Per the Federal Facility Agreement for Iowa Army Ammunition Plant, Article X.B.1, the attached document is the final version of the submitted document.

IOWA ARMY AMMUNITION PLANT

DRAFT FINAL
(Revision 2)

WORK PLAN FOR SUPPLEMENTAL REMEDIAL INVESTIGATION OPERABLE UNIT 4 for IOWA ARMY AMMUNITION PLANT MIDDLETOWN, IA

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LIST OF ACRONYMS AND ABBREVIATIONS

AEC	Atomic Energy Commission
AET	Advanced Environmental Technology, Inc.
AO	American Ordinance, LLC
amsl	above mean sea level
ATSDR	Agency for Toxic Substances and Disease Registry
BERA	Baseline Ecological Risk Assessment
bgs	below ground surface
CAMU	Corrective Action Management Unit
CC	critical concentration
CCJM	C.C. Johnson & Malhotra, P.C.
CDL	Construction Debris Landfill
CEA	Cap Extension Area
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CO	Contracting Officer
COR	Contracting Officer's Representative
cm/sec	centimeter per second
CTA	Central Test Area
DMP	Data Management Plan
DPT	direct push technology
EBP	East Burn Pads
ECC	Environmental Chemical Corporation
EDA	Explosive Disposal Area
ERG	Environmental Research Group, Inc.
ERIS	Environmental Restoration Information System
EWI	Explosive Waste Incinerator
°F	degrees Fahrenheit
FAWP	Fly Ash Waste Pile
FFA	Federal Facility Agreement
FM	Field Manager
FSAP	Field Sampling and Analysis Plan
FTP	Fire Training Pit
FUSRAP	Formerly Utilized Sites Remedial Action Program
FWWP	Facility-Wide Work Plan
GIS	Geographic Information System
GPR	Ground Penetrating Radar
GPS	Global Positioning System
GWM	groundwater monitoring

HAL	Health Advisory Level
HASP	Health and Safety Plan
HMX	High Melt Explosive
HRR	Historical Records Review
HSO	Health and Safety Officer
IAAAP	Iowa Army Ammunition Plant
IDA	Inert Disposal Area
IDNR	Iowa Department of Natural Resources
IDW	investigation derived waste
IGS	Iowa Geological Survey
InDA	Incendiary Disposal Area
IRDMIS	Installation Restoration Data Management Information System
LAP	load, assemble, and pack
LDR	land disposal restriction
LOAEL	Lowest Observed Adverse Effects Level
MCL	Maximum Contaminant Level
µg/L	micrograms per liter
mg/Kg	milligrams per kilogram
MKM	MKM Engineers, Inc.
mS/m	milliSimens/meter
MWH	Montgomery Watson Harza
OU	Operable Unit
PA/SI	Preliminary Assessment/Site Investigation
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
PDS	Possible Demolition Site
PM	Project Manager
POC	point of contact
PRG	Preliminary Remediation Goal
PVC	poly vinyl chloride
QAPP	Quality Assurance Project Plan
QA	Quality Assurance
QC	Quality Control
RAA	Remedial Alternatives Assessment
RCRA	Resource Conservation and Recovery Act
RDX	Royal Demolition Explosive (cyclotrimethylenetrinitramine)
RG	Remediation Goal
RI	Remedial Investigation

ROD	Record of Decision
SM	Site Manager
SOP	standard operating procedure
SSO	Site Safety Officer
SVOC	semi-volatile organic compound
TCLP	Toxicity Characteristic Leaching Procedure
Tetra Tech	Tetra Tech, Inc.
TNT	Trinitrotoluene
URS	URS Corporation
USAEC	U. S. Army Environmental Center
USEPA	U. S. Environmental Protection Agency
USGS	U. S. Geological Survey
USTHAMA	U. S. Army Toxic and Hazardous Materials Agency
UXO	unexploded ordnance
VOC	volatile organic compound
Work Plan	Work Plan for Supplemental Remedial Investigation Operable Unit 4

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1.0 INTRODUCTION

1.1 PROJECT AUTHORITY

This Work Plan for Supplemental Remedial Investigation of Operable Unit 4 (Work Plan) has been prepared by Tetra Tech, Inc. (Tetra Tech) for the Iowa Army Ammunition Plant (IAAAP) and the U.S. Army Environmental Center (USAEC) to define the scope of activities for a Supplemental Remedial Investigation (RI) of the Operable Unit 4 (OU-4) sites at Middletown, Iowa. This work plan was prepared in accordance with the requirements of Contract W911S0-04-F-0026; the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); and the IAAAP Federal Facility Agreement (FFA).

1.2 PURPOSE AND SCOPE OF WORK

OU-4 was developed to address closure of the Corrective Action Management Unit (CAMU); institutional controls; previously unaddressed areas of soil, groundwater, sediment, and surface water contamination; and any other unacceptable risks that may be identified and not addressed in either OU-1 or OU-3.

OU-4 initially encompassed the following sites:

- IAAP-006G: Lines 5A & 5B Ammunition Assembly
- IAAP-012G: Explosive Disposal Area (EDA)—East Burn Pads (EBP)
- IAAP-013: Incendiary Disposal Area (InDA)
- IAAP-015: Old Fly Ash Waste Pile (FAWP)
- IAAP-018: Possible Demolition Site (PDS)
- IAAP-020: Inert Disposal Area (IDA)
- IAAP-025: Explosive Waste Incinerator (EWI)
- IAAP-028: Construction Debris Landfill (CDL)
- IAAP-039G: Fire Training Pit (FTP)
- IAAP-041: Line 3A Pond
- IAAP-047: Central Test Area (CTA)

Of the above sites, IAAP-006G, IAAP-012G, IAAP-039G, and the groundwater portion of IAAP-020 are not addressed within the OU-4 Work Plan because they are already part of OU-3 and were included in the *Draft Groundwater Monitoring (GWM) Program* (Tetra Tech, 2005a). Any future work conducted for groundwater at these sites will be conducted as part of OU-3. Work plans for groundwater at these sites are included in the *Revised Draft Brush Creek Watershed Evaluation and Supplemental Data Collection Work Plan* (Tetra Tech, 2005b) (IAAAP-006G) and the *Revised Draft Spring Creek, Long Creek, and Skunk River Watersheds Evaluation and Supplemental Data Collection Work Plan* (Tetra Tech, 2005c). It should be noted that the *Draft GWM Program*, the *Revised Draft Brush Creek Watershed Evaluation and*

Supplemental Data Collection Work Plan, and the *Revised Draft Spring Creek, Long Creek, and Skunk River Watersheds Evaluation and Supplemental Data Collection Work Plan* are currently being combined into a single work plan for OU-3.

IAAP-047, while addressed within the supplemental RI for OU-4, is also considered part of OU-1 due to the potential need for soil remediation, and is included in the *Draft Final Remedial Design/Remedial Action Work Plan for Soils Operational Unit 1* (Tetra Tech, 2005d).

The general scope of work for the OU-4 Supplemental RI will consist of filling identified data gaps from past investigations, determining if contamination exists at sites not previously investigated, and delineating contamination at sites where contaminants have been confirmed to be present. To accomplish the goals of the OU-4 Supplemental RI, the field work will be implemented in two parts. The field effort completed by MKM Engineers, Inc. (MKM) in August through September 2004, in accordance with their *Draft Final Soil Data Collection Work Plan* (MKM, 2004), is considered to be an initial part of the RI. The results from the MKM data collection effort are presented in their entirety in the *Draft Final Soil Data Collection Report* (MKM, 2005a). A brief summary of the data collection effort is provided within this Work Plan. Generally, the MKM data collection efforts focused on the collection of soil, sediment, and limited groundwater samples at the following six OU-4 sites, which required sampling to provide sufficient data to support future remedial decisions:

- IAAP-013: InDA,
- IAAP-015: FAWP,
- IAAP-018: PDS,
- IAAP-025: EWI,
- IAAP-028: CDL, and
- IAAP-041: Line 3A Pond.

A geophysical survey and soil sampling beyond the data collection activities proposed in the *Draft Final Soil Data Collection Work Plan* (MKM, 2004) were conducted by MKM at the CTA in October 2004. The results from this additional work are presented in the *Draft Final MEC Density Survey Report* (MKM, 2005b). A brief summary is provided within this Work Plan.

The results of the MKM data collection efforts were evaluated for the presence of contamination above comparison criteria and to determine if data gaps exist. These results were utilized to focus additional RI sampling, as necessary, at the above six sites.

Recent and historical analytical data were evaluated using the following comparison criteria:

- Surface soil data with the exception of metals (0 to 1 ft bgs) are compared to OU-1 remediation goals (RGs) established in the OU-1 Record of Decision (ROD) (USACE, 1997) (Table 1-1). Where no OU-1 RG is present or where analyte concentrations were lower than established RGs, the lower of U.S. Environmental Protection Agency (USEPA) Region 9 preliminary remediation goals (PRGs) for industrial soils or the critical concentrations (CCs)

for terrestrial receptors established in the *Draft Final Baseline Ecological Risk Assessment* (BERA) (Montgomery Watston Harza [MWH], 2004) was used as the comparison criteria.

- Surface soil metals data are compared to OU-1 remediation goals (RGs) established in the OU-1 ROD (Table 1-1). Where no OU-1 RG is present or where analyte concentrations were lower than established RGs, the range of background metals soil concentrations were used. Naturally occurring concentrations of metals in the surface soil are not considered to require remediation or further investigation. Finally if metals concentrations were below OU-1 RGs and background soil concentrations, the lower of USEPA Region 9 PRGs for industrial soils or the critical concentrations (CCs) for terrestrial receptors established in the *Draft Final Baseline Ecological Risk Assessment* (BERA) (Montgomery Watston Harza [MWH], 2004) was used.

- Subsurface soil data with the exception of metals are compared to OU-1 RGs established in the OU-1 ROD (Table 1-1). Where no OU-1 RG is present because the compound was not detected prior to the *Baseline Human Health and Ecological Risk Assessment* (JAYCOR, 1996), such as volatile organic compounds (VOCs), USEPA Region 9 PRGs are used. Where no OU-1 RG is present because the compound was determined to cause no adverse risk, the compound is not considered to require remediation or further investigation.

- Subsurface soil metals data are compared to OU-1 remediation goals (RGs) established in the OU-1 ROD (Table 1-1). Where no OU-1 RG is present or where analyte concentrations were lower than established RGs, the range of background metals soil concentrations were used. Naturally occurring concentrations of metals in the surface soil are not considered to require remediation or further investigation. Finally if metals concentrations were below OU-1 remediation goals and background soil concentrations, USEPA Region 9 PRGs for industrial soils were used as the comparison criteria.

- Sediment data are compared to the BERA CCs for aquatic receptors Naturally- occurring concentrations of metals in the soils and thus sediment are not considered to require remediation or further investigation.

- Surface water data are compared to the BERA CCs for aquatic receptors (Table 1-3).

- Groundwater data are compared to the USEPA Maximum Contaminant Levels (MCLs). Where no MCL exists or analyte concentrations were lower, data was compared to the Lifetime Health Advisory Levels (HALs). If analyte concentrations were still lower than MCLs or HALs, or where MCLs/HALs were not available, data was screened against USEPA Region 9 PRGs for tap water.

The RGs established in the OU-1 ROD are derived from the *Baseline Human Health and Ecological Risk Assessment* (JAYCOR, 1996) and are based on concentrations that are (1) protective of human health or (2) protective of groundwater (in the case of 2,4,6-trinitrotoluene [TNT] and royal demolition explosive [RDX], which have more conservative leaching RGs) (USAEC, 1997). The CCs established for surface soil, sediment, and

surface water in the BERA are based on the Lowest Observed Adverse Effects Level (LOAEL), which should not result in unacceptable levels of risk to ecological receptors (MWH, 2004). The range of background concentrations are from data collected in the upper two feet of soil (with a few deeper soil samples included), thus are applicable to ecological risk evaluation. Groundwater PRGs are derived from USEPA Maximum Contaminant Levels (MCLs) or Lifetime Health Advisory Levels (HALs). If MCLs or HALs were not available, USEPA Region 9 PRGs for tap water were used (Tetra Tech, 2005c). Compounds with no RG, USEPA Region 9 PRG, CC or groundwater PRG are considered to pose no unacceptable risks to human health and/or ecological receptors, with the exception of compounds that have not been previously analyzed at the facility (such as total phosphorus). Generally, the lowest applicable standard was used for comparison, with the exception of metals in soil, in which case the higher of the background or LOAEL derived CC was used (MWH, 2004).

Subsequent RI activities will generally consist of the collection of groundwater, surface water, soil, and sediment samples for chemical analysis where necessary; the installation and sampling of groundwater wells where necessary; an evaluation of the data; and preparation of a Supplemental RI Report. In addition, site features required for remedial action planning will be documented and/or surveyed. Field activities will be completed in accordance with procedures detailed in the *Draft Final Soil Data Collection Work Plan* (MKM, 2004) and in the approved *Final Facility-Wide Work Plan* (URS Corporation [URS], 2002b), except where noted in Section 5.

1.3 WORK PLAN ORGANIZATION

This Work Plan for Supplemental RI includes sections presenting the facility background and environmental setting (Section 2); a description of each site addressed within OU-4, including a brief summary of previous investigations and remedial actions as applicable (Section 3); the site-specific general work plans for each site addressed within OU-4 (Section 4); the Facility Wide Work Plan (FWWP) Addendum (Section 5) and References (Section 6). Appendix A includes historical photos of the Fly Ash Waste Pile. Appendix B contains a historic drawing of the Line 3A Pond. Appendix C contains the Standard Operating Procedures (SOPs) for data collection activities.

2.0 FACILITY BACKGROUND AND ENVIRONMENTAL SETTING

2.1 FACILITY DESCRIPTION

IAAAP is a government facility, owned by the United States Army and operated by a private contractor, American Ordnance, LLC (AO). The IAAAP is located in the southeastern part of Iowa, near the town of Middletown, Des Moines County, approximately 10 miles west of the Mississippi River (Figure 2-1). The IAAAP is a secured facility covering approximately 19,000 acres in a rural setting. Approximately 7,750 acres are currently leased for agricultural use, 7,500 acres are forested land, and the remaining area is used for administrative and industrial operations. The principal mission of IAAAP has been load, assemble, and pack (LAP) operations dealing with a variety of conventional ammunition and fusing systems.

IAAAP was initially developed in 1941 for the production of supplies for World War II and operated from September 1941 until August 1945. Production was resumed in 1949 and has continued to the present. Also, from 1946 to 1950, nitrogen fertilizer was produced at Line 8. From 1947 through mid-1975, the former Atomic Energy Commission (AEC) occupied facilities on the site, which then reverted to Army control in 1975 (Ecology and Environment, Inc., 1987 in JAYCOR, 1996).

2.2 ENVIRONMENTAL SETTING

2.2.1 Climate

Des Moines County has a typical midwestern climate of hot, humid summers and cold, wet winters (USATHAMA, 1980). According to the National Weather Service, between 1971 and 2000, the average annual temperature in this area was 52°F with typical variations of 15°F (January) to 85°F (July). The average annual precipitation in this area is 37.9 inches, with variation ranging from 23.6 inches in 1988 to 49.9 inches in 1993. During the winter, precipitation frequently occurs as snow, and during the rest of the year it is chiefly rain, often heavy. Approximately 25 percent of precipitation occurs as snow in the winter months, amounting to approximately 8.5 inches of precipitation. The highest rainfall amounts tend to occur between May and July.

Snow-melt during spring, combined with frozen or saturated soil conditions that reduce the infiltration, can result in high runoff and substantial erosion. In addition, severe thunderstorms in summer can also result in a high volume of precipitation over a short period of time and thus create high runoff volumes (JAYCOR, 1996).

The facility is located in a moderate tornado frequency area, as determined by the U.S. Weather Service. Twenty-three tornadoes were recorded in nearby Burlington, Iowa, over a 12-year period (JAYCOR, 1996). The prevailing wind is from the south.

2.2.2 Ecology

Des Moines County is a loess-covered glacial till plain. The soils formed under prairie and forest vegetation. The nearly level and gently sloping soils formed in loess. The native vegetation in these areas consists of grass. The soils in the steeper areas formed from glacial till. The native vegetation in these areas consists of trees. The nearly level and gently sloping soils on bottom land along the Mississippi and Skunk rivers formed in alluvium. The native vegetation found in this area consists of oak, hickory, ash, elm and maple trees. The main types of prairie grasses found in the bottomlands are big bluestem and little bluestem prairie grasses (JAYCOR, 1996).

The terrestrial habitats located adjacent to facility operations are vegetated where buildings and pavement do not occur, and are utilized by small- and medium sized mammals, such as rodents and raccoons. Avian species also use the areas to forage for food and to nest. Cropland dominates some of the facility, which was predominantly cropland prior to the construction of IAAAP in 1941, and much of the off-site area landscape, which is planted with corn, soybeans, winter wheat, and alfalfa and pasture grasses. Areas along U.S. Highway 61, and north of the Skunk River adjacent to cropland, are restored grassland with vegetation consistent with reseeded grassland areas. The Skunk River, several oxbow lakes, ponds, gravel pits and creeks scattered throughout the onsite and off-site areas are open water wetlands, including the Line 800 pink water lagoon and the Line 1 impoundment. An area north of the Skunk River is identified as a palustrine emergent wetland with vegetation consistent with a non-forested wetland. There are industrial areas along U.S. Highway 61 (along with farmstead and residential areas) throughout the off-site area having vegetation consistent with heavily disturbed areas. Lowland forest was identified in the north and south floodplains of the Skunk River, which is woodland vegetation consistent with riparian/lowland areas. North of the Skunk River floodplain is upland forest with woodland vegetation consistent with upland areas (MWH, 2004).

Wildlife found at the IAAAP site includes a large white-tail deer population, foxes, gray squirrels, raccoons, woodchucks, coyotes, eastern cottontail rabbits, red foxes, mice, moles, pocket gophers, beavers, muskrats, badgers, opossum, and mink. In an attempt to effectively manage the overpopulation of deer, limited hunting seasons have been allowed on the site. Trapping of fur-bearing mammals is also allowed during limited times of the year (JAYCOR, 1996).

Numerous bird species inhabit or migrate through the IAAAP site. Some of the most common species include the American robin, northern cardinal, blue jay, red-headed woodpecker, common crow, common grackle, mourning dove, red-winged blackbird, chipping sparrow, eastern meadowlark, American goldfinch, and turkey. Red-tailed hawks are the most common raptor species present, but bald eagles have been observed flying over the IAAAP or feeding on the fish they catch in Mathes Lake. Because of its close proximity to the Mississippi River flyway, a large variety of migrating bird species may also use the IAAAP environs. Water fowl commonly seen include mallards, blue-winged teals, goldeneyes, buffleheads, wood ducks, hood mergansers, green-winged teals, northern shovelers, and Canadian geese. Nest boxes have been set up on the site for wood ducks, which are common near the on-site ponds and lakes (JAYCOR, 1996).

Long, Brush, and Spring Creeks and the Skunk River are classified by the state of Iowa as Class B(w) waters, indicating there is warm water suitable for wildlife, fish, aquatic, and semi-aquatic life, and secondary water uses. Species surveys in the three creeks have indicated an assortment of minnows, darters, and some sucker species in the lower reaches. The upstream reaches are apparently too small to support fish species (U.S. Army Corps of Engineers 1989). Existing fishing facilities on Mathes Lake are limited and extensive development has been deliberately avoided to preserve the quality of the lake. Species found in Mathes Lake include large-mouth bass, channel catfish, black crappie, white crappie, walleye, flathead catfish, gizzard shad, bluegill, carp, black bullheads, and green sunfish (JAYCOR, 1996).

Stump Lake, the smaller lake located north of Mathes Lake, was reported to have aquatic life similar to that found in Mathes Lake. Bluegill, northern pike, and channel catfish have been stocked since a fishkill in 1982 apparently eliminated the bluegill and crappie populations. This fishkill occurred on the upper reaches of a tributary to Long Creek. Iowa Department of Natural Resources (IDNR) investigated the fishkill and determined the cause to be thermal inversion (JAYCOR, 1996).

The aquatic habitats evaluated in the BERA include the sections of Long Creek, Brush Creek, and Spring Creek that flow within IAAAP, along with any related tributaries and tributaries to the Skunk River. Because of IAAAP's large size, some of the headwaters of these streams and tributaries originate within the boundaries of IAAAP. These streams primarily flow through deciduous forests and deciduous wetland swamps, and are removed some distance from the soil areas of concern. These streams provide habitat for a wide variety of aquatic receptors, including fish, benthic invertebrates, and amphibians. Wildlife and avian species use the streams as a source of water and food. Noteworthy is the presence of the State-endangered orangethroat darter (MWH, 2004).

Additional information regarding the ecology of IAAAP is provided in the BERA (MWH, 2004).

According to the U.S. Department of the Interior's Fish and Wildlife Service, no known endangered species reside at IAAAP. However, two federally-listed endangered animals may be found as transient species in the vicinity of the site. These species are the bald eagle that winters along large rivers such as the Mississippi and Skunk, and the Indiana bat that has been sighted in adjacent Louisa and Van Buren counties. The IDNR has identified two state-listed threatened species that may be found at IAAAP. These species are the orangethroat darter and the yellow trout lily. The orangethroat darter is known to inhabit small headwater streams and was present in Brush and Spring creeks during a 1987 sampling event. Although no yellow trout lilies have been observed at IAAAP, they are generally found in low woodlands along streams or on low wooded slopes and bluffs (JAYCOR, 1996).

2.2.3 Soils

The soils in Des Moines County consist of seven soil associations (USDA Soils Survey of Des Moines County Iowa, 1983). Each association has a distinctive pattern of soils, relief, and drainage, making it a unique natural landscape. Typically, an association consists of one or more major soils and some minor soils. Four soil groups are present at IAAAP:

- Mahaska: windblown soil developed under prairie conditions. This soil is dark colored, medium textured, low to moderate permeability, and slopes range from 0 to 3 percent. It is found mainly in the northern and central parts of the site.

- Ladoga: a transition between Mahaska and Clinton Groups, having developed partly under timber vegetation and partly under prairie conditions. This soil is somewhat poorly drained to moderately well drained. Silty soils exist on uplands and slopes range from 1 to 9 percent. It is found mainly in the northwest and central areas of the IAAAP site.

- Clinton: windblown soil, developed under timber vegetation. This soil is light colored, medium textured, moderately to slowly permeable, and subject to sheet erosion, except on flatter areas which frequently exhibit poor drainage. The soil composition is primarily loam and silt in association and slopes range from 2 to 4 percent. It is found mainly in the southern and central parts of the site.

- Webash-Judson: bottomland soil on narrow drainageways. This soil is generally a black, silty clay loam washed in from upland areas, usually from prairie-formed soils. Subsoils are clay with permeability similar to the surface soils and slopes range from 1 to 9 percent. It is found mainly in the southwestern portion of the IAAAP site, along Skunk River and Long Creek.

2.2.4 Topography and Surface Water

Overall, topography at IAAAP is generally flat in the uplands and dissected by several major drainages, with overall topography sloping gently toward the south. Ground surface elevations range from approximately 222 meters in the uplands in the north to approximately 162 meters near the southern property boundary at Long Creek. The IAAAP property is drained by, from west to east, the Skunk River, Long Creek, Brush Creek, and Spring Creek (Figure 2-1).

The Skunk River watershed at the facility is approximately 2,395 acres in the far southwest, and slopes generally south-southwest toward the Skunk River. There are two large tributaries at the site that discharge into the Skunk River, Long Creek and Brush Creek. However, much of the flow in the Skunk River watershed is from small intermittent tributaries. The Skunk River flows generally east-southeast and discharges into the Mississippi River approximately 6 miles from the eastern facility boundary. This watershed is generally undeveloped and includes the former Line 3A Pond site.

The Long Creek watershed at the facility is approximately 7,975 acres and comprises the entire western half of the facility, excluding the far southwest portion. Topography in the Long Creek watershed slopes generally to the south and toward Long Creek and its tributaries. Long Creek flows generally east-southeast and is fed by three unnamed perennial tributaries from the north and many small intermittent tributaries. In the eastern portion of this watershed at the confluence of two of the perennial tributaries and Long Creek, Long Creek has been dammed to form George H. Mathes Lake. After discharging from Mathes Lake, Long Creek flows south and discharges into the Skunk River approximately 0.5 mile from the facility boundary. Development

in this watershed is scattered and is mostly near the tributaries rather than Long Creek itself. OU-4 sites in the Long Creek watershed include the CDL and the PDS.

The Brush Creek watershed at the facility is approximately 5,000 acres and comprises the east-central portion of the facility. Topography in the Brush Creek watershed slopes generally south and toward Brush Creek and its tributaries. Brush Creek, fed by intermittent tributaries, flows generally south and discharges into the Skunk River approximately three miles south of the facility boundary. This watershed is the most developed watershed at the facility, with active production lines along Brush Creek itself or one of its tributaries. OU-4 sites in the Brush Creek watershed include the CTA and the FAWP.

The Spring Creek watershed at the facility is approximately 4,000 acres and comprises the eastern portion of the facility. Topography at the Spring Creek watershed slopes generally south and toward Spring Creek and its tributaries. Spring Creek is fed by at least two perennial tributaries from the north and east and several smaller intermittent tributaries. Spring Creek flows generally south and discharges into the Mississippi River approximately 5 miles from the southern facility boundary. OU-4 sites in the Spring Creek watershed include the EWI and the InDA.

2.2.5 Geology and Hydrogeology

The IAAAP is located in the Dissected Till Plain section of the Central Lowland Province of the Southern Iowa Drift Plain Region. The IAAAP is underlain by a sequence of unconsolidated glacial deposits of Pleistocene age overlying sedimentary bedrock units.

Loess is at the surface in many areas at IAAAP. Typically, loess deposits consist of silt with some clay-size material of varying types and can form very steep walls in roadcuts or bluffs along major stream courses. Most loess' vertical permeability tends to be low but greater than its horizontal permeability. The Iowa Geological Survey (IGS) has determined the average permeability of the loess in southeastern Iowa to be 7.3×10^{-6} cm/sec primarily in the vertical direction. According to the IGS, the average thickness of loess deposits in this region ranges from 2 to 6 feet and generally increase in thickness from west to east. Well logs of existing monitoring wells within the uplands of the IAAAP indicate that the loess is present to depths of 26 feet (well JAW-78 in the Brush Creek watershed). The thickness of loess deposits within IAAAP vary across the site ranging from 0 to 26 feet with an average thickness of 6 to 8 feet in the Long and Spring Creek watersheds and 15 feet in the Brush Creek watershed (JAYCOR, 1996).

The glacial tills underlying the loess consist primarily of silty clay and clayey silt with thin sand seams and lenses and are assigned to the Kellersville Till Member (Illinoian Age) of the Glasford Formation of southeastern Iowa. Characteristically the Kellersville Till has a particle size distribution of 66% clay and 34% sand. The tills extend to depths in excess of 100 feet in portions of the north half of the IAAAP, but are thin or absent locally in deeper stream valleys in the south around Mathes Lake and in the northeast. In general it can be seen that the loess is thicker in the upper reaches, especially in the Brush Creek watershed, and thins to the middle reaches. The till remains relatively constant in thickness in the Long and Spring Creek watersheds (JAYCOR, 1996).

The bedrock underlying IAAAP consists of a sequence of limestones interbedded with varying thicknesses of shales and sandstones ranging in age from Cambrian to Mississippian. There are two basic formations of importance at the facility, which are the uppermost rock units within the area—the Keokuk Limestone and Burlington Limestone of the Osaga Series (Mississippian) (JAYCOR, 1996).

The Keokuk Limestone is basically a light gray cherty limestone formation which is approximately 70 feet thick in the IAAAP area. The upper portion of the formation (40 feet) becomes more dolomitic and shaly, grading into the Warsaw shale which lies conformably above it. The base of the unit is identified by the Montrose cherts, which is a 30-foot layer of alternating gray and blue cherty limestone (JAYCOR, 1996).

The Burlington limestone is estimated to be 70 feet thick within the facility. It is exposed at several locations within the stream valleys at IAAAP and is the major unit observed in the Raider Brother Quarry in Augusta, Iowa, located immediately southwest of the IAAAP. The Burlington limestone is a very pale orange to gray crystalline limestone which contains fossiliferous, chert beds imbedded with dolomite. There are also two major glauconitic layers within the formation which delineate it from the overlying Keokuk Limestone. The Burlington Limestone is a major escarpment formation along the Mississippi River near Burlington, Iowa, and is much more resistant to erosion than the overlying Keokuk Limestone (JAYCOR, 1996).

In Des Moines County, Iowa, there are four principal aquifers: the surficial soils aquifer and the bedrock aquifers of Mississippian, Devonian, and Cambro-Ordovician units. The shallow surficial soil aquifer at IAAAP occupies the upland till plain and is predominantly clay-rich glacial tills that exhibit low hydraulic conductivities and yield only small quantities of groundwater to wells. This report describes the surficial soils aquifer using the following terminology: shallow till (typically containing the water table surface), intermediate till, and basal till. Depth to the water table in the shallow till is generally less than 10 to 15 feet. Shallow groundwater flow typically mimics surface topography (JAYCOR, 1996).

Information on hydrogeologic conditions in the bedrock aquifers underlying the deeper till is sparse. Facility-wide groundwater levels suggest that overall flow direction in the bedrock is to the south and east toward the Skunk and Mississippi Rivers, when not intercepted by incised surface drainages (JAYCOR, 1996).

Water in the Devonian and Cambro-Ordovician aquifers is reported to be highly mineralized and objectionably hard and contain high amounts of total dissolved solids. Water temperatures are reported to be higher [averaging 72 degrees Fahrenheit (°F)] than other rock aquifer sources (ranging from 55 to 60°F) (JAYCOR, 1996).

3.0 SITE-SPECIFIC BACKGROUNDS

Each site below is presented with an operational, investigative, and remedial background, and an evaluation of contamination. Contaminants are compared to the matrix-specific criteria specified in Section 1.2.

3.1 INCENDIARY DISPOSAL AREA (IAAP-013)

3.1.1 Site Background

Site Features and Operational History

IAAP-013 is located east of Yard D and Spring Creek and north of K Road (lower Augusta Road). Although details are not known, the site was rumored to have been used for incendiary material burial during the mid-1940s. The exact size, location, and materials buried at this site could not be determined because there was no documented waste disposal in this area. Magnesium fuzes may have been buried at this location during the mid-1940s (JAYCOR, 1996). The InDA was believed to be small (approximately 40 by 60 feet) and surrounded by a barbed wire fence (US Army, 2004).

During a 2000 site walkover, a cratered area was observed west of the suspected InDA area, along with a fence with "Danger" signs. The craters were approximately 4 feet wide and 2 feet deep and were spread over approximately 10 acres (US Army, 2004).

During the Shaw historical records review (HRR), the InDA was not well known by most of the interviewees contacted. It was indicated that any items that were not burned on the burning pads were detonated, and that this area was not used often or after World War II, giving it a short period of use. Shaw obtained a drawing of contaminated areas dated October 1945 that included the InDA (Shaw, 2005). According to the drawing, the InDA (88 by 197 by 85 by 106 feet) is located approximately 400 feet west-northwest of K Road and 160 feet west-southwest of Building P.97 (no longer present), which was located approximately 250 feet west-northwest of K Road. In the drawing, a fence bounds the northwestern edge of the InDA. The drawing is provided in the Shaw HRR, and the area of the InDA from the drawing is provided in Figure 3-1.

An evaluation of the 1941 aerial photo shows a building in the InDA area and its driveway that match the locations provided in the drawing. In the 1941 photo, the area between K Road and the intermittent tributary is cleared, with few trees. Trees are present along the intermittent tributary, and a stand of trees is present approximately 250 feet northwest of the building. Fenced areas appear to be present north and south of the building. By the 1963 and 1969 aerial photos, traces of the fenced areas are still visible, with the northern fenced area still partially cleared, but the building location is overgrown. By 1978, no traces of fence are apparent, and the northern area is beginning to be overgrown, particularly at the southeastern end. The 1998 aerial photo is much the same as 1978, with the southeastern portion of the northern area almost completely overgrown. Aerial photos are provided in the Shaw HRR, but the 1941 aerial photo is included as part of Figure 3-1.

Topography and Surface Water

The terrain at the site slopes to the west toward a south flowing tributary of Spring Creek. Ground surface elevations range from 200 meters (656 feet) amsl at the western portion of the site near the road to 178 meters (584 feet) amsl at the tributary of Spring Creek.

Surface drainage at the site is generally sheet flow to the tributary of Spring Creek (Figure 3-2).

Geology and Hydrogeology

The unconsolidated deposits are described as a layer of silt with sand (loess) overlying glacial till. Groundwater is anticipated to flow to the west and south toward Spring Creek.

3.1.2 Investigations and Remedial Activities

Soil

During the SI, two composite surface soil samples were collected from three rectangular pits suspected by JAYCOR to be burial pits (13SD0101) and from three crater-like depressions (13SD0201), all in the northern fenced area visible in the historical aerial photos (Figure 3-2), and analyzed for metals and explosives (JAYCOR, 1996). Soil analytical data with applicable comparison criteria are provided in Table 3-1. No explosives were detected, and metals concentrations were below comparison criteria.

During the 2004 MKM sampling effort, six multi-point incremental (composite) soil samples and seven grab soil samples were collected from 0 to 1 foot below ground surface (bgs), and three soil boring samples were collected from 1 to 4 feet bgs at the location of three of the grab sample locations (Figure 3-2). Samples were analyzed for metals, explosives, and total phosphorus. The three soil borings were located in an area that coincides with the southeastern portion of the northern fenced area visible in the historical aerial photos. MKM presumed the area to contain disposal pits. Additional grab samples were located in a small area of pock marks on the western portion of the site. According to observations by MKM, the greatest impact to the site was observed on the western portion of the site in a pock marked area and the slope facing the Spring Creek tributary (MKM, 2005a).

In the incremental soil samples, no explosives were detected. Beryllium and mercury exceeded comparison criteria in an incremental soil sample from grid 003 in the western portion of the site. Total phosphorus was detected ranging from 8.8 milligrams per kilogram (mg/Kg) to 43 mg/Kg. In the grab surface soil samples, no explosives were detected, and one sample from the southwestern portion of the pock marked area (IDA-SS-005) exhibited a lead concentration above comparison criteria. Total phosphorus was detected ranging from 2.3 mg/Kg to 72 mg/Kg (Table 3-1).

In the three soil borings co-located with three of the grab surface soil sample locations (IDA-SS-001 through IDS-SS-003) on the eastern portion of the site (Figure 3-2), no explosives were

detected, metals were below comparison criteria, and total phosphorus was detected ranging from 1.3 mg/Kg to 3.9 mg/Kg (Table 3-1) .

There is no soil RG established in the OU-1 ROD for total phosphorus (USAEC, 1997), which has not been previously reported at IAAAP, nor are there CC or screening values from the BERA (MWH, 2004) or a USEPA Region 9 soil PRG.

Because MKM performed a total phosphorus analysis on samples collected during the supplemental RI, it is therefore impossible to determine which forms of phosphorus are present. According to the USEPA, the total phosphorus test method measures all forms of phosphorus in the sample (orthophosphate, condensed phosphate, and organic phosphate), and would capture both naturally occurring and any man-made sources (USEPA, 2003). Available information on the toxicity of total phosphorus could not be found; however, excess phosphorus in agricultural runoff is known to cause eutrophication in surface waters. Differences in testing methods (environmental vs. agronomical) make comparing agricultural soil concentrations to environmental soil concentrations difficult. In a report by the U.S. Geological Survey (USGS), non-agricultural soils (collected from cemeteries) in the Cheney River Reservoir watershed (Kansas) contained total phosphorus concentrations ranging from 74 to 539 mg/kg with a median concentration of 245 mg/kg, while sediment near agricultural areas contained a mean total phosphorus concentration of 500 mg/Kg (USGS, 2002). Clinton soils (which are present in this part of the facility) display a high subsoil phosphorus level (greater than 22.5 ppm) (USDA, 1995). Total phosphorus results in surface and subsurface soils at the InDA range from below detection limits (0.05 mg/Kg) to 72 mg/kg, with an average of 46.5 mg/Kg. Phosphorus is an essential nutrient in the environment for photosynthesis, metabolism, nerve functions and is, therefore, an important element for the growth and development of plants and animals. It can occur naturally in mineral form or from decomposing plant and animal material, or in man-made forms such as fertilizer (USEPA, 2003).

Sediment and Surface Water

During the RI in 1992, three sediment/surface water sample sets were collected in the vicinity of the InDA and analyzed for metals, explosives, semi-volatile organic compounds (SVOCs), VOCs, and pesticides/polychlorinated biphenyls (PCBs). One sample set was collected approximately 2800 feet upstream of the site from the intermittent tributary adjacent to the site (RBWSD/SW26); two were collected in Spring Creek, one where the tributary adjacent to the site discharges (RBWSD/SW27) and one downstream (RBWSD/SW28) (JAYCOR, 1996) (Figure 3-2). Sediment and surface water analytical data with applicable comparison criteria are provided in Tables 3-2 and 3-3, respectively. No compounds in sediment exceeded comparison criteria. Surface water concentrations that exceed comparison criteria are likely from suspended sediments in the intermittent tributary, which would only have water during rain events (report does not specify if samples were filtered).

During the BERA in May and September 2000, two surface water samples were collected in the vicinity of the site. One location was near the northeast corner of the site (SCT01-H), and one location was in Spring Creek approximately 1,000 feet upstream of the confluence with the

tributary that discharges from the site (SC3-H) (Figure 3-2). In May 2000, samples at both locations were analyzed for metals and explosives, and at SCT01-H pesticides/PCBs, SVOCs, and herbicides were also analyzed. In September 2000, samples at both locations were analyzed for metals and explosives only. Both co-located sediment samples collected in September 2000 were analyzed for metals and explosives; and at SCT01-H pesticides/PCBs, SVOCs, and herbicides were also analyzed (MWH, 2004). Sediment and surface water analytical data with applicable comparison criteria are provided in Tables 3-2 and 3-3, respectively. In surface water sample SCT01-H and SC3-H (May and September 2000), dissolved aluminum, barium, and copper exceeded comparison criteria, these concentrations do not reflect site sources but naturally occurring sources since the upgradient spring creek sample exhibited similar concentrations. In sediment, no compounds exceeded comparison criteria in either sample location. In surface water in SC3-H (May and September 2000), dissolved aluminum, barium, and copper exceeded comparison criteria; however, these concentrations are likely a reflection of naturally occurring sources.

Surface water sample location SC4, located in Spring Creek approximately 450 feet downstream of the confluence with the tributary that discharges from the site has been sampled as part of the GWM Program since 2001 (Figure 3-2). Samples are collected and analyzed for explosives, metals, and VOCs. Only barium has exceeded the comparison criteria (Table 3-3); however, barium exceeds the comparison criteria in SC3-H, collected in Spring Creek approximately 1,000 feet upstream of the confluence of Spring Creek and the tributary adjacent to the site, indicating that the barium is not a result of activities at the site.

During the 2004 MKM sampling effort, three sediment samples (upstream, midstream and downstream) were collected from the intermittent tributary adjacent to the site (Figure 3-2) and analyzed for metals, explosives, and total phosphorus. No explosives were detected, and metals did not exceed comparison criteria (Table 3-2). Total phosphorus was detected in all three sediment samples at concentrations ranging from 2.7 mg/Kg to 140 mg/Kg (MKM, 2005a).

