (North of Facility 265), Lateral Connection (South of Facility 268), Cyanide Collection Line (East of Facility 507), Lateral Connection (Facility 511), OWS (Facility 514), Lift Station 1 (Facility 924), and the Industrial Wastewater Treatment Plant.

Category 3 Facilities

Facilities and areas designated as Category 3 were found to have no contamination, or contamination levels were below residential and industrial RBSLs. In addition, facilities or areas that were or will be investigated or remediated under other environmental programs were placed into this category. Facilities in each subgroup are listed below.

Category 3A includes facilities that were investigated, and in some cases remediated, under other programs at the Base. Therefore, for the purposes of the SI, it is assumed that facilities categorized as 3A have been addressed, and that no further action is required under OU9 or other programs. The following facilities are categorized as 3A facilities: 20, 26, 32, 41, 52, 204, 221, 388, 460, 519, 534, 553, 555, 575/577, 598, 837, 859, 880, 881/882, 888, 915, and 5026.

Category 3B includes facilities where site investigations are being planned or performed under other programs at the Base. The type of investigation is described in Section 5.0. The following facilities are categorized as 3B facilities: 261, 280, 511, 514, 870, 910, and 924.

Category 3C includes facilities placed in the no further action category according to the data research and facility reconnaissance during the work plan portion of the investigation. This is a work plan category. The following facilities are categorized as 3C facilities: 180, 237, 508, 570, 574, 810, 830, 846, 848, 849, 890, 892, and 918.

Category 3D includes facilities where the results of data collected during the SI or IWTP/IWCS Upgrade Project indicate that a contaminant release has not occurred. No further action is recommended. The following facilities are categorized as 3D facilities: 9, 11, 12, 16, 21, 22, 58, 150, 218, 246, 250, 252, 258, 266, 272, 273, 274, 275, 276, 350, 371, 456, 518, 572, 812/814, 825, 827, 840, 860, 861, and 914. A majority of the IWCS sites were found to be uncontaminated and are categorized as 3D sites.