Groundwater

There are two groundwater wells in the vicinity of the InDA (JAZ-629 and G-26) (Figure 3-2). JAZ-629, located adjacent to Spring Creek (presumably downgradient of the site) was installed in 1992 to monitor temperature and water levels adjacent to Spring Creek. G-26, located at the facility boundary east of the site (presumably upgradient), has been sampled several times for explosives and metals. No explosives have been detected; arsenic has been detected above PRGs several times, including the most recent sampling event in Spring 2002. Lead was detected once above the PRG in 1997. Because G-26 is upgradient and far from the site, the concentrations observed are unlikely to be associated with activities at the InDA. Detections at G-26 and the applicable comparison criteria are provided in Table 3-4.

3.1.3 Summary and Conclusions

No explosives were detected in any soil sample. Metals concentrations in surface soil samples (0 to 1 foot bgs) are below RGs across the site, with the exception of the western portion (grid 003),

which contained concentrations of beryllium and mercury above the RG in the multi-point incremental sample and lead above the RG in one grab sample. No compounds in the shallow subsurface soil samples (1 to 4 feet bgs) in the eastern portion of the site exceeded RGs. The distribution of total phosphorus detected across the site indicates it may be from man-made sources, since the three highest concentrations are all located in grid 003. However, the concentrations are within naturally occurring ranges. There is no comparison criteria for total phosphorus.

Upon review of historical documents from the HRR, it appears that MKM grab sample locations at the suspected disposal pits were not located in the vicinity of the InDA as identified in the 1945 drawing, which is located at MKM's southern boundary of the site. Based on the drawing and aerial photo (Figure 3-1), it appears that the MKM sample locations are in the former fenced area northeast of Building P.97. It is not known what these pits are from, but no contamination above RGs is present. Thus, no grab samples appear to have been collected from the contaminated area identified in 1945. Vertical and horizontal delineation of the beryllium and mercury concentrations in the western portion of the site, and of the lead concentration detected at IDA-SS-005 is needed in addition to characterizing historical areas of contamination identified after MKM's field efforts.

Groundwater contamination at this site has not been investigated. Groundwater sampling in the presumed downgradient area (west) may be needed to assess any groundwater impacts from the site.

No explosives have been detected in sediment or surface water near the site. Only barium was present in 2003 surface water samples above the comparison criteria, but this compound was also present above the comparison criteria in an upstream sample, indicating naturally occurring or upstream sources. Due to the distribution, the total phosphorus detected in sediment, like the soil samples, may be from man-made sources. There is no comparison criteria for total phosphorus. No additional investigation of sediment is considered necessary. However, surface water samples may be needed to confirm any impact from runoff across surface soils at the site.

Two types of phosphorus may have been used in incendiary devices disposed of at the site, white phosphorous and red phosphorus. Based on information available from the Agency for Toxic Substances and Disease Registry (ATSDR), a collaborative entity between the USEPA and Centers for Disease Control white phosphorus is the most toxic version of phosphorus and is readily converted to nontoxic chemical species in the environment. Except for cases where buried pockets (not exposed to air or moisture) remain from pyrotechnics disposal or where incendiary devices remain intact, phosphorus does not pose a substantial threat to human health or the environment. If red or white phosphorus is released into the environment from past disposal or training exercises, it is readily oxidized in the presence of moisture to produce phosphoric acid and phosphate (ATSDR, 1997). White phosphorus has a USEPA Region 9 PRG, red phosphorus has no known regulatory limit.

3.2 OLD FLY ASH WASTE PILE (IAAP-015)

3.2.1 Site Background

Site Features and Operational History

The FAWP (IAAP-015) is in the southeastern quadrant of IAAAP, east of Plant Road H, between Yards E and D (Figure 3-3). The site is an open area where fly ash from the Main Heating Plant and the Building 1-62 Heating Plant was deposited from 1940 to 1976. Ash was dumped directly onto the ground surface. In 1976, dumping of fly ash at this site was terminated. Sludge from the Sewage Disposal Plant was deposited on the landfill once or twice a year since the early 1940s. There is no record of the total amount of fly ash and sludge deposited, or when the sludge dumping was discontinued (JAYCOR, 1996). Since the termination of dumping, no remedial or closure actions have been taken, allowing weathering to occur (Shaw, 2005).

The majority of the surface of the FAWP is vegetated, except in some areas where soil erosion appears to have taken place (Appendix A). In 1999 it was observed that the steep slope of IAAP-015 had begun to erode into Brush Creek (Appendix A), and signs were present of uncontrolled dumping of solid waste including tires, bricks, 5-gallon cans, and vegetation (MKM, 2004).

Topography and Surface Water

The site is generally flat lying to northwesterly sloping with elevations ranging from 207 meters (679 feet) amsl to 203 meters (666 feet) amsl. The eastern boundary of the site slopes steeply to Brush Creek at elevations ranging from approximately 676 feet amsl at the top of the site to approximately 633 feet amsl at Brush Creek. The eastern shore of Brush Creek is the low shore. The depth of the fly ash was estimated by JAYCOR to be up to 40 feet deep. Based on soil borings installed by MKM on the upper part of the FAWP, the fly ash/soil interface is approximately 12 feet to 26 feet below the top of the fly ash (MKM, 2005a). The fly ash on the steep slope, however, is present down to the elevation of Brush Creek, approximately 43 feet below the top of the fly ash, indicating that fly ash was pushed or eroded over the edge of the FAWP.

Surface runoff from the site would flow north/west into the ditch along Road H, which flows north and south into tributaries of Brush Creek (Figure 3-3).

Geology and Hydrogeology

The soil in the vicinity of the Old Fly Ash Waste Pile (and presumed to be below the fly ash and sludge) is composed of fine sand and organic silt to about 5 feet deep, with silt between 5 and 10 feet bgs (JAYCOR, 1996).

Based on groundwater levels from the borings installed by MKM in 2004, groundwater is present at approximately 32 feet bgs or about 6 feet below the fly ash/soil interface on the upper portions of the FAWP (MKM, 2005a). Groundwater flow at the site is presumably to the east toward Brush Creek.

3.2.2 Investigations and Remedial Activities

Soil

An Endangerment Assessment was conducted by Dames & Moore in 1987. Potential contaminants found in the fly ash pile included zinc, iron, copper, and sulfur. The concentration of metals found in the fly ash pile were below Resource Conservation and Recovery Act (RCRA)-regulated levels. As a result, the fly ash was not classed as toxic under RCRA (JAYCOR, 1996).

During the SI in 1991, one surface (15SS0301) and one subsurface (3 feet bgs) (15SA0301) composite soil samples were collected from non-vegetated areas at the FAWP and analyzed for metals, nitrates, and sulfates (JAYCOR, 1996). Metals concentrations were below comparison criteria in both samples (Table 3-5).

During their 2004 investigation, MKM collected two multi-point incremental samples (0 to 1 foot bgs) in the fly ash, and 11 subsurface samples (from various depths at six locations), of which six were collected from fly ash, three were collected from the fly ash/soil interface, and two were collected from soil beneath the fly ash (Figure 3-3). All samples were analyzed for metals and polynuclear aromatic hydrocarbons (PAHs); both incremental and select subsurface (fly ash) samples were also analyzed for Toxicity Characteristic Leaching Procedure (TCLP) metals (MKM, 2005a).

For the two surface samples, mercury and silver exceed comparison criteria (Table 3-5). TCLP metals leachate data for surface fly ash exhibit concentrations below the RCRA TCLP limits. Barium exhibits a leachate concentration above surface water comparison criteria; however, the barium concentration in surface fly ash is within the range of background concentrations, indicating that the barium leachate would also be within naturally occurring ranges.

Subsurface samples exhibit concentrations of metals and PAHs below comparison criteria in all samples (Table 3-5). PAHs were detected in all the fly ash samples; only one soil/fly ash interface sample contained detectable PAHs, and no PAHs were detected in subsurface soil beneath the fly ash. TCLP metals leachate data for subsurface fly ash exhibit concentrations below the RCRA TCLP limits and below groundwater comparison criteria indicating that any seepage through the fly ash should not adversely impact groundwater.

Sediment and Surface Water

During the SI in 1991 three sediment/surface water sample sets (15SD/SW0101, 15SD/SW0201, and 15SD/SW0401) were collected in the vicinity of the FAWP (Figure 3-3) and analyzed for metals, nitrates, and sulfates (JAYCOR, 1996). Silver was detected slightly above the comparison criteria in sediment sample 15DS0401 collected in Brush Creek from near the approximate middle of the waste pile (Table 3-6). Surface water samples contained barium concentrations above the comparison criteria (Table 3-7); however, the barium concentration at the site is within the range of background concentrations, indicating that the barium in surface water is within naturally occurring ranges.

During the RI in 1992, a sediment/surface water sample set was collected downstream of the site (RBWSD/SW32) and analyzed for explosives, metals, VOCs, and SVOCs (JAYCOR, 1996). Silver exceeded the comparison criteria in sediment (Table 3-6). RDX was the only compound in surface water to exceed comparison criteria (Table 3-7), and was also detected above comparison criteria upstream of the FAWP, indicating sources upstream of the FAWP. Barium and silver exceeded comparison criteria in surface water, with barium in surface water within likely naturally occurring ranges.

During the supplemental RI in 1997, two sediment samples (7J1 and 7J2) and one surface water sample (7J1) were collected in Brush Creek approximately 1,000 feet downstream of the FAWP and analyzed for explosives, metals, VOCs, and SVOCs (Harza, 2001). One sediment sample contained silver above the comparison criteria (Table 3-6). The surface water sample contained RDX, barium, and selenium above the comparison criteria (Table 3-7), with barium in surface water within likely naturally occurring ranges. The same compounds were detected in upstream samples as well, indicating sources upstream of the FAWP. Methylene chloride was detected in the surface water and sediment samples, but also in the blank samples.

During the BERA in 2000, sediment and surface water samples were collected approximately 275 meters upstream (BC19-H) and 300 meters downstream (BC05-H) of the FAWP (Figure 3-3). Samples were analyzed for metals and explosives at both sample locations and additionally for SVOCs, pesticides/PCBs, and herbicides at BC05-H (MWH, 2004). The sediment samples contained similar metals concentrations (Table 3-6), with silver exceeding comparison criteria in both sampling locations. In surface water total values of aluminum, barium, and copper exceeded comparison criteria at both sampling locations, likely reflecting naturally occurring sources (Table 3-7). For dissolved values in surface water, antimony exceeded the comparison criteria only in upstream sample BC19-H; no other metals exceeded comparison criteria. Aluminum and thallium exceeded comparison criteria only in BC19-H; barium and copper exceeded comparison criteria at both locations. Both surface water sample locations contained similar concentration of RDX above comparison criteria, indicating sources upstream of the FAWP.

During a sediment/surface water investigation in October 2003, a sediment/surface water sample set was collected at the approximate location of BC-05H (Site 5) (Figure 3-3). Samples were analyzed for RDX only (CCJM, 2004). Sediment contained RDX below comparison criteria (Table 3-6), and surface water contained RDX above comparison criteria (Table 3-7). Two sediment/surface water sample sets collected upstream of the FAWP in the vicinity of the Sewage Treatment Plant contained higher levels of RDX in sediment and surface water, indicating sources of RDX upstream of the FAWP.

Four sediment samples in Brush Creek and three near-sediment samples on the edges of Brush Creek were collected during the 2004 MKM investigation (Figure 3-3) and analyzed for metals (MKM, 2005a). Silver slightly exceeded comparison criteria in two sediment samples in the downstream portion of the creek (FAP-SD-003 duplicate and FAP-SD-004) (Table 3-6) and exceeded comparison criteria in two near-sediment samples in the near upstream portion and center portion of the creek (FAP-NSD-001 and FAP-NSD-002). Silver, which has been detected in upstream sediment, is likely from upstream sources.

Groundwater

Groundwater has been monitored in two wells approximately 800 feet downstream of the FAWP (bedrock well G-52 and shallow till well G-53) (Figure 3-3) since 1981. Samples are typically analyzed for explosives and metals. Only arsenic has been detected sporadically above the PRG in G-52 (1992, Fall 2000), and no explosives have been detected above PRGs. Metals and explosives concentrations in G-53 have not exceeded PRGs (Table 3-8).

Three groundwater samples were collected from temporary wells during the 2004 MKM investigation and analyzed for total and dissolved metals (Figure 3-3). One temporary well (FAP-GW-001) was installed upgradient of the FAWP to approximately 20 feet bgs with no sand pack. Temporary wells in the FAWP were set in borings FAP-SB-003 (FAP-GW-002) to 40 feet bgs and FAP-SB-006 (FAP-GW-003) to 47 feet bgs, neither with a sand pack. An outer casing was installed through the fly ash and five feet into the underlying native soil. The groundwater sample collected upgradient of the FAWP was noted as having a medium turbidity; groundwater samples in the FAWP were noted as having a high turbidity and high solids content (MKM, 2005a).

Data from the temporary wells indicate total lead was detected above the PRG in FAP-GW-003 and its duplicate (Table 3-8); however, the dissolved (filtered) lead concentrations in these samples were below the detection limits. The detection of total lead while the dissolved (filtered) lead concentration was below the detection limit is likely due to the high turbidity of the groundwater sample. Concentrations of other total and dissolved metals in the groundwater samples were below applicable PRGs.

3.2.3 Summary and Conclusions

A 1987 investigation indicated that concentrations of metals were below RCRA-regulated levels, and data from the MKM investigation indicate that detected concentrations of PAHs and metals are below comparison criteria, with the exception of mercury and silver in surface fly ash samples. The detections of mercury and silver in the surface samples are delineated at depth, and TCLP results indicate that they will not leach to potential stormwater. Mercury was metal below the sediment comparison criteria in and adjacent to Brush Creek, indicating this metal is not contaminating sediments; and silver was also detected in upstream sediments. Though TCLP leachate data indicate that barium may potentially impact surface runoff, the barium concentrations in surface fly ash are within the range of background concentrations, indicating barium would be within naturally occurring ranges for IAAAP.

Historical and recent surface water and sediment sampling efforts indicate that concentrations upstream are generally higher than or similar to those downstream of the FAWP, indicating upstream sources of contamination. Silver was detected in the MKM sediment samples above the comparison criteria; however silver was also detected above comparison criteria upstream of the site in 2000.

No contamination above PRGs (explosives and metals) has been detected in groundwater downgradient of the site. Though total lead in a very turbid groundwater sample in the southern

portion of the FAWP exceeded the PRG, the dissolved lead was below detection limits. Thus, groundwater results from the MKM investigation indicate no adverse impacts from any metals contamination from the overlying soil or fly ash.

Though explosives have been identified as a potential contaminant of concern at this site through the dumping of sewage plant sludge, no explosives were sampled during the SI or during the MKM investigation. Additionally, though included in the MKM work plan, PAHs sampling of groundwater was not conducted.

3.3 POSSIBLE DEMOLITION SITE (IAAP-018)

3.3.1 Site Background

Site Features and Operational History

The PDS, IAAP-018, was identified as an area used during the 1940s and possibly into the early 1950s as a demolition area for ammunition items. There are no site records to substantiate demolition activities or the kind of ammunition items disposed at the site. The specific wastes that may be present at this site are unknown; however, the contaminants likely to be present are explosives commonly used at IAAAP and metals. IAAP-018 is located south of Plant Road K (lower Augusta Road) near Yard G and directly across the road (south-southeast) from the pistol range. The exact size of the site is unknown, but is believed to encompass approximately 15 acres.

The PDS was used during the 1940s and possibly into the early 1950s as a demolition area for ammunition items. There are no site records regarding the demolition activities or the types of items disposed at the site. During the HRR, few interviewees recalled this area as a possible disposal site, but noted that they heard a lot of material being exploded, and there was the potential for unexploded ordnance (UXO) buried about 3 feet deep. Those interviewed did not think the area was used past the 1940s (Shaw, 2005).

Shaw obtained a drawing of contaminated areas dated October 1945 that included the PDS (Shaw, 2005). The site, an irregularly shaped area approximately 128 by 105 feet was located approximately 75 feet east of Long Creek and approximately 180 feet south-southwest of Road K (Figure 3-4). Neither the 1941 nor the circa 1957 aerial photos indicate any disturbances in the PDS area identified in the drawing. In 1941, the entire site area is cleared of trees and possibly fenced to the south. By circa 1957, the south fence line is still visible, and the site is still clear of trees; a roughly circular scarred area of approximately 3 acres is present approximately 275 feet east-northeast of Long Creek and 50 feet south of Road K (Figure 3-4). By 1969, the scarring in the southern portion of this area is still visible; trees are starting to grow in the previously cleared areas, though they are not growing in the circular scarred area, nor are they growing in this area in the 1978 aerial photo. Sparse trees are observed in the 1983 aerial. The color 1998 aerial photo indicates the trees that have grown in the circular area are evergreens, with deciduous trees growing around them.

Topography and Surface Water

The terrain in the area of the PDS is heavily wooded and generally flat with a gentle slope toward the southwest. The surface drainage of this area flows southwest toward Long Creek which is adjacent to the site's estimated western boundary (Figure 3-5).

Geology and Hydrogeology

A southwestern groundwater flow toward Long Creek is expected at this site based on topographical features.

The groundwater surface in the nearest well (G-21), which is located less than 100 meters from Long Creek, is approximately 7 feet bgs (Hydrogeologic, 2003).

3.3.2 Investigations and Remedial Activities

Soil

In 1981, one soil sample (S-6) was collected by Environmental Research Group, Inc., (ERG) during a contamination survey approximately 350 feet south of the scarred area (Figure 3-5) and approximately 400 feet south of the PDS area identified in the 1945 drawing and analyzed for metals, explosives, nitrates, and sulfates (ERG, 1982) No explosives were detected, and metals were detected below comparison criteria (Table 3-9).

During the Preliminary Assessment and Site Investigation (PA/SI) in 1991, three soil samples (18SA0101, 18SA0201, and 18SA0301) were collected at 1.5 feet bgs at suspected demolition pit areas west of the scarred area and analyzed for metals and explosives (JAYCOR, 1996). Sample 18SA0201 was collected at or near the northwestern corner of the PDS area identified in the 1945 drawing (Figure 3-5). No explosives were detected, and metals were detected below comparison criteria (Table 3-9).

During the first part (preliminary) of the 2004 MKM investigation, nine multi-point incremental soil samples and four grab soil samples were collected from 0 to 1 foot bgs and analyzed for metals, explosives, and total phosphorus (Figure 3-5) (MKM, 2005a).

Incremental samples from grid 002 (PDS-SSI-002) and grid 005 (PDA-SSI-005) exceed comparison criteria for 2,4,6-TNT (Table 3-9). Lead exceeds comparison criteria in the incremental sample from grid 002 (PDS-SSI-002); barium exceeds comparison criteria in the incremental sample from grid 005 (PDS-SSI-005); and mercury exceeds comparison criteria in the incremental samples at six sample locations (grids 001, 002, 004 through 007). Other metals were below comparison criteria. Total phosphorus concentrations were detected between 2.1 mg/Kg and 180 mg/Kg in the incremental soil samples.

In the grab samples, no explosives exceed comparison criteria (Table 3-9). Mercury concentrations exceeds comparison criteria in all four grab samples, and barium exceeds the comparison criteria at

one grab sample (PDS-SS-001) collected in the northern part of grid 006. Concentrations of other metals were below comparison criteria in other grab samples. Total phosphorus concentrations were detected between 11 mg/Kg and 130 mg/Kg in the four grab samples.

Grids 002 through 005 were subsequently subdivided into four sub-grids each (Figure 3-5) (secondary sampling). A total of 16 multi-point incremental soil samples and 16 grab samples (one from each sub-grid) were collected from 0 to 1 foot bgs (MKM, 2005a).

Explosives were below comparison criteria in all samples (incremental and grab) (Table 3-9). Mercury was detected above comparison criteria in incremental samples from three of the grid 002 subgrids and all of the grid 004 and 005 subgrids. Barium was detected above comparison criteria in incremental samples from one of the grid 002 subgrids, one of the grid 004 subgrids, and one of the grid 005 subgrids. Total phosphorus concentrations were detected between 1.4 mg/Kg and 430 mg/Kg in the incremental soil samples. Mercury was detected above comparison criteria in grab samples from two of the grid 002 subgrids, three of the grid 004 subgrids, and three of the grid 005 subgrids. Barium was detected above comparison criteria in a grab sample from one of the grid 004 subgrids. Total phosphorus concentrations were detected between 1.9 mg/Kg and 330 mg/Kg in the grab samples.

MKM performed a total phosphorus analysis on soil samples collected during their field efforts. As discussed in Section 3.1.2, it is impossible to determine which forms of phosphorus are present. In a report by the USGS, non-agricultural soils (collected from cemeteries) in the Cheney River Reservoir watershed (Kansas) contained total phosphorus concentrations ranging from 74 to 539 mg/kg with a median concentration of 245 mg/kg, while sediment near agricultural areas contained a mean total phosphorus concentration of 500 mg/Kg (USGS, 2002). Clinton soils (which are present in this part of the facility) display a high subsoil phosphorus level (greater than 22.5 ppm) (USDA, 1995). Total phosphorus results in surface soils at the PDS range from 1.4 mg/Kg to 430 mg/kg, with an average of 45.6 mg/Kg.

Sediment and Surface Water

In 1981, one sediment/surface water sample set was collected by ERG at the base boundary approximately 1,900 feet south (downstream) of the scarred area (W-8) and analyzed for explosives, metals, PCBs, pesticides, nitrate, sulfate, and total phosphates (ERG, 1982). No explosives were detected in sediment or surface water (Tables 3-10 and 3-11, respectively). Barium and copper were detected in surface water above comparison criteria, likely reflecting naturally occurring sources. No other compounds were detected above comparison criteria in surface water or sediment.

During the RI in 1992, a sediment/surface water sample set (RBWSD/SW54) was collected approximately 1,500 feet downstream of the scarred area and analyzed for explosives, metals, SVOCs, and VOCs (JAYCOR, 1996). In sediment, no explosives were detected, and no compounds were detected above comparison criteria (Table 3-10). In surface water no explosives were detected, and barium and bis(2-ethylhexyl)phthalate concentrations were detected above comparison criteria (Table 3-11).

Sediment and surface water samples (LC02-H) were collected approximately 1,600 feet downstream of the scarred area in May and September 2000 as part of the BERA and analyzed for metals, explosives, SVOCs, pesticides/PCBs, and herbicides (MWH, 2004). In the sediment sample collected in September 2000, no explosives were detected, and no other compounds exceeded comparison criteria (Table 3-10). In the surface water, no explosives were detected on either date. Bis(2-ethylhexyl)phthalate exceeded comparison criteria in May 2000, and was not detected in September 2000 (Table 3-11). Total values of aluminum and barium exceeded comparison criteria, and dissolved values of barium on both dates and copper in September 2000 exceeded comparison criteria; likely reflecting naturally occurring sources.

Groundwater

Monitoring well G-21, located approximately 2,100 feet south-southeast (down/cross-gradient) of the site has been sampled since its installation by ERG in 1981 and has been part of the GWM Program. Bis(2-ethylhexyl)phthalate, a common laboratory cross-contaminant, was detected above the PRG in 1996 (Table 3-12). No metals or explosives have been detected above PRGs, including the last time the well was sampled in Spring 2002.

3.3.3 Summary and Conclusions

Data indicate concentrations of 2,4,6-TNT, barium, lead, and mercury above comparison criteria in surface soil samples (incremental and grab) collected from grids 002, 003, 004, 005, and 006. Exceedences of comparison criteria for 2,4,6-TNT and lead are horizontally delineated in both incremental and grab samples. The barium and mercury exceedences are not horizontally delineated. No exceedences are vertically delineated.

The distribution of surface soil contamination coincides with the parts of the scarred area and the 1945 PDS area. However, the sampling scheme employed by MKM (using grids of approximately 200 by 200 feet, subgrids of approximately 100 by 100 feet, and grab samples collected between 50 and 150 feet apart) may not adequately pinpoint contaminated areas that require remediation. The distribution of total phosphorus detected across the site indicates it may be from natural sources, since there is no apparent pattern to the distribution, and the concentrations are within potentially naturally occurring ranges. There is no comparison criteria for total phosphorus.

As discussed in Section 3.1.3, two types of phosphorus may have been used in devices disposed of at the site, white phosphorous and red phosphorus, with white phosphorus as the most toxic version of phosphorus, which is readily converted to nontoxic chemical species in the environment. If red or white phosphorus is released into the environment from past disposal or training exercises, it is readily oxidized in the presence of moisture to produce phosphoric acid and phosphate (ATSDR, 1997). White phosphorus has a USEPA Region 9 PRG.

According to the Shaw HRR, there is the potential for UXO buried approximately 3 feet deep. No subsurface soil sampling has been conducted in the scarred area, and only one subsurface sample has been collected at/near the PDS area identified in the 1945 drawing (Figure 3-4). Subsurface sampling is needed to characterize any contamination from potential buried UXO.

Surface water and sediment contamination has not been demonstrated downstream of the site; however, the sampling locations were over 1,000 feet downstream. Additional investigation regarding the impacts of the site on Long Creek is needed.

Groundwater contamination may be an issue at the site, particularly if there is UXO related contamination in the subsurface. Groundwater is likely to be present at 5 feet bgs or more near Long Creek (based on groundwater levels in G-21) and deeper farther east of Long Creek. However, given the widespread nature of contamination observed at the site and the difficulty of pinpointing contamination from soil sampling, there is the potential for groundwater contamination from past practices. Therefore, groundwater should be investigated.

3.4 INERT DISPOSAL AREA (IAAP-020)

Because only the closure of Trench 6 and the CAMU within this site are to be addressed as part of OU-4, a discussion of the entire IDA is not included. A more complete discussion of the IDA and associated investigations will be provided in the *Comprehensive Watersheds Evaluation and Supplemental Data Collection Work Plan*.

3.4.1 Site Background

Site Features and Operational History

The IDA, located west of C Road and north of Line 3A in the west central part of IAAAP, encompasses approximately 20 acres (Figure 3-6), and originally consisted of a solid waste landfill and burning ground.

In an effort to control the collection and disposal of materials, the Army converted the IDA into a contaminated soil management site, which is covered under OU-4. This is a landfill type operation with three separate areas designated for disposal of soil and debris with varying ranges of contamination. The portions of the IDA covered under OU-4 include the CAMU (also referred to as Trench 7), a lined facility designated by USEPA for the treatment of high health-risk contaminated soils generated during CERCLA remedial actions; Trench 6, a lined RCRA type landfill for the disposal of medium health-risk contaminated soils generated during CERCLA remedial actions and soils treated at the CAMU, and currently used to store wastes from the remediation of sites at IAAAP; and the Cap Extension Area (CEA), a RCRA Subtitle D equivalent landfill designated for soils containing low level contamination generated during CERCLA remedial actions [Environmental Chemical Corporation (ECC), 2001]. In previous reports the CEA is also called the Random Fill Area. For the purposes of this report, the landfill designated for soils with low level contamination is referred to as the CEA. The Random Fill Area is considered the closed and capped landfill (Trenches 1 through 5).

According to the 2001 Remedial Action Report, Trench 6 and the CAMU were constructed in approximately 1996 and 1997 with a base of compacted clay overlain by an impermeable liner. Atop the liner is a 12-inch drainage collection layer of granular material with a 6-inch slotted

pipe to conduct leachate to a leachate detection pipe sump. Any leachate detected in the sump is transferred to one of two leachate collection tanks. Atop the drainage layer is 6 inches of granular filter material. Atop the drainage layer is the bottom liner of the soil depository. A leachate detection sump was constructed at the downhill side. The detection sump is monitored on a regular basis. Sedimentation dams/ponds were constructed downstream of both Trench 6 and the CAMU (ECC, 2001).

Topography and Surface Water

A tributary of Long Creek flows south approximately 1,000 feet west of IAAP-020. Runoff from Trench 6 and the CAMU (Trench 7) flows in a southwesterly direction to three sediment ponds. Water in these ponds is treated, if necessary, to meet remediation goals prior to discharge. The discharge from the ponds is captured by a south-southeast sloping, open trench located along the downgradient perimeter of the site. Surface water flow continues southeasterly from the trench toward an intermittent Long Creek tributary. Because surface water runoff is captured and treated prior to reaching the discharge area, untreated surface runoff from the landfill is not expected to reach Long Creek.

Geology and Hydrogeology

The site is immediately underlain by fill material consisting of silty clay and debris. The depth of the fill is approximately 27 feet and thins toward the southern portion of the site. The thickness of the till at the IDA is 108 feet.

The direction of groundwater flow at the IDA is to the south and west. Groundwater flow at the bedrock interface is to the west.

3.4.2 Investigations and Remedial Activities

Soil

During the August 2004 radiological screening of the IDA conducted by the Formerly Utilized Sites Remedial Action Program (FUSRAP), one isolated area of radiological contamination was identified. This area was limited to a small object (since removed) and the soils around the object (approximately one square yard). Lab analysis indicated contamination by Cesium-137.

Sediment and Surface Water

During the RI, a sediment/surface water sample set (R14SW/SD04) was collected from the drainage-way that originates at the end of Trench 6 (open trench) and continues south, away from the site (Figure 3-6). The samples were analyzed for metals, explosives, SVOCs, and VOCs (JAYCOR, 1996). In surface water RDX was detected above comparison criteria (Table 3-14). Barium exceeded comparison criteria, but likely reflects naturally occurring sources. In the sediment sample selenium was detected above comparison criteria (Table 3-13). The intermittent nature of this tributary makes it highly unlikely to contribute to surface water contamination.

Additionally, the area from which this sample was collected is now impounded and monitored under the RCRA permit.

Groundwater

Groundwater at this site is sampled semiannually as part of the RCRA permit for Trench 5. The majority of the wells monitoring groundwater at the site are considered part of OU-3. The wells that monitor the CAMU and Trench 6 include (from upgradient to downgradient) T-4, T-5, T-9, C-00-3, IDA-MW1, JAW-26, and G-5 (Figure 3-6).

The CAMU designated wells are sampled for explosives, metals, VOCs, and SVOCs. They have contained primarily bis(2-ethylhexyl)phthalate and RDX. No detections of these compounds above PRGs have been observed since at least Spring 2002 (Table 3-15). T-4 has not contained any compounds above PRGs since at least 1999. T-5 and T-9 have historically contained bis(2-ethylhexyl)phthalate, but it has not been above PRGs since Fall 2000. C-00-3 has been sampled for the same parameters in addition to gross alpha. Metals and gross alpha exceeded PRGs in Fall 2000, but have not been detected above PRGs since then. IDA-MW-1 contained metals and gross alpha above PRGs in Fall 1999, but has not contained concentrations above PRGs since then. JAW-26 contained bis(2-ethylhexyl)phthalate above the PRG in Fall 1999, but not afterward. G-5 has not contained concentrations above PRGs since at least Fall 1999.

3.4.3 Summary and Conclusions

For the portion of the site addressed under OU-4, contaminated materials remain at the site where they are being treated in the CAMU or stored in Trench 6, a lined disposal area. The site is currently being monitored under RCRA. Groundwater concentrations in the vicinity of these areas have exhibited decreasing or relatively unchanging concentrations.

No data gaps have been identified at this site as pertains to closure of Trench 6 and the CAMU.

3.5 EXPLOSIVE WASTE INCINERATOR (IAAP-025)

3.5.1 Site Background

Site Features and Operational History

The EWI is situated in the southwest corner of the EDA, southwest of the FTP site (IAAP-039). The EWI is enclosed within Building BG-199-1, which measures 28 x 110 feet; the associated, adjoining air pollution control system measures 32 x 27 feet. The EWI was a RCRA-permitted facility that has undergone RCRA closure. A layout of IAAP-025 is depicted on Figure 3-7.

The EWI was utilized to incinerate ammunition products that were out of date or failed to meet specifications. It also treated materials listed as hazardous wastes: K044 (wastewater treatment sludges from the manufacturing and processing of explosives) and K045 (spent carbon from the treatment of wastewater containing explosives). Sump scrap was also treated here. Though the

EWI was permitted to treat spent carbon and explosives-contaminated solvent, it was not used for these purposes (Shaw, 2005).

The EWI operated from November 1981 to April 1982 to prepare for the first trial burn. The EWI operated routinely until September 1990 when it was shut down to allow installation of an afterburner and related equipment as required by USEPA incinerator standards. In December 1990, the USEPA allowed the EWI to operate on a short-term basis as a prerequisite for another trial burn. The short-term operation was limited to 720 hours of incinerator operation. Another trial burn was conducted in October 1991, even though IAAAP had not yet operated the EWI for the allowable 720 hours (JAYCOR, 1996). Operations ceased in June 1997, and the EWI was decontaminated. The building remains intact (Shaw, 2005).

Topography and Surface Water

The terrain is generally flat, with a slope to the south toward a tributary of Spring Creek. The surface elevation ranges from 207 meters (679 feet) amsl to 206 meters (676 feet) amsl.

Drainage at the site is routed through east flowing ditches, which join a south flowing ditch approximately 400 feet east of Building BG-199-1. The south flowing ditch joins an easterly flowing tributary of Spring Creek approximately 430 feet southeast of the site (Figure 3-7).

Geology and Hydrogeology

Based upon the well log information obtained from the FTP site, the site is underlain by loess to an average depth of 1 to 2 feet. Underlying the loess is glacial till consisting of clay and silt with discontinuous sand and gravel seams. Below this is a zone of very stiff clay approximately 10 feet thick. RI data suggested that this clay is an aquitard, and groundwater and contaminants may flow horizontally across it, through the clay where it contains sand and gravel, and eventually deeper into the upper bedrock. In the southern half of the site, underlying or in place of the clay is a sandy silty clay layer. Either this layer or a sandy layer is present at the till/bedrock interface. The bedrock at the site is part of the Warsaw Formation, and the depth ranges from 20 to 34 feet bgs (JAYCOR, 1996).

Groundwater flow in the shallow till is connected to the upper bedrock because bedrock is near the surface across the area. These two units comprise the shallow groundwater unit. In the vicinity of the EWI, the groundwater surface in the shallow unit in 2003 was approximately 7.5 feet bgs, and groundwater flow was to the south and southeast (Hydrogeologic, 2004).

3.5.2 Investigations and Remedial Activities

Soil

Two surface soil samples collected during the SI in 1991 were analyzed for explosives, metals, SVOCs, and VOCs: one southwest of the EWI (25SS01), and one in the ditch east of the EWI (25SS02) (JAYCOR, 1996) (Figure 3-7). All compounds detected in both samples were below

comparison criteria (Table 3-16). One VOC (1,1,2,2-tetrachloroethane) was detected below the USEPA Region 9 PRG in 25SS02.

At the direction of USEPA Region 7, further investigation was conducted under the RI. During the RI in 1992 and 1995, seven soil samples (R17 series) were collected at depths ranging from 0.5 feet to 3 feet bgs and analyzed for explosives, metals, SVOCs, and VOCs (Figure 3-7). One surface soil sample was collected at the same location as sample 25SS02 (R17SS01) (JAYCOR, 1996). The VOC 1,1,2,2-tetrachloroethane was not detected in R17SS01; however, RDX and mercury were detected above comparison criteria (Table 3-16). Explosives and SVOCs concentrations in the other R17 series samples were below detection limits. Metals were detected below comparison criteria in all the RI samples. Toluene and trichlorofluoromethane were the only VOCs detected, with a maximum concentration of 0.0035 mg/Kg for toluene (R17SS01) and 0.0065 mg/Kg trichlorofluromethane (immediately south of the building in R17SA602). Both of these are well below the Region 9 industrial soil PRGs of 520 mg/Kg for toluene and 2,000 mg/Kg for trichlorofluoromethane. Neither compound was determined to cause adverse risk to terrestrial receptors (MWH, 2004).

According to the HRR for the site, surface soil samples were collected as part of a Phase I – PSA by PDC Technical Services in 1998. The samples were collected around the building (in grassy areas), at deluge sumps, and at four background locations, and were analyzed for explosives and metals. Explosives were below detection limits in all samples, and metals concentrations ranged from below detection limits to 510 mg/Kg (Shaw, 2005).

During the 2004 MKM investigation, three multi-point incremental soil samples (0 to 1 foot bgs) were collected from around the EWI (Figure 3-7) and analyzed for metals, explosives, and SVOCs. VOCs were analyzed from a single point within each grid (MKM, 2005a). Explosives, VOCs, and SVOCs were below detection limits in all three samples. Metals concentrations were detected below comparison criteria (Table 3-16).

Sediment and Surface Water

One sediment sample (25SD0301) was collected during the SI downstream from soil sample 25SS02 (Figure 3-7) and analyzed for explosives, metals, PCBs, SVOCs, and VOCs (JAYCOR, 1996). Only metals below comparison criteria were detected in the sample.

During the RI in July and August 1992, a sediment/surface water sample set was collected in the tributary of Spring Creek approximately 375 feet upstream of where the ditches draining the EWI discharge into the tributary (RBWSD/SW05) (Figure 3-7) and analyzed for explosives, metals, SVOCs, and VOCs (JAYCOR, 1996). In July 1992, trichlorofluoromethane was detected in sediment well below the Region 9 industrial soil PRG (Table 3-17). In August 1992, aluminum and selenium were detected above the comparison criteria. Tetrachloroethene was detected at 0.0022 mg/Kg, well below the Region 9 industrial soil PRG; the compound was determined to cause no adverse risk to aquatic receptors (MWH, 2004). No explosives, SVOCs, or VOCs were detected in surface water on either date. In July 1992, barium and selenium were detected above the surface water comparison criteria (Table 3-18); in August 1992, only barium

was detected above the surface water comparison criteria, and selenium was not detected. Barium was likely from naturally occurring sources. Given that the sampling location is upstream of where the site ditches discharge to the tributary, it is unlikely that the VOCs detected in the samples are from the EWI.

During the 2004 MKM investigation, seven sediment samples (0 to 0.5 foot bgs) were collected from the ditch east of the EWI (including EWI-SD-001 near the location of soil samples 25SS02 and R17SS01) (Figure 3-7) and analyzed for explosives, metals, VOCs, and SVOCs (MKM, 2005a). No compounds exceed comparison criteria (Table 3-17).

Groundwater

Due to the conclusion of the SI that no soil contamination was present, groundwater was not further investigated during the RI (JAYCOR, 1996).

During the field activities in support of the Remedial Alternatives Assessment (RAA) (Fall 2002 and Spring 2003) for the FTP site and annual GWM program (Spring 2003), two monitoring wells (FTP-MW7 and FTP-MW8) were installed southeast (downgradient) of the EWI as part of the well network at the FTP site (Figure 3-7) and sampled for explosives, metals, and VOCs. During the Spring 2003 sampling event, no compounds were detected above PRGs in either of the wells (Table 3-19).

3.5.3 Summary and Conclusions

Based on investigations conducted at the site, no soil or sediment contamination above comparison criteria is present at the site. The exceedences of soil comparison criteria (RDX and mercury) in 1992 were not confirmed upon subsequent sampling in 2004. No metals or explosives have been detected in groundwater above PRGs in downgradient wells, indicating no adverse affect to groundwater from this site.

No data gaps have been identified at this site as pertains to contribution of contamination to Spring Creek and its tributary or to a potential remedy.

3.6 CONSTRUCTION DEBRIS LANDFILL (IAAP-028)

3.6.1 Site Background

Site Features and Operational History

The CDL (IAAP-028) is located in the central portion of IAAAP northwest of Yard O between Plant Road I and the east/west-running railroad track. Originally thought to be only 3 acres, it was later determined to be approximately 6 acres. A review of the historical and more recent (circa 1957 and 1998) aerial photos confirms the approximate 6 acres of likely disposal area. A layout of IAAP-028 is depicted on Figure 3-8.

The CDL operated from the 1940s to approximately September 1992. The site also served as a storage yard for debris placed directly on surface soils including brick, stone, and concrete, mostly associated with demolition/renovation at Line 4A in the 1960s. Concrete, wire fencing, brick, and stone rubble were heaped on the ground surface, and material disposed at the site was reportedly dumped into natural ravines (JAYCOR, 1996). A review of the historical and more recent (circa 1957 to 1998) aerial photos does not confirm this; however, it does appear that debris may have been pushed off the plateau upon which the site sits onto the upper slopes of drainages. Fly ash observed at approximately 15 feet bgs during MKM's field efforts in Fall 2004 (MKM, 2005a) indicates that fly ash was also disposed of at the CDL, potentially early in its life. A review of historical aerial photos indicates a slightly darker area in circa 1957 in the vicinity of the trenches where the fly ash was observed.

Observations by MKM indicate the site currently contains large pieces of concrete, rebar, brick and other pieces of construction debris on the surface, and down embankments on the west and south sides of the site (MKM, 2005a), though MKM does not specify how far down the embankments debris was observed. Between 1991 and 2004 an earthen cover approximately one to three feet thick was placed at the disposal area. According to the HRR interviews, the area was used often for disposal of non-flammable and non-biodegradable items (Shaw, 2005).

Topography and Surface Water

The site is located in the Long Creek watershed on the edge of an upland plateau. Ground surface elevation generally ranges between 210 meters (689 feet) and 213 meters (699 feet) amsl. The terrain drops off steeply at the edge of the apparent disposal areas into two steeply cut ravines to the west and south. The CDL is moderately vegetated, while surface water drainages surrounding the site have heavier vegetation.

Surface drainage is south and west toward the two ravines/intermittent tributaries that drain to Long Creek. The two tributaries converge near the south-southwestern portion of the site before merging with another tributary of Long Creek approximately 1500 feet southwest of the site (Figure 3-8).

Geology and Hydrogeology

The site is immediately underlain by fill material consisting of silty clay, construction debris, and loess. The till is steeply cut by drainage to Long Creek just south of the site. It appears that drainage cut through the less consolidated till and flows at the interface of a more dense basal till (JAYCOR, 1996).

The direction of groundwater flow in the drift aquifer is west and southwest toward the intermittent tributary of Long Creek. The groundwater surface ranges from 7 to 8 feet bgs in the eastern portion of the site to 16 feet bgs in the western portion of the site (Hydrogeologic, 2003). The direction of groundwater flow in the bedrock aquifer is west to southwest based on water levels collected in conjunction with sampling in Winter 1999.

3.6.2 Investigations and Remedial Activities

Soil

During the SI in 1991, two samples were collected in the suspected area of disposal (28SS0101 and 28SS0201) and one sample was collected in the ravine southwest of the site (28SS0301) (Figure 3-8). The three samples were collected from 0.5 feet and analyzed for explosives, metals, pesticides/PCBs, and VOCs (JAYCOR, 1996). The explosive 1,3-dintirobenzne was detected above comparison criteria in only one sample (28SS0201) (Table 3-20). Metals concentrations were below the comparison criteria in all samples. No other compounds were detected above comparison criteria or Region 9 PRGs (VOCs).

During the RI in 1992 and 1993, 16 soil samples were collected and analyzed for pesticides/PCBs, with select samples also being analyzed for explosives, metals, SVOCs, and VOCs (JAYCOR, 1996). No compounds were detected above comparison criteria (Table 3-20).

During the 2004 MKM investigation, six investigative trenches were created (Figure 3-8), and at five of the trenches, 10 subsurface soil samples (two at varying depths within each trench) were collected and analyzed for explosives, metals, and pesticides/PCBs. No explosives were detected in any of the samples, no pesticides were detected above Region 9 PRGs, and no PCBs were detected above RGs (Table 3-20). A "fluffy" fly ash like material was encountered between approximately 15 and 18 feet bgs in Trench 1 and Trench 6; the excavator was not capable of digging deeper than 18 feet, thus, it is not known how deep the fly ash like material extends. The fly ash like material was sampled in both trenches (MKM, 2005a). No metals were detected above RGs in the fly ash like material from Trench 1. Beryllium was detected slightly above its RG in the fly ash like material at Trench 6, and other metals were below RGs. All metals were below the RGs in the remainder of the samples.

Sediment and Surface Water

One sediment/surface water sample set was collected from the tributary approximately 1,300 feet south-southwest of the site (R20SW/SD10) and analyzed for explosives, pesticides, and PCBs during the JAYCOR RI. The surface water sample was also analyzed for metals, VOCs, and SVOCs (JAYCOR, 1996). The sediment sample did not contain any detectable compounds. Only barium was detected in surface water above the comparison criteria (Table 3-22) and is likely a reflection of naturally occurring sources.

During the 2004 MKM investigation, five sediment samples were collected in the tributaries to the west and south and in the conjoined tributary south-southwest of the site (Figure 3-8). Samples were analyzed for metals, explosives, pesticides, and PCBs (MKM, 2005a). The pesticide 4,4-DDT was detected above comparison criteria at one sampling location (Table 3-21), but not at either sampling location further downstream, indicating a limited and delineated area of contamination. Concentrations were generally lower in the sample collected from the conjoined tributary south of the site. No other compounds exceeded OU-1 RGs, and no pesticides exceeded Region 9 PRGs.

Groundwater

Groundwater samples were collected from two piezometers (R20PZ0901 and R20PZ1201) (Figure 3-8) during the RI in 1992 and analyzed for explosives, metals, SVOCs, VOCs, pesticides, and PCBs (JAYCOR, 1996). Both piezometer samples contained concentrations of antimony, lead, iron, nickel, and bis(2-ethylhexyl)phthalate above PRGs (Table 3-23). The piezometer on the northern portion of the site (R20PZ1201) also contained concentrations of aluminum, beryllium, barium, cadmium, chromium, manganese, and vanadium above groundwater PRGs. The elevated metals detections are likely a reflection of turbid samples, particularly since R20PZ1201 may be located at the northern edge (upgradient) of the disposal area. The piezometers were not sampled again.

Three monitoring wells were installed during the RI (JAW-08, JAW-09, and JAW-10) (Figure 3-8) and have been sampled six times for explosives, metals, pesticides/PCBs, and VOCs. Well JAW-10 is located approximately 300 feet southwest (downgradient) of piezometer R20PZ12, and appears to be near the west edge of the disposal area; well JAW-09 is located approximately 80 feet south of R20PZ09, and may be at the southeast edge of the disposal area; well JAW-08 is located northeast of the apparent disposal area. Though lead has been historically detected above the PRG in the wells (including upgradient well JAW-08), as of Spring 2000, no analytes were detected above PRGs.

3.6.3 Summary and Conclusions

No contamination above RGs has been identified in previous investigations, thus no soil removal actions have been conducted or proposed. A fly ash layer was encountered in two trenches at approximately 15 feet bgs, and was sampled in both of the trenches. The fly ash material contained beryllium slightly above comparison criteria at only one trench. Based on a review of the circa 1957 aerial photo, it appears that a darker substance, potentially fly ash, was deposited in this area. Results for the other samples collected in 2004 indicate no compounds above comparison criteria.

Sediments at the CDL are not likely to be a concern. The pesticide detected in one upstream sediment sample above the comparison criteria was not detected farther downstream. Additionally, because of the intermittent nature of the tributaries in the vicinity of the CDL, any contamination from the site is not expected to impact perennial tributaries or Long Creek.

Groundwater data indicated elevated concentrations of metals in piezometers, and only lead above PRGs in the monitoring wells (including the upgradient well). The existing monitoring wells were sampled last in 2000, and did not contain any compounds above PRGs. Based on a review of historical aerial photos, at least two of the wells are located at the edges of the disposal area and would intercept any groundwater contamination from the site.

Characterization and delineation of the fly ash material needs to be done. It is currently unclear where disposal has occurred at the site. Though debris has reportedly been disposed of in the

ravines/drainages, there is a lack of photographic evidence (aerial or otherwise) to indicate the type and placement of the debris. Based on the results of additional site reconnaissance, an additional groundwater sampling point may be needed.

3.7 LINE 3A POND (IAAP-041)

3.7.1 Site Background

Site Features and Operational History

The Line 3A Pond is located southeast of Line 3A. The location was identified in the field by former IAAAP employee Jack Polson as an excavated, unlined area measuring 60 x 30 x 8 feet. According to Mr. Polson, the pond was constructed in 1956 and was closed in 1958 or 1959. According to interviews with plant personnel conducted by JAYCOR during the PA, approximately 15,000 gallons of spent sulfuric and hydrochloric acid were disposed in the pond and neutralized with sodium hydroxide. The waste was a result of a metal cleaning operation that was a discrete system entirely enclosed within a building at Line 3A. No wastewater from other parts of operations at Line 3A was reportedly disposed in the pond. (JAYCOR, 1996). During the interviews for the HRR, it was indicated that TNT-contaminated water was also disposed of in the pond (Shaw, 2005).

MKM attempted to locate the pond through geophysical means (ground penetrating radar [GPR] and electromagnetic survey) during their investigation in Fall 2004. GPR proved ineffective at measuring the interface between native soils and backfill possibly due to the age of the excavation and backfill. In the Soil Data Collection Report, they report one large (75 x 80 feet) irregularly shaped anomaly (readings 10 to 20 milliSiemens/meter [mS/m] higher than surrounding materials) in the western area of what MKM considered the site area. A smaller (15 x 20 feet) circular shaped anomaly was identified in the northeastern portion of the MKM site. Although the smaller anomaly was assumed to be too small to represent the former pond, it was marked as a point of interest due to its proximity to a surface depression (MKM, 2005a), located off the eastern edge of the anomaly (Samelak, 2005). Further review of the MKM geophysical data indicates two additional anomalies, a small one immediately east of the smaller circular shaped anomaly and the edge of a larger one at the eastern boundary of the study area. The geophysical maps are provided in the *Soil Data Collection Report* (MKM, 2005b)

During a review of historical drawings and aerial photos by Tetra Tech, the Line 3A pond was determined to be a leach field associated with building 3A-01 (shipping and receiving warehouse) and a raw chemical disposal pit. A drawing dated July 1951 shows a proposed leach field (40 x 60 x 2 feet deep) and a proposed sheathed raw chemical disposal pit (10 x 20 x 6 feet deep) to the north of the leach field (Figure 3-9 and Appendix B). A review of the circa 1957 aerial photo shows an area of disturbed soil or stressed vegetation (black and white photo) in the approximate location of the leach field and pit from the drawing (Figure 3-9). One difference between the drawing and the circa 1957 aerial photo is the driveway to the disposal pit. What is shown in the proposed drawing as a drive perpendicular to the east-west road appears to be a

semi-circular drive across the pit area. Other than this one difference, the pit and leach field appear to be as proposed on the drawing. The location of the leach field as indicated in the circa 1957 aerial photo appears to coincide with the larger of one of the additional anomalies observed in the eastern portion of the MKM geophysical study area.

Topography and Surface Water

The site is relatively flat but slopes gently to the southwest and southeast toward unnamed intermittent streams, which eventually empty into the Skunk River approximately 200 feet south of IAAAP and approximately 4,000 feet south of the site (Figure 3-10).

Geology and Hydrogeology

Underlying the surface loess deposit is till approximately 50 to 55 feet bgs based on the well logs at Line 3A. The Warsaw Formation is the uppermost bedrock unit in the Line 3A area.

Groundwater flow in the drift aquifer is strongly influenced by topography. Based on the topography and boring logs of wells installed at Line 3A, the groundwater flow in the upper drift aquifer is generally to the south, away from Line 3A. A lower aquitard (or confining unit) has been identified at approximately 42 feet bgs. Data indicate that the lower aquitard unit extends across the site.

3.7.2 Investigations and Remedial Activities

Soil

According to former IAAAP employee Jack Polson, the Line 3A pond was closed in 1958 or 1959. At that time soil samples were collected until a dark blue-gray soil was encountered, to determine the extent of contaminated soils. Closure consisted of excavating the contaminated soils, neutralizing them with sodium hydroxide, and disposing at the facility's landfill. Information regarding the disposition of excavated soils is not available. Dark gray soil has been documented at the site northwest of the former leach field/southwest of the chemical disposal pit.

During the SI in 1991, a subsurface soil sample was collected at approximately 7 feet bgs in the presumed (at the time) area of the former pond (41SA03) (Figure 3-10) and analyzed for explosives, metals, nitrates, and sulfates. (JAYCOR, 1996). No explosives, nitrates, or sulfates were detected; and no metals were detected above comparison criteria (Table 3-24). This sample location is approximately 190 feet west of the southwest corner of the former leach field location (Figure 3-9). Two additional samples (41SA01 and 40SA02) were collected from the drainage to the west at approximately 3 feet bgs and analyzed for the same parameters. No analytes were detected above comparison criteria.

During the RI in 1992, two soil samples (R29SB601 and R29SB602) were collected at approximately 9 feet bgs north and south of SI sample 41SA03 (Figure 3-10) and analyzed for metals, VOCs, and SVOCs (JAYCOR, 1996). No compounds were detected above comparison

criteria (Table 3-24). The VOC trichlorofluoromethane was detected in both samples, and the SVOC chlorobenzene was detected in R29SB602. Neither compound exceeded the USEPA Region 9 industrial soil PRGs. The U.S. Army Center for Health Promotion and Preventive Medicine completed a review of the data and concurred with the decision that no further action was required for soils (JAYCOR, 1996).

Four multi-point incremental soil samples (0 to 1 foot bgs) and 14 subsurface soil samples (7 to 9 feet bgs) were collected during the 2004 MKM investigation (Figure 3-10) and analyzed for metals and pH (MKM, 2005a). No compounds were detected above comparison criteria in surface or subsurface soil samples. The range of pH for the four incremental samples was 5.8 to 7.6, and the range of pH for the fourteen subsurface soil samples was 5.6 to 7.6, indicating no apparent acidification of soils. Of the subsurface soil samples, only one (3AP-SB-011) appears to have been placed in the former leach field location, and one (3AP-SB-007) appears to be southwest of the chemical disposal pit (Figure 3-9). Neither sample indicates concentrations greater than surrounding samples, nor is the pH lower than surrounding samples.

Sediment and Surface Water

During the RI, three sediment/surface water sample sets (R29SD/SWS01, R29SD/SW02, and R29SD/SW03) were collected from the intermittent stream west of the former pond area and analyzed for metals, SVOCs and VOCs (JAYCOR, 1996). No compounds were detected in sediment above comparison criteria (Table 3-25). Only barium was detected in all three surface water samples above comparison criteria, likely from naturally occurring sources (Table 3-26).

Groundwater

No groundwater sampling has been conducted at the Line 3A Pond.

3.7.3 Summary and Conclusions

The pond was reportedly excavated in the late 1950s, and the potentially contaminated materials removed. No compounds have been detected above comparison criteria. However, only one sample appears to have been placed in the former leach field, and no samples appear to have been placed in the former chemical disposal pit.

Surface water and sediment samples have not indicated any impacts in the intermittent stream west of the site.

Because the actual location of the former pond was not fully determined until recently, previous sampling efforts have not characterized the pond, with the exception of one subsurface soil sample (3AP-SB-011). A review of the boring log for 3AP-SB-011 does not indicate soils substantially different than those in other borings nearby. However, according to the 1951 drawing, the leach field was only two feet deep and any differences in the upper two feet of soil after almost 50 years may be minimal. Explosives-contaminated water was reportedly disposed of in the pond, and explosives were not analyzed during the most recent soil sampling efforts. The

chemical disposal pit is labeled as "raw chemical," thus it is unknown if raw chemicals other than acids were disposed of. Thus the pond has not been adequately characterized.

3.8 CENTRAL TEST AREA (IAAP-047)

3.8.1 Site Background

Site Features and Operational History

The Central Test Area (CTA) is located between Line 4A and Line 5A and includes Building 600-84 and the walled-in area south of the building (JAYCOR, 1996), jointly known as the Central Testing Laboratory, and the field to the north and east of Building 600-84, known as the test-fire area.

Building 600-84 was constructed in 1941 as the Central Testing Laboratory, and many of the components tested inside the building were fuzes, primers, and detonators. The walled-in area south of Building 600-84 was used as a test site for the inside charge of grenades. Line 6 quality inspection personnel sent five sample components from each completed lot to Building 600-84 for jumble and jolt tests. In 1963, Line 6 moved its component testing operations from Building 600-84 to 6-97, where the components were detonated by machine. Ventilation ductwork lead from the machine to the outside. Similar operations are thought to have taken place in Building 600-84 (TN & Associates, 2003b).

The test-fire area was used to test-fire hand grenades, adaptor boosters, and aerial mines. During the HRR, a drawing dated 1941 with the final revision in 1950 indicated the original layout of the CTA. The test-fire area was comprised of a test firing pit and other structures, located northeast of Building 600-84. The test firing pit was approximately 9 feet x 14 feet with wooden walls covered by steel plates, with an earthen floor and a concrete walkway. A concrete pedestal capped by a steel plate was anchored in the floor of the pit. Soil was sloped up the walls to a height of approximately 5 feet. An operator's building was located 105 feet southwest of the test-fire pit. A fence was present (traces of which can be seen in aerial photos) in a roughly circular area around the firing pit approximately 215 feet out from the firing pit. A small area northwest of the test pit area contained a metal stand (tripod) on a concrete pad used to hold components to be test detonated (TN & Associates, 2003b; MKM, 2005b).

A review of historical aerial photos by Tetra Tech shows the firing area and associated areas (including the tripod area) as very well defined in the circa 1957 photo (Figure 3-11), less defined in the 1963 photo, nearly gone in the 1969 photo, and completely gone in the 1978 aerial photo. The concrete base of the tripod area is visible approximately 275 feet northwest of the firing pit in the aerial photos between circa 1957 and 1969 and in the color 1998 aerial photo. An area apparently bare of vegetation in the northwestern half of the circular fenced area is present in the circa 1957 aerial photo. Parts of this same bare area appear to be present in the 1963 and 1969 aerial photos, but the picture quality of both photos is poor. There is no apparent sign of a bare area in 1978 or later photos.

During the HRR, it was determined there was a potential UXO concern at this site (TN & Associates, 2003). To determine location of any UXO, MKM conducted a geophysical survey in the CTA in September 2004. The geophysical survey indicates two large concentrated anomalies. The first anomalous area is approximately 300 by 200 feet and is located on the west side of the grid approximately 400 feet north of Building 600-84. The second area is approximately 95 feet by 70 feet and is located in the northeast corner of the surveyed site (MKM, 2005b) at the location of the former firing pit area. Both anomalies likely extend beyond the surveyed area. No additional geophysical surveying was conducted to define the edges of the two anomalies. The 1941 aerial photo indicates disturbed soil in the vicinity of the western anomaly that is not apparent in the circa 1957 photo.

Topography and Surface Water

The terrain at IAAP-047 is generally flat ranging from approximately 219 meters (718 feet) to 223 meters (731 feet) amsl with a gentle easterly slope to the east of the test-fire pit area. The nearest surface water is the intermittent tributary from Line 5A approximately 500 meters east of Building 600-84 and approximately 220 meters east of the easternmost portion of the former fence.

Surface drainage at Building 600-84 is west and south into ditches, which ultimately discharge into the intermittent tributary from Line 5A. Surface drainage from the former test-fire pit area is likely to be to the east and southeast toward a ditch and the intermittent tributary from Line 5A (Figure 3-12).

Geology and Hydrogeology

The geology at IAAP-047 is assumed to be similar to that at Lines 5A and 5B (IAAP-006), where the thickness of the till is approximately 80 feet.

There is a hydraulic divide between Lines 5A and 5B that is likely to be present at IAAP-047. The bulk of IAAP-047 is assumed to be in the Brush Creek watershed, and the far western portion, potentially including Building 600-84, is assumed to be in the Long Creek watershed. The gradients toward each watershed in this area as observed at Line 5A/5B are slight. The gradient at Line 5A (Brush Creek watershed) is toward the southeast. The gradient at Line 5B (Long Creek watershed) is west-southwest.

3.8.2 Investigations and Remedial Activities

The 1980 US Army Toxic and Hazardous Materials Agency Installation Assessment of IAAAP indicated two areas were used for testing, including the CTA. Contamination implications were generally similar to the explosives residue produced at the Demolition Area and EDA (RDX, 2,4,6-TNT, high melt explosive [HMX], tetryl, etc.) (TN & Associates, 2003).

Soil

During the RI, one soil sample was collected in the drainage-way south of Building 600-84, and three samples were collected west of the eastern wall southeast of Building 600-84. Samples

were collected from 0.5 and 3 feet bgs and analyzed for explosives and metals (JAYCOR, 1996). None of the soil samples contained concentrations of explosives above comparison criteria (Table 3-27). The surface soil sample collected adjacent to the wall (R06SS605) contained cadmium (1,100 mg/Kg) above comparison criteria, but other metals and metals in the other soil samples were below comparison criteria.

An Environmental Baseline Study was conducted by Advanced Environmental Technology (AET) at Building 600-84 at the areas east and south of the building in October 2001. The soil samples were located in five composite groups with three surface samples making up each group. Surface soil samples were collected in previously used areas around the site east of Building 600-84 and northeast of the barricade wall, at the east edge of the parking lot and the west edge of the septic field, at the access area immediately east of Building 600-84, at the north end of the construction site for the AET treatment facility, and at the south end of the construction site for the AET treatment facility. Samples were analyzed for explosives and metals (AET/AO, 2001). Explosives were not detected in any samples, and detected metals were below RGs.

Ten grab soil samples (0-1 foot bgs) were collected in Fall 2004 by MKM in the vicinity of the former test-fire pit, near the tripod, in ditches, and at other areas of potential concern (Figure 3-12). Samples were analyzed for explosives and propellants (MKM,2005b). One sample collected northwest of the former test-fire pit (CTA-006-ES) contained 2,4,6-TNT above the RG and BERA soil CC (Table 3-27). The sample location is in the bare area observed in the circa 1957 aerial photo, and in an area that MKM notes as a spot of bare soil (MKM, 2005b). Three samples collected from a ditch (CTA-001-ES), south of Building 600-84 (CTA-002-ES), and adjacent to the former test-fire site (CTA-008-ES) contained detectable nitrobenzene (no comparison criteria) well below the Region 9 industrial soil PRG. One sample collected adjacent to the concrete base of the tripod contained detectable nitrocellulose, a propellent with no comparison criteria and no Region 9 PRG.

Sediment and Surface Water

No sediment or surface water samples have been collected at the site. The nearest surface water body is 1,500 feet away, and the topographical gradient is slight.

Groundwater

Monitoring wells at nearby Lines 5A/5B and Lines 4A/4B are too far away to indicate any groundwater impacts from activities at IAAP-047.

3.8.3 Summary and Conclusions

Surface soils in a “bare spot” are impacted with 2,4,6-TNT above comparison criteria. The “bare spot” is potentially part of a larger bare area identified in the circa 1957 aerial photo (Figure 3-11). Sampling associated with Building 600-84 appears to have adequately characterized any contamination in that area, and has determined that little contamination is present. Limited sampling has been conducted in the vicinity of the test-fire pit and associated features and the tripod area. Further soil sampling is necessary to delineate the known contamination and

characterize the site, including the western anomalous area. No groundwater sampling has been conducted at the site.

Surface water runoff and groundwater are not currently concerns; however, this could change if additional soil sampling indicates more surface soil concentrations above CCs or subsurface contamination above RGs.

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4.0 SITE-SPECIFIC INVESTIGATIONS

An evaluation of surface water, groundwater, soil, and sediment data was conducted for the sites considered part of OU-4. Based on the evaluation of historical and current analytical data, two of the sites in OU-4 were determined not to be contamination sources because contaminated surface soils have been removed, and/or because data indicate no concentrations of contaminants above applicable comparison criteria, or because they are already slated for future work. These two sites are the EWI (below comparison criteria) and the IDA (closure—future work), and are not included in the investigation outlines below. The other sites require additional evaluation, including sampling of soil, groundwater, sediment, and/or surface water.

4.1 GENERAL APPROACH

In order to verify and refine the distribution of contaminant concentrations above comparison criteria, Tetra Tech has developed the following sampling strategy for the OU-4 sites:

1. Delineation (vertical and horizontal) sampling in areas with contamination concentrations above comparison criteria that have not been sufficiently delineated by previous sampling efforts.

2. Characterization sampling in areas and matrices not previously investigated, which have the potential for contaminant concentrations above comparison criteria based on historical indications (interviews, drawings, aerial photos, etc.) or topographic/geologic features.

To identify previous sampling locations (with the exception of MKM sample locations) and historical areas of interest (areas where contamination is likely to be) described in Section 3 of this work plan, Tetra Tech has developed a methodology to aid in site reconnaissance and in locating areas of interest to be investigated, as presented below.

- Identify historical sampling locations and areas of interest based on a review of the maps and text descriptions in previous reports, historical drawings and aerial photos, interviews from the HRRs, and any other pertinent information.

- Import the appropriate maps, drawings, and aerial photos into a Geographic Information System (GIS), warping them where appropriate into their correct spatial location relative to known spatial locations of roads, waterways, buildings, etc. Using the appropriate overlays, identify sample locations needed to characterize the areas of interest, and prepare proposed locations maps. Proposed sample locations and areas of interest will be uploaded into a hand held global positioning system (GPS) unit for quick identification in the field.

- Using the proposed locations maps and the GPS unit, Tetra Tech field personnel will locate the areas of interest and proposed sample locations. Any field relocation of sampling locations will be documented/located with the GPS to ensure the proper areas are sampled and to ensure the safety of personnel at sites with potential UXO. Any additional areas of

interest observed in the field will also be documented/located with the GPS unit. The data generated by the GPS unit will be downloaded into the GIS to produce maps.

Samples will be collected using the methods detailed in the *Facility-Wide Work Plan* (URS, 2002), and detailed in Appendix C. Samples will be analyzed for the compounds specified in the site specific plans (below) utilizing the methods described in Sections 5.1.

4.2 INCENDIARY DISPOSAL AREA (IAAP-013)

Based on an evaluation of the results of the recent MKM investigation and previous investigations summarized in Section 3.1.2, additional sampling is required to delineate soil exceedences at the site, to characterize areas of potential contamination that have not been characterized in previous investigations, and to characterize surface water (if present) and groundwater. To accomplish this, the following actions will be performed at the site. Proposed sampling locations are provided in Figure 4-1, unless otherwise noted. The number of samples and the sampling rationale for soil, groundwater, and surface water are provided in Tables 4-1 through 4-3, respectively.

- Perform site reconnaissance while conducting UXO avoidance (UXO technician with magnetometer) using the procedures discussed above, particularly targeting the areas shown in Figure 4-4. Survey pock marks or craters identified and flagged during July 2005 site reconnaissance and former area depicted on facility drawing as the InDA (Figure 4-4), and any other areas of interest. Take photos of items and areas of interest. Stake MKM's sample locations that require delineation (if not still marked in the field). Survey proposed locations with UXO avoidance support (UXO technician with magnetometer).

- Based on field reconnaissance, collect up to 11 grab samples (0-1 feet and 1-2 feet) at target areas of interest (pock marks, craters, apparent disposal pits, etc). Investigate two areas within the InDA – the north area representing the center of the MKM grid where pock marks were observed and the south area representing the original location of the InDA as depicted on the 1945 as-built drawing. Based on field reconnaissance, up to 5 grab samples (0-1 feet and 1-2 feet) in the north area and up to 6 samples (0-1 feet and 1-2 feet) in the south area will be collected utilizing a hand auger. The locations will target areas of interest (pock marks, craters, apparent soil disposal pits, etc.) if necessary. Analyze for explosives and metals. Because these sample locations will be determined in the field, their locations on Figure 4-1 are approximate.

- Collect groundwater samples at one location west (downgradient) of InDA-TTSB-010 using direct push technologies (DPT) screen point samplers. Location may need to be moved, if not rig accessible or UXO avoidance determines it is unsafe. Analyze groundwater for explosives and total/dissolved metals.

- Collect one surface water sample from Spring Creek in an area downslope of pock marked area. It should be noted that no analytes exceeded any comparison criteria in sediment during MKM's 2004 sampling event. Collect 1 surface water sample from upstream and one from

downstream of the InDA as shown in Figure 4-1. Analyze for explosives, total/dissolved metals, alkalinity, field parameters (pH, turbidity, temperature, redox).

4.3 FLY ASH WASTE PILE (IAAP-015)

Based on an evaluation of the results of the recent MKM investigation and previous investigations summarized in Section 3.2.2, additional investigation is needed to characterize the potential impact of fly ash to Brush Creek, confirm/delineate the groundwater (boron) exceedence, and characterize explosives and PAHs in groundwater. To accomplish this, the following actions will be performed at the site. The number of samples and the sampling rationale for soil, groundwater, and surface water are provided in Tables 4-1 through 4-3, respectively. Approximate proposed sampling locations are provided in Figure 4-2.

- Conduct reconnaissance at the FAWP to relocate and stake MKM's sample location FAP-GW-003.

- Collect samples of the fly ash (0 to 1 foot) at the surface of the waste pile at location without vegetation. Analyze for explosives.

- Collect 2 DPT groundwater samples from southern portion of FAWP near MKM boron exceedance (FAP-GW-003). Analyze the groundwater for explosives, PAHs, and metals (total and dissolved).

- Collect three surface water samples in Brush Creek at downstream and upstream of the FAWP area that is sloughing into the creek. Analyze the water for explosives, PAHs, and metals (total and dissolved), and field parameters.

4.4 POSSIBLE DEMOLITION SITE (IAAP-018)

Based on an evaluation of the results of the recent MKM investigation and previous investigations summarized in Section 3.3.2, further sampling is necessary at this site to delineate soil contamination, to characterize areas not characterized in previous investigations, and to characterize sediment, surface water, and groundwater. To accomplish this, the following actions will be performed at the site. Proposed sampling locations are provided in Figure 4-3. The number of samples and the sampling rationale for soil, groundwater, and surface water/sediment are provided in Tables 4-1 through 4-3, respectively.

- Perform site reconnaissance, particularly targeting the PDS area identified in the 1945 drawing and any scarring remaining from the circa 1957 aerial photo. Using GPS, map out any scars, debris, etc. Stake MKM's sample locations (if not still marked in the field) or remark based on GPS coordinates.

- Perform site reconnaissance while conducting UXO avoidance (UXO technician with magnetometer) given the potential for UXO at this site.

- Collect characterization grab soil samples (0-1 foot, 1-2 feet, 2-4 feet) adjacent (at least 5 feet away) to any potentially identified buried UXO, with concurrence from UXO expert. Analyze samples for explosives and metals. Because these sample locations will be determined in the field based on field reconnaissance, they are not included in Figure 4-3.

- Collect characterization grab soil samples (0-1 foot, 1-2 feet, 2-4 feet) utilizing hand augers from 3 locations (PDS-TTSB-002, -001, -032) at the 1945 drawing location (Figure 4-3). Collect characterization grab soil samples (0-1 foot, 1-2 feet) using hand augers from the areas of scarring in the circa 1957 aerial photo from 5 locations (PDS-TTSB-007, -008, -034, -035, -404). Analyze samples for explosives and metals.

- Delineate soil RG exceedances based on MKM's samples. Analyze samples for explosives and metals.

- Delineate MKM RG exceedance in PDS-SS-004 with PDS-TTSB-028, 029, 042, -031. Analyze samples for explosives and metals.

- Characterize MKM RG exceedance in MI sample PDS-SSI-005 with samples PDS-TTSAB-030, 017, 033. Analyze samples for explosives and metals.

- Delineate RG exceedance in MKM sample PDS-SS-003 with PDS-TTSB-048, 055, -052, -041. Analyze samples for explosives and metals.

- Collect groundwater samples at one location using DPT screen point sampler within former PDS site identified on 1945 drawing. Analyze sample for explosives and metals (total and dissolved). Because these sample locations will be determined in the field, they are not included in Figure 4-3

- Collect three surface water samples upstream adjacent to and downstream of site within Long Creek. Analyze for explosives and metals.

4.5 CONSTRUCTION DEBRIS LANDFILL (IAAP-028)

Based on an evaluation of the results of the recent MKM investigation and previous investigations summarized in Section 3.6.2, additional investigation is required for delineation of buried fly ash like material, and to characterize parts of the site that have not been previously characterized. To accomplish this, the following actions will be performed at the site. Proposed sampling locations are provided in Figure 4-4. The number of samples and the sampling rationale for soil and groundwater are provided in Tables 4-1 and 4-2, respectively.

- Perform site reconnaissance (and take photos), particularly in the drainages which are reported to contain debris. Look for any outcroppings of the fly ash like material. Document the types of debris and the locations to better determine the extent and nature of the landfill.

- Based on site reconnaissance results conducted by Tetra Tech in August 2005, collect characterization soil grab samples (0-1 foot) at areas with debris and disposal material at surface. Analyze samples for explosives and metals. Because these sample locations will be determined in the field, they are not included in Figure 4-4.

- Characterize and define the extent of the fly ash (vertically and horizontally) using DPT (three transects through area), based on the circa 1957 aerial photo, which shows an area that may correspond with the fly ash like material. Sample fly ash like material and in soil beneath it; analyze samples for explosives, metals, and PAHs.

- Collect groundwater samples from the three existing monitoring wells (JAW-08, -09, and -10). Analyze for metals, explosives, pesticides/herbicides, VOCs and SVOCs.

4.6 LINE 3A POND (IAAP-041)

Based on an evaluation of the results of the recent MKM investigation and previous investigations summarized in Section 3.6.2, this site is in need of further investigation. To accomplish this, the following actions will be performed at the site. Proposed sampling locations are provided in Figure 4-5. The number of samples and the sampling rationale for soil and groundwater are provided in Tables 4-1 and 4-2, respectively.

- Conduct site reconnaissance in the area identified as the chemical disposal pit and leach field in the circa 1957 aerial photo and 1951 drawing (also the actual location of the nearby surface depression described by MKM). Identify any surface signs (sandy areas, gravel areas, depressions, stressed/different vegetation) that may be indicative of the location of the leach field, chemical disposal pit, and driveway. Stake MKM's sample locations (if not still marked in the field).

- Install three soil borings in the approximate center of the leach field with continuous soil logging, and collect two samples from each boring, one in fill (if encountered; anticipated to extend to approximately 2 feet) and one in native soils beneath the fill. Collect groundwater samples in one of the soil borings using a DPT screen point sampler. Analyze soil and groundwater samples for explosives, metals (including dissolved metals for groundwater), and pH (groundwater pH will be measured with a field meter).

- Install two soil borings in the chemical disposal pit area with continuous soil logging. Two samples will be collected from each boring, one in fill (if encountered; anticipated to extend to approximately 6 feet) and one in native soils beneath the fill. Collect groundwater samples in one of the soil borings using a DPT screen point sampler. Analyze soil and groundwater samples for explosives, metals (including dissolved metals for groundwater), pH (groundwater pH will be measured with a field meter), VOCs, and SVOCs.

4.7 CENTRAL TEST AREA (IAAP-047)

Based on an evaluation of the results of the recent MKM geophysical investigation and limited sampling effort and previous investigations summarized in Section 3.6.2, additional sampling is necessary at the site to delineate exceedences and to characterize areas not previously characterized. To accomplish this, the following actions will be performed at the site. Because UXO is potentially present, all subsurface work will be conducted with a UXO specialist providing UXO avoidance support. Proposed sampling locations are provided in Figure 4-6. The number of samples and the sampling rationale for soil and groundwater are provided in Tables 4-1 and 4-2, respectively.

- Conduct site reconnaissance to evaluate any indications of areas of interest, including the test-fire pit and associated features, the tripod, and any other areas indicative of contamination (such as bare spots), and to evaluate contamination/use of the western anomaly. Stake MKM's sample locations (if not still marked in the field).

- With UXO assistance (UXO technician with magnetometers), collect samples for metals and explosives analysis at the following locations and depths:

  - Collect surface and subsurface grab samples (0-1 foot, 1-2 feet and at select locations 2-4 feet, and 4-6 feet) in the circular fenced area to delineate/characterize the bare spots noted on circa 1947 aerial photo,

  - Collect surface and subsurface grab samples (0-1 foot, 1-2 feet) at two locations along the former sidewalk to the test-fire pit,

  - Collect a surface and subsurface grab sample (0-1 foot, 1-2 feet) at the tripod area, and

  - Collect surface and subsurface grab samples (0-1 foot, 1-2 feet) at the geophysical (EM61) anomalies depicted on Figure 4-6 in pink.

- Collect groundwater samples at up to two locations using DPT screen point samplers, one at the test fire pit and one southeast (downgradient) of the test fire pit. Additional groundwater sampling may be conducted should subsurface soil contamination at other areas be present. Analyze groundwater for metals and explosives.

4.8 REPORTING

A supplemental RI Report will be prepared in accordance with requirements of the FFA schedule. The report will include, but will not necessarily be limited to, the following information:

- Background summary of groundwater data including historical and current land use;

- Historical environmental activities (investigations, remedial actions, etc.);

- Summary of drilling and sampling activities performed during the RI field program;
- Geologic and hydrogeologic interpretation, including new geologic cross-sections available for the installation;
- Analytical results;
- Data assessment;
- Integration of the RI findings with historical investigation results;
- Findings and conclusions of the nature and extent of contamination at the installation;
- Site-specific human health risk screening of chemical analytes. If contamination is determined to be present at levels above screening criteria, a baseline human health risk assessment will be conducted; and
- Conclusions and recommendations.

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5.0 FACILITY-WIDE WORK PLAN ADDENDUM

All work for the OU-4 RI will be conducted in accordance with the procedures and methods specified in the *Final Facility-Wide Work Plan* (FWWP), prepared by URS (2002b), which was approved by USEPA Region 7. All sections of the FWWP are incorporated by reference. However, some sections of the FWWP do not fully meet OU-4 project needs: Section 3, the Field Sampling and Analysis Plan (FSAP); Section 4, the Quality Assurance Project Plan (QAPP); Section 5, the Data Management Plan (DMP); Section 6, the Health and Safety Plan (HASP); Section 7, the Investigation Derived Waste (IDW) Transportation and Disposal Plan; Section 8, the Project Management Plan. These plans are addended below.

5.1 FIELD SAMPLING AND ANALYSIS PLAN ADDENDUM

This section addends the FSAP, Section 3 of the FWWP. All sections of the FWWP FSAP are incorporated by reference, except where noted in the sections below, and are addended where necessary in the sections below. This FSAP Addendum provides quantities for field activities summarized in Section 4 of this RI Work Plan, as required by the FWWP FSAP. Some field activities, primarily UXO screening, which are not referenced in the FWWP FSAP, will be completed in accordance with the procedures detailed in the *Draft Final Soil Data Collection Work Plan* (MKM, 2004), a site specific UXO avoidance work plan, and as addended in the sections below. Standard operating procedures encompassing field sampling well installation, and other activities are included in Appendix C.

5.1.1 Surface Soil Sampling

Grab surface soil samples will be collected from surface soils at all sites to be investigated for the OU4 RI at the locations specified in Section 4 and in accordance with Section 3.2.1 of the FWWP. The anticipated quantities for each type of sample at each site and the analytical parameters associated with surface soil sampling are presented in Table 5-1.

5.1.2 Subsurface Soil Sampling

Subsurface soil sampling activities will be completed via hand augers (less than 5 feet bgs) and DPT (greater than 5 feet bgs) in accordance with Section 3.2.2 and Section 3.2.3, respectively, of the FWWP.

The anticipated quantities for each type of subsurface soil sample at each site and the analytical parameters associated with subsurface sampling are presented in Table 5-1.

5.1.3 Screen Point and Monitoring Well Installation, Development, and Sampling

Geoprobe (or equivalent) screen point groundwater samplers will be utilized at the majority of sites to collect groundwater samples, as described in Section 3.2.3 of the FWWP. In general,

each screen point sampler will be advanced by DPT to a depth where saturated conditions have been encountered in a soil boring where lithologic sampling has been conducted.

Temporary monitoring wells will be installed in DPT borings (see Section 5.1.2) at select sites, and particularly at sites where screen point samplers do not yield sufficient groundwater for sampling. Wells will be constructed using the materials and techniques detailed in Appendix C. In general, each well will be constructed of 1-inch diameter poly vinyl chloride (PVC) with up to 10 feet of 10-slot screen, adequate sand pack (of appropriate grain size for 10-slot screen) to reduce the occurrence of fines in the well, and a bentonite seal to prevent contamination of the sand pack with soils from upper portions of the borehole. Wells will be installed to straddle the water table. No surface completion will be constructed; however, wells will be fitted with lockable expansion caps.

Should DPT prove incapable of reaching the depths required for installation of the temporary wells, hollow stem auger techniques will be employed as specified in Sections 3.2.2 and 3.2.4 of the FWWP, but well installation will be conducted using the same or equivalent materials specified in Appendix C of this RI Work Plan.

Development of the temporary monitoring wells and groundwater sampling will be conducted as specified in Section 3.2.4 and Section 3.2.6, respectively, of the FWWP.

The anticipated number of screen point sampling points and temporary wells at each site and the analytical parameters associated with groundwater sampling are summarized in Section 4 of this RI Work Plan and are presented in Table 5-2.

5.1.4 Sediment and Surface Water Sampling

Sediment sampling will be conducted during the RI at select sites with drainages, but which may or may not contain surface water. Sediment sampling will employ the same techniques as surface soil grab sampling discussed in Section 5.1 of this RI Work Plan.

Surface water sampling will be conducted during the RI in accordance with Section 3.2.7 of the FWWP at select sites where surface water is present in the drainages. No seep sampling is anticipated.

The anticipated quantities for sediment and surface water samples at each site and the analytical parameters associated with this sampling are presented in Table 5-3.

5.1.5 Water Level Measurement

Water level measurements will be collected from permanent and/or temporary monitoring wells associated with each site (where present) utilizing the methods specified in Section 3.2.8.3 of the FWWP. No facility-wide water level measurement event is planned as part of the OU-4 RI activities.

5.1.6 Sample Identification, Handling, Documentation, Shipping

Sample identification, handling, field documentation, and shipping procedures will be conducted in accordance with Section 3.2.10 of the FWWP. A summary of the number of samples per matrix; the analytical parameters; and sample holding times, bottle requirements, and preservatives are provided in Table 5-4.

5.1.7 Location Surveying

Locations of soil, sediment, and surface water samples, temporary wells, and areas of interest will be surveyed utilizing a hand-held GPS unit. The coordinates established by the GPS unit will be uploaded into the GIS. Professional surveying may be utilized to support some of the activities in this RI Work Plan (e.g. delineating bounds of historical features).

5.1.8 UXO Screening

UXO consists of explosive ordnance that has been primed, fused, armed, or otherwise prepared for action; that has been fired, dropped, launched, projected, buried, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material; and that remains unexploded by malfunction, design, or any other cause. A review of the history of the OU-4 sites has been performed and the potential for UXO identified at the PDS, InDA, and CTA. At these sites, Tetra Tech will perform UXO avoidance practices, not UXO clearance or UXO identification. The Army will be responsible for the removal of any discovered UXO. Other procedures to be followed are provided in Appendix D of the *Draft Final Soil Data Collection Work Plan* (MKM, 2004a).

5.1.9 Permits and Clearances

Tetra Tech and its subcontractors will adhere to the IAAAP security regulations while working at the facility, in accordance with Section 3.2.12 of the FWWP.

5.2 DATA MANAGEMENT PLAN ADDENDUM

This section addends, where necessary, the DMP, Section 5 of the FWWP. All sections (including tables) of the FWWP DMP are incorporated by reference, except where noted and addended in the sections below.

5.2.1 Database Export Capabilities

According to the FWWP DMP, data exported from the database will be used for the Installation Restoration Data Management Information System (IRDMIS) submission. However, the IRDMIS is no longer an existing entity. The Environmental Restoration Information System (ERIS) has replace IRDMIS. Procedures for preparation of the ERIS submission will follow the criteria outlined in the USAEC's ERIS Users Manual.

5.3 HEALTH AND SAFETY PLAN ADDENDUM

This section addends, where necessary, the HSP, Section 6 of the FWWP. All sections of the FWWP HSP are incorporated by reference, except where noted and addended in the sections below.

5.3.1 Emergencies/Accidents

Emergency Telephone Numbers

- Ambulance: 911 (or 17 for on-post assistance)
- Police: 911 (or 17 for on-post assistance)
- Fire Department: 911 (or 17 for on-post assistance)
- Hospital: Great River Medical Center (319-753-3011)
- CHEMTREC: 1-800 424 9300
- Tetra Tech Project Manager (PM): Rick Arnseth 865-220-4721
- Tetra Tech Health and Safety Officer (HSO): To be determined
- Tetra Tech Site Manager (SM): To be determined
- Tetra Tech Site Safety Officer (SSO): To be determined
- IAAAP PM/Point of Contact (POC): Rodger Allison 319-753-7130

How to Report an Emergency

If an emergency occurs at the facility, the following procedures are to be initiated:

- Initiate an emergency notification by hand signals, voice commands, air horn, two-way radios, or cell phones to the SM/SSO. Describe to the SSO (who will serve as the Incident Coordinator) what has occurred and provide as many details as possible.

- Evacuate nonessential persons from the incident scene; engage initial response measures given the emergency type (i.e., spill response, fire extinguisher, first aid).

- If site personnel cannot control the incident through offensive and defensive measures, the SM and/or SSO will enact the emergency notification procedures to secure additional outside assistance by calling that appropriate emergency contact identified above.

- Give the emergency operator the location of the emergency and a brief description of what has occurred.

- Stay on the phone and follow the instructions given by the operator. The appropriate agency will be notified and dispatched.

- Call the on-site representative, the PM, and the HSO.

Hospital Route

Name of facility: Great River Medical Center
Telephone: 319-753-3011
Address: 1221 S. Gear Avenue, West Burlington, IA 52655

Specific Directions:
From Road A, travel through the front gate to Hwy 34. Turn right onto Hwy 34. Travel east of Hwy 34 for approximately 4 miles and exit at Gear Avenue. Turn right onto Gear Avenue and travel south less than 1 mile. The hospital is at the intersection of Gear Avenue and West Agency Road. The hospital route is provided in Figure 5-1.

5.4 IDW TRANSPORTATION AND DISPOSAL PLAN ADDENDUM

This section addends, where necessary, the IDW Transportation and Disposal Plan, Section 7 of the FWWP. All sections are incorporated by reference, except where noted and addended in the sections below.

5.4.1 Waste Storage and Disposal

Soil Cuttings

Soil cuttings generated during OU-4 RI activities will be transported to the IDA as specified in 7.3.1 of the FWWP. Soil cuttings will be placed into one of three areas, depending on the level of risk presented by the contaminants in the soil, as specified in the OU-1 ROD (USAEC, 1997).

- Temporary storage of contaminated soils with risk levels above 10^{-5} or that fail land disposal restriction (LDR) criteria, in the designated on-site CAMU (Trench 7) for remediation, then transport into the on-site soil repository (Trench 6).

- Permanent disposal of contaminated soils with risk levels between 10^{-3} and 10^{-1} in Trench 6.

- Permanent disposal of contaminated soils with risk levels below 10^{-6} and above the leaching RGs in Trench 6 or the on-site Inert Landfill.

Development and Purge Water and Decontamination Fluids

Development and purge water and decontamination fluids will be containerized as specified in Section 7.3.2 of the FWWP and transported to the IDA for discharge into the existing water treatment (granular activated carbon) system. The tanks will be emptied when full and at the end of each day. There is no concentration limit on water placed in the treatment system.

5.5 PROJECT MANAGEMENT PLAN ADDENDUM

This section addends, where necessary, the Project Management Plan, Section 8 of the FWWP. All sections are incorporated by reference, except where noted and addended in the sections below.

5.5.1 Project Organizational Chart

The lines of authority for the OU-4 RI are provided in Figure 5-2. The proper names of individuals are included where applicable.

5.5.2 Management Responsibilities

U. S. Army Management

Contracting Officer
The contracting officer (CO) is responsible for management of contractual aspects of the delivery order for USAEC. Contract modifications will be reviewed and approved by the CO prior to being issued to Tetra Tech.

Contracting Officer's Representative
The COR has the overall responsibility for technical performance of this delivery order.

Tetra Tech Management

Project Manager
The Tetra Tech PM is responsible for performance of technical aspects of work for Tetra Tech under this contract. The Tetra Tech PM has first line responsibility for managing Tetra Tech and subcontractor personnel in performing the work. This includes monitoring the project budget and schedule and ensuring the availability of necessary personnel, equipment, subcontractors, and services. The Tetra Tech PM will also supervise Tetra Tech and subcontractor personnel in performing the interim measure activities and will supervise preparation of follow-up reports.

Technical Lead
The Tetra Tech Technical Lead is responsible for performance of technical aspects of work for Tetra Tech under this contract, in conjunction with the PM. The Technical Lead has first line responsibility for managing the technical aspects of Tetra Tech and subcontractor personnel in performing the work, and ensuring the availability of necessary personnel, equipment, subcontractors, and services.

Data Manager
The Data Manager is responsible for coordinating sampling efforts with the contract laboratory, in conjunction with the Technical Lead and Field Manager (FM). The Data Manager will track the arrival of samples at the laboratory, ensure the correct analyses are conducted and the results

provided per the contract, coordinate with the data validator, and ensure Tetra Tech is billed by the laboratory for the correct number of samples and analyses.

5.5.3 Quality Assurance Responsibilities

Senior Technical Reviewer
The Senior Technical Reviewer, along with the PM, will be responsible for internal technical review of project work plans and reports.

QA/QC Manager
The QA/QC Manager for this project will be the Technical Lead, who will ensure that the RI Work Plan is being followed by the FM and support personnel. The QA/QC Manager will coordinate with the FM and Data Manager to ensure proper sampling techniques and analytical procedures are being followed. The QA/QC Manager will also ensure the quality of the RI report. Because of the limited nature of the sampling effort at each site, no field audit is planned.

5.5.4 Field Responsibilities

Field Manager
The FM is responsible for coordinating all on-site personnel, for providing technical assistance, for the completion of all sampling, boring, field, and chain-of-custody documentation. The FM will coordinate sampling activities and will ensure the availability and maintenance of all sampling materials/equipment. The FM will assume custody of all samples and ensure the proper handling and shipping of samples. The FM is also responsible for providing oversight and technical supervision of the subcontractors.

Site Safety Officer
The Site Safety Officer (SSO) for this project will be the FM. The SSO will monitor the activities in the field. Tetra Tech's Health and Safety Officer will manage preparation of any revisions or addenda to the SSHP for the specific needs of this project. The SSHP will specify procedures and requirements to ensure that an adequate level of personal protection exists for the anticipated hazards.

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TABLES

Table 1-1. Soil Comparison Criteria

Analyte	Analysis Group	CAS	Units	ROD Remediation Goals	Backgroud Soil	BERA Surface Soils	EPA Region 9 Industrial Soils
1,2-Dinitrobenzene	Explosives	528-29-0	mg/kg	-	-	-	61.561
1,3,5-Trinitrobenzene	Explosives	99-35-4	mg/kg	102	-	-	18468.189
1,3-Dinitrobenzene	Explosives	99-65-0	mg/kg	-	-	0.6	61.561
2,4,6-Trinitrotoluene	Explosives	118-96-7	mg/kg	47	-	27.5	57.457
2,4-Dinitrotoluene	Explosives	121-14-2	mg/kg	8.7	-	-	1231.213
2,6-Dinitrotoluene	Explosives	606-20-2	mg/kg	-	-	-	615.606
2-Nitrotoluene	Explosives	88-72-2	mg/kg	-	-	-	2.250
3-Nitrotoluene	Explosives	99-08-1	mg/kg	-	-	-	1000.000
3-Nitrotoluene	Explosives	99-08-1	mg/kg	-	-	-	1000.000
4-Nitroaniline	Explosives	100-01-6	mg/kg	-	-	-	82.081
4-Nitrotoluene	Explosives	99-99-0	mg/kg	-	-	-	30.436
HMX	Explosives	2691-41-0	mg/kg	51000	-	29.4	30780.315
Nitrobenzene	Explosives	98-95-3	mg/kg	-	-	-	102.935
Nitroglycerine	Explosives	55-63-0	mg/kg	-	-	-	123.121
RDX	Explosives	121-82-4	mg/kg	1.3	-	49.6	15.670
Tetryl	Explosives	479-45-8	mg/kg	-	-	-	6156.063
2,4-D	Herbicides	94-75-7	mg/kg	-	-	-	7683.333
3-Amino-2,5-Dichlorobenzoic Acid	Herbicides	133-90-4	mg/kg	-	-	-	9234.094
Atrazine	Herbicides	1912-24-9	mg/kg	-	-	-	7.764
Bromacil	Herbicides	314-40-9	mg/kg	-	-	-	-
Dacthal	Herbicides	1861-32-1	mg/kg	-	-	-	6156.063
Dalapon	Herbicides	75-99-0	mg/kg	-	-	-	18468.189
Dicamba	Herbicides	1918-00-9	mg/kg	-	-	-	18468.189
Dinoseb	Herbicides	88-85-7	mg/kg	-	-	-	615.606
Silvex	Herbicides	93-72-1	mg/kg	-	-	-	4924.850
Weedone / 2,4,5-T	Herbicides	93-76-5	mg/kg	-	-	-	6156.063
Ammonia nitrogen	Inorganics	7664-41-7	mg/kg	-	-	-	-
Cyanide	Inorganics	57-12-5	mg/kg	-	-	-	12313.101
Fluoride	Inorganics	16984-48-8	mg/kg	-	-	-	36938.395
Nitrate	Inorganics	14797-55-8	mg/kg	-	-	-	-
Nitrite	Inorganics	14797-65-0	mg/kg	-	-	-	-
Phosphorus	Inorganics	7723-14-0	mg/kg	-	-	-	20.440

Table 1-1. Soil Comparison Criteria

Analyte	Analysis Group	CAS	Units	ROD Remediation Goals	Backgroud Soil	BERA Surface Soils	EPA Region 9 Industrial Soils
Aluminum	Metals	7429-90-5	mg/kg	-	-	-	100000.000
Antimony	Metals	7440-36-0	mg/kg	816	31.39	16.4	408.800
Arsenic	Metals	7440-38-2	mg/kg	30	15.37	41.4	1.590
Barium	Metals	7440-39-3	mg/kg	-	368.37	259	66577.349
Beryllium	Metals	7440-41-7	mg/kg	5	-	-	1940.690
Boron	Metals	7440-42-8	mg/kg	1200	-	-	100000.000
Cadmium	Metals	7440-43-9	mg/kg	1000	0.97	30	451.413
Cobalt	Metals	7440-48-4	mg/kg	-	26.4	53.2	1921.353
Copper	Metals	7440-50-8	mg/kg	-	2444.73	703	40876.658
Hexavalent chromium	Metals	18540-29-9	mg/kg	-	-	-	64.045
Iron	Metals	7439-89-6	mg/kg	-	-	-	100000.000
Lead	Metals	7439-92-1	mg/kg	1000	1210.09	12100	800.000
Manganese	Metals	7439-96-5	mg/kg	-	1932.75	5110	19458.107
Mercury	Metals	7439-97-6	mg/kg	4	0.14	0.05	-
Molybdenum	Metals	7439-98-7	mg/kg	-	-	-	5109.948
Nickel	Metals	7440-02-0	mg/kg	20000	78.99	1040	20439.164
Selenium	Metals	7782-49-2	mg/kg	-	0.72	4.32	5109.948
Silver	Metals	7440-22-4	mg/kg	-	0.83	4.91	5109.948
Thallium	Metals	7440-28-0	mg/kg	143	19.05	0.97	67.452
Total Chromium (1:6 ratio Cr VI:Cr III)++	Metals	7440-47-3	mg/kg	-	-	-	448.317
Uranium	Metals	7440-61-1	mg/kg	-	-	-	204.400
Uranium	Metals	7440-61-1	mg/kg	-	-	-	-
Vanadium	Metals	7440-62-2	mg/kg	-	53.84	202	1021.998
Zinc	Metals	7440-66-6	mg/kg	-	-	-	100000.000
2-(2-N-BUTOXYETHOXY) ETHANOL	Organics	112-34-5	mg/kg	-	-	-	6155.638
2-Butoxyethanol	Organics	111-76-2	mg/kg	-	-	-	100000.000
Benzaldehyde	Organics	100-52-7	mg/kg	-	-	-	61560.629
Caprolactam	Organics	105-60-2	mg/kg	-	-	-	100000.000
Cyclohexanone	Organics	108-94-1	mg/kg	-	-	-	100000.000
Diisopropyl methylphosphonate	Organics	1445-75-6	mg/kg	-	-	-	49248.503
HXCDS	Organics	103-23-1	mg/kg	-	-	-	1436.415
Aroclor 1016	PCBs	12674-11-2	mg/kg	-	-	-	21.246

Table 1-1. Soil Comparison Criteria

Analyte	Analysis Group	CAS	Units	ROD Remediation Goals	Backgroud Soil	BERA Surface Soils	EPA Region 9 Industrial Soils
Aroclor 1254	PCBs	11097-69-1	mg/kg	-	-	2.21	0.744
Aroclor 1260	PCBs	11096-82-5	mg/kg	-	-	2.2	-
Total PCBs	PCBs	1336-36-3	mg/kg	-	-	-	-
2,4-DB	Pesticides	94-82-6	mg/kg	-	-	-	4924.850
Aldrin	Pesticides	309-00-2	mg/kg	-	-	-	0.101
alpha-BHC	Pesticides	319-84-6	mg/kg	-	-	-	0.359
beta-BHC	Pesticides	319-85-7	mg/kg	-	-	-	1.258
Chlordane	Pesticides	57-74-9	mg/kg	-	-	-	6.468
DDD	Pesticides	72-54-8	mg/kg	-	-	-	9.951
DDE	Pesticides	72-55-9	mg/kg	-	-	-	7.025
DDT	Pesticides	50-29-3	mg/kg	-	-	-	7.025
Dichlorvos	Pesticides	62-73-7	mg/kg	-	-	-	5.944
Dieldrin	Pesticides	60-57-1	mg/kg	-	-	0.07	0.108
Endrin	Pesticides	72-20-8	mg/kg	-	-	-	184.682
Heptachlor	Pesticides	76-44-8	mg/kg	-	-	-	0.383
Heptachlor epoxide	Pesticides	1024-57-3	mg/kg	-	-	-	0.189
Linedane	Pesticides	58-89-9	mg/kg	-	-	-	1.741
Malathion	Pesticides	121-75-5	mg/kg	-	-	-	12312.126
Methoxychlor	Pesticides	72-43-5	mg/kg	-	-	-	3078.031
Mirex	Pesticides	2385-85-5	mg/kg	-	-	-	0.958
Parathion	Pesticides	56-38-2	mg/kg	-	-	-	3693.638
Toxaphene	Pesticides	8001-35-2	mg/kg	-	-	-	1.567
Nitrocellulose	Propellant	9004-70-0	mg/kg	-	-	-	-
Nitroguanidine	Propellant	556-88-7	mg/kg	-	-	-	61560.629
Alpha gross	Radionuclides	12587-46-1	mg/kg	-	-	-	-
Beta gross	Radionuclides	12587-47-2	mg/kg	-	-	-	-
1,2,4-Trichlorobenzene	SVOCs	120-82-1	mg/kg	-	-	-	215.925
1,2-Dichlorobenzene	SVOCs	95-50-1	mg/kg	-	-	-	600.000
1,2-Diphenylhydrazine	SVOCs	122-66-7	mg/kg	-	-	-	2.155
1,3-Dichlorobenzene	SVOCs	541-73-1	mg/kg	-	-	-	600.000
1,4-Dichlorobenzene	SVOCs	106-46-7	mg/kg	-	-	-	7.867
2,3,4,6-Tetrachlorophenol	SVOCs	58-90-2	mg/kg	-	-	-	18468.189

Table 1-1. Soil Comparison Criteria

Analyte	Analysis Group	CAS	Units	ROD Remediation Goals	Backgroud Soil	BERA Surface Soils	EPA Region 9 Industrial Soils
2,4,5-Trichlorophenol	SVOCs	95-95-4	mg/kg	-	-	-	61560.629
2,4,6-Trichlorophenol	SVOCs	88-06-2	mg/kg	-	-	-	61.561
2,4-Dichlorophenol	SVOCs	120-83-2	mg/kg	-	-	-	1846.819
2,4-Dimethylphenol	SVOCs	105-67-9	mg/kg	-	-	-	12312.126
2,4-Dinitrophenol	SVOCs	51-28-5	mg/kg	-	-	-	1231.213
2-Chloronaphthalene	SVOCs	91-58-7	mg/kg	-	-	-	23382.732
2-Chlorophenol	SVOCs	95-57-8	mg/kg	-	-	-	235.768
2-Cresol	SVOCs	95-48-7	mg/kg	-	-	-	30780.315
2-Nitroaniline	SVOCs	88-74-4	mg/kg	-	-	-	1830.232
3,3-Dichlorobenzidine	SVOCs	91-94-1	mg/kg	-	-	-	3.830
3-Methylphenol	SVOCs	108-39-4	mg/kg	-	-	-	30780.315
3-Nitroaniline	SVOCs	99-09-2	mg/kg	-	-	-	82.081
4,6-Dinitro-2-cresol	SVOCs	534-52-1	mg/kg	-	-	-	61.561
4-Chloroaniline	SVOCs	106-47-8	mg/kg	-	-	-	2462.425
4-Methylphenol	SVOCs	106-44-5	mg/kg	-	-	-	3078.031
4-Nitrophenol	SVOCs	100-02-7	mg/kg	-	-	-	-
Acenaphthene	SVOCs	83-32-9	mg/kg	-	-	-	29219.327
Aniline	SVOCs	62-53-3	mg/kg	-	-	-	302.403
Anthracene	SVOCs	120-12-7	mg/kg	-	-	-	100000.000
Azobenzene	SVOCs	103-33-3	mg/kg	-	-	-	15.670
Benzidine	SVOCs	92-87-5	mg/kg	-	-	-	0.007
Benzo[a]anthracene	SVOCs	56-55-3	mg/kg	8.1	-	-	2.110
Benzo[a]pyrene	SVOCs	50-32-8	mg/kg	0.81	-	-	0.211
Benzo[b]fluoranthene	SVOCs	205-99-2	mg/kg	8.1	-	-	2.110
Benzo[g,h,i]perylene	SVOCs	191-24-2	mg/kg	-	-	-	-
Benzo[k]fluoranthene	SVOCs	207-08-9	mg/kg	-	-	-	21.096
Benzoic acid	SVOCs	65-85-0	mg/kg	-	-	-	100000.000
Benzyl alcohol	SVOCs	100-51-6	mg/kg	-	-	-	100000.000
Bis(2-chloroethyl) ether	SVOCs	111-44-4	mg/kg	-	-	-	0.575
Bis(2-chloroisopropyl) ether	SVOCs	108-60-1	mg/kg	-	-	-	7.352
Bis(2-ethylhexyl) phthalate	SVOCs	117-81-7	mg/kg	-	-	-	123.121
Butylbenzyl phthalate	SVOCs	85-68-7	mg/kg	-	-	-	100000.000

Table 1-1. Soil Comparison Criteria

Analyte	Analysis Group	CAS	Units	ROD Remediation Goals	Backgroud Soil	BERA Surface Soils	EPA Region 9 Industrial Soils
Carbazole	SVOCs	86-74-8	mg/kg	-	-	-	86.185
Chrysene	SVOCs	218-01-9	mg/kg	-	-	-	210.962
Dibenz[ah]anthracene	SVOCs	53-70-3	mg/kg	0.81	-	-	0.211
Dibenzofuran	SVOCs	132-64-9	mg/kg	-	-	-	1563.342
Dicyclopentadiene	SVOCs	77-73-6	mg/kg	-	-	-	1.780
Diethyl phthalate	SVOCs	84-66-2	mg/kg	-	-	-	100000.000
Dimethyl phthalate	SVOCs	131-11-3	mg/kg	-	-	-	100000.000
Di-n-butyl phthalate	SVOCs	84-74-2	mg/kg	-	-	-	61560.629
Di-n-octyl phthalate	SVOCs	117-84-0	mg/kg	-	-	-	24624.252
Fluoranthene	SVOCs	206-44-0	mg/kg	-	-	-	22000.353
Fluorene	SVOCs	86-73-7	mg/kg	-	-	-	26281.433
Hexachlorobenzene	SVOCs	118-74-1	mg/kg	-	-	-	1.077
achlorobutadiene / Hexachloro-1,3-butad	SVOCs	87-68-3	mg/kg	-	-	-	22.099
Hexachlorocyclopentadiene	SVOCs	77-47-4	mg/kg	-	-	-	3658.717
Hexachloroethane	SVOCs	67-72-1	mg/kg	-	-	-	123.121
Indeno[1,2,3-C,D]pyrene	SVOCs	193-39-5	mg/kg	-	-	-	2.110
Isophorone	SVOCs	78-59-1	mg/kg	-	-	-	511.979
Naphthalene	SVOCs	91-20-3	mg/kg	-	-	-	187.691
Nitrosodi-n-propylamine	SVOCs	621-64-7	mg/kg	-	-	-	0.246
N-Nitrosodimethylamine	SVOCs	62-75-9	mg/kg	-	-	-	0.034
N-Nitrosodiphenylamine	SVOCs	86-30-6	mg/kg	-	-	-	351.775
Pentachlorophenol	SVOCs	87-86-5	mg/kg	-	-	-	8.998
Phenanthrene	SVOCs	85-01-8	mg/kg	-	-	-	-
Phenol	SVOCs	108-95-2	mg/kg	-	-	-	100000.000
Pyrene	SVOCs	129-00-0	mg/kg	-	-	-	29126.201
1,1,1,2-Tetrachloroethane	VOCs	630-20-6	mg/kg	-	-	-	7.275
1,1,1-Trichloroethane	VOCs	71-55-6	mg/kg	-	-	-	1200.000
1,1,2,2-Tetrachloroethane	VOCs	79-34-5	mg/kg	-	-	-	0.929
2-Trichloro-1,2,2-trifluoroethane (Freon	VOCs	76-13-1	mg/kg	-	-	-	5600.000
1,1,2-Trichloroethane	VOCs	79-00-5	mg/kg	-	-	-	1.605
1,1-Dichloroethane	VOCs	75-34-3	mg/kg	-	-	-	1738.654
1,1-Dichloroethene	VOCs	75-35-4	mg/kg	-	-	-	413.325

Table 1-1. Soil Comparison Criteria

Analyte	Analysis Group	CAS	Units	ROD Remediation Goals	Backgroud Soil	BERA Surface Soils	EPA Region 9 Industrial Soils
1,2,3-Trichloropropane	VOCs	96-18-4	mg/kg	-	-	-	0.076
1,2,4-Trimethylbenzene	VOCs	95-63-6	mg/kg	-	-	-	170.272
1,2-Dibromo-3-chloropropane	VOCs	96-12-8	mg/kg	-	-	-	2.017
1,2-Dibromoethane	VOCs	106-93-4	mg/kg	-	-	-	0.073
1,2-Dichloroethane	VOCs	107-06-2	mg/kg	-	-	-	0.603
1,2-Dichloropropane	VOCs	78-87-5	mg/kg	-	-	-	0.742
1,3,5-Trimethylbenzene	VOCs	108-67-8	mg/kg	-	-	-	69.712
1,3-Dichloropropane	VOCs	142-28-9	mg/kg	-	-	-	360.521
1,3-Dichloropropene	VOCs	542-75-6	mg/kg	-	-	-	1.765
2-Butanone / Methyl Ethyl Ketone	VOCs	78-93-3	mg/kg	-	-	-	113264.388
2-Chlorotoluene	VOCs	95-49-8	mg/kg	-	-	-	560.010
4-Chlorotoluene	VOCs	106-43-4	mg/kg	-	-	-	-
ethyl-2-Pentanone / Methyl Isobutyl Ket	VOCs	108-10-1	mg/kg	-	-	-	47001.434
Acetone	VOCs	67-64-1	mg/kg	-	-	-	54320.986
Acetonitrile	VOCs	75-05-8	mg/kg	-	-	-	1817.648
Acrolein	VOCs	107-02-8	mg/kg	-	-	-	0.336
Acrylonitrile	VOCs	107-13-1	mg/kg	-	-	-	0.491
Benzene	VOCs	71-43-2	mg/kg	-	-	-	1.409
Bromobenzene	VOCs	108-86-1	mg/kg	-	-	-	92.152
Bromochloromethane	VOCs	74-97-5	mg/kg	-	-	-	-
Bromodichloromethane	VOCs	75-27-4	mg/kg	-	-	-	1.831
Bromoform	VOCs	75-25-2	mg/kg	-	-	-	218.200
Bromomethane	VOCs	74-83-9	mg/kg	-	-	-	13.078
Butylbenzene	VOCs	104-51-8	mg/kg	-	-	-	240.000
Carbon disulfide	VOCs	75-15-0	mg/kg	-	-	-	720.000
Carbon tetrachloride	VOCs	56-23-5	mg/kg	-	-	-	0.549
Chlorobenzene	VOCs	108-90-7	mg/kg	-	-	-	530.466
Chlorodifluoromethane	VOCs	75-45-6	mg/kg	-	-	-	340.000
Chloroethane	VOCs	75-00-3	mg/kg	-	-	-	6.485
Chloroethane	VOCs	75-00-3	mg/kg	-	-	-	6.485
Chloroform	VOCs	67-66-3	mg/kg	-	-	-	0.470
Chloromethane	VOCs	74-87-3	mg/kg	-	-	-	155.746

Table 1-1. Soil Comparison Criteria

Analyte	Analysis Group	CAS	Units	ROD Remediation Goals	Backgroud Soil	BERA Surface Soils	EPA Region 9 Industrial Soils
cis-1,2-Dichloroethene	VOCs	156-59-2	mg/kg	-	-	-	146.301
omochloromethane / Chlorodibromomet	VOCs	124-48-1	mg/kg	-	-	-	2.554
Dichlorodifluoromethane	VOCs	75-71-8	mg/kg	-	-	-	308.058
Diethyl ether	VOCs	60-29-7	mg/kg	-	-	-	1800.000
e oxide / Tetrahydrofuran / Tetramethyl	VOCs	109-99-9	mg/kg	-	-	-	21.152
Ethylbenzene	VOCs	100-41-4	mg/kg	-	-	-	395.000
Hexane	VOCs	110-54-3	mg/kg	-	-	-	110.000
Isopropylbenzene	VOCs	98-82-8	mg/kg	-	-	-	1977.451
Methylene bromide / Dibromomethane	VOCs	74-95-3	mg/kg	-	-	-	233.550
Methylene chloride	VOCs	75-09-2	mg/kg	-	-	-	20.527
Methyl-tert-butyl-ether (MTBE)	VOCs	1634-04-4	mg/kg	-	-	-	70.000
n-Propylbenzene / Propylbenzene	VOCs	103-65-1	mg/kg	-	-	-	240.000
Styrene	VOCs	100-42-5	mg/kg	-	-	-	1700.000
tert-Butylbenzene	VOCs	98-06-6	mg/kg	-	-	-	390.000
Tetrachloroethene	VOCs	127-18-4	mg/kg	-	-	-	1.309
Toluene	VOCs	108-88-3	mg/kg	-	-	-	520.000
Total Xylenes	VOCs	1330-20-7	mg/kg	-	-	-	420.000
trans-1,2-Dichloroethene	VOCs	156-60-5	mg/kg	-	-	-	234.823
Trichloroethene	VOCs	79-01-6	mg/kg	-	-	-	0.115
Trichlorofluoromethane	VOCs	75-69-4	mg/kg	-	-	-	2000.000
Vinyl Acetate	VOCs	108-05-4	mg/kg	-	-	-	1396.422
Vinyl chloride	VOCs	75-01-4	mg/kg	-	-	-	0.746
Vinyl chloride	VOCs	75-01-4	mg/kg	-	-	-	-

Table 1-2 Sediment Comparison Criteria

Analyte	Analysis Group	CAS	Units	BERA Sediment
1,2-Dinitrobenzene	Explosives	528-29-0	mg/kg	-
1,3,5-Trinitrobenzene	Explosives	99-35-4	mg/kg	-
1,3-Dinitrobenzene	Explosives	99-65-0	mg/kg	-
2,4,6-Trinitrotoluene	Explosives	118-96-7	mg/kg	13.6
2,4-Dinitrotoluene	Explosives	121-14-2	mg/kg	-
2,6-Dinitrotoluene	Explosives	606-20-2	mg/kg	-
2-Nitrotoluene	Explosives	88-72-2	mg/kg	-
3-Nitrotoluene	Explosives	99-08-1	mg/kg	-
3-Nitrotoluene	Explosives	99-08-1	mg/kg	-
4-Nitroaniline	Explosives	100-01-6	mg/kg	-
4-Nitrotoluene	Explosives	99-99-0	mg/kg	-
HMX	Explosives	2691-41-0	mg/kg	-
Nitrobenzene	Explosives	98-95-3	mg/kg	-
Nitroglycerine	Explosives	55-63-0	mg/kg	-
RDX	Explosives	121-82-4	mg/kg	23.4
Tetryl	Explosives	479-45-8	mg/kg	-
2,4-D	Herbicides	94-75-7	mg/kg	-
3-Amino-2,5-Dichlorobenzoic Acid	Herbicides	133-90-4	mg/kg	-
Atrazine	Herbicides	1912-24-9	mg/kg	-
Bromacil	Herbicides	314-40-9	mg/kg	-
Dacthal	Herbicides	1861-32-1	mg/kg	-
Dalapon	Herbicides	75-99-0	mg/kg	-
Dicamba	Herbicides	1918-00-9	mg/kg	-
Dinoseb	Herbicides	88-85-7	mg/kg	-
Silvex	Herbicides	93-72-1	mg/kg	-
Weedone / 2,4,5-T	Herbicides	93-76-5	mg/kg	-
Ammonia nitrogen	Inorganics	7664-41-7	mg/kg	-
Cyanide	Inorganics	57-12-5	mg/kg	-
Fluoride	Inorganics	16984-48-8	mg/kg	-
Nitrate	Inorganics	14797-55-8	mg/kg	-
Nitrite	Inorganics	14797-65-0	mg/kg	-
Phosphorus	Inorganics	7723-14-0	mg/kg	-
Aluminum	Metals	7429-90-5	mg/kg	61.8
Antimony	Metals	7440-36-0	mg/kg	-
Arsenic	Metals	7440-38-2	mg/kg	4.03
Barium	Metals	7440-39-3	mg/kg	63.4
Beryllium	Metals	7440-41-7	mg/kg	-
Boron	Metals	7440-42-8	mg/kg	-
Cadmium	Metals	7440-43-9	mg/kg	8.47
Cobalt	Metals	7440-48-4	mg/kg	-
Copper	Metals	7440-50-8	mg/kg	93.7
Hexavalent chromium	Metals	18540-29-9	mg/kg	-
Iron	Metals	7439-89-6	mg/kg	-
Lead	Metals	7439-92-1	mg/kg	-
Manganese	Metals	7439-96-5	mg/kg	-
Mercury	Metals	7439-97-6	mg/kg	0.96
Molybdenum	Metals	7439-98-7	mg/kg	-
Nickel	Metals	7440-02-0	mg/kg	511

Table 1-2 Sediment Comparison Criteria

Analyte	Analysis Group	CAS	Units	BERA Sediment
Selenium	Metals	7782-49-2	mg/kg	1.06
Silver	Metals	7440-22-4	mg/kg	1.2
Thallium	Metals	7440-28-0	mg/kg	0.237
Total Chromium (1:6 ratio Cr VI:Cr III)+++	Metals	7440-47-3	mg/kg	-
Uranium	Metals	7440-61-1	mg/kg	-
Uranium	Metals	7440-61-1	mg/kg	-
Vanadium	Metals	7440-62-2	mg/kg	-
Zinc	Metals	7440-66-6	mg/kg	1620
2-(2-N-BUTOXYETHOXY) ETHANOL	Organics	112-34-5	mg/kg	-
2-Butoxyethanol	Organics	111-76-2	mg/kg	-
Benzaldehyde	Organics	100-52-7	mg/kg	-
Caprolactam	Organics	105-60-2	mg/kg	-
Cyclohexanone	Organics	108-94-1	mg/kg	-
Diisopropyl methylphosphonate	Organics	1445-75-6	mg/kg	-
HXCDS	Organics	103-23-1	mg/kg	-
Aroclor 1016	PCBs	12674-11-2	mg/kg	-
Aroclor 1254	PCBs	11097-69-1	mg/kg	-
Aroclor 1260	PCBs	11096-82-5	mg/kg	-
Total PCBs	PCBs	1336-36-3	mg/kg	-
2,4-DB	Pesticides	94-82-6	mg/kg	-
Aldrin	Pesticides	309-00-2	mg/kg	-
alpha-BHC	Pesticides	319-84-6	mg/kg	-
beta-BHC	Pesticides	319-85-7	mg/kg	-
Chlordane	Pesticides	57-74-9	mg/kg	-
DDD	Pesticides	72-54-8	mg/kg	-
DDE	Pesticides	72-55-9	mg/kg	-
DDT	Pesticides	50-29-3	mg/kg	6.78
Dichlorvos	Pesticides	62-73-7	mg/kg	-
Dieldrin	Pesticides	60-57-1	mg/kg	-
Endrin	Pesticides	72-20-8	mg/kg	-
Heptachlor	Pesticides	76-44-8	mg/kg	-
Heptachlor epoxide	Pesticides	1024-57-3	mg/kg	-
Linedane	Pesticides	58-89-9	mg/kg	-
Malathion	Pesticides	121-75-5	mg/kg	-
Methoxychlor	Pesticides	72-43-5	mg/kg	-
Mirex	Pesticides	2385-85-5	mg/kg	-
Parathion	Pesticides	56-38-2	mg/kg	-
Toxaphene	Pesticides	8001-35-2	mg/kg	-
Nitrocellulose	Propellant	9004-70-0	mg/kg	-
Nitroguanidine	Propellant	556-88-7	mg/kg	-
Alpha gross	Radionuclides	12587-46-1	mg/kg	-
Beta gross	Radionuclides	12587-47-2	mg/kg	-
1,2,4-Trichlorobenzene	SVOCs	120-82-1	mg/kg	-
1,2-Dichlorobenzene	SVOCs	95-50-1	mg/kg	-
1,2-Diphenylhydrazine	SVOCs	122-66-7	mg/kg	-
1,3-Dichlorobenzene	SVOCs	541-73-1	mg/kg	-
1,4-Dichlorobenzene	SVOCs	106-46-7	mg/kg	-
2,3,4,6-Tetrachlorophenol	SVOCs	58-90-2	mg/kg	-

Table 1-2 Sediment Comparison Criteria

Analyte	Analysis Group	CAS	Units	BERA Sediment
2,4,5-Trichlorophenol	SVOCs	95-95-4	mg/kg	-
2,4,6-Trichlorophenol	SVOCs	88-06-2	mg/kg	-
2,4-Dichlorophenol	SVOCs	120-83-2	mg/kg	-
2,4-Dimethylphenol	SVOCs	105-67-9	mg/kg	-
2,4-Dinitrophenol	SVOCs	51-28-5	mg/kg	-
2-Chloronaphthalene	SVOCs	91-58-7	mg/kg	-
2-Chlorophenol	SVOCs	95-57-8	mg/kg	-
2-Cresol	SVOCs	95-48-7	mg/kg	-
2-Nitroaniline	SVOCs	88-74-4	mg/kg	-
3,3-Dichlorobenzidine	SVOCs	91-94-1	mg/kg	-
3-Methylphenol	SVOCs	108-39-4	mg/kg	-
3-Nitroaniline	SVOCs	99-09-2	mg/kg	-
4,6-Dinitro-2-cresol	SVOCs	534-52-1	mg/kg	-
4-Chloroaniline	SVOCs	106-47-8	mg/kg	-
4-Methylphenol	SVOCs	106-44-5	mg/kg	-
4-Nitrophenol	SVOCs	100-02-7	mg/kg	-
Acenaphthene	SVOCs	83-32-9	mg/kg	-
Aniline	SVOCs	62-53-3	mg/kg	-
Anthracene	SVOCs	120-12-7	mg/kg	-
Azobenzene	SVOCs	103-33-3	mg/kg	-
Benzidine	SVOCs	92-87-5	mg/kg	-
Benzo[a]anthracene	SVOCs	56-55-3	mg/kg	-
Benzo[a]pyrene	SVOCs	50-32-8	mg/kg	-
Benzo[b]fluoranthene	SVOCs	205-99-2	mg/kg	-
Benzo[g,h,i]perylene	SVOCs	191-24-2	mg/kg	-
Benzo[k]fluoranthene	SVOCs	207-08-9	mg/kg	-
Benzoic acid	SVOCs	65-85-0	mg/kg	-
Benzyl alcohol	SVOCs	100-51-6	mg/kg	-
Bis(2-chloroethyl) ether	SVOCs	111-44-4	mg/kg	-
Bis(2-chloroisopropyl) ether	SVOCs	108-60-1	mg/kg	-
Bis(2-ethylhexyl) phthalate	SVOCs	117-81-7	mg/kg	310
Butylbenzyl phthalate	SVOCs	85-68-7	mg/kg	-
Carbazole	SVOCs	86-74-8	mg/kg	-
Chrysene	SVOCs	218-01-9	mg/kg	-
Dibenz[ah]anthracene	SVOCs	53-70-3	mg/kg	-
Dibenzofuran	SVOCs	132-64-9	mg/kg	-
Dicyclopentadiene	SVOCs	77-73-6	mg/kg	-
Diethyl phthalate	SVOCs	84-66-2	mg/kg	-
Dimethyl phthalate	SVOCs	131-11-3	mg/kg	-
Di-n-butyl phthalate	SVOCs	84-74-2	mg/kg	-
Di-n-octyl phthalate	SVOCs	117-84-0	mg/kg	-
Fluoranthene	SVOCs	206-44-0	mg/kg	-
Fluorene	SVOCs	86-73-7	mg/kg	-
Hexachlorobenzene	SVOCs	118-74-1	mg/kg	-
Hexachlorobutadiene / Hexachloro-1,3-butadiene	SVOCs	87-68-3	mg/kg	-
Hexachlorocyclopentadiene	SVOCs	77-47-4	mg/kg	-
Hexachloroethane	SVOCs	67-72-1	mg/kg	-
Indeno[1,2,3-C,D]pyrene	SVOCs	193-39-5	mg/kg	-

Table 1-2 Sediment Comparison Criteria

Analyte	Analysis Group	CAS	Units	BERA Sediment
Isophorone	SVOCs	78-59-1	mg/kg	-
Naphthalene	SVOCs	91-20-3	mg/kg	-
Nitrosodi-n-propylamine	SVOCs	621-64-7	mg/kg	-
N-Nitrosodimethylamine	SVOCs	62-75-9	mg/kg	-
N-Nitrosodiphenylamine	SVOCs	86-30-6	mg/kg	-
Pentachlorophenol	SVOCs	87-86-5	mg/kg	-
Phenanthrene	SVOCs	85-01-8	mg/kg	-
Phenol	SVOCs	108-95-2	mg/kg	-
Pyrene	SVOCs	129-00-0	mg/kg	-
1,1,1,2-Tetrachloroethane	VOCs	630-20-6	mg/kg	-
1,1,1-Trichloroethane	VOCs	71-55-6	mg/kg	-
1,1,2,2-Tetrachloroethane	VOCs	79-34-5	mg/kg	-
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	VOCs	76-13-1	mg/kg	-
1,1,2-Trichloroethane	VOCs	79-00-5	mg/kg	-
1,1-Dichloroethane	VOCs	75-34-3	mg/kg	-
1,1-Dichloroethene	VOCs	75-35-4	mg/kg	-
1,2,3-Trichloropropane	VOCs	96-18-4	mg/kg	-
1,2,4-Trimethylbenzene	VOCs	95-63-6	mg/kg	-
1,2-Dibromo-3-chloropropane	VOCs	96-12-8	mg/kg	-
1,2-Dibromoethane	VOCs	106-93-4	mg/kg	-
1,2-Dichloroethane	VOCs	107-06-2	mg/kg	-
1,2-Dichloropropane	VOCs	78-87-5	mg/kg	-
1,3,5-Trimethylbenzene	VOCs	108-67-8	mg/kg	-
1,3-Dichloropropane	VOCs	142-28-9	mg/kg	-
1,3-Dichloropropene	VOCs	542-75-6	mg/kg	-
2-Butanone / Methyl Ethyl Ketone	VOCs	78-93-3	mg/kg	-
2-Chlorotoluene	VOCs	95-49-8	mg/kg	-
4-Chlorotoluene	VOCs	106-43-4	mg/kg	-
4-Methyl-2-Pentanone / Methyl Isobutyl Ketone	VOCs	108-10-1	mg/kg	-
Acetone	VOCs	67-64-1	mg/kg	-
Acetonitrile	VOCs	75-05-8	mg/kg	-
Acrolein	VOCs	107-02-8	mg/kg	-
Acrylonitrile	VOCs	107-13-1	mg/kg	-
Benzene	VOCs	71-43-2	mg/kg	-
Bromobenzene	VOCs	108-86-1	mg/kg	-
Bromochloromethane	VOCs	74-97-5	mg/kg	-
Bromodichloromethane	VOCs	75-27-4	mg/kg	-
Bromoform	VOCs	75-25-2	mg/kg	-
Bromomethane	VOCs	74-83-9	mg/kg	-
Butylbenzene	VOCs	104-51-8	mg/kg	-
Carbon disulfide	VOCs	75-15-0	mg/kg	-
Carbon tetrachloride	VOCs	56-23-5	mg/kg	-
Chlorobenzene	VOCs	108-90-7	mg/kg	-
Chlorodifluoromethane	VOCs	75-45-6	mg/kg	-
Chloroethane	VOCs	75-00-3	mg/kg	-
Chloroethane	VOCs	75-00-3	mg/kg	-
Chloroform	VOCs	67-66-3	mg/kg	-
Chloromethane	VOCs	74-87-3	mg/kg	-

Table 1-2 Sediment Comparison Criteria

Analyte	Analysis Group	CAS	Units	BERA Sediment
cis-1,2-Dichloroethene	VOCs	156-59-2	mg/kg	-
Dibromochloromethane / Chlorodibromomethane	VOCs	124-48-1	mg/kg	-
Dichlorodifluoromethane	VOCs	75-71-8	mg/kg	-
Diethyl ether	VOCs	60-29-7	mg/kg	-
Diethylene oxide / Tetrahydrofuran / Tetramethylene oxide	VOCs	109-99-9	mg/kg	-
Ethylbenzene	VOCs	100-41-4	mg/kg	-
Hexane	VOCs	110-54-3	mg/kg	-
Isopropylbenzene	VOCs	98-82-8	mg/kg	-
Methylene bromide / Dibromomethane	VOCs	74-95-3	mg/kg	-
Methylene chloride	VOCs	75-09-2	mg/kg	-
Methyl-tert-butyl-ether (MTBE)	VOCs	1634-04-4	mg/kg	-
n-Propylbenzene / Propylbenzene	VOCs	103-65-1	mg/kg	-
Styrene	VOCs	100-42-5	mg/kg	-
tert-Butylbenzene	VOCs	98-06-6	mg/kg	-
Tetrachloroethene	VOCs	127-18-4	mg/kg	-
Toluene	VOCs	108-88-3	mg/kg	-
Total Xylenes	VOCs	1330-20-7	mg/kg	-
trans-1,2-Dichloroethene	VOCs	156-60-5	mg/kg	-
Trichloroethene	VOCs	79-01-6	mg/kg	-
Trichlorofluoromethane	VOCs	75-69-4	mg/kg	-
Vinyl Acetate	VOCs	108-05-4	mg/kg	-
Vinyl chloride	VOCs	75-01-4	mg/kg	-
Vinyl chloride	VOCs	75-01-4	mg/kg	-

Table 1-3 Surface Water Comparion Criteria

Analyte	Analysis Group	CAS	Units	BERA Surface Water
1,2-Dinitrobenzene	Explosives	528-29-0	ug/L	-
1,3,5-Trinitrobenzene	Explosives	99-35-4	ug/L	-
1,3-Dinitrobenzene	Explosives	99-65-0	ug/L	-
2,4,6-Trinitrotoluene	Explosives	118-96-7	ug/L	1100
2,4-Dinitrotoluene	Explosives	121-14-2	ug/L	-
2,6-Dinitrotoluene	Explosives	606-20-2	ug/L	-
2-Nitrotoluene	Explosives	88-72-2	ug/L	-
3-Nitrotoluene	Explosives	99-08-1	ug/L	-
3-Nitrotoluene	Explosives	99-08-1	ug/L	-
4-Nitroaniline	Explosives	100-01-6	ug/L	-
4-Nitrotoluene	Explosives	99-99-0	ug/L	-
HMX	Explosives	2691-41-0	ug/L	-
Nitrobenzene	Explosives	98-95-3	ug/L	-
Nitroglycerine	Explosives	55-63-0	ug/L	-
RDX	Explosives	121-82-4	ug/L	12900
Tetryl	Explosives	479-45-8	ug/L	-
2,4-D	Herbicides	94-75-7	ug/L	-
3-Amino-2,5-Dichlorobenzoic Acid	Herbicides	133-90-4	ug/L	-
Atrazine	Herbicides	1912-24-9	ug/L	-
Bromacil	Herbicides	314-40-9	ug/L	-
Dacthal	Herbicides	1861-32-1	ug/L	-
Dalapon	Herbicides	75-99-0	ug/L	-
Dicamba	Herbicides	1918-00-9	ug/L	-
Dinoseb	Herbicides	88-85-7	ug/L	-
Silvex	Herbicides	93-72-1	ug/L	-
Weedone / 2,4,5-T	Herbicides	93-76-5	ug/L	-
Ammonia nitrogen	Inorganics	7664-41-7	ug/L	-
Cyanide	Inorganics	57-12-5	ug/L	-
Fluoride	Inorganics	16984-48-8	ug/L	-
Nitrate	Inorganics	14797-55-8	ug/L	-
Nitrite	Inorganics	14797-65-0	ug/L	-
Phosphorus	Inorganics	7723-14-0	ug/L	-
Aluminum	Metals	7429-90-5	ug/L	13.7
Antimony	Metals	7440-36-0	ug/L	-
Arsenic	Metals	7440-38-2	ug/L	49
Barium	Metals	7440-39-3	ug/L	280
Beryllium	Metals	7440-41-7	ug/L	-
Boron	Metals	7440-42-8	ug/L	-
Cadmium	Metals	7440-43-9	ug/L	8
Chromium	Metals	7440-47-3	ug/L	-
Cobalt	Metals	7440-48-4	ug/L	-
Copper	Metals	7440-50-8	ug/L	7.6
Hexavalent chromium	Metals	18540-29-9	ug/L	-
Iron	Metals	7439-89-6	ug/L	-
Lead	Metals	7439-92-1	ug/L	-
Manganese	Metals	7439-96-5	ug/L	-
Mercury	Metals	7439-97-6	ug/L	0.0084

Table 1-3 Surface Water Comparion Criteria

Analyte	Analysis Group	CAS	Units	BERA Surface Water
Molybdenum	Metals	7439-98-7	ug/L	-
Nickel	Metals	7440-02-0	ug/L	16200
Selenium	Metals	7782-49-2	ug/L	0.75
Silver	Metals	7440-22-4	ug/L	3.6
Thallium	Metals	7440-28-0	ug/L	0.014
Uranium	Metals	7440-61-1	ug/L	-
Uranium	Metals	7440-61-1	ug/L	-
Vanadium	Metals	7440-62-2	ug/L	-
Zinc	Metals	7440-66-6	ug/L	200
2-(2-N-BUTOXYETHOXY) ETHANOL	Organics	112-34-5	ug/L	-
2-Butoxyethanol	Organics	111-76-2	ug/L	-
Benzaldehyde	Organics	100-52-7	ug/L	-
Caprolactam	Organics	105-60-2	ug/L	-
Cyclohexanone	Organics	108-94-1	ug/L	-
Diisopropyl methylphosphonate	Organics	1445-75-6	ug/L	-
HXCDS	Organics	103-23-1	ug/L	-
Aroclor 1016	PCBs	12674-11-2	ug/L	-
Aroclor 1254	PCBs	11097-69-1	ug/L	-
Aroclor 1260	PCBs	11096-82-5	ug/L	-
Total PCBs	PCBs	1336-36-3	ug/L	-
2,4-DB	Pesticides	94-82-6	ug/L	-
Aldrin	Pesticides	309-00-2	ug/L	-
alpha-BHC	Pesticides	319-84-6	ug/L	-
beta-BHC	Pesticides	319-85-7	ug/L	-
Chlordane	Pesticides	57-74-9	ug/L	-
DDD	Pesticides	72-54-8	ug/L	-
DDE	Pesticides	72-55-9	ug/L	-
DDT	Pesticides	50-29-3	ug/L	0.0633
Dichlorvos	Pesticides	62-73-7	ug/L	-
Dieldrin	Pesticides	60-57-1	ug/L	-
Endrin	Pesticides	72-20-8	ug/L	-
Heptachlor	Pesticides	76-44-8	ug/L	-
Heptachlor epoxide	Pesticides	1024-57-3	ug/L	-
Linedane	Pesticides	58-89-9	ug/L	-
Malathion	Pesticides	121-75-5	ug/L	-
Methoxychlor	Pesticides	72-43-5	ug/L	-
Mirex	Pesticides	2385-85-5	ug/L	-
Parathion	Pesticides	56-38-2	ug/L	-
Toxaphene	Pesticides	8001-35-2	ug/L	-
Nitrocellulose	Propellant	9004-70-0	ug/L	-
Nitroguanidine	Propellant	556-88-7	ug/L	-
Alpha gross	Radionuclides	12587-46-1	ug/L	-
Beta gross	Radionuclides	12587-47-2	ug/L	-
1,2,4-Trichlorobenzene	SVOCs	120-82-1	ug/L	-
1,2-Dichlorobenzene	SVOCs	95-50-1	ug/L	-
1,2-Diphenylhydrazine	SVOCs	122-66-7	ug/L	-
1,3-Dichlorobenzene	SVOCs	541-73-1	ug/L	-

Table 1-3 Surface Water Comparion Criteria

Analyte	Analysis Group	CAS	Units	BERA Surface Water
1,4-Dichlorobenzene	SVOCs	106-46-7	ug/L	-
2,3,4,6-Tetrachlorophenol	SVOCs	58-90-2	ug/L	-
2,4,5-Trichlorophenol	SVOCs	95-95-4	ug/L	-
2,4,6-Trichlorophenol	SVOCs	88-06-2	ug/L	-
2,4-Dichlorophenol	SVOCs	120-83-2	ug/L	-
2,4-Dimethylphenol	SVOCs	105-67-9	ug/L	-
2,4-Dinitrophenol	SVOCs	51-28-5	ug/L	-
2-Chloronaphthalene	SVOCs	91-58-7	ug/L	-
2-Chlorophenol	SVOCs	95-57-8	ug/L	-
2-Cresol	SVOCs	95-48-7	ug/L	-
2-Nitroaniline	SVOCs	88-74-4	ug/L	-
3,3-Dichlorobenzidine	SVOCs	91-94-1	ug/L	-
3-Methylphenol	SVOCs	108-39-4	ug/L	-
3-Nitroaniline	SVOCs	99-09-2	ug/L	-
4,6-Dinitro-2-cresol	SVOCs	534-52-1	ug/L	-
4-Chloroaniline	SVOCs	106-47-8	ug/L	-
4-Methylphenol	SVOCs	106-44-5	ug/L	-
4-Nitrophenol	SVOCs	100-02-7	ug/L	-
Acenaphthene	SVOCs	83-32-9	ug/L	-
Aniline	SVOCs	62-53-3	ug/L	-
Anthracene	SVOCs	120-12-7	ug/L	-
Azobenzene	SVOCs	103-33-3	ug/L	-
Benzidine	SVOCs	92-87-5	ug/L	-
Benzo[a]anthracene	SVOCs	56-55-3	ug/L	-
Benzo[a]pyrene	SVOCs	50-32-8	ug/L	-
Benzo[b]fluoranthene	SVOCs	205-99-2	ug/L	-
Benzo[g,h,i]perylene	SVOCs	191-24-2	ug/L	-
Benzo[k]fluoranthene	SVOCs	207-08-9	ug/L	-
Benzoic acid	SVOCs	65-85-0	ug/L	-
Benzyl alcohol	SVOCs	100-51-6	ug/L	-
Bis(2-chloroethyl) ether	SVOCs	111-44-4	ug/L	-
Bis(2-chloroisopropyl) ether	SVOCs	108-60-1	ug/L	-
Bis(2-ethylhexyl) phthalate	SVOCs	117-81-7	ug/L	123
Butylbenzyl phthalate	SVOCs	85-68-7	ug/L	-
Carbazole	SVOCs	86-74-8	ug/L	-
Chrysene	SVOCs	218-01-9	ug/L	-
Dibenz[ah]anthracene	SVOCs	53-70-3	ug/L	-
Dibenzofuran	SVOCs	132-64-9	ug/L	-
Dicyclopentadiene	SVOCs	77-73-6	ug/L	-
Diethyl phthalate	SVOCs	84-66-2	ug/L	-
Dimethyl phthalate	SVOCs	131-11-3	ug/L	-
Di-n-butyl phthalate	SVOCs	84-74-2	ug/L	-
Di-n-octyl phthalate	SVOCs	117-84-0	ug/L	-
Fluoranthene	SVOCs	206-44-0	ug/L	-
Fluorene	SVOCs	86-73-7	ug/L	-
Hexachlorobenzene	SVOCs	118-74-1	ug/L	-
chlorobutadiene / Hexachloro-1,3-buta	SVOCs	87-68-3	ug/L	-

Table 1-3 Surface Water Comparion Criteria

Analyte	Analysis Group	CAS	Units	BERA Surface Water
Hexachlorocyclopentadiene	SVOCs	77-47-4	ug/L	-
Hexachloroethane	SVOCs	67-72-1	ug/L	-
Indeno[1,2,3-C,D]pyrene	SVOCs	193-39-5	ug/L	-
Isophorone	SVOCs	78-59-1	ug/L	-
Naphthalene	SVOCs	91-20-3	ug/L	-
Nitrosodi-n-propylamine	SVOCs	621-64-7	ug/L	-
N-Nitrosodimethylamine	SVOCs	62-75-9	ug/L	-
N-Nitrosodiphenylamine	SVOCs	86-30-6	ug/L	-
Pentachlorophenol	SVOCs	87-86-5	ug/L	-
Phenanthrene	SVOCs	85-01-8	ug/L	-
Phenol	SVOCs	108-95-2	ug/L	-
Pyrene	SVOCs	129-00-0	ug/L	-
1,1,1,2-Tetrachloroethane	VOCs	630-20-6	ug/L	-
1,1,1-Trichloroethane	VOCs	71-55-6	ug/L	-
1,1,2,2-Tetrachloroethane	VOCs	79-34-5	ug/L	-
?-Trichloro-1,2,2-trifluoroethane (Freon	VOCs	76-13-1	ug/L	-
1,1,2-Trichloroethane	VOCs	79-00-5	ug/L	-
1,1-Dichloroethane	VOCs	75-34-3	ug/L	-
1,1-Dichloroethene	VOCs	75-35-4	ug/L	-
1,2,3-Trichloropropane	VOCs	96-18-4	ug/L	-
1,2,4-Trimethylbenzene	VOCs	95-63-6	ug/L	-
1,2-Dibromo-3-chloropropane	VOCs	96-12-8	ug/L	-
1,2-Dibromoethane	VOCs	106-93-4	ug/L	-
1,2-Dichloroethane	VOCs	107-06-2	ug/L	-
1,2-Dichloropropane	VOCs	78-87-5	ug/L	-
1,3,5-Trimethylbenzene	VOCs	108-67-8	ug/L	-
1,3-Dichloropropane	VOCs	142-28-9	ug/L	-
1,3-Dichloropropene	VOCs	542-75-6	ug/L	-
2-Butanone / Methyl Ethyl Ketone	VOCs	78-93-3	ug/L	-
2-Chlorotoluene	VOCs	95-49-8	ug/L	-
4-Chlorotoluene	VOCs	106-43-4	ug/L	-
ethyl-2-Pentanone / Methyl Isobutyl Ke	VOCs	108-10-1	ug/L	-
Acetone	VOCs	67-64-1	ug/L	-
Acetonitrile	VOCs	75-05-8	ug/L	-
Acrolein	VOCs	107-02-8	ug/L	-
Acrylonitrile	VOCs	107-13-1	ug/L	-
Benzene	VOCs	71-43-2	ug/L	-
Bromobenzene	VOCs	108-86-1	ug/L	-
Bromochloromethane	VOCs	74-97-5	ug/L	-
Bromodichloromethane	VOCs	75-27-4	ug/L	-
Bromoform	VOCs	75-25-2	ug/L	-
Bromomethane	VOCs	74-83-9	ug/L	-
Butylbenzene	VOCs	104-51-8	ug/L	-
Carbon disulfide	VOCs	75-15-0	ug/L	-
Carbon tetrachloride	VOCs	56-23-5	ug/L	-
Chlorobenzene	VOCs	108-90-7	ug/L	-
Chlorodifluoromethane	VOCs	75-45-6	ug/L	-

Table 1-3 Surface Water Comparion Criteria

Analyte	Analysis Group	CAS	Units	BERA Surface Water
Chloroethane	VOCs	75-00-3	ug/L	-
Chloroethane	VOCs	75-00-3	ug/L	-
Chloroform	VOCs	67-66-3	ug/L	-
Chloromethane	VOCs	74-87-3	ug/L	-
cis-1,2-Dichloroethene	VOCs	156-59-2	ug/L	-
)mochloromethane / Chlorodibromomet	VOCs	124-48-1	ug/L	-
Dichlorodifluoromethane	VOCs	75-71-8	ug/L	-
Diethyl ether	VOCs	60-29-7	ug/L	-
e oxide / Tetrahydrofuran / Tetramethyl	VOCs	109-99-9	ug/L	-
Ethylbenzene	VOCs	100-41-4	ug/L	-
Hexane	VOCs	110-54-3	ug/L	-
Isopropylbenzene	VOCs	98-82-8	ug/L	-
Methylene bromide / Dibromomethane	VOCs	74-95-3	ug/L	-
Methylene chloride	VOCs	75-09-2	ug/L	-
Methyl-tert-butyl-ether (MTBE)	VOCs	1634-04-4	ug/L	-
n-Propylbenzene / Propylbenzene	VOCs	103-65-1	ug/L	-
Styrene	VOCs	100-42-5	ug/L	-
tert-Butylbenzene	VOCs	98-06-6	ug/L	-
Tetrachloroethene	VOCs	127-18-4	ug/L	-
Toluene	VOCs	108-88-3	ug/L	-
Total Xylenes	VOCs	1330-20-7	ug/L	-
trans-1,2-Dichloroethene	VOCs	156-60-5	ug/L	-
Trichloroethene	VOCs	79-01-6	ug/L	-
Trichlorofluoromethane	VOCs	75-69-4	ug/L	-
Vinyl Acetate	VOCs	108-05-4	ug/L	-
Vinyl chloride	VOCs	75-01-4	ug/L	-
Vinyl chloride	VOCs	75-01-4	ug/L	-

Table 1-4. Groundwater Comparison Criteria

Analyte	Analysis Group	CAS	Units	MCL	HAL	EPA Region 9
1,2-Dinitrobenzene	Explosives	528-29-0	ug/L	-	-	3.650
1,3,5-Trinitrobenzene	Explosives	99-35-4	ug/L	-	-	1094.999
1,3-Dinitrobenzene	Explosives	99-65-0	ug/L	-	1	3.650
2,4,6-Trinitrotoluene	Explosives	118-96-7	ug/L	-	2	2.241
2,4-Dinitrotoluene	Explosives	121-14-2	ug/L	-	-	73.000
2,6-Dinitrotoluene	Explosives	606-20-2	ug/L	-	-	36.500
2-Nitrotoluene	Explosives	88-72-2	ug/L	-	-	0.049
3-Nitrotoluene	Explosives	99-08-1	ug/L	-	-	121.667
3-Nitrotoluene	Explosives	99-08-1	ug/L	-	-	121.667
4-Nitroaniline	Explosives	100-01-6	ug/L	-	-	3.202
4-Nitrotoluene	Explosives	99-99-0	ug/L	-	-	0.659
HMX	Explosives	2691-41-0	ug/L	-	400	1824.997
Nitrobenzene	Explosives	98-95-3	ug/L	-	-	3.395
Nitroglycerine	Explosives	55-63-0	ug/L	-	5	4.802
RDX	Explosives	121-82-4	ug/L	-	2	0.611
Tetryl	Explosives	479-45-8	ug/L	-	-	365.000
2,4-D	Herbicides	94-75-7	ug/L	70	70	365.000
3-Amino-2,5-Dichlorobenzoic Acid	Herbicides	133-90-4	ug/L	-	100	547.500
Atrazine	Herbicides	1912-24-9	ug/L	3	-	0.303
Bromacil	Herbicides	314-40-9	ug/L	-	90	-
Dacthal	Herbicides	1861-32-1	ug/L	-	70	365.000
Dalapon	Herbicides	75-99-0	ug/L	200	200	1094.999
Dicamba	Herbicides	1918-00-9	ug/L	-	200	1094.999
Dinoseb	Herbicides	88-85-7	ug/L	7	7	36.500
Silvex	Herbicides	93-72-1	ug/L	50	50	292.000
Weedone / 2,4,5-T	Herbicides	93-76-5	ug/L	-	70	365.000
Ammonia nitrogen	Inorganics	7664-41-7	ug/L	-	30000	-
Cyanide	Inorganics	57-12-5	ug/L	-	-	729.999
Fluoride	Inorganics	16984-48-8	ug/L	-	-	2189.995
Nitrate	Inorganics	14797-55-8	ug/L	10000	-	10000.000
Nitrite	Inorganics	14797-65-0	ug/L	1000	-	1000.000
Phosphorus	Inorganics	7723-14-0	ug/L	-	0.1	0.730
Aluminum	Metals	7429-90-5	ug/L	-	-	36498.668
Antimony	Metals	7440-36-0	ug/L	6	6	14.600
Arsenic	Metals	7440-38-2	ug/L	10	-	0.045
Barium	Metals	7440-39-3	ug/L	2000	2000	2554.993
Beryllium	Metals	7440-41-7	ug/L	4	-	73.000
Boron	Metals	7440-42-8	ug/L	-	600	7300.000
Cadmium	Metals	7440-43-9	ug/L	5	5	18.250
Cobalt	Metals	7440-48-4	ug/L	-	-	729.999
Copper	Metals	7440-50-8	ug/L	-	-	1459.998
Hexavalent chromium	Metals	18540-29-9	ug/L	-	-	109.500
Iron	Metals	7439-89-6	ug/L	-	-	10949.880
Lead	Metals	7439-92-1	ug/L	-	-	-
Manganese	Metals	7439-96-5	ug/L	-	300	875.999
Mercury	Metals	7439-97-6	ug/L	-	-	-
Molybdenum	Metals	7439-98-7	ug/L	-	40	182.500
Nickel	Metals	7440-02-0	ug/L	-	100	729.999
Selenium	Metals	7782-49-2	ug/L	50	50	182.500

Table 1-4. Groundwater Comparison Criteria

Analyte	Analysis Group	CAS	Units	MCL	HAL	EPA Region 9
Silver	Metals	7440-22-4	ug/L	-	100	182.500
Thallium	Metals	7440-28-0	ug/L	0.5	0.5	2.409
tal Chromium (1:6 ratio Cr VI:Cr III)+	Metals	7440-47-3	ug/L	100	100	-
Uranium	Metals	7440-61-1	ug/L	-	-	7.300
Uranium	Metals	7440-61-1	ug/L	30	-	-
Vanadium	Metals	7440-62-2	ug/L	-	-	36.500
Zinc	Metals	7440-66-6	ug/L	-	2000	10949.880
2-(2-N-BUTOXYETHOXY) ETHANOL	Organics	112-34-5	ug/L	-	-	365.000
2-Butoxyethanol	Organics	111-76-2	ug/L	-	-	18249.667
Benzaldehyde	Organics	100-52-7	ug/L	-	-	3649.987
Caprolactam	Organics	105-60-2	ug/L	-	-	18249.667
Cyclohexanone	Organics	108-94-1	ug/L	-	-	182466.700
Diisopropyl methylphosphonate	Organics	1445-75-6	ug/L	-	600	2919.991
HXCDS	Organics	103-23-1	ug/L	400	400	56.026
Aroclor 1016	PCBs	12674-11-2	ug/L	-	-	0.960
Aroclor 1254	PCBs	11097-69-1	ug/L	-	-	0.034
Aroclor 1260	PCBs	11096-82-5	ug/L	-	-	-
Total PCBs	PCBs	1336-36-3	ug/L	0.5	-	-
2,4-DB	Pesticides	94-82-6	ug/L	-	-	292.000
Aldrin	Pesticides	309-00-2	ug/L	-	-	0.004
alpha-BHC	Pesticides	319-84-6	ug/L	-	-	0.011
beta-BHC	Pesticides	319-85-7	ug/L	-	-	0.037
Chlordane	Pesticides	57-74-9	ug/L	2	-	0.192
DDD	Pesticides	72-54-8	ug/L	-	-	0.280
DDE	Pesticides	72-55-9	ug/L	-	-	0.198
DDT	Pesticides	50-29-3	ug/L	-	-	0.198
Dichlorvos	Pesticides	62-73-7	ug/L	-	-	0.232
Dieldrin	Pesticides	60-57-1	ug/L	-	-	0.004
Endrin	Pesticides	72-20-8	ug/L	2	2	10.950
Heptachlor	Pesticides	76-44-8	ug/L	0.4	-	0.015
Heptachlor epoxide	Pesticides	1024-57-3	ug/L	0.2	-	0.007
Linedane	Pesticides	58-89-9	ug/L	0.2	0.2	0.052
Malathion	Pesticides	121-75-5	ug/L	-	100	729.999
Methoxychlor	Pesticides	72-43-5	ug/L	40	40	182.500
Mirex	Pesticides	2385-85-5	ug/L	-	-	0.037
Parathion	Pesticides	56-38-2	ug/L	-	-	219.000
Toxaphene	Pesticides	8001-35-2	ug/L	3	-	0.061
Nitrocellulose	Propellant	9004-70-0	ug/L	-	-	-
Nitroguanidine	Propellant	556-88-7	ug/L	-	700	3649.987
Alpha gross	Radionuclides	12587-46-1	ug/L	15	15	-
Beta gross	Radionuclides	12587-47-2	ug/L	4	4	-
1,2,4-Trichlorobenzene	SVOCs	120-82-1	ug/L	70	70	7.157
1,2-Dichlorobenzene	SVOCs	95-50-1	ug/L	600	600	370.141
1,2-Diphenylhydrazine	SVOCs	122-66-7	ug/L	-	-	0.084
1,3-Dichlorobenzene	SVOCs	541-73-1	ug/L	-	600	182.500
1,4-Dichlorobenzene	SVOCs	106-46-7	ug/L	75	75	0.502
2,3,4,6-Tetrachlorophenol	SVOCs	58-90-2	ug/L	-	-	1094.999
2,4,5-Trichlorophenol	SVOCs	95-95-4	ug/L	-	-	3649.987
2,4,6-Trichlorophenol	SVOCs	88-06-2	ug/L	-	-	3.650

Table 1-4. Groundwater Comparison Criteria

Analyte	Analysis Group	CAS	Units	MCL	HAL	EPA Region 9
2,4-Dichlorophenol	SVOCs	120-83-2	ug/L	-	20	109.500
2,4-Dimethylphenol	SVOCs	105-67-9	ug/L	-	-	729.999
2,4-Dinitrophenol	SVOCs	51-28-5	ug/L	-	-	73.000
2-Chloronaphthalene	SVOCs	91-58-7	ug/L	-	-	486.667
2-Chlorophenol	SVOCs	95-57-8	ug/L	-	40	30.417
2-Cresol	SVOCs	95-48-7	ug/L	-	-	1824.997
2-Nitroaniline	SVOCs	88-74-4	ug/L	-	-	109.500
3,3-Dichlorobenzidine	SVOCs	91-94-1	ug/L	-	-	0.149
3-Methylphenol	SVOCs	108-39-4	ug/L	-	-	1824.997
3-Nitroaniline	SVOCs	99-09-2	ug/L	-	-	3.202
4,6-Dinitro-2-cresol	SVOCs	534-52-1	ug/L	-	-	3.650
4-Chloroaniline	SVOCs	106-47-8	ug/L	-	-	146.000
4-Methylphenol	SVOCs	106-44-5	ug/L	-	-	182.500
4-Nitrophenol	SVOCs	100-02-7	ug/L	-	60	-
Acenaphthene	SVOCs	83-32-9	ug/L	-	-	365.000
Aniline	SVOCs	62-53-3	ug/L	-	-	11.795
Anthracene	SVOCs	120-12-7	ug/L	-	-	1825.000
Azobenzene	SVOCs	103-33-3	ug/L	-	-	0.611
Benzidine	SVOCs	92-87-5	ug/L	-	-	0.000
Benzo[a]anthracene	SVOCs	56-55-3	ug/L	-	-	0.092
Benzo[a]pyrene	SVOCs	50-32-8	ug/L	0.2	-	0.009
Benzo[b]fluoranthene	SVOCs	205-99-2	ug/L	-	-	0.092
Benzo[g,h,i]perylene	SVOCs	191-24-2	ug/L	-	-	-
Benzo[k]fluoranthene	SVOCs	207-08-9	ug/L	-	-	0.921
Benzoic acid	SVOCs	65-85-0	ug/L	-	-	145978.687
Benzyl alcohol	SVOCs	100-51-6	ug/L	-	-	10949.880
Bis(2-chloroethyl) ether	SVOCs	111-44-4	ug/L	-	-	0.010
Bis(2-chloroisopropyl) ether	SVOCs	108-60-1	ug/L	-	-	0.274
Bis(2-ethylhexyl) phthalate	SVOCs	117-81-7	ug/L	6	-	4.802
Butylbenzyl phthalate	SVOCs	85-68-7	ug/L	-	-	7299.947
Carbazole	SVOCs	86-74-8	ug/L	-	-	3.362
Chrysene	SVOCs	218-01-9	ug/L	-	-	9.210
Dibenz[ah]anthracene	SVOCs	53-70-3	ug/L	-	-	0.009
Dibenzofuran	SVOCs	132-64-9	ug/L	-	-	12.167
Dicyclopentadiene	SVOCs	77-73-6	ug/L	-	-	0.417
Diethyl phthalate	SVOCs	84-66-2	ug/L	-	-	29199.147
Dimethyl phthalate	SVOCs	131-11-3	ug/L	-	-	364866.824
Di-n-butyl phthalate	SVOCs	84-74-2	ug/L	-	-	3649.987
Di-n-octyl phthalate	SVOCs	117-84-0	ug/L	-	-	1459.998
Fluoranthene	SVOCs	206-44-0	ug/L	-	-	1459.998
Fluorene	SVOCs	86-73-7	ug/L	-	-	243.333
Hexachlorobenzene	SVOCs	118-74-1	ug/L	1	-	0.042
hlorobutadiene / Hexachloro-1,3-buta	SVOCs	87-68-3	ug/L	-	1	0.862
Hexachlorocyclopentadiene	SVOCs	77-47-4	ug/L	50	-	219.000
Hexachloroethane	SVOCs	67-72-1	ug/L	-	1	4.802
Indeno[1,2,3-C,D]pyrene	SVOCs	193-39-5	ug/L	-	-	0.092
Isophorone	SVOCs	78-59-1	ug/L	-	100	70.770
Naphthalene	SVOCs	91-20-3	ug/L	-	100	6.203
Nitrosodi-n-propylamine	SVOCs	621-64-7	ug/L	-	-	0.010

Table 1-4. Groundwater Comparison Criteria

Analyte	Analysis Group	CAS	Units	MCL	HAL	EPA Region 9
N-Nitrosodimethylamine	SVOCs	62-75-9	ug/L	-	-	0.001
N-Nitrosodiphenylamine	SVOCs	86-30-6	ug/L	-	-	13.721
Pentachlorophenol	SVOCs	87-86-5	ug/L	1	-	0.560
Phenanthrene	SVOCs	85-01-8	ug/L	-	-	-
Phenol	SVOCs	108-95-2	ug/L	-	2000	10949.880
Pyrene	SVOCs	129-00-0	ug/L	-	-	182.500
1,1,1,2-Tetrachloroethane	VOCs	630-20-6	ug/L	-	70	0.432
1,1,1-Trichloroethane	VOCs	71-55-6	ug/L	200	200	3171.724
1,1,2,2-Tetrachloroethane	VOCs	79-34-5	ug/L	-	0.3	0.055
-Trichloro-1,2,2-trifluoroethane (Freon	VOCs	76-13-1	ug/L	-	-	59179.857
1,1,2-Trichloroethane	VOCs	79-00-5	ug/L	5	3	0.200
1,1-Dichloroethane	VOCs	75-34-3	ug/L	-	-	811.111
1,1-Dichloroethene	VOCs	75-35-4	ug/L	7	-	338.844
1,2,3-Trichloropropane	VOCs	96-18-4	ug/L	-	40	0.006
1,2,4-Trimethylbenzene	VOCs	95-63-6	ug/L	-	-	12.326
1,2-Dibromo-3-chloropropane	VOCs	96-12-8	ug/L	0.2	-	0.048
1,2-Dibromoethane	VOCs	106-93-4	ug/L	0.05	-	0.006
1,2-Dichloroethane	VOCs	107-06-2	ug/L	5	-	0.123
1,2-Dichloropropane	VOCs	78-87-5	ug/L	5	-	0.165
1,3,5-Trimethylbenzene	VOCs	108-67-8	ug/L	-	-	12.326
1,3-Dichloropropane	VOCs	142-28-9	ug/L	-	-	121.667
1,3-Dichloropropene	VOCs	542-75-6	ug/L	-	-	0.395
2-Butanone / Methyl Ethyl Ketone	VOCs	78-93-3	ug/L	-	4000	6968.182
2-Chlorotoluene	VOCs	95-49-8	ug/L	-	100	121.667
4-Chlorotoluene	VOCs	106-43-4	ug/L	-	100	-
thyl-2-Pentanone / Methyl Isobutyl Ke	VOCs	108-10-1	ug/L	-	-	1993.016
Acetone	VOCs	67-64-1	ug/L	-	-	5475.000
Acetonitrile	VOCs	75-05-8	ug/L	-	-	103.417
Acrolein	VOCs	107-02-8	ug/L	-	-	0.042
Acrylonitrile	VOCs	107-13-1	ug/L	-	-	0.039
Benzene	VOCs	71-43-2	ug/L	5	-	0.354
Bromobenzene	VOCs	108-86-1	ug/L	-	-	20.297
Bromochloromethane	VOCs	74-97-5	ug/L	-	90	-
Bromodichloromethane	VOCs	75-27-4	ug/L	80	-	0.181
Bromoform	VOCs	75-25-2	ug/L	80	-	8.510
Bromomethane	VOCs	74-83-9	ug/L	-	10	8.661
Butylbenzene	VOCs	104-51-8	ug/L	-	-	243.333
Carbon disulfide	VOCs	75-15-0	ug/L	-	-	1042.857
Carbon tetrachloride	VOCs	56-23-5	ug/L	5	-	0.171
Chlorobenzene	VOCs	108-90-7	ug/L	100	100	106.068
Chlorodifluoromethane	VOCs	75-45-6	ug/L	-	-	85166.667
Chloroethane	VOCs	75-00-3	ug/L	-	-	4.637
Chloroethane	VOCs	75-00-3	ug/L	-	-	4.637
Chloroform	VOCs	67-66-3	ug/L	80	70	0.166
Chloromethane	VOCs	74-87-3	ug/L	-	30	158.167
cis-1,2-Dichloroethene	VOCs	156-59-2	ug/L	70	70	60.833
mochloromethane / Chlorodibromome	VOCs	124-48-1	ug/L	80	60	0.133
Dichlorodifluoromethane	VOCs	75-71-8	ug/L	-	1000	394.595
Diethyl ether	VOCs	60-29-7	ug/L	-	-	1216.667

Table 1-4. Groundwater Comparison Criteria

Analyte	Analysis Group	CAS	Units	MCL	HAL	EPA Region 9
oxide / Tetrahydrofuran / Tetrameth	VOCs	109-99-9	ug/L	-	-	1.616
Ethylbenzene	VOCs	100-41-4	ug/L	700	700	1339.873
Hexane	VOCs	110-54-3	ug/L	-	-	416.710
Isopropylbenzene	VOCs	98-82-8	ug/L	-	-	658.197
Methylene bromide / Dibromomethan	VOCs	74-95-3	ug/L	-	-	60.833
Methylene chloride	VOCs	75-09-2	ug/L	5	-	4.276
Methyl-tert-butyl-ether (MTBE)	VOCs	1634-04-4	ug/L	-	-	11.000
n-Propylbenzene / Propylbenzene	VOCs	103-65-1	ug/L	-	-	243.333
Styrene	VOCs	100-42-5	ug/L	100	100	1641.085
tert-Butylbenzene	VOCs	98-06-6	ug/L	-	-	243.333
Tetrachloroethene	VOCs	127-18-4	ug/L	5	10	0.104
Toluene	VOCs	108-88-3	ug/L	1000	1000	723.423
Total Xylenes	VOCs	1330-20-7	ug/L	10000	-	205.734
trans-1,2-Dichloroethene	VOCs	156-60-5	ug/L	100	100	121.667
Trichloroethene	VOCs	79-01-6	ug/L	5	-	0.028
Trichlorofluoromethane	VOCs	75-69-4	ug/L	-	2000	1288.235
Vinyl Acetate	VOCs	108-05-4	ug/L	-	-	412.429
Vinyl chloride	VOCs	75-01-4	ug/L	2	-	-
Vinyl chloride	VOCs	75-01-4	ug/L	-	-	0.020

Table 3-1. Incendiary Disposal Area--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round
					Fall 2004
IDA-SB-001-0001-SO	Arsenic	1 - 4 ft	1.59	b	**8.7**
	Barium		259	b	220
	Beryllium		n/a	n/a	0.91
	Boron		n/a	n/a	2.9
	Chromium		n/a	n/a	19
	Lead		12100	b	17
	Mercury		0.05	b	0.048
	Phosphorus		n/a	n/a	2.2
IDA-SB-002-0001-SO	Arsenic	1 - 4 ft	1.59	b	**9.4**
	Barium		259	b	140
	Beryllium		n/a	n/a	0.87
	Boron		n/a	n/a	4
	Chromium		n/a	n/a	17
	Lead		12100	b	16
	Mercury		0.05	b	0.044
	Phosphorus		n/a	n/a	2.3
IDA-SB-003-0001-SO	Arsenic	1 - 4 ft	1.59	b	**7.2**
	Barium		259	b	140
	Beryllium		n/a	n/a	0.83
	Boron		n/a	n/a	3.9
	Chromium		n/a	n/a	18
	Lead		12100	b	11
	Mercury		0.05	b	0.032
IDA-SS-001-0001-SO	Arsenic	0 - 1 ft	41.4	a	8.2
	Barium		66577	b	150
	Beryllium		1941	b	0.89
	Boron		100000	b	3.3
	Chromium		448	b	19
	Lead		12100	a	13
	Mercury		0.05	a	0.042
	Phosphorus		20.44	b	**41**
IDA-SS-002-0001-SO	Arsenic	0 - 1 ft	41.4	a	5.8
	Barium		66577	b	120
	Beryllium		1941	b	0.75
	Boron		100000	b	2.9
	Chromium		448	b	16
	Lead		12100	a	9.5
	Mercury		0.05	a	0.03
	Phosphorus		20.44	b	7.2

Table 3-1. Incendiary Disposal Area--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round
					Fall 2004
IDA-SS-003-0001-SO	Arsenic	0 - 1 ft	41.4	a	10
	Barium		66577	b	170
	Beryllium		1941	b	0.89
	Boron		100000	b	6.2
	Cadmium		0.97	c	**1.2**
	Chromium		448	b	18
	Lead		12100	a	79
	Mercury		0.05	a	**0.061**
IDA-SS-004-0001-SO	Arsenic	0 - 1 ft	41.4	a	9.8
	Barium		66577	b	65
	Beryllium		1941	b	0.82
	Boron		100000	b	3.6
	Chromium		448	b	17
	Lead		12100	a	32
	Mercury		0.05	a	0.028
IDA-SS-005-0001-SO	Arsenic	0 - 1 ft	41.4	a	14.07
	Barium		66577	b	51
	Beryllium		1941	b	0.77
	Boron		100000	b	3.7
	Chromium		448	b	18
	Lead		1000	e	**3231.01**
	Mercury		0.05	a	**0.056**
IDA-SS-006-0001-SO	Arsenic	0 - 1 ft	15.37	c	**16**
	Barium		66577	b	55
	Beryllium		1941	b	0.9
	Boron		100000	b	3.8
	Chromium		448	b	50
	Lead		12100	a	340
	Mercury		0.05	a	**0.051**
	Phosphorus		20.44	b	2.3
IDA-SS-007-0001-SO	Arsenic	0 - 1 ft	41.4	a	4.6
	Barium		66577	b	62
	Beryllium		1941	b	0.53
	Boron		100000	b	2.5
	Chromium		448	b	11
	Lead		12100	a	89
	Mercury		0.05	a	0.021
	Phosphorus		20.44	b	**72**

Table 3-1. Incendiary Disposal Area--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round
					Fall 2004
IDA-SSI-001-0001-SO	Arsenic	0 - 1 ft	41.4	a	5.8
	Barium		66577	b	120
	Beryllium		1941	b	0.43
	Boron		100000	b	1.8
	Cadmium		451	b	0.17
	Chromium		448	b	14
	Lead		12100	a	15
	Mercury		0.05	a	0.046
	Phosphorus		20.44	b	9
	Selenium		5110	b	0.53
IDA-SSI-002-0001-SO	Arsenic	0 - 1 ft	41.4	a	7.3
	Barium		66577	b	150
	Beryllium		1941	b	0.45
	Boron		100000	b	2.5
	Cadmium		451	b	0.2
	Chromium		448	b	15
	Lead		12100	a	21
	Mercury		0.05	a	**0.086**
	Phosphorus		20.44	b	10
	Selenium		5110	b	0.52
IDA-SSI-003-0001-SO	Arsenic	0 - 1 ft	41.4	a	5.4
	Barium		66577	b	67
	Beryllium		1941	b	0.43
	Boron		100000	b	1.3
	Cadmium		451	b	0.15
	Chromium		448	b	15
	Lead		12100	a	76
	Mercury		0.14	c	**0.42**
	Phosphorus		20.44	b	**43**
	Selenium		0.72	c	**0.9**
IDA-SSI-004-0001-SO	Arsenic	0 - 1 ft	41.4	a	4.1
	Barium		66577	b	62
	Beryllium		1941	b	0.4
	Boron		100000	b	1.2
	Cadmium		451	b	0.094
	Chromium		448	b	12
	Lead		12100	a	16
	Mercury		0.05	a	0.044
	Phosphorus		20.44	b	8.8
	Selenium		5110	b	0.68

Table 3-1. Incendiary Disposal Area--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round
					Fall 2004
IDA-SSI-005-0001-SO	Arsenic	0 - 1 ft	41.4	a	5.8
	Barium		66577	b	47
	Beryllium		1941	b	0.52
	Boron		100000	b	1.1
	Chromium		448	b	19
	Lead		12100	a	210
	Mercury		0.05	a	**0.053**
	Phosphorus		20.44	b	15
	Selenium		0.72	c	**0.91**
IDA-SSI-006-0001-SO	Arsenic	0 - 1 ft	41.4	a	5.3
	Barium		66577	b	49
	Beryllium		1941	b	0.46
	Boron		100000	b	1.3
	Cadmium		451	b	0.089
	Chromium		448	b	15
	Lead		12100	a	180
	Mercury		0.05	a	0.044
	Phosphorus		20.44	b	**41**
	Selenium		0.72	c	**0.85**

Notes:
(a) - *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e)
n/a - no comparison value available
-- not sampled
bold exceeds applicable RG

Table 3-2. Incendiary Disposal Area--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round			
				Summer 1991	Spring/Summer 1992	Fall 2000	Fall 2004
13SD0101	Arsenic	4.03	a	**4.95**	**--**	**--**	**--**
	Barium	63.4	a	**105**	**--**	**--**	**--**
	Beryllium	n/a	n/a	0.612	--	--	--
	Chromium	n/a	n/a	33.1	--	--	--
	Copper	93.7	a	33.2	**--**	**--**	**--**
	Lead	n/a	n/a	88	--	--	--
	Mercury	0.96	a	0.407	**--**	**--**	**--**
	Nickel	511	a	18.3	**--**	**--**	**--**
	Zinc	1620	a	59.8	**--**	**--**	**--**
13SD0201	Arsenic	4.03	a	**5.14**	**--**	**--**	**--**
	Barium	63.4	a	**142**	**--**	**--**	**--**
	Chromium	n/a	n/a	31.7	--	--	--
	Copper	93.7	a	24.8	**--**	**--**	**--**
	Lead	n/a	n/a	90	--	--	--
	Mercury	0.96	a	0.175	**--**	**--**	**--**
	Nickel	511	a	19.2	**--**	**--**	**--**
	Zinc	1620	a	73.6	**--**	**--**	**--**
IDA-SD-001-0001-SD	Arsenic	4.03	a	**--**	**--**	**--**	3.4
	Barium	63.4	a	**--**	**--**	**--**	45
	Beryllium	n/a	n/a	--	--	--	0.26
	Boron	n/a	n/a	--	--	--	1.3
	Chromium	n/a	n/a	--	--	--	6.1
	Lead	n/a	n/a	--	--	--	5.8
	Phosphorus	n/a	n/a	--	--	--	7.9
IDA-SD-002-0001-SD	Arsenic	4.03	a	**--**	**--**	**--**	**4.8**
	Barium	63.4	a	**--**	**--**	**--**	**65**
	Beryllium	n/a	n/a	--	--	--	0.22
	Boron	n/a	n/a	--	--	--	0.85
	Chromium	n/a	n/a	--	--	--	3.9
	Lead	n/a	n/a	--	--	--	8.7
	Phosphorus	n/a	n/a	--	--	--	140
IDA-SD-003-0001-SD	Arsenic	4.03	a	**--**	**--**	**--**	2
	Barium	63.4	a	**--**	**--**	**--**	22
	Beryllium	n/a	n/a	--	--	--	0.18
	Boron	n/a	n/a	--	--	--	0.88
	Chromium	n/a	n/a	--	--	--	2.5
	Lead	n/a	n/a	--	--	--	4
	Phosphorus	n/a	n/a	--	--	--	2.7

Table 3-2. Incendiary Disposal Area--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round			
				Summer 1991	Spring/Summer 1992	Fall 2000	Fall 2004
RBWSD2601	Aluminum	61.8	a	--	**6100**	--	--
	Arsenic	4.03	a	--	**5.77**	--	--
	Barium	63.4	a	--	**99.6**	--	--
	Beryllium	n/a	n/a	--	1.09	--	--
	Chromium	n/a	n/a	--	10.8	--	--
	Cobalt	n/a	n/a	--	9.7	--	--
	Copper	93.7	a	--	8.81	--	--
	Iron	n/a	n/a	--	13300	--	--
	Lead	n/a	n/a	--	12.4	--	--
	Magnesium	n/a	n/a	--	1680	--	--
	Manganese	n/a	n/a	--	621	--	--
	Nickel	511	a	--	12.3	--	--
	Potassium	n/a	n/a	--	592	--	--
	Selenium	1.06	a	--	0.519	--	--
	Vanadium	n/a	n/a	--	22.3	--	--
	Zinc	1620	a	--	41.7	--	--
RBWSD2701	Aluminum	61.8	a	--	**3480**	--	--
	Arsenic	4.03	a	--	2.77	--	--
	Barium	63.4	a	--	**93.2**	--	--
	Chromium	n/a	n/a	--	7.1	--	--
	Cobalt	n/a	n/a	--	5.64	--	--
	Copper	93.7	a	--	6.33	--	--
	Iron	n/a	n/a	--	7950	--	--
	Lead	n/a	n/a	--	8.81	--	--
	Magnesium	n/a	n/a	--	2050	--	--
	Manganese	n/a	n/a	--	285	--	--
	Nickel	511	a	--	9.5	--	--
	Potassium	n/a	n/a	--	442	--	--
	Total organic carbon	n/a	n/a	--	1450	--	--
	Total organic content	n/a	n/a	--	1450	--	--
	Vanadium	n/a	n/a	--	12.4	--	--
	Zinc	1620	a	--	28.4	--	--

Table 3-2. Incendiary Disposal Area--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round			
				Summer 1991	Spring/Summer 1992	Fall 2000	Fall 2004
RBWSD2801	Aluminum	61.8	a	--	**1420**	--	--
	Arsenic	4.03	a	--	1.99	--	--
	Barium	63.4	a	--	**97**	--	--
	Cobalt	n/a	n/a	--	3.96	--	--
	Copper	93.7	a	--	2.72	--	--
	Iron	n/a	n/a	--	4920	--	--
	Lead	n/a	n/a	--	4.43	--	--
	Magnesium	n/a	n/a	--	965	--	--
	Manganese	n/a	n/a	--	207	--	--
	Nickel	511	a	--	5.29	--	--
	Potassium	n/a	n/a	--	256	--	--
	Total organic carbon	n/a	n/a	--	6730	--	--
	Vanadium	n/a	n/a	--	7.11	--	--
	Zinc	1620	a	--	16.5	--	--
SC03-H	Aluminum	61.8	a	--	--	**2410**	--
	Arsenic	4.03	a	--	--	**5.5**	--
	Barium	63.4	a	--	--	**85.2**	--
	Beryllium	n/a	n/a	--	--	0.3	--
	Chromium	n/a	n/a	--	--	10.9	--
	Cobalt	n/a	n/a	--	--	7.8	--
	Copper	93.7	a	--	--	4	--
	Iron	n/a	n/a	--	--	15700	--
	Lead	n/a	n/a	--	--	5.5	--
	Magnesium	n/a	n/a	--	--	1350	--
	Manganese	n/a	n/a	--	--	438	--
	Nickel	511	a	--	--	11.7	--
	Potassium	n/a	n/a	--	--	235	--
	Silver	1.2	a	--	--	0.07	--
	Vanadium	n/a	n/a	--	--	17.2	--
	Zinc	1620	a	--	--	23.7	--

Table 3-2. Incendiary Disposal Area--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round			
				Summer 1991	Spring/Summer 1992	Fall 2000	Fall 2004
SCT01-H	Aluminum	61.8	a	**--**	**--**	**1260**	**--**
	Arsenic	4.03	a	**--**	**--**	**5.1**	**--**
	Barium	63.4	a	**--**	**--**	**113**	**--**
	Beryllium	n/a	n/a	--	--	0.33	--
	Chromium	n/a	n/a	--	--	4.5	--
	Cobalt	n/a	n/a	--	--	13.1	--
	Copper	93.7	a	**--**	**--**	3.4	**--**
	Iron	n/a	n/a	--	--	9840	--
	Lead	n/a	n/a	--	--	8.3	--
	Magnesium	n/a	n/a	--	--	939	--
	Manganese	n/a	n/a	--	--	1140	--
	Nickel	511	a	**--**	**--**	8.4	**--**
	Potassium	n/a	n/a	--	--	163	--
	Vanadium	n/a	n/a	--	--	14.6	--
	Zinc	1620	a	**--**	**--**	22.5	**--**

Notes:
(a) - *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
n/a - no comparison value available
-- not sampled
bold exceeds applicable RG

Table 3-3. Incendiary Disposal Area--Detections in Surface Water

Name	Analyte	PRG	Source	Sampling Round		
				Spring/Summer 1992	Spring 2000	Fall 2000
RBWSW2601	Barium	280	a	81.5	**--**	**--**
	Iron	n/a	n/a	114	--	--
	Lead	n/a	n/a	1.95	--	--
	Magnesium	n/a	n/a	24000	--	--
	Manganese	n/a	n/a	11.6	--	--
RBWSW2701	Aluminum	13.7	a	**201**	**--**	**--**
	Arsenic	49	a	2.88	**--**	**--**
	Barium	280	a	127	**--**	**--**
	Biological oxygen demand	n/a	n/a	1000	--	--
	Chemical oxygen demand	n/a	n/a	11300	--	--
	Iron	n/a	n/a	270	--	--
	Magnesium	n/a	n/a	24200	--	--
	Manganese	n/a	n/a	64.9	--	--
	RDX	12900	a	1.95	**--**	**--**
	Total dissolved solids	n/a	n/a	478000	--	--
	Total hardness	n/a	n/a	291000	--	--
	Total organic carbon	n/a	n/a	6790	--	--
	Total suspended solids	n/a	n/a	11000	--	--
RBWSW2801	Barium	280	a	127	**--**	**--**
	Chemical oxygen demand	n/a	n/a	7500	--	--
	Iron	n/a	n/a	180	--	--
	Magnesium	n/a	n/a	24500	--	--
	Manganese	n/a	n/a	71.2	--	--
	RDX	12900	a	2.03	**--**	**--**
	Total dissolved solids	n/a	n/a	469000	--	--
	Total hardness	n/a	n/a	350000	--	--
	Total organic carbon	n/a	n/a	5360	--	--
	Total suspended solids	n/a	n/a	12000	--	--

Table 3-3. Incendiary Disposal Area--Detections in Surface Water

Name	Analyte	PRG	Source	Sampling Round		
				Spring/Summer 1992	Spring 2000	Fall 2000
SC03-H	2-Nitrotoluene	n/a	n/a	--	1	ND
	Aluminum	13.7	a	**--**	**978**	**7170**
	Arsenic	49	a	**--**	ND	3.9
	Barium	280	a	**--**	146	151
	Beryllium	n/a	n/a	--	0.6	ND
	Chromium	n/a	n/a	--	ND	11.2
	Cobalt	n/a	n/a	--	ND	1.6
	Copper	7.6	a	**--**	ND	**11.9**
	HMX	n/a	n/a	--	0.45	0.2
	Iron	n/a	n/a	--	1040	7390
	Lead	n/a	n/a	--	3.1	4.9
	Magnesium	n/a	n/a	--	22900	14000
	Manganese	n/a	n/a	--	294	280
	Nickel	16200	a	**--**	5.1	7.4
	RDX	12900	a	**--**	0.93	ND
	Selenium	0.75	a	**--**	**4.2**	ND
	Silver	3.6	a	**--**	ND	2.5
	Vanadium	n/a	n/a	--	3.2	17.1
	Zinc	200	a	**--**	9.6	29.2
SCT01-H	Aluminum	13.7	a	**--**	**751**	**3440**
	Antimony	n/a	n/a	--	ND	6.5
	Arsenic	49	a	**--**	ND	2.2
	Barium	280	a	**--**	122	143
	Beryllium	n/a	n/a	--	0.5	0.3
	Chromium	n/a	n/a	--	2.4	6.7
	Cobalt	n/a	n/a	--	ND	1.8
	Copper	7.6	a	**--**	**26.3**	5.7
	Iron	n/a	n/a	--	714	3950
	Lead	n/a	n/a	--	3.4	4.4
	Magnesium	n/a	n/a	--	25400	21700
	Manganese	n/a	n/a	--	122	142
	Nickel	16200	a	**--**	3.6	5.7
	Selenium	0.75	a	**--**	**4.5**	ND
	Silver	3.6	a	**--**	ND	1.4
	Vanadium	n/a	n/a	--	2	12.1
	Zinc	200	a	**--**	15.2	17.9

Table 3-3. Incendiary Disposal Area--Detections in Surface Water

Name	Analyte	PRG	Source	Sampling Round		
				Spring/Summer 1992	Spring 2000	Fall 2000

Notes:
(a) - *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
n/a - no comparison value available
-- not sampled
bold exceeds applicable PRG

Table 3-4. Incendiary Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round									
				Summer 1981	Fall 1985	Spring/Summer 1992	Summer 1996	Spring 1997	Summer 1997	Fall 2000	Spring 2001	Spring 2002	Spring 2004
G-26	1,3,5-Trinitrobenzene	1095	b	ND	ND	ND	ND	ND	0.12	ND	ND	ND	ND
	1,3-Dinitrobenzene	3.65	b	ND	ND	ND	ND	ND	0.21	ND	ND	ND	ND
	2,4,6-Trinitrotoluene	2.24	b	ND	ND	ND	ND	0.18	ND	ND	ND	ND	ND
	2,4-Dinitrotoluene	73	b	ND	ND	1.35	ND	ND	ND	ND	ND	ND	ND
	2,6-Dinitrotoluene	36.5	b	ND	3.58	ND	ND	ND	ND	ND	ND	ND	ND
	2-Ethyl-1-hexanol	n/a	n/a	--	--	6	--	--	--	--	--	--	--
	2-Ethylhexanoic acid	n/a	n/a	--	--	6	--	--	--	--	--	--	--
	3,4-Dinitrotoluene	n/a	n/a	--	--	--	--	--	--	--	--	100	96
	Aluminum	36499	b	--	--	226	--	--	--	--	--	--	--
	Antimony	14.6	b	--	--	ND	2.22	--	--	--	--	--	--
	Barium	2000	f	--	--	--	**2460**	--	--	--	--	--	--
	Benzothiazole	n/a	n/a	--	--	20	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	ND	ND	ND	1	ND	1.9	ND	ND	ND
	Caprolactam	18250	b	--	--	900	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	ND	ND	33.7	ND	28	3.1	3.7	1.1	ND
	Copper	1460	b	--	1	ND	2.76	--	--	--	--	--	--
	HMX	1825	b	--	35.3	ND	ND	ND	ND	ND	ND	ND	ND
	Iron	10950	b	--	--	7520	--	--	--	--	--	--	--
	Lead	n/a	n/a	--	ND	4.77	ND	70.5	ND	4	7.2	ND	3.1
	Magnesium	n/a	n/a	--	--	31500	--	--	--	--	--	--	--
	Manganese	300	d	--	--	**339**	--	--	--	--	--	--	--
	Mercury	n/a	n/a	--	ND	ND	ND	0.058	ND	ND	ND	ND	ND
	Nickel	730	b	--	--	ND	31.2	--	--	--	--	--	--
	Selenium	182	b	--	ND	ND	4.97	ND	ND	2.4	4.6	ND	ND
	Silver	182	b	--	ND	ND	ND	0.68	ND	ND	ND	ND	ND
	Sulfate	n/a	n/a	190000	--	--	--	--	--	--	--	--	--
	Total phosphates	n/a	n/a	130	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	--	--	ND	12.5	--	--	--	--	--	--
	Zinc	10950	b	--	ND	105	--	--	--	--	--	--	--

Table 3-4. Incendiary Disposal Area--Detections in Groundwater

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(d) - Health Advisory Level (HAL)
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
-- not sampled
bold exceeds applicable PRG

Table 3-5. Old Fly Ash Waste Pile--Detections in Soil/Fly Ash

Name	Analyte	Depth Range	RG	Source	Sampling Round		
					Summer 1981	Summer 1991	Fall 2004
15SA0301	Arsenic	3 ft	1.59	b	--	**17.5**	--
	Barium		259	b	--	139	--
	Beryllium		n/a	n/a	--	3.36	--
	Chromium		n/a	n/a	--	27.9	--
	Copper		703	b	--	34.1	--
	Lead		12100	b	--	29	--
	Mercury		0.05	b	--	**0.104**	--
	Nickel		1040	b	--	30	--
	Nitrite, nitrate - nonspecific		n/a	n/a	--	31	--
	Selenium		0.72	c	--	**2.34**	--
	Sulfate		n/a	n/a	--	105	--
	Zinc		n/a	n/a	--	271	--
15SS0301	Arsenic	0.5 ft	15.37	c	--	**18.6**	--
	Barium		66577	b	--	196	--
	Beryllium		1941	b	--	4.31	--
	Cadmium		0.97	c	--	**2.53**	--
	Chromium		448	b	--	31.5	--
	Copper		40877	b	--	39.4	--
	Lead		12100	a	--	37	--
	Mercury		0.14	c	--	**0.15**	--
	Nickel		20439	b	--	36.7	--
	Nitrite, nitrate -		n/a	n/a	--	38	--
	Selenium		0.72	c	--	**2.31**	--
	Sulfate		n/a	n/a	--	170	--
	Zinc		100000	b	--	430	--

Table 3-5. Old Fly Ash Waste Pile--Detections in Soil/Fly Ash

Name	Analyte	Depth Range	RG	Source	Sampling Round		
					Summer 1981	Summer 1991	Fall 2004
FAP-SB-001-0001-SO	Anthracene	11 - 11.5 ft	n/a	n/a	--	--	0.012
	Arsenic		1.59	b	**--**	**--**	**8.9**
	Barium		259	b	**--**	**--**	70
	Benzo[a]anthracene		n/a	n/a	--	--	0.017
	Benzo[a]pyrene		n/a	n/a	--	--	0.02
	Benzo[b]fluoranthene		n/a	n/a	--	--	0.019
	Benzo[ghi]perylene		n/a	n/a	--	--	0.013
	Benzo[k]fluoranthene		n/a	n/a	--	--	0.0083
	Beryllium		n/a	n/a	--	--	2.3
	Boron		n/a	n/a	--	--	100
	Cadmium		30	b	**--**	**--**	0.22
	Chromium		n/a	n/a	--	--	14
	Chrysene		n/a	n/a	--	--	0.016
	Fluoranthene		n/a	n/a	--	--	0.021
	Indeno[1,2,3-C,D]pyrene		n/a	n/a	--	--	0.0087
	Lead		12100	b	**--**	**--**	45
	Mercury		0.05	b	**--**	**--**	**0.071**
	Phenanthrene		n/a	n/a	--	--	0.082
	Selenium		0.72	c	**--**	**--**	**2.2**
FAP-SB-002-0001-SO	Anthracene	20 ft	n/a	n/a	--	--	0.01
	Arsenic		1.59	b	**--**	**--**	**9.1**
	Barium		259	b	**--**	**--**	210
	Benzo[a]anthracene		n/a	n/a	--	--	0.019
	Benzo[a]pyrene		n/a	n/a	--	--	0.011
	Beryllium		n/a	n/a	--	--	1.6
	Boron		n/a	n/a	--	--	53
	Cadmium		30	b	**--**	**--**	0.7
	Chromium		n/a	n/a	--	--	11
	Chrysene		n/a	n/a	--	--	0.017
	Fluoranthene		n/a	n/a	--	--	0.029
	Lead		12100	b	**--**	**--**	13
	Mercury		0.05	b	**--**	**--**	0.033
	Naphthalene		n/a	n/a	--	--	0.019
	Phenanthrene		n/a	n/a	--	--	0.12
	Pyrene		n/a	n/a	--	--	0.038
	Selenium		0.72	c	**--**	**--**	**1.5**

Table 3-5. Old Fly Ash Waste Pile--Detections in Soil/Fly Ash

Name	Analyte	Depth Range	RG	Source	Sampling Round		
					Summer 1981	Summer 1991	Fall 2004
FAP-SB-003-0001-SO	Anthracene	21 - 22 ft	n/a	n/a	--	--	0.01
	Arsenic		1.59	b	**--**	**--**	**7.6**
	Barium		259	b	**--**	**--**	220
	Benzo[a]anthracene		n/a	n/a	--	--	0.012
	Benzo[a]pyrene		n/a	n/a	--	--	0.0084
	Beryllium		n/a	n/a	--	--	1.4
	Boron		n/a	n/a	--	--	78
	Cadmium		30	b	**--**	**--**	0.15
	Chromium		n/a	n/a	--	--	11
	Chrysene		n/a	n/a	--	--	0.012
	Fluoranthene		n/a	n/a	--	--	0.016
	Lead		12100	b	**--**	**--**	31
	Mercury		0.05	b	**--**	**--**	0.043
	Naphthalene		n/a	n/a	--	--	0.014
	Phenanthrene		n/a	n/a	--	--	0.091
	Pyrene		n/a	n/a	--	--	0.031
	Selenium		0.72	c	**--**	**--**	**1.8**
FAP-SB-004-0001-SO	Arsenic	8.7 - 9.7 ft	1.59	b	**--**	**--**	**6.5**
	Barium		259	b	**--**	**--**	**280**
	Benzo[a]anthracene		n/a	n/a	--	--	0.014
	Benzo[a]pyrene		n/a	n/a	--	--	0.0063
	Benzo[b]fluoranthene		n/a	n/a	--	--	0.0081
	Beryllium		n/a	n/a	--	--	1.1
	Boron		n/a	n/a	--	--	37
	Cadmium		30	b	**--**	**--**	0.72
	Chromium		n/a	n/a	--	--	6.9
	Chrysene		n/a	n/a	--	--	0.012
	Fluoranthene		n/a	n/a	--	--	0.018
	Lead		12100	b	**--**	**--**	8
	Mercury		0.05	b	**--**	**--**	0.033
	Phenanthrene		n/a	n/a	--	--	0.063
	Pyrene		n/a	n/a	--	--	0.025
	Selenium		0.72	c	**--**	**--**	**1.6**

Table 3-5. Old Fly Ash Waste Pile--Detections in Soil/Fly Ash

Name	Analyte	Depth Range	RG	Source	Sampling Round		
					Summer 1981	Summer 1991	Fall 2004
FAP-SB-005-0001-SO	Anthracene	19.5 - 20 ft	n/a	n/a	--	--	0.0076
	Arsenic		1.59	b	**--**	**--**	**14**
	Barium		259	b	**--**	**--**	220
	Benzo[a]anthracene		n/a	n/a	--	--	0.006
	Beryllium		n/a	n/a	--	--	1.5
	Boron		n/a	n/a	--	--	71
	Cadmium		0.97	c	**--**	**--**	**5**
	Chromium		n/a	n/a	--	--	14
	Fluoranthene		n/a	n/a	--	--	0.01
	Lead		12100	b	**--**	**--**	16
	Mercury		0.05	b	**--**	**--**	0.041
	Naphthalene		n/a	n/a	--	--	0.065
	Phenanthrene		n/a	n/a	--	--	0.082
	Pyrene		n/a	n/a	--	--	0.017
	Selenium		0.72	c	**--**	**--**	**1.4**
FAP-SB-006-0001-SO	Anthracene	23 - 24 ft	n/a	n/a	--	--	0.017
	Arsenic		1.59	b	**--**	**--**	**13**
	Barium		259	b	**--**	**--**	200
	Benzo[a]anthracene		n/a	n/a	--	--	0.018
	Benzo[a]pyrene		n/a	n/a	--	--	0.013
	Benzo[b]fluoranthene		n/a	n/a	--	--	0.012
	Beryllium		n/a	n/a	--	--	1.6
	Boron		n/a	n/a	--	--	75
	Cadmium		0.97	c	**--**	**--**	**5**
	Chromium		n/a	n/a	--	--	15
	Chrysene		n/a	n/a	--	--	0.021
	Fluoranthene		n/a	n/a	--	--	0.024
	Lead		12100	b	**--**	**--**	13
	Mercury		0.05	b	**--**	**--**	0.033
	Naphthalene		n/a	n/a	--	--	0.059
	Phenanthrene		n/a	n/a	--	--	0.14
	Pyrene		n/a	n/a	--	--	0.034
	Selenium		0.72	c	**--**	**--**	**1.6**

Table 3-5. Old Fly Ash Waste Pile--Detections in Soil/Fly Ash

Name	Analyte	Depth Range	RG	Source	Sampling Round		
					Summer 1981	Summer 1991	Fall 2004
FAP-SSI-001-0001-SO	Acenaphthene	0 - 1 ft	29219	b	--	--	0.0099
	Acenaphthylene		n/a	n/a	--	--	0.042
	Anthracene		100000	b	--	--	0.034
	Arsenic		15.37	c	--	--	**25**
	Barium		368	c	--	--	**520**
	Benzo[a]anthracene		2.11	b	--	--	0.078
	Benzo[a]pyrene		0.211	b	--	--	0.11
	Benzo[b]fluoranthene		2.11	b	--	--	0.12
	Benzo[ghi]perylene		n/a	n/a	--	--	0.069
	Benzo[k]fluoranthene		21.1	b	--	--	0.092
	Beryllium		1941	b	--	--	2.3
	Boron		100000	b	--	--	37
	Cadmium		0.97	c	--	--	**1.2**
	Chromium		448	b	--	--	59
	Chrysene		211	b	--	--	0.11
	Fluoranthene		22000	b	--	--	0.13
	Fluorene		26281	b	--	--	0.011
	Indeno[1,2,3-C,D]pyrene		2.11	b	--	--	0.05
	Lead		12100	a	--	--	61
	Mercury		0.14	c	--	--	**2.9**
	Naphthalene		188	b	--	--	0.015
	Phenanthrene		n/a	n/a	--	--	0.14
	Pyrene		29126	b	--	--	0.12
	Selenium		0.72	c	--	--	**1.1**
	Silver		0.83	c	--	--	**160**

Table 3-5. Old Fly Ash Waste Pile--Detections in Soil/Fly Ash

Name	Analyte	Depth Range	RG	Source	Sampling Round		
					Summer 1981	Summer 1991	Fall 2004
FAP-SSI-002-0001-SO	Acenaphthylene	0 - 1 ft	n/a	n/a	--	--	0.015
	Anthracene		100000	b	--	--	0.01
	Arsenic		15.37	c	--	--	**22**
	Barium		368	c	--	--	**450**
	Benzo[a]anthracene		2.11	b	--	--	0.017
	Benzo[a]pyrene		0.211	b	--	--	0.041
	Benzo[b]fluoranthene		2.11	b	--	--	0.038
	Benzo[ghi]perylene		n/a	n/a	--	--	0.065
	Benzo[k]fluoranthene		21.1	b	--	--	0.032
	Beryllium		1941	b	--	--	2.4
	Boron		100000	b	--	--	34
	Cadmium		0.97	c	--	--	0.97
	Chromium		448	b	--	--	55
	Chrysene		211	b	--	--	0.03
	Fluoranthene		22000	b	--	--	0.022
	Indeno[1,2,3-C,D]pyrene		2.11	b	--	--	0.021
	Lead		12100	a	--	--	48
	Mercury		0.14	c	--	--	**1.9**
	Naphthalene		188	b	--	--	0.011
	Phenanthrene		n/a	n/a	--	--	0.069
	Pyrene		29126	b	--	--	0.036
	Selenium		0.72	c	--	--	**1.6**
	Silver		0.83	c	--	--	**130**
S-14	Barium	1 ft	66577	b	120	--	--
	Cadmium		0.97	c	**2**	--	--
	Chromium		448	b	19	--	--
	Copper		40877	b	28	--	--
	Lead		12100	a	12	--	--
	Total phosphates		n/a	n/a	390	--	--
	Zinc		100000	b	250	--	--

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
n/a - no comparison value available
-- not sampled
bold exceeds applicable RG

Table 3-6. Old Fly Ash Waste Pile--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round				
				Summer 1991	Spring 1997	Fall 2000	Fall 2003	Fall 2004
15SD0101	Barium	63.4	a	**144**	--	--	--	--
	Chromium	n/a	n/a	15.6	--	--	--	--
	Copper	93.7	a	9.87	--	--	--	--
	Lead	n/a	n/a	9.1	--	--	--	--
	Mercury	0.96	a	0.0774	--	--	--	--
	Nickel	511	a	9.83	--	--	--	--
	Silver	1.2	a	**2.73**	--	--	--	--
	Sulfate	n/a	n/a	17.1	--	--	--	--
	Zinc	1620	a	34.4	--	--	--	--
15SD0201	Barium	63.4	a	**121**	--	--	--	--
	Chromium	n/a	n/a	24.5	--	--	--	--
	Copper	93.7	a	9.11	--	--	--	--
	Lead	n/a	n/a	9.68	--	--	--	--
	Mercury	0.96	a	**1**	--	--	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	2.12	--	--	--	--
	Silver	1.2	a	**14.5**	--	--	--	--
	Sulfate	n/a	n/a	14	--	--	--	--
	Zinc	1620	a	42.2	--	--	--	--
15SD0401	Arsenic	4.03	a	**5.82**	--	--	--	--
	Barium	63.4	a	**77.6**	--	--	--	--
	Chromium	n/a	n/a	11.7	--	--	--	--
	Copper	93.7	a	5.72	--	--	--	--
	Lead	n/a	n/a	16	--	--	--	--
	Nickel	511	a	6.64	--	--	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	1.02	--	--	--	--
	Silver	1.2	a	**2.17**	--	--	--	--
	Sulfate	n/a	n/a	180	--	--	--	--
	Zinc	1620	a	32.6	--	--	--	--
7J1	2,4,6-Trinitrotoluene	13.6	a	--	**760**	--	--	--
	4-Amino-2,6dinitrotoluene	n/a	n/a	--	660	--	--	--
	Arsenic	4.03	a	--	**5.2**	--	--	--
	Barium	63.4	a	--	**130**	--	--	--
	Chromium	n/a	n/a	--	12.7	--	--	--
	Lead	n/a	n/a	--	10.9	--	--	--
	RDX	23.4	a	--	**470**	--	--	--
	Selenium	1.06	a	--	0.53	--	--	--
	Silver	1.2	a	--	0.64	--	--	--

Table 3-6. Old Fly Ash Waste Pile--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round				
				Summer 1991	Spring 1997	Fall 2000	Fall 2003	Fall 2004
7J2	Arsenic	4.03	a	--	**13.8**	--	--	--
	Barium	63.4	a	--	**123**	--	--	--
	Chromium	n/a	n/a	--	20.8	--	--	--
	Lead	n/a	n/a	--	19.8	--	--	--
	RDX	23.4	a	--	**460**	--	--	--
	Selenium	1.06	a	--	0.3	--	--	--
	Silver	1.2	a	--	**4.2**	--	--	--
BC05-H	2,4,6-Trinitrotoluene	13.6	a	--	--	0.13	--	--
	Aluminum	61.8	a	--	--	**5280**	--	--
	Arsenic	4.03	a	--	--	3.8	--	--
	Barium	63.4	a	--	--	**133**	--	--
	Beryllium	n/a	n/a	--	--	0.58	--	--
	Chromium	n/a	n/a	--	--	11.1	--	--
	Cobalt	n/a	n/a	--	--	4.5	--	--
	Copper	93.7	a	--	--	9	--	--
	Iron	n/a	n/a	--	--	11100	--	--
	Lead	n/a	n/a	--	--	9.5	--	--
	Magnesium	n/a	n/a	--	--	2200	--	--
	Manganese	n/a	n/a	--	--	296	--	--
	Mercury	0.96	a	--	--	0.08	--	--
	Nickel	511	a	--	--	9.1	--	--
	RDX	23.4	a	--	--	0.35	--	--
	Silver	1.2	a	--	--	**1.3**	--	--
	Sodium	n/a	n/a	--	--	794	--	--
	Toxaphene	n/a	n/a	--	--	0.26	--	--
	Vanadium	n/a	n/a	--	--	16	--	--
	Zinc	1620	a	--	--	41.2	--	--

Table 3-6. Old Fly Ash Waste Pile--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round				
				Summer 1991	Spring 1997	Fall 2000	Fall 2003	Fall 2004
BC19-H	2,4,6-Trinitrotoluene	13.6	a	--	--	0.31	--	--
	Aluminum	61.8	a	--	--	**5820**	--	--
	Arsenic	4.03	a	--	--	3.6	--	--
	Barium	63.4	a	--	--	**92.4**	--	--
	Beryllium	n/a	n/a	--	--	0.39	--	--
	Cadmium	8.47	a	--	--	0.11	--	--
	Chromium	n/a	n/a	--	--	11.7	--	--
	Cobalt	n/a	n/a	--	--	5.5	--	--
	Copper	93.7	a	--	--	8.8	--	--
	Iron	n/a	n/a	--	--	10600	--	--
	Lead	n/a	n/a	--	--	8	--	--
	Magnesium	n/a	n/a	--	--	5490	--	--
	Manganese	n/a	n/a	--	--	584	--	--
	Mercury	0.96	a	--	--	0.04	--	--
	Nickel	511	a	--	--	10.8	--	--
	RDX	23.4	a	--	--	0.7	--	--
	Silver	1.2	a	--	--	1.2	--	--
	Sodium	n/a	n/a	--	--	771	--	--
	Vanadium	n/a	n/a	--	--	15.1	--	--
	Zinc	1620	a	--	--	30.9	--	--
FAP-NSD-001-0001-SD	Arsenic	4.03	a	--	--	--	--	**20**
	Barium	63.4	a	--	--	--	--	**150**
	Beryllium	n/a	n/a	--	--	--	--	2.4
	Boron	n/a	n/a	--	--	--	--	45
	Cadmium	8.47	a	--	--	--	--	1.5
	Chromium	n/a	n/a	--	--	--	--	17
	Lead	n/a	n/a	--	--	--	--	28
	Mercury	0.96	a	--	--	--	--	0.088
	Selenium	1.06	a	--	--	--	--	**1.8**
	Silver	1.2	a	--	--	--	--	**2**
FAP-NSD-002-0001-SD	Arsenic	4.03	a	--	--	--	--	**15**
	Barium	63.4	a	--	--	--	--	**170**
	Beryllium	n/a	n/a	--	--	--	--	1.8
	Boron	n/a	n/a	--	--	--	--	47
	Cadmium	8.47	a	--	--	--	--	1.1
	Chromium	n/a	n/a	--	--	--	--	25
	Lead	n/a	n/a	--	--	--	--	28
	Mercury	0.96	a	--	--	--	--	0.11
	Selenium	1.06	a	--	--	--	--	**1.3**
	Silver	1.2	a	--	--	--	--	**16**

Table 3-6. Old Fly Ash Waste Pile--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round				
				Summer 1991	Spring 1997	Fall 2000	Fall 2003	Fall 2004
FAP-NSD-003-0001-SD	Arsenic	4.03	a	--	--	--	--	**11**
	Barium	63.4	a	--	--	--	--	**86**
	Beryllium	n/a	n/a	--	--	--	--	2.6
	Boron	n/a	n/a	--	--	--	--	210
	Cadmium	8.47	a	--	--	--	--	0.45
	Chromium	n/a	n/a	--	--	--	--	20
	Lead	n/a	n/a	--	--	--	--	14
	Mercury	0.96	a	--	--	--	--	0.051
	Selenium	1.06	a	--	--	--	--	**1.7**
FAP-SD-001-0001-SD	Arsenic	4.03	a	--	--	--	--	**6.7**
	Barium	63.4	a	--	--	--	--	**130**
	Beryllium	n/a	n/a	--	--	--	--	0.52
	Boron	n/a	n/a	--	--	--	--	2.1
	Chromium	n/a	n/a	--	--	--	--	11
	Lead	n/a	n/a	--	--	--	--	9.3
	Mercury	0.96	a	--	--	--	--	0.058
	Silver	1.2	a	--	--	--	--	0.77
FAP-SD-002-0001-SD	Arsenic	4.03	a	--	--	--	--	**5**
	Barium	63.4	a	--	--	--	--	**150**
	Beryllium	n/a	n/a	--	--	--	--	0.41
	Boron	n/a	n/a	--	--	--	--	5.3
	Chromium	n/a	n/a	--	--	--	--	10
	Lead	n/a	n/a	--	--	--	--	9.6
	Mercury	0.96	a	--	--	--	--	0.095
	Selenium	1.06	a	--	--	--	--	0.83
	Silver	1.2	a	--	--	--	--	**1.5**
FAP-SD-003-0001-SD	Arsenic	4.03	a	--	--	--	--	**9.1**
	Barium	63.4	a	--	--	--	--	**120**
	Beryllium	n/a	n/a	--	--	--	--	0.76
	Boron	n/a	n/a	--	--	--	--	19
	Chromium	n/a	n/a	--	--	--	--	13
	Lead	n/a	n/a	--	--	--	--	15
	Mercury	0.96	a	--	--	--	--	0.11
	Selenium	1.06	a	--	--	--	--	0.75
	Silver	1.2	a	--	--	--	--	1.1

Table 3-6. Old Fly Ash Waste Pile--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round				
				Summer 1991	Spring 1997	Fall 2000	Fall 2003	Fall 2004
FAP-SD-004-0001-SD	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**11**
	Barium	63.4	a	**--**	**--**	**--**	**--**	**210**
	Beryllium	n/a	n/a	--	--	--	--	1.9
	Boron	n/a	n/a	--	--	--	--	34
	Cadmium	8.47	a	**--**	**--**	**--**	**--**	0.27
	Chromium	n/a	n/a	--	--	--	--	22
	Lead	n/a	n/a	--	--	--	--	44
	Mercury	0.96	a	**--**	**--**	**--**	**--**	0.03
	Silver	1.2	a	**--**	**--**	**--**	**--**	**1.5**
Site 5	RDX	23.4	a	**--**	**--**	**--**	0.204	**--**

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
n/a - no comparison value available
-- not sampled
bold exceeds applicable PRG

Table 3-7. Old Fly Ash Waste Pile--Detections in Surface Water

Name	Analyte	PRG	Source	Sampling Round				
				Summer 1991	Spring 1997	Spring 2000	Fall 2000	Fall 2003
15SW0101	Arsenic	49	a	2.66	**--**	**--**	**--**	**--**
	Barium	280	a	81.9	**--**	**--**	**--**	**--**
	Nitrite, nitrate - nonspecific	n/a	n/a	5300	--	--	--	--
	Sulfate	n/a	n/a	70000	--	--	--	--
	Zinc	200	a	69.4	**--**	**--**	**--**	**--**
15SW0201	Barium	280	a	79.3	**--**	**--**	**--**	**--**
	Nitrite, nitrate - nonspecific	n/a	n/a	5300	--	--	--	--
	Sulfate	n/a	n/a	82000	--	--	--	--
	Zinc	200	a	74.3	**--**	**--**	**--**	**--**
15SW0401	Barium	280	a	85.7	**--**	**--**	**--**	**--**
	Beryllium	n/a	n/a	1.44	--	--	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	4200	--	--	--	--
	Sulfate	n/a	n/a	2E+06	--	--	--	--
	Zinc	200	a	73.5	**--**	**--**	**--**	**--**
7J1	Arsenic	49	a	**--**	0.79	**--**	**--**	**--**
	Barium	280	a	**--**	110	**--**	**--**	**--**
	HMX	n/a	n/a	--	1.6	--	--	--
	RDX	12900	a	**--**	5.3	**--**	**--**	**--**
	Selenium	0.75	a	**--**	**1.2**	**--**	**--**	**--**
BC05-H	2-Amino-4,6-dinitrotoluene	n/a	n/a	--	--	ND	0.22	--
	4-Amino-2,6-dinitrotoluene	n/a	n/a	--	--	ND	0.39	--
	Aluminum	13.7	a	**--**	**--**	**401**	**696**	**--**
	Barium	280	a	**--**	**--**	117	102	**--**
	Beryllium	n/a	n/a	--	--	1	0.2	--
	Chromium	n/a	n/a	--	--	2.5	3.7	--
	Cobalt	n/a	n/a	--	--	ND	1.1	--
	Copper	7.6	a	**--**	**--**	3	4.8	**--**
	Dalapon	n/a	n/a	--	--	1.9	ND	--
	HMX	n/a	n/a	--	--	1.9	3.7	--
	Iron	n/a	n/a	--	--	361	654	--
	Lead	n/a	n/a	--	--	3.6	2.2	--
	Magnesium	n/a	n/a	--	--	19700	15000	--
	Manganese	n/a	n/a	--	--	46.6	40.1	--
	Nickel	16200	a	**--**	**--**	3	3.4	**--**
	RDX	12900	a	**--**	**--**	3.9	8.9	**--**
	Selenium	0.75	a	**--**	**--**	ND	**3.3**	**--**
	Silver	3.6	a	**--**	**--**	ND	3.3	**--**
	Vanadium	n/a	n/a	--	--	1.8	2.3	--
	Zinc	200	a	**--**	**--**	15.6	10.1	**--**

Table 3-7. Old Fly Ash Waste Pile--Detections in Surface Water

Name	Analyte	PRG	Source	Sampling Round				
				Summer 1991	Spring 1997	Spring 2000	Fall 2000	Fall 2003
BC19-H	Aluminum	13.7	a	**--**	**--**	**2070**	**536**	**--**
	Antimony	n/a	n/a	--	--	13.7	ND	--
	Barium	280	a	**--**	**--**	149	99.3	**--**
	Chromium	n/a	n/a	--	--	3.5	2.4	--
	Cobalt	n/a	n/a	--	--	3.3	ND	--
	Copper	7.6	a	**--**	**--**	5.2	3.8	**--**
	HMX	n/a	n/a	--	--	2.4	2.8	--
	Iron	n/a	n/a	--	--	1820	460	--
	Lead	n/a	n/a	--	--	3	1.8	--
	Magnesium	n/a	n/a	--	--	21300	17000	--
	Manganese	n/a	n/a	--	--	194	47.1	--
	Nickel	16200	a	**--**	**--**	2.2	3.3	**--**
	RDX	12900	a	**--**	**--**	2.8	5	**--**
	Selenium	0.75	a	**--**	**--**	ND	**3.7**	**--**
	Silver	3.6	a	**--**	**--**	2.9	0.8	**--**
	Thallium	0.014	a	**--**	**--**	**8.1**	ND	**--**
	Vanadium	n/a	n/a	--	--	5.9	2.9	--
	Zinc	200	a	**--**	**--**	18.6	32.3	**--**
Site 5	RDX	12900	a	**--**	**--**	**--**	**--**	2.96

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
n/a - no comparison value available
-- not sampled
bold exceeds applicable PRG

Table 3-8. Old Fly Ash Waste Pile--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round								
				Spring/Summer 1992	Spring 1997	Summer 1997	Fall 2000	Spring 2001	Spring 2002	Spring 2003	Spring 2004	Fall 2004
FAP-GW-001-0001-GW	Barium	2555	b	--	--	--	--	--	--	--	--	200
	Boron	7300	b	--	--	--	--	--	--	--	--	98
	Cadmium	18.2	b	--	--	--	--	--	--	--	--	3
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	3.2
FAP-GW-002-0001-GW	Barium	2555	b	--	--	--	--	--	--	--	--	260
	Beryllium	73	b	--	--	--	--	--	--	--	--	1.7
	Boron	7300	b	--	--	--	--	--	--	--	--	510
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	24
	Lead	n/a	n/a	--	--	--	--	--	--	--	--	12
	Mercury	n/a	n/a	--	--	--	--	--	--	--	--	0.055
	Selenium	182	b	--	--	--	--	--	--	--	--	5.1
FAP-GW-003-0001-GW	Barium	2555	b	--	--	--	--	--	--	--	--	170
	Beryllium	73	b	--	--	--	--	--	--	--	--	1.6
	Boron	600	d	--	--	--	--	--	--	--	--	**4700**
	Cadmium	18.2	b	--	--	--	--	--	--	--	--	1.7
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	25
	Lead	n/a	n/a	--	--	--	--	--	--	--	--	18
	Selenium	182	b	--	--	--	--	--	--	--	--	5.9
G-52	3,4-Dinitrotoluene	n/a	n/a	--	--	--	--	--	110	88	98	--
	Arsenic	10	f	**29.9**	--	--	**19.8**	--	--	--	--	--
	Barium	2555	b	100	--	--	96	111	107	97.1	87.1	--
	Cadmium	18.2	b	ND	--	--	ND	0.9	ND	ND	ND	--
	Caprolactam	18250	b	20	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	ND	--	--	ND	1.8	ND	4.7	ND	--
	Iron	10950	b	2560	--	--	--	--	--	--	--	--
	Magnesium	n/a	n/a	43800	--	--	--	--	--	--	--	--
	Manganese	876	b	38.2	--	--	--	--	--	--	--	--
	Mercury	n/a	n/a	ND	--	--	ND	ND	5.06	0.022	ND	--
	Selenium	182	b	ND	--	--	ND	ND	3.3	3.5	ND	--
	Zinc	10950	b	29.3	--	--	--	--	--	--	--	--

Table 3-8. Old Fly Ash Waste Pile--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round								
				Spring/Summer 1992	Spring 1997	Summer 1997	Fall 2000	Spring 2001	Spring 2002	Spring 2003	Spring 2004	Fall 2004
G-53	2,4,6-Trinitrotoluene	2.24	b	ND	0.33	ND	ND	ND	--	--	--	--
	Aluminum	36499	b	7180	--	--	--	--	--	--	--	--
	Barium	2555	b	243	189	212	630	234	--	--	--	--
	Benzothiazole	n/a	n/a	6	--	--	--	--	--	--	--	--
	Caprolactam	18250	b	90	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	11.2	0.35	23	1.9	0.4	--	--	--	--
	Copper	1460	b	9.05	--	--	--	--	--	--	--	--
	Lead	n/a	n/a	9	11.7	ND	ND	ND	--	--	--	--
	Magnesium	n/a	n/a	24800	--	--	--	--	--	--	--	--
	Manganese	300	d	**1260**	--	--	--	--	--	--	--	--
	Mercury	n/a	n/a	ND	0.029	0.043	ND	ND	--	--	--	--
	Nickel	730	b	48	--	--	--	--	--	--	--	--
	Selenium	182	b	ND	4.32	ND	2	11.3	--	--	--	--
	Silver	182	b	ND	2.25	ND	0.5	ND	--	--	--	--
	Vanadium	36.5	b	23.4	--	--	--	--	--	--	--	--
	Zinc	10950	b	64.7	--	--	--	--	--	--	--	--

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(d) - Health Advisory Level (HAL)
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
-- not sampled
bold exceeds applicable PRG

Table 3-9. Possible Demolition Site--Detections in Soils

Name	Analyte	Depth Range	RG	Source	Sampling Round			
					Summer 1981	Summer 1991	Fall 2000	Fall 2004
18SA0101	Arsenic	1.5 ft	1.59	b	--	**5.9**	--	--
	Barium		259	b	--	140	--	--
	Chromium		n/a	n/a	--	35.8	--	--
	Copper		703	b	--	20.1	--	--
	Lead		12100	b	--	14	--	--
	Mercury		0.05	b	--	**0.061**	--	--
	Nickel		1040	b	--	15.1	--	--
	Zinc		n/a	n/a	--	66.7	--	--
18SA0201	Arsenic	1.5 ft	1.59	b	--	**5.27**	--	--
	Barium		259	b	--	250	--	--
	Chromium		n/a	n/a	--	26.2	--	--
	Copper		703	b	--	17.8	--	--
	Lead		12100	b	--	19	--	--
	Mercury		0.05	b	--	**0.0529**	--	--
	Nickel		1040	b	--	14.4	--	--
	Zinc		n/a	n/a	--	47	--	--
18SA0301	Arsenic	1.5 ft	1.59	b	--	**4.9**	--	--
	Barium		259	b	--	**260**	--	--
	Chromium		n/a	n/a	--	21.7	--	--
	Copper		703	b	--	12.2	--	--
	Lead		12100	b	--	19	--	--
	Mercury		0.05	b	--	**0.0832**	--	--
	Zinc		n/a	n/a	--	44.9	--	--
PDS-SS-001-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	4.7
	Barium		368	c	--	--	--	**3200**
	Beryllium		1941	b	--	--	--	0.67
	Boron		100000	b	--	--	--	2.4
	Chromium		448	b	--	--	--	12
	Lead		12100	a	--	--	--	42
	Mercury		0.14	c	--	--	--	**2**
	Phosphorus		20.4	b	--	--	--	**66**
PDS-SS-002-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	5.4
	Barium		259	a	--	--	--	**280**
	Beryllium		1941	b	--	--	--	0.62
	Boron		100000	b	--	--	--	2.3
	Chromium		448	b	--	--	--	13
	Lead		12100	a	--	--	--	17
	Mercury		0.14	c	--	--	--	**1.3**
	Phosphorus		20.4	b	--	--	--	**130**
PDS-SS-002-0011-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	4.5
	Barium		66577	b	--	--	--	210
	Beryllium		1941	b	--	--	--	0.85
	Boron		100000	b	--	--	--	5.7
	Cadmium		451	b	--	--	--	0.13
	Chromium		448	b	--	--	--	17
	Lead		12100	a	--	--	--	17
	Mercury		0.05	a	--	--	--	**0.099**
	Phosphorus		20.4	b	--	--	--	1.6

Table 3-9. Possible Demolition Site--Detections in Soils

Name	Analyte	Depth Range	RG	Source	Sampling Round			
					Summer 1981	Summer 1991	Fall 2000	Fall 2004
PDS-SS-002-0021-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.055
	Arsenic		41.4	a	--	--	--	7.69
	Barium		66577	b	--	--	--	162.98
	Beryllium		1941	b	--	--	--	0.67
	Boron		100000	b	--	--	--	6.35
	Cadmium		451	b	--	--	--	0.43
	Chromium		448	b	--	--	--	12.98
	Lead		12100	a	--	--	--	37
	Mercury		0.14	c	--	--	--	**0.59**
	Selenium		5110	b	--	--	--	0.65
PDS-SS-002-0031-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.046
	Arsenic		41.4	a	--	--	--	4.9
	Barium		66577	b	--	--	--	150
	Beryllium		1941	b	--	--	--	0.53
	Boron		100000	b	--	--	--	2.8
	Cadmium		451	b	--	--	--	0.6
	Chromium		448	b	--	--	--	9.9
	Lead		12100	a	--	--	--	110
	Mercury		0.14	c	--	--	--	**0.54**
	Phosphorus		20.4	b	--	--	--	**300**
PDS-SS-002-0041-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	5.4
	Barium		66577	b	--	--	--	130
	Beryllium		1941	b	--	--	--	0.63
	Boron		100000	b	--	--	--	3.9
	Cadmium		451	b	--	--	--	0.14
	Chromium		448	b	--	--	--	12
	Lead		12100	a	--	--	--	77
	Mercury		0.14	c	--	--	--	**1.2**
	Phosphorus		20.4	b	--	--	--	7.2
PDS-SS-003-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	6.1
	Barium		66577	b	--	--	--	170
	Beryllium		1941	b	--	--	--	0.64
	Boron		100000	b	--	--	--	3.2
	Chromium		448	b	--	--	--	11
	Lead		12100	a	--	--	--	64
	Mercury		4	e	--	--	--	**4.7**
	Phosphorus		20.4	b	--	--	--	**33**
PDS-SS-003-0011-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	7.1
	Barium		66577	b	--	--	--	130
	Beryllium		1941	b	--	--	--	0.68
	Boron		100000	b	--	--	--	4.6
	Chromium		448	b	--	--	--	18
	Lead		12100	a	--	--	--	17
	Mercury		0.05	a	--	--	--	**0.086**
	Phosphorus		20.4	b	--	--	--	5.4
	Selenium		0.72	c	--	--	--	**0.97**

Table 3-9. Possible Demolition Site--Detections in Soils

Name	Analyte	Depth Range	RG	Source	Sampling Round			
					Summer 1981	Summer 1991	Fall 2000	Fall 2004
PDS-SS-003-0021-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	6.8
	Barium		66577	b	--	--	--	170
	Beryllium		1941	b	--	--	--	0.75
	Boron		100000	b	--	--	--	3.5
	Chromium		448	b	--	--	--	17
	Lead		12100	a	--	--	--	11
	Mercury		0.05	a	--	--	--	0.049
	Phosphorus		20.4	b	--	--	--	**39**
PDS-SS-003-0031-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	6.4
	Barium		66577	b	--	--	--	87
	Beryllium		1941	b	--	--	--	0.72
	Boron		100000	b	--	--	--	3.5
	Chromium		448	b	--	--	--	16
	Lead		12100	a	--	--	--	8
	Mercury		0.05	a	--	--	--	**0.084**
PDS-SS-003-0041-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	5.4
	Barium		66577	b	--	--	--	130
	Beryllium		1941	b	--	--	--	0.63
	Boron		100000	b	--	--	--	3
	Chromium		448	b	--	--	--	12
	Lead		12100	a	--	--	--	16
	Mercury		0.14	c	--	--	--	**0.15**
	Phosphorus		20.4	b	--	--	--	4.8
PDS-SS-004-0011-SO	4-Nitrotoluene	0 - 1 ft	30	b	--	--	--	0.054
	Arsenic		41.4	a	--	--	--	3.4
	Barium		66577	b	--	--	--	110
	Beryllium		1941	b	--	--	--	0.42
	Boron		100000	b	--	--	--	4
	Cadmium		451	b	--	--	--	0.1
	Chromium		448	b	--	--	--	8.2
	Lead		12100	a	--	--	--	11
	Mercury		0.14	c	--	--	--	**0.34**
PDS-SS-004-0021-SO	1,3,5-Trinitrobenzene	0 - 1 ft	18468	b	--	--	--	0.039
	2,4,6-Trinitrotoluene		57	b	--	--	--	0.41
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.42
	4-Amino-2,6dinitrotoluene			n/a	--	--	--	0.4
	Arsenic		41.4	a	--	--	--	3.3
	Barium		368	c	--	--	--	**2300**
	Beryllium		1941	b	--	--	--	0.45
	Boron		100000	b	--	--	--	2.9
	Cadmium		451	b	--	--	--	0.25
	Chromium		448	b	--	--	--	8.4
	Lead		12100	a	--	--	--	24
	Mercury		0.14	c	--	--	--	**0.81**
	Phosphorus		20.4	b	--	--	--	8

Table 3-9. Possible Demolition Site--Detections in Soils

Name	Analyte	Depth Range	RG	Source	Sampling Round			
					Summer 1981	Summer 1991	Fall 2000	Fall 2004
PDS-SS-004-0031-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	3.5
	Barium		66577	b	--	--	--	240
	Beryllium		1941	b	--	--	--	0.52
	Boron		100000	b	--	--	--	3.4
	Cadmium		451	b	--	--	--	0.19
	Chromium		448	b	--	--	--	9.7
	Lead		12100	a	--	--	--	23
	Mercury		0.14	c	--	--	--	**1.5**
	Phosphorus		20.4	b	--	--	--	7.8
PDS-SS-004-0041-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.042
	Arsenic		41.4	a	--	--	--	3.6
	Barium		368	c	--	--	--	**590**
	Beryllium		1941	b	--	--	--	0.57
	Boron		100000	b	--	--	--	3.2
	Cadmium		451	b	--	--	--	0.32
	Chromium		448	b	--	--	--	11
	Lead		12100	a	--	--	--	42
	Mercury		4	e	--	--	--	**9.4**
	Phosphorus		20.4	b	--	--	--	**330**
	Selenium		5110	b	--	--	--	0.51
PDS-SS-005-0011-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.087
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.049
	Arsenic		41.4	a	--	--	--	4.8
	Barium		259	a	--	--	--	**350**
	Beryllium		1941	b	--	--	--	0.5
	Boron		100000	b	--	--	--	3.2
	Cadmium		451	b	--	--	--	0.37
	Chromium		448	b	--	--	--	11
	Lead		12100	a	--	--	--	230
	Mercury		4	e	--	--	--	**14**
	Phosphorus		20.4	b	--	--	--	1.9
PDS-SS-005-0021-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.04
	Arsenic		41.4	a	--	--	--	4.3
	Barium		259	a	--	--	--	**270**
	Beryllium		1941	b	--	--	--	0.58
	Boron		100000	b	--	--	--	2.5
	Cadmium		451	b	--	--	--	0.089
	Chromium		448	b	--	--	--	9.7
	Lead		12100	a	--	--	--	31
	Mercury		0.14	c	--	--	--	**3.1**
	Phosphorus		20.4	b	--	--	--	12

Table 3-9. Possible Demolition Site--Detections in Soils

Name	Analyte	Depth Range	RG	Source	Sampling Round			
					Summer 1981	Summer 1991	Fall 2000	Fall 2004
PDS-SS-005-0031-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.039
	Arsenic		41.4	a	--	--	--	4.6
	Barium		66577	b	--	--	--	120
	Beryllium		1941	b	--	--	--	0.5
	Boron		100000	b	--	--	--	2.5
	Cadmium		451	b	--	--	--	0.42
	Chromium		448	b	--	--	--	8.9
	Lead		12100	a	--	--	--	19
	Mercury		0.14	c	--	--	--	**0.33**
	Phosphorus		20.4	b	--	--	--	6.9
PDS-SS-005-0041-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.042
	Arsenic		41.4	a	--	--	--	5.3
	Barium		259	a	--	--	--	**350**
	Beryllium		1941	b	--	--	--	0.59
	Boron		100000	b	--	--	--	2.8
	Cadmium		451	b	--	--	--	0.55
	Chromium		448	b	--	--	--	10
	Lead		12100	a	--	--	--	94
	Mercury		4	e	--	--	--	**9.8**
	Phosphorus		20.4	b	--	--	--	1.2
PDS-SSI-001-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	5.21
	Barium		66577	b	--	--	--	173
	Beryllium		1941	b	--	--	--	0.66
	Boron		100000	b	--	--	--	5.3
	Chromium		448	b	--	--	--	16.91
	Lead		12100	a	--	--	--	21.13
	Mercury		0.14	c	--	--	--	**1**
	Phosphorus		20.4	b	--	--	--	**30**
	Selenium		5110	b	--	--	--	0.53

Table 3-9. Possible Demolition Site--Detections in Soils

Name	Analyte	Depth Range	RG	Source	Sampling Round			
					Summer 1981	Summer 1991	Fall 2000	Fall 2004
PDS-SSI-002-0001-SO	1,3,5-Trinitrobenzene	0 - 1 ft	18468	b	--	--	--	0.33
	2,4,6-Trinitrotoluene		47	e	--	--	--	**78**
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.97
	4-Amino-2,6dinitrotoluene			n/a	--	--	--	1.3
	Arsenic		41.4	a	--	--	--	5.9
	Barium		66577	b	--	--	--	210
	Beryllium		1941	b	--	--	--	0.68
	Boron		100000	b	--	--	--	4.1
	Cadmium		451	b	--	--	--	0.2
	Chromium		448	b	--	--	--	18
	Lead		1000	e	--	--	--	**1700**
	Mercury		0.14	c	--	--	--	**1.8**
	Phosphorus		20.4	b	--	--	--	8.8
	Selenium		5110	b	--	--	--	0.49
PDS-SSI-002-0011-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	5
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.056
	Arsenic		41.4	a	--	--	--	5.5
	Barium		368	c	--	--	--	**810**
	Beryllium		1941	b	--	--	--	0.72
	Boron		100000	b	--	--	--	4.9
	Cadmium		451	b	--	--	--	0.19
	Chromium		448	b	--	--	--	34
	Lead		12100	a	--	--	--	41
	Mercury		0.14	c	--	--	--	**0.29**
PDS-SSI-002-0021-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.057
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.053
	Arsenic		41.4	a	--	--	--	5.2
	Barium		66577	b	--	--	--	120
	Beryllium		1941	b	--	--	--	0.71
	Boron		100000	b	--	--	--	4.5
	Chromium		448	b	--	--	--	40
	Lead		12100	a	--	--	--	28
	Mercury		0.14	c	--	--	--	**0.8**
PDS-SSI-002-0031-SO	1,3,5-Trinitrobenzene	0 - 1 ft	18468	b	--	--	--	0.11
	2,4,6-Trinitrotoluene		57	b	--	--	--	11
	2,4-Dinitrotoluene		1231	b	--	--	--	0.051
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.64
	4-Amino-2,6dinitrotoluene			n/a	--	--	--	0.94
	Arsenic		41.4	a	--	--	--	4.4
	Barium		66577	b	--	--	--	200
	Beryllium		1941	b	--	--	--	0.58
	Boron		100000	b	--	--	--	3
	Cadmium		451	b	--	--	--	0.52
	Chromium		448	b	--	--	--	24
	Lead		12100	a	--	--	--	100
	Mercury		0.14	c	--	--	--	**2.1**
	Phosphorus		20.4	b	--	--	--	3.3

Table 3-9. Possible Demolition Site--Detections in Soils

Name	Analyte	Depth Range	RG	Source	Sampling Round			
					Summer 1981	Summer 1991	Fall 2000	Fall 2004
PDS-SSI-002-0041-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.11
	Arsenic		41.4	a	--	--	--	4.7
	Barium		66577	b	--	--	--	92
	Beryllium		1941	b	--	--	--	0.66
	Boron		100000	b	--	--	--	3
	Chromium		448	b	--	--	--	25
	Lead		12100	a	--	--	--	37
	Mercury		0.14	c	--	--	--	**1.6**
PDS-SSI-003-0001-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	7.9
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.15
	4-Amino-2,6dinitrotoluene			n/a	--	--	--	0.16
	Arsenic		41.4	a	--	--	--	7.2
	Barium		66577	b	--	--	--	110
	Beryllium		1941	b	--	--	--	0.78
	Boron		100000	b	--	--	--	3.9
	Chromium		448	b	--	--	--	22
	Lead		12100	a	--	--	--	20
	Mercury		0.05	a	--	--	--	**0.087**
	Phosphorus		20.4	b	--	--	--	**180**
	Selenium		0.72	c	--	--	--	**0.85**
PDS-SSI-003-0011-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	6.86
	Barium		66577	b	--	--	--	160
	Beryllium		1941	b	--	--	--	0.7
	Boron		100000	b	--	--	--	4.4
	Chromium		448	b	--	--	--	23.4
	Lead		12100	a	--	--	--	21
	Mercury		0.14	c	--	--	--	**0.2**
	Phosphorus		20.4	b	--	--	--	1.4
	Selenium		5110	b	--	--	--	0.56
PDS-SSI-003-0021-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	5.7
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.19
	4-Amino-2,6dinitrotoluene			n/a	--	--	--	0.18
	Arsenic		41.4	a	--	--	--	5.5
	Barium		66577	b	--	--	--	100
	Beryllium		1941	b	--	--	--	0.64
	Boron		100000	b	--	--	--	3.2
	Chromium		448	b	--	--	--	21
	Lead		12100	a	--	--	--	15
	Phosphorus		20.4	b	--	--	--	19
	Selenium		5110	b	--	--	--	0.43
PDS-SSI-003-0031-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	1.3
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.054
	4-Amino-2,6dinitrotoluene			n/a	--	--	--	0.2
	Arsenic		41.4	a	--	--	--	5.8
	Barium		259	a	--	--	--	**270**
	Beryllium		1941	b	--	--	--	0.71
	Boron		100000	b	--	--	--	3.3
	Chromium		448	b	--	--	--	16
	Lead		12100	a	--	--	--	16
	Phosphorus		20.4	b	--	--	--	1.2

Table 3-9. Possible Demolition Site--Detections in Soils

Name	Analyte	Depth Range	RG	Source	Sampling Round			
					Summer 1981	Summer 1991	Fall 2000	Fall 2004
PDS-SSI-003-0041-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	5.3
	Barium		259	a	--	--	--	**330**
	Beryllium		1941	b	--	--	--	0.67
	Boron		100000	b	--	--	--	3.1
	Chromium		448	b	--	--	--	15
	Lead		12100	a	--	--	--	18
	Phosphorus		20.4	b	--	--	--	8.5
PDS-SSI-004-0001-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.13
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.14
	4-Amino-2,6dinitrotoluene			n/a	--	--	--	0.17
	Arsenic		41.4	a	--	--	--	4.4
	Barium		368	c	--	--	--	**540**
	Beryllium		1941	b	--	--	--	0.55
	Boron		100000	b	--	--	--	3.8
	Cadmium		451	b	--	--	--	0.26
	Chromium		448	b	--	--	--	17
	Lead		12100	a	--	--	--	40
	Mercury		0.14	c	--	--	--	**3.2**
	Phosphorus		20.4	b	--	--	--	**25**
	RDX		49.6	a	--	--	--	0.058
PDS-SSI-004-0011-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	3.8
	Barium		259	a	--	--	--	**260**
	Beryllium		1941	b	--	--	--	0.54
	Boron		100000	b	--	--	--	3.8
	Cadmium		451	b	--	--	--	0.16
	Chromium		448	b	--	--	--	24
	Lead		12100	a	--	--	--	20
	Mercury		0.14	c	--	--	--	**2**
	Phosphorus		20.4	b	--	--	--	7.1
PDS-SSI-004-0021-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.79
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.13
	4-Amino-2,6dinitrotoluene			n/a	--	--	--	0.14
	Arsenic		41.4	a	--	--	--	3.7
	Barium		368	c	--	--	--	**1100**
	Beryllium		1941	b	--	--	--	0.52
	Boron		100000	b	--	--	--	3.1
	Cadmium		451	b	--	--	--	0.49
	Chromium		448	b	--	--	--	20
	Lead		12100	a	--	--	--	63
	Mercury		0.14	c	--	--	--	**3.5**
	Phosphorus		20.4	b	--	--	--	2.1
	Selenium		5110	b	--	--	--	0.43

Table 3-9. Possible Demolition Site--Detections in Soils

Name	Analyte	Depth Range	RG	Source	Sampling Round			
					Summer 1981	Summer 1991	Fall 2000	Fall 2004
PDS-SSI-004-0031-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.038
	Arsenic		41.4	a	--	--	--	3.7
	Barium		259	a	--	--	--	**320**
	Beryllium		1941	b	--	--	--	0.55
	Boron		100000	b	--	--	--	3.5
	Cadmium		451	b	--	--	--	0.16
	Chromium		448	b	--	--	--	26
	Lead		12100	a	--	--	--	27
	Mercury		0.14	c	--	--	--	**3**
	Phosphorus		20.4	b	--	--	--	2.9
PDS-SSI-004-0041-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.042
	Arsenic		41.4	a	--	--	--	3.5
	Barium		368	c	--	--	--	**500**
	Beryllium		1941	b	--	--	--	0.55
	Boron		100000	b	--	--	--	2.9
	Cadmium		451	b	--	--	--	0.33
	Chromium		448	b	--	--	--	20
	Lead		12100	a	--	--	--	68
	Mercury		4	e	--	--	--	**17**
	Phosphorus		20.4	b	--	--	--	3.6
PDS-SSI-005-0001-SO	1,3,5-Trinitrobenzene	0 - 1 ft	18468	b	--	--	--	0.091
	2,4,6-Trinitrotoluene		27.5	a	--	--	--	**46**
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.84
	4-Amino-2,6dinitrotoluene			n/a	--	--	--	0.86
	Arsenic		41.4	a	--	--	--	4.5
	Barium		368	c	--	--	--	**830**
	Beryllium		1941	b	--	--	--	0.56
	Boron		100000	b	--	--	--	3.1
	Cadmium		451	b	--	--	--	0.52
	Chromium		448	b	--	--	--	16
	Lead		12100	a	--	--	--	230
	Mercury		4	e	--	--	--	**27**
	Phosphorus		20.4	b	--	--	--	**170**
PDS-SSI-005-0011-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.89
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.14
	4-Amino-2,6dinitrotoluene			n/a	--	--	--	0.16
	Arsenic		41.4	a	--	--	--	4.1
	Barium		259	a	--	--	--	**270**
	Beryllium		1941	b	--	--	--	0.52
	Boron		100000	b	--	--	--	2.8
	Cadmium		451	b	--	--	--	0.46
	Chromium		448	b	--	--	--	24
	Lead		12100	a	--	--	--	89
	Mercury		4	e	--	--	--	**5.1**
	Phosphorus		20.4	b	--	--	--	6.4

Table 3-9. Possible Demolition Site--Detections in Soils

Name	Analyte	Depth Range	RG	Source	Sampling Round			
					Summer 1981	Summer 1991	Fall 2000	Fall 2004
PDS-SSI-005-0021-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.12
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.06
	Arsenic		41.4	a	--	--	--	4.6
	Barium		368	c	--	--	--	**530**
	Beryllium		1941	b	--	--	--	0.63
	Boron		100000	b	--	--	--	2.8
	Cadmium		451	b	--	--	--	0.28
	Chromium		448	b	--	--	--	22
	Lead		12100	a	--	--	--	58
	Mercury		0.14	c	--	--	--	**3.2**
	Phosphorus		20.4	b	--	--	--	3.3
PDS-SSI-005-0031-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.094
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.047
	Arsenic		41.4	a	--	--	--	4
	Barium		368	c	--	--	--	**470**
	Beryllium		1941	b	--	--	--	0.52
	Boron		100000	b	--	--	--	2.5
	Cadmium		451	b	--	--	--	0.48
	Chromium		448	b	--	--	--	20
	Lead		12100	a	--	--	--	68
	Mercury		4	e	--	--	--	**19**
	Phosphorus		20.4	b	--	--	--	1.8
PDS-SSI-005-0041-SO	2,4,6-Trinitrotoluene	0 - 1 ft	57	b	--	--	--	0.17
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	--	--	0.11
	4-Amino-2,6dinitrotoluene			n/a	--	--	--	0.11
	Arsenic		41.4	a	--	--	--	5.3
	Barium		368	c	--	--	--	**1100**
	Beryllium		1941	b	--	--	--	0.52
	Boron		100000	b	--	--	--	2.7
	Cadmium		451	b	--	--	--	0.34
	Chromium		448	b	--	--	--	22
	Lead		12100	a	--	--	--	800
	Mercury		4	e	--	--	--	**330**
	Phosphorus		20.4	b	--	--	--	2.9
PDS-SSI-006-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	5
	Barium		368	c	--	--	--	**370**
	Beryllium		1941	b	--	--	--	0.62
	Boron		100000	b	--	--	--	3
	Cadmium		451	b	--	--	--	0.7
	Chromium		448	b	--	--	--	15
	Lead		12100	a	--	--	--	29
	Mercury		0.14	c	--	--	--	**0.53**
	Phosphorus		20.4	b	--	--	--	**53**
	Selenium		5110	b	--	--	--	0.49
PDS-SSI-007-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	4.9
	Barium		66577	b	--	--	--	190
	Beryllium		1941	b	--	--	--	0.62
	Boron		100000	b	--	--	--	3.9
	Chromium		448	b	--	--	--	18
	Lead		12100	a	--	--	--	16
	Mercury		0.14	c	--	--	--	**1.3**
	Phosphorus		20.4	b	--	--	--	2.1

Table 3-9. Possible Demolition Site--Detections in Soils

Name	Analyte	Depth Range	RG	Source	Sampling Round			
					Summer 1981	Summer 1991	Fall 2000	Fall 2004
PDS-SSI-008-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	4.7
	Barium		66577	b	--	--	--	100
	Beryllium		1941	b	--	--	--	0.62
	Boron		100000	b	--	--	--	3.6
	Chromium		448	b	--	--	--	15
	Lead		12100	a	--	--	--	13
	Mercury		0.05	a	--	--	--	**0.11**
	Phosphorus		20.4	b	--	--	--	**100**
PDS-SSI-009-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	4
	Barium		66577	b	--	--	--	200
	Beryllium		1941	b	--	--	--	0.54
	Boron		100000	b	--	--	--	2.7
	Chromium		448	b	--	--	--	13
	Lead		12100	a	--	--	--	13
	Mercury		0.05	a	--	--	--	**0.072**
	Phosphorus		20.4	b	--	--	--	**64**
	Selenium		5110	b	--	--	--	0.55
S-6	1,4-Benzoquinone	0.5 - 0.8 ft	n/a	n/a	4	--	--	--
	4,4-Difluorobenzophenone		n/a	n/a	7	--	--	--
	Arsenic		41.4	a	--	--	5.84	--
	Barium		368	c	**1200**	--	224	--
	Chromium		448	b	10	--	15.4	--
	Copper		40877	b	60	--	--	--
	Lead		12100	a	270	--	18.1	--
	Selenium		0.72	c	--	--	**1.36**	--
	Total phosphates		n/a	n/a	250	--	--	--
	Zinc		100000	b	84	--	--	--

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
n/a - no comparison value available
bold exceeds applicable RG

Table 3-10. Possible Demolition Site--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round						
				Summer 1981	Fall 1985	Summer 1991	Spring/Summer 1992	Spring 2000	Fall 2000	Fall 2004
18SA0101	Arsenic	n/a	n/a	--	--	5.9	--	--	--	--
	Barium	63.4	a	--	--	**140**	--	--	--	--
	Chromium	n/a	n/a	--	--	35.8	--	--	--	--
	Copper	93.7	a	--	--	20.1	--	--	--	--
	Lead	n/a	n/a	--	--	14	--	--	--	--
	Mercury	0.96	a	--	--	0.061	--	--	--	--
	Nickel	511	a	--	--	15.1	--	--	--	--
	Zinc	1620	a	--	--	66.7	--	--	--	--
18SA0201	Arsenic	n/a	n/a	--	--	5.27	--	--	--	--
	Barium	63.4	a	--	--	**250**	--	--	--	--
	Chromium	n/a	n/a	--	--	26.2	--	--	--	--
	Copper	93.7	a	--	--	17.8	--	--	--	--
	Lead	n/a	n/a	--	--	19	--	--	--	--
	Mercury	0.96	a	--	--	0.0529	--	--	--	--
	Nickel	511	a	--	--	14.4	--	--	--	--
	Zinc	1620	a	--	--	47	--	--	--	--
18SA0301	Arsenic	n/a	n/a	--	--	4.9	--	--	--	--
	Barium	63.4	a	--	--	**260**	--	--	--	--
	Chromium	n/a	n/a	--	--	21.7	--	--	--	--
	Copper	93.7	a	--	--	12.2	--	--	--	--
	Lead	n/a	n/a	--	--	19	--	--	--	--
	Mercury	0.96	a	--	--	0.0832	--	--	--	--
	Zinc	1620	a	--	--	44.9	--	--	--	--
LC02-H	Aluminum	61.8	a	--	--	--	--	**510**	**4670**	--
	Arsenic	4.03	a	--	--	--	--	--	3.8	--
	Barium	63.4	a	--	--	--	--	**106**	**137**	--
	Beryllium	n/a	n/a	--	--	--	--	0.5	2	--
	Beta gross	n/a	n/a	--	--	--	--	--	8.7	--
	Bis(2-ethylhexyl)	310	a	--	--	--	--	20	--	--
	Cadmium	8.47	a	--	--	--	--	--	0.3	--
	Chromium	n/a	n/a	--	--	--	--	--	35.7	--
	Cobalt	n/a	n/a	--	--	--	--	--	7	--
	Copper	93.7	a	--	--	--	--	--	9.8	--
	Dalapon	n/a	n/a	--	--	--	--	3.2	--	--
	Iron	n/a	n/a	--	--	--	--	447	11100	--
	Lead	n/a	n/a	--	--	--	--	2.6	10	--
	Magnesium	n/a	n/a	--	--	--	--	20100	15500	--
	Manganese	n/a	n/a	--	--	--	--	89.1	781	--
	Mercury	0.96	a	--	--	--	--	--	0.03	--
	Nickel	511	a	--	--	--	--	2.7	17.8	--
	Selenium	1.06	a	--	--	--	--	--	**2.7**	--
	Silver	1.2	a	--	--	--	--	--	1	--
	Uranium	n/a	n/a	--	--	--	--	--	2.1	--
	Vanadium	n/a	n/a	--	--	--	--	1.8	17.6	--
	Zinc	1620	a	--	--	--	--	3.8	33	--

Table 3-10. Possible Demolition Site--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round						
				Summer 1981	Fall 1985	Summer 1991	Spring/Summer 1992	Spring 2000	Fall 2000	Fall 2004
PDS-SS-001-0001-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**4.7**
	Barium	n/a	n/a	--	--	--	--	--	--	3200
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.67
	Boron	n/a	n/a	--	--	--	--	--	--	2.4
	Chromium	n/a	n/a	--	--	--	--	--	--	12
	Lead	n/a	n/a	--	--	--	--	--	--	42
	Mercury	n/a	n/a	--	--	--	--	--	--	2
	Phosphorus	n/a	n/a	--	--	--	--	--	--	66
PDS-SS-002-0001-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**5.4**
	Barium	63.4	a	**--**	**--**	**--**	**--**	**--**	**--**	**280**
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.62
	Boron	n/a	n/a	--	--	--	--	--	--	2.3
	Chromium	n/a	n/a	--	--	--	--	--	--	13
	Lead	n/a	n/a	--	--	--	--	--	--	17
	Mercury	n/a	n/a	--	--	--	--	--	--	1.3
	Phosphorus	n/a	n/a	--	--	--	--	--	--	130
PDS-SS-002-0011-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**4.5**
	Barium	n/a	n/a	--	--	--	--	--	--	210
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.85
	Boron	n/a	n/a	--	--	--	--	--	--	5.7
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.13
	Chromium	n/a	n/a	--	--	--	--	--	--	17
	Lead	n/a	n/a	--	--	--	--	--	--	17
	Mercury	0.96	a	**--**	**--**	**--**	**--**	**--**	**--**	0.099
	Phosphorus	n/a	n/a	--	--	--	--	--	--	1.6
PDS-SS-002-0021-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.055
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**7.69**
	Barium	n/a	n/a	--	--	--	--	--	--	162.98
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.67
	Boron	n/a	n/a	--	--	--	--	--	--	6.35
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.43
	Chromium	n/a	n/a	--	--	--	--	--	--	12.98
	Lead	n/a	n/a	--	--	--	--	--	--	37
	Mercury	n/a	n/a	--	--	--	--	--	--	0.59
	Selenium	n/a	n/a	--	--	--	--	--	--	0.65
PDS-SS-002-0031-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.046
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**4.9**
	Barium	n/a	n/a	--	--	--	--	--	--	150
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.53
	Boron	n/a	n/a	--	--	--	--	--	--	2.8
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.6
	Chromium	n/a	n/a	--	--	--	--	--	--	9.9
	Lead	n/a	n/a	--	--	--	--	--	--	110
	Mercury	n/a	n/a	--	--	--	--	--	--	0.54
	Phosphorus	n/a	n/a	--	--	--	--	--	--	300

Table 3-10. Possible Demolition Site--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round						
				Summer 1981	Fall 1985	Summer 1991	Spring/Summer 1992	Spring 2000	Fall 2000	Fall 2004
PDS-SS-002-0041-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**5.4**
	Barium	n/a	n/a	--	--	--	--	--	--	130
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.63
	Boron	n/a	n/a	--	--	--	--	--	--	3.9
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.14
	Chromium	n/a	n/a	--	--	--	--	--	--	12
	Lead	n/a	n/a	--	--	--	--	--	--	77
	Mercury	n/a	n/a	--	--	--	--	--	--	1.2
	Phosphorus	n/a	n/a	--	--	--	--	--	--	7.2
PDS-SS-003-0001-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**6.1**
	Barium	n/a	n/a	--	--	--	--	--	--	170
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.64
	Boron	n/a	n/a	--	--	--	--	--	--	3.2
	Chromium	n/a	n/a	--	--	--	--	--	--	11
	Lead	n/a	n/a	--	--	--	--	--	--	64
	Mercury	n/a	n/a	--	--	--	--	--	--	4.7
	Phosphorus	n/a	n/a	--	--	--	--	--	--	33
PDS-SS-003-0011-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**7.1**
	Barium	n/a	n/a	--	--	--	--	--	--	130
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.68
	Boron	n/a	n/a	--	--	--	--	--	--	4.6
	Chromium	n/a	n/a	--	--	--	--	--	--	18
	Lead	n/a	n/a	--	--	--	--	--	--	17
	Mercury	0.96	a	**--**	**--**	**--**	**--**	**--**	**--**	0.086
	Phosphorus	n/a	n/a	--	--	--	--	--	--	5.4
	Selenium	n/a	n/a	--	--	--	--	--	--	0.97
PDS-SS-003-0021-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**6.8**
	Barium	n/a	n/a	--	--	--	--	--	--	170
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.75
	Boron	n/a	n/a	--	--	--	--	--	--	3.5
	Chromium	n/a	n/a	--	--	--	--	--	--	17
	Lead	n/a	n/a	--	--	--	--	--	--	11
	Mercury	0.96	a	**--**	**--**	**--**	**--**	**--**	**--**	0.049
	Phosphorus	n/a	n/a	--	--	--	--	--	--	39
PDS-SS-003-0031-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**6.4**
	Barium	n/a	n/a	--	--	--	--	--	--	87
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.72
	Boron	n/a	n/a	--	--	--	--	--	--	3.5
	Chromium	n/a	n/a	--	--	--	--	--	--	16
	Lead	n/a	n/a	--	--	--	--	--	--	8
	Mercury	0.96	a	**--**	**--**	**--**	**--**	**--**	**--**	0.084
PDS-SS-003-0041-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**5.4**
	Barium	n/a	n/a	--	--	--	--	--	--	130
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.63
	Boron	n/a	n/a	--	--	--	--	--	--	3
	Chromium	n/a	n/a	--	--	--	--	--	--	12
	Lead	n/a	n/a	--	--	--	--	--	--	16
	Mercury	n/a	n/a	--	--	--	--	--	--	0.15
	Phosphorus	n/a	n/a	--	--	--	--	--	--	4.8

Table 3-10. Possible Demolition Site--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round						
				Summer 1981	Fall 1985	Summer 1991	Spring/Summer 1992	Spring 2000	Fall 2000	Fall 2004
PDS-SS-004-0001-SD	2,4,6-Trinitrotoluene	13.6	a	--	--	--	--	--	--	0.11
	Arsenic	4.03	a	--	--	--	--	--	--	**5.7**
	Barium	63.4	a	--	--	--	--	--	--	**260**
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.75
	Boron	n/a	n/a	--	--	--	--	--	--	3.4
	Cadmium	8.47	a	--	--	--	--	--	--	0.12
	Chromium	n/a	n/a	--	--	--	--	--	--	15
	Lead	n/a	n/a	--	--	--	--	--	--	66
	Mercury	0.96	a	--	--	--	--	--	--	0.71
	Phosphorus	n/a	n/a	--	--	--	--	--	--	19
PDS-SS-004-0011-SO	4-Nitrotoluene	n/a	n/a	--	--	--	--	--	--	0.054
	Arsenic	4.03	a	--	--	--	--	--	--	3.4
	Barium	n/a	n/a	--	--	--	--	--	--	110
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.42
	Boron	n/a	n/a	--	--	--	--	--	--	4
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.1
	Chromium	n/a	n/a	--	--	--	--	--	--	8.2
	Lead	n/a	n/a	--	--	--	--	--	--	11
	Mercury	n/a	n/a	--	--	--	--	--	--	0.34
PDS-SS-004-0021-SO	1,3,5-Trinitrobenzene	n/a	n/a	--	--	--	--	--	--	0.039
	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.41
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.42
	4-Amino-	n/a	n/a	--	--	--	--	--	--	0.4
	Arsenic	4.03	a	--	--	--	--	--	--	3.3
	Barium	n/a	n/a	--	--	--	--	--	--	2300
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.45
	Boron	n/a	n/a	--	--	--	--	--	--	2.9
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.25
	Chromium	n/a	n/a	--	--	--	--	--	--	8.4
	Lead	n/a	n/a	--	--	--	--	--	--	24
	Mercury	n/a	n/a	--	--	--	--	--	--	0.81
	Phosphorus	n/a	n/a	--	--	--	--	--	--	8
PDS-SS-004-0031-SO	Arsenic	4.03	a	--	--	--	--	--	--	3.5
	Barium	n/a	n/a	--	--	--	--	--	--	240
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.52
	Boron	n/a	n/a	--	--	--	--	--	--	3.4
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.19
	Chromium	n/a	n/a	--	--	--	--	--	--	9.7
	Lead	n/a	n/a	--	--	--	--	--	--	23
	Mercury	n/a	n/a	--	--	--	--	--	--	1.5
	Phosphorus	n/a	n/a	--	--	--	--	--	--	7.8
PDS-SS-004-0041-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.042
	Arsenic	4.03	a	--	--	--	--	--	--	3.6
	Barium	n/a	n/a	--	--	--	--	--	--	590
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.57
	Boron	n/a	n/a	--	--	--	--	--	--	3.2
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.32
	Chromium	n/a	n/a	--	--	--	--	--	--	11
	Lead	n/a	n/a	--	--	--	--	--	--	42
	Mercury	n/a	n/a	--	--	--	--	--	--	9.4
	Phosphorus	n/a	n/a	--	--	--	--	--	--	330
	Selenium	n/a	n/a	--	--	--	--	--	--	0.51

Table 3-10. Possible Demolition Site--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round						
				Summer 1981	Fall 1985	Summer 1991	Spring/Summer 1992	Spring 2000	Fall 2000	Fall 2004
PDS-SS-005-0011-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.087
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.049
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**4.8**
	Barium	63.4	a	**--**	**--**	**--**	**--**	**--**	**--**	**350**
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.5
	Boron	n/a	n/a	--	--	--	--	--	--	3.2
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.37
	Chromium	n/a	n/a	--	--	--	--	--	--	11
	Lead	n/a	n/a	--	--	--	--	--	--	230
	Mercury	n/a	n/a	--	--	--	--	--	--	14
	Phosphorus	n/a	n/a	--	--	--	--	--	--	1.9
PDS-SS-005-0021-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.04
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**4.3**
	Barium	63.4	a	**--**	**--**	**--**	**--**	**--**	**--**	**270**
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.58
	Boron	n/a	n/a	--	--	--	--	--	--	2.5
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.089
	Chromium	n/a	n/a	--	--	--	--	--	--	9.7
	Lead	n/a	n/a	--	--	--	--	--	--	31
	Mercury	n/a	n/a	--	--	--	--	--	--	3.1
	Phosphorus	n/a	n/a	--	--	--	--	--	--	12
PDS-SS-005-0031-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.039
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**4.6**
	Barium	n/a	n/a	--	--	--	--	--	--	120
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.5
	Boron	n/a	n/a	--	--	--	--	--	--	2.5
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.42
	Chromium	n/a	n/a	--	--	--	--	--	--	8.9
	Lead	n/a	n/a	--	--	--	--	--	--	19
	Mercury	n/a	n/a	--	--	--	--	--	--	0.33
	Phosphorus	n/a	n/a	--	--	--	--	--	--	6.9
PDS-SS-005-0041-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.042
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**5.3**
	Barium	63.4	a	**--**	**--**	**--**	**--**	**--**	**--**	**350**
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.59
	Boron	n/a	n/a	--	--	--	--	--	--	2.8
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.55
	Chromium	n/a	n/a	--	--	--	--	--	--	10
	Lead	n/a	n/a	--	--	--	--	--	--	94
	Mercury	n/a	n/a	--	--	--	--	--	--	9.8
	Phosphorus	n/a	n/a	--	--	--	--	--	--	1.2
PDS-SSI-001-0001-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**5.21**
	Barium	n/a	n/a	--	--	--	--	--	--	173
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.66
	Boron	n/a	n/a	--	--	--	--	--	--	5.3
	Chromium	n/a	n/a	--	--	--	--	--	--	16.91
	Lead	n/a	n/a	--	--	--	--	--	--	21.13
	Mercury	n/a	n/a	--	--	--	--	--	--	1
	Phosphorus	n/a	n/a	--	--	--	--	--	--	30
	Selenium	n/a	n/a	--	--	--	--	--	--	0.53

Table 3-10. Possible Demolition Site--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round						
				Summer 1981	Fall 1985	Summer 1991	Spring/Summer 1992	Spring 2000	Fall 2000	Fall 2004
PDS-SSI-002-0001-SO	1,3,5-Trinitrobenzene	n/a	n/a	--	--	--	--	--	--	0.33
	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	78
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.97
	4-Amino-	n/a	n/a	--	--	--	--	--	--	1.3
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**5.9**
	Barium	n/a	n/a	--	--	--	--	--	--	210
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.68
	Boron	n/a	n/a	--	--	--	--	--	--	4.1
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.2
	Chromium	n/a	n/a	--	--	--	--	--	--	18
	Lead	n/a	n/a	--	--	--	--	--	--	1700
	Mercury	n/a	n/a	--	--	--	--	--	--	1.8
	Phosphorus	n/a	n/a	--	--	--	--	--	--	8.8
	Selenium	n/a	n/a	--	--	--	--	--	--	0.49
PDS-SSI-002-0011-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	5
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.056
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**5.5**
	Barium	n/a	n/a	--	--	--	--	--	--	810
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.72
	Boron	n/a	n/a	--	--	--	--	--	--	4.9
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.19
	Chromium	n/a	n/a	--	--	--	--	--	--	34
	Lead	n/a	n/a	--	--	--	--	--	--	41
	Mercury	n/a	n/a	--	--	--	--	--	--	0.29
PDS-SSI-002-0021-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.057
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.053
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**5.2**
	Barium	n/a	n/a	--	--	--	--	--	--	120
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.71
	Boron	n/a	n/a	--	--	--	--	--	--	4.5
	Chromium	n/a	n/a	--	--	--	--	--	--	40
	Lead	n/a	n/a	--	--	--	--	--	--	28
	Mercury	n/a	n/a	--	--	--	--	--	--	0.8
PDS-SSI-002-0031-SO	1,3,5-Trinitrobenzene	n/a	n/a	--	--	--	--	--	--	0.11
	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	11
	2,4-Dinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.051
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.64
	4-Amino-	n/a	n/a	--	--	--	--	--	--	0.94
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**4.4**
	Barium	n/a	n/a	--	--	--	--	--	--	200
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.58
	Boron	n/a	n/a	--	--	--	--	--	--	3
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.52
	Chromium	n/a	n/a	--	--	--	--	--	--	24
	Lead	n/a	n/a	--	--	--	--	--	--	100
	Mercury	n/a	n/a	--	--	--	--	--	--	2.1
	Phosphorus	n/a	n/a	--	--	--	--	--	--	3.3

Table 3-10. Possible Demolition Site--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round						
				Summer 1981	Fall 1985	Summer 1991	Spring/Summer 1992	Spring 2000	Fall 2000	Fall 2004
PDS-SSI-002-0041-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.11
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**4.7**
	Barium	n/a	n/a	--	--	--	--	--	--	92
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.66
	Boron	n/a	n/a	--	--	--	--	--	--	3
	Chromium	n/a	n/a	--	--	--	--	--	--	25
	Lead	n/a	n/a	--	--	--	--	--	--	37
	Mercury	n/a	n/a	--	--	--	--	--	--	1.6
PDS-SSI-003-0001-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	7.9
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.15
	4-Amino-	n/a	n/a	--	--	--	--	--	--	0.16
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**7.2**
	Barium	n/a	n/a	--	--	--	--	--	--	110
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.78
	Boron	n/a	n/a	--	--	--	--	--	--	3.9
	Chromium	n/a	n/a	--	--	--	--	--	--	22
	Lead	n/a	n/a	--	--	--	--	--	--	20
	Mercury	0.96	a	**--**	**--**	**--**	**--**	**--**	**--**	0.087
	Phosphorus	n/a	n/a	--	--	--	--	--	--	180
	Selenium	n/a	n/a	--	--	--	--	--	--	0.85
PDS-SSI-003-0011-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**6.86**
	Barium	n/a	n/a	--	--	--	--	--	--	160
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.7
	Boron	n/a	n/a	--	--	--	--	--	--	4.4
	Chromium	n/a	n/a	--	--	--	--	--	--	23.4
	Lead	n/a	n/a	--	--	--	--	--	--	21
	Mercury	n/a	n/a	--	--	--	--	--	--	0.2
	Phosphorus	n/a	n/a	--	--	--	--	--	--	1.4
	Selenium	n/a	n/a	--	--	--	--	--	--	0.56
PDS-SSI-003-0021-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	5.7
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.19
	4-Amino-	n/a	n/a	--	--	--	--	--	--	0.18
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**5.5**
	Barium	n/a	n/a	--	--	--	--	--	--	100
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.64
	Boron	n/a	n/a	--	--	--	--	--	--	3.2
	Chromium	n/a	n/a	--	--	--	--	--	--	21
	Lead	n/a	n/a	--	--	--	--	--	--	15
	Phosphorus	n/a	n/a	--	--	--	--	--	--	19
	Selenium	n/a	n/a	--	--	--	--	--	--	0.43

Table 3-10. Possible Demolition Site--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round						
				Summer 1981	Fall 1985	Summer 1991	Spring/Summer 1992	Spring 2000	Fall 2000	Fall 2004
PDS-SSI-003-0031-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	1.3
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.054
	4-Amino-	n/a	n/a	--	--	--	--	--	--	0.2
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**5.8**
	Barium	63.4	a	**--**	**--**	**--**	**--**	**--**	**--**	**270**
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.71
	Boron	n/a	n/a	--	--	--	--	--	--	3.3
	Chromium	n/a	n/a	--	--	--	--	--	--	16
	Lead	n/a	n/a	--	--	--	--	--	--	16
	Phosphorus	n/a	n/a	--	--	--	--	--	--	1.2
PDS-SSI-003-0041-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**5.3**
	Barium	63.4	a	**--**	**--**	**--**	**--**	**--**	**--**	**330**
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.67
	Boron	n/a	n/a	--	--	--	--	--	--	3.1
	Chromium	n/a	n/a	--	--	--	--	--	--	15
	Lead	n/a	n/a	--	--	--	--	--	--	18
	Phosphorus	n/a	n/a	--	--	--	--	--	--	8.5
PDS-SSI-004-0001-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.13
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.14
	4-Amino-	n/a	n/a	--	--	--	--	--	--	0.17
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**4.4**
	Barium	n/a	n/a	--	--	--	--	--	--	540
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.55
	Boron	n/a	n/a	--	--	--	--	--	--	3.8
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.26
	Chromium	n/a	n/a	--	--	--	--	--	--	17
	Lead	n/a	n/a	--	--	--	--	--	--	40
	Mercury	n/a	n/a	--	--	--	--	--	--	3.2
	Phosphorus	n/a	n/a	--	--	--	--	--	--	25
	RDX	23.4	a	**--**	**--**	**--**	**--**	**--**	**--**	0.058
PDS-SSI-004-0011-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	3.8
	Barium	63.4	a	**--**	**--**	**--**	**--**	**--**	**--**	**260**
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.54
	Boron	n/a	n/a	--	--	--	--	--	--	3.8
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.16
	Chromium	n/a	n/a	--	--	--	--	--	--	24
	Lead	n/a	n/a	--	--	--	--	--	--	20
	Mercury	n/a	n/a	--	--	--	--	--	--	2
	Phosphorus	n/a	n/a	--	--	--	--	--	--	7.1
PDS-SSI-004-0021-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.79
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.13
	4-Amino-	n/a	n/a	--	--	--	--	--	--	0.14
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	3.7
	Barium	n/a	n/a	--	--	--	--	--	--	1100
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.52
	Boron	n/a	n/a	--	--	--	--	--	--	3.1
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.49
	Chromium	n/a	n/a	--	--	--	--	--	--	20
	Lead	n/a	n/a	--	--	--	--	--	--	63
	Mercury	n/a	n/a	--	--	--	--	--	--	3.5
	Phosphorus	n/a	n/a	--	--	--	--	--	--	2.1
	Selenium	n/a	n/a	--	--	--	--	--	--	0.43
	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.038
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	3.7
	Barium	63.4	a	**--**	**--**	**--**	**--**	**--**	**--**	**320**

Table 3-10. Possible Demolition Site--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round						
				Summer 1981	Fall 1985	Summer 1991	Spring/Summer 1992	Spring 2000	Fall 2000	Fall 2004
PDS-SSI-004-0031-SO	Beryllium	n/a	n/a	--	--	--	--	--	--	0.55
	Boron	n/a	n/a	--	--	--	--	--	--	3.5
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.16
	Chromium	n/a	n/a	--	--	--	--	--	--	26
	Lead	n/a	n/a	--	--	--	--	--	--	27
	Mercury	n/a	n/a	--	--	--	--	--	--	3
	Phosphorus	n/a	n/a	--	--	--	--	--	--	2.9
PDS-SSI-004-0041-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.042
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	3.5
	Barium	n/a	n/a	--	--	--	--	--	--	500
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.55
	Boron	n/a	n/a	--	--	--	--	--	--	2.9
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.33
	Chromium	n/a	n/a	--	--	--	--	--	--	20
	Lead	n/a	n/a	--	--	--	--	--	--	68
	Mercury	n/a	n/a	--	--	--	--	--	--	17
	Phosphorus	n/a	n/a	--	--	--	--	--	--	3.6
PDS-SSI-005-0001-SO	1,3,5-Trinitrobenzene	n/a	n/a	--	--	--	--	--	--	0.091
	2,4,6-Trinitrotoluene	13.6	a	**--**	**--**	**--**	**--**	**--**	**--**	**46**
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.84
	4-Amino-	n/a	n/a	--	--	--	--	--	--	0.86
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**4.5**
	Barium	n/a	n/a	--	--	--	--	--	--	830
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.56
	Boron	n/a	n/a	--	--	--	--	--	--	3.1
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.52
	Chromium	n/a	n/a	--	--	--	--	--	--	16
	Lead	n/a	n/a	--	--	--	--	--	--	230
	Mercury	n/a	n/a	--	--	--	--	--	--	27
	Phosphorus	n/a	n/a	--	--	--	--	--	--	170
PDS-SSI-005-0011-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.89
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.14
	4-Amino-	n/a	n/a	--	--	--	--	--	--	0.16
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**4.1**
	Barium	63.4	a	**--**	**--**	**--**	**--**	**--**	**--**	**270**
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.52
	Boron	n/a	n/a	--	--	--	--	--	--	2.8
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.46
	Chromium	n/a	n/a	--	--	--	--	--	--	24
	Lead	n/a	n/a	--	--	--	--	--	--	89
	Mercury	n/a	n/a	--	--	--	--	--	--	5.1
	Phosphorus	n/a	n/a	--	--	--	--	--	--	6.4

Table 3-10. Possible Demolition Site--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round						
				Summer 1981	Fall 1985	Summer 1991	Spring/Summer 1992	Spring 2000	Fall 2000	Fall 2004
PDS-SSI-005-0021-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.12
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.06
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**4.6**
	Barium	n/a	n/a	--	--	--	--	--	--	530
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.63
	Boron	n/a	n/a	--	--	--	--	--	--	2.8
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.28
	Chromium	n/a	n/a	--	--	--	--	--	--	22
	Lead	n/a	n/a	--	--	--	--	--	--	58
	Mercury	n/a	n/a	--	--	--	--	--	--	3.2
	Phosphorus	n/a	n/a	--	--	--	--	--	--	3.3
PDS-SSI-005-0031-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.094
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.047
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	4
	Barium	n/a	n/a	--	--	--	--	--	--	470
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.52
	Boron	n/a	n/a	--	--	--	--	--	--	2.5
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.48
	Chromium	n/a	n/a	--	--	--	--	--	--	20
	Lead	n/a	n/a	--	--	--	--	--	--	68
	Mercury	n/a	n/a	--	--	--	--	--	--	19
	Phosphorus	n/a	n/a	--	--	--	--	--	--	1.8
PDS-SSI-005-0041-SO	2,4,6-Trinitrotoluene	n/a	n/a	--	--	--	--	--	--	0.17
	2-Amino-4,6-	n/a	n/a	--	--	--	--	--	--	0.11
	4-Amino-	n/a	n/a	--	--	--	--	--	--	0.11
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**5.3**
	Barium	n/a	n/a	--	--	--	--	--	--	1100
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.52
	Boron	n/a	n/a	--	--	--	--	--	--	2.7
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.34
	Chromium	n/a	n/a	--	--	--	--	--	--	22
	Lead	n/a	n/a	--	--	--	--	--	--	800
	Mercury	n/a	n/a	--	--	--	--	--	--	330
	Phosphorus	n/a	n/a	--	--	--	--	--	--	2.9
PDS-SSI-006-0001-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**5**
	Barium	n/a	n/a	--	--	--	--	--	--	370
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.62
	Boron	n/a	n/a	--	--	--	--	--	--	3
	Cadmium	n/a	n/a	--	--	--	--	--	--	0.7
	Chromium	n/a	n/a	--	--	--	--	--	--	15
	Lead	n/a	n/a	--	--	--	--	--	--	29
	Mercury	n/a	n/a	--	--	--	--	--	--	0.53
	Phosphorus	n/a	n/a	--	--	--	--	--	--	53
	Selenium	n/a	n/a	--	--	--	--	--	--	0.49
PDS-SSI-007-0001-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**4.9**
	Barium	n/a	n/a	--	--	--	--	--	--	190
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.62
	Boron	n/a	n/a	--	--	--	--	--	--	3.9
	Chromium	n/a	n/a	--	--	--	--	--	--	18
	Lead	n/a	n/a	--	--	--	--	--	--	16
	Mercury	n/a	n/a	--	--	--	--	--	--	1.3
	Phosphorus	n/a	n/a	--	--	--	--	--	--	2.1
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	**4.7**
	Barium	n/a	n/a	--	--	--	--	--	--	100
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.62

Table 3-10. Possible Demolition Site--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round						
				Summer 1981	Fall 1985	Summer 1991	Spring/Summer 1992	Spring 2000	Fall 2000	Fall 2004
PDS-SSI-008-0001-SO	Boron	n/a	n/a	--	--	--	--	--	--	3.6
	Chromium	n/a	n/a	--	--	--	--	--	--	15
	Lead	n/a	n/a	--	--	--	--	--	--	13
	Mercury	0.96	a	**--**	**--**	**--**	**--**	**--**	**--**	0.11
	Phosphorus	n/a	n/a	--	--	--	--	--	--	100
PDS-SSI-009-0001-SO	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**--**	4
	Barium	n/a	n/a	--	--	--	--	--	--	200
	Beryllium	n/a	n/a	--	--	--	--	--	--	0.54
	Boron	n/a	n/a	--	--	--	--	--	--	2.7
	Chromium	n/a	n/a	--	--	--	--	--	--	13
	Lead	n/a	n/a	--	--	--	--	--	--	13
	Mercury	0.96	a	**--**	**--**	**--**	**--**	**--**	**--**	0.072
	Phosphorus	n/a	n/a	--	--	--	--	--	--	64
	Selenium	n/a	n/a	--	--	--	--	--	--	0.55
RBWSD5401	Aluminum	61.8	a	**--**	**--**	**--**	**3220**	**--**	**--**	**--**
	Arsenic	4.03	a	**--**	**--**	**--**	3.88	**--**	**--**	**--**
	Barium	63.4	a	**--**	**--**	**--**	**72.7**	**--**	**--**	**--**
	Beryllium	n/a	n/a	--	--	--	0.904	--	--	--
	Chromium	n/a	n/a	--	--	--	6.97	--	--	--
	Cobalt	n/a	n/a	--	--	--	7.25	--	--	--
	Copper	93.7	a	**--**	**--**	**--**	6.66	**--**	**--**	**--**
	Iron	n/a	n/a	--	--	--	9930	--	--	--
	Lead	n/a	n/a	--	--	--	8.71	--	--	--
	Magnesium	n/a	n/a	--	--	--	2840	--	--	--
	Manganese	n/a	n/a	--	--	--	587	--	--	--
	Nickel	511	a	**--**	**--**	**--**	10.6	**--**	**--**	**--**
	Selenium	1.06	a	**--**	**--**	**--**	0.618	**--**	**--**	**--**
	Vanadium	n/a	n/a	--	--	--	14.6	--	--	--
	Zinc	1620	a	**--**	**--**	**--**	31.1	**--**	**--**	**--**
S-6	1,4-Benzoquinone	n/a	n/a	4	--	--	--	--	--	--
	4,4-	n/a	n/a	7	--	--	--	--	--	--
	Arsenic	4.03	a	**--**	**--**	**--**	**--**	**--**	**5.84**	**--**
	Barium	n/a	n/a	1200	--	--	--	--	224	--
	Chromium	n/a	n/a	10	--	--	--	--	15.4	--
	Copper	n/a	n/a	60	--	--	--	--	--	--
	Lead	n/a	n/a	270	--	--	--	--	18.1	--
	Selenium	n/a	n/a	--	--	--	--	--	1.36	--
	Total phosphates	n/a	n/a	250	--	--	--	--	--	--
	Zinc	n/a	n/a	84	--	--	--	--	--	--

Table 3-10. Possible Demolition Site--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round						
				Summer 1981	Fall 1985	Summer 1991	Spring/Summer 1992	Spring 2000	Fall 2000	Fall 2004
W-8	Barium	63.4	a	**1100**	--	--	--	--	--	--
	Cadmium	8.47	a	0.5	--	--	--	--	--	--
	Chromium	n/a	n/a	13	--	--	--	--	--	--
	Copper	93.7	a	11	--	--	--	--	--	--
	Lead	n/a	n/a	6.5	--	--	--	--	--	--
	Nitrate	n/a	n/a	4600	--	--	--	--	--	--
	Nitrite	n/a	n/a	40	--	--	--	--	--	--
	Nitrite, nitrate -	n/a	n/a	120	--	--	--	--	--	--
	Selenium	1.06	a	--	**4**	--	--	--	--	--
	Sulfate	n/a	n/a	28000	--	--	--	--	--	--
	Total phosphates	n/a	n/a	220	--	--	--	--	--	--
	Zinc	1620	a	340	--	--	--	--	--	--

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
n/a - no comparison value available
bold exceeds applicable RG

Table 3-11. Possible Demolition Site--Detections in Surface Water

Name	Analyte	PRG	Source	Sampling Round					
				Summer 1981	Fall 1985	Spring/Summer 1992	Spring 2000	Fall 2000	Fall 2001
LC02-H	Aluminum	13.7	a	**--**	**--**	**--**	**510**	**1200**	**--**
	Barium	280	a	**--**	**--**	**--**	106	137	**--**
	Beryllium	n/a	n/a	--	--	--	0.5	2	--
	Beta gross	n/a	n/a	--	--	--	--	8.7	--
	Bis(2-ethylhexyl) phthalate	123	a	**--**	**--**	**--**	20	ND	**--**
	Cadmium	8	a	**--**	**--**	**--**	ND	0.3	**--**
	Chromium	n/a	n/a	--	--	--	ND	35.7	--
	Copper	7.6	a	**--**	**--**	**--**	ND	2.8	**--**
	Dalapon	n/a	n/a	--	--	--	3.2	--	ND
	Iron	n/a	n/a	--	--	--	447	1420	--
	Lead	n/a	n/a	--	--	--	2.6	2.2	--
	Magnesium	n/a	n/a	--	--	--	20100	15500	--
	Manganese	n/a	n/a	--	--	--	89.1	157	--
	Nickel	16200	a	**--**	**--**	**--**	2.7	17.8	**--**
	Selenium	0.75	a	**--**	**--**	**--**	ND	**2.7**	**--**
	Silver	3.6	a	**--**	**--**	**--**	ND	1	**--**
	Uranium	n/a	n/a	--	--	--	--	2.1	--
	Vanadium	n/a	n/a	--	--	--	1.8	2.7	--
	Zinc	200	a	**--**	**--**	**--**	3.8	7.8	**--**
RBWSW5401	Aluminum	13.7	a	**--**	**--**	**373**	**--**	**--**	**--**
	Barium	280	a	**--**	**--**	84.4	**--**	**--**	**--**
	Bis(2-ethylhexyl) phthalate	123	a	**--**	**--**	4.4	**--**	**--**	**--**
	Iron	n/a	n/a	--	--	459	--	--	--
	Lead	n/a	n/a	--	--	3.25	--	--	--
	Magnesium	n/a	n/a	--	--	15600	--	--	--
	Manganese	n/a	n/a	--	--	65.3	--	--	--
W-8	Barium	280	a	**1100**	**--**	**--**	**--**	**--**	**--**
	Copper	7.6	a	**10**	ND	**--**	**--**	**--**	**--**
	Nitrate	n/a	n/a	4600	--	--	--	--	--
	Nitrite	n/a	n/a	40	--	--	--	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	120	--	--	--	--	--
	Selenium	0.75	a	**--**	**4**	**--**	**--**	**--**	**--**
	Sulfate	n/a	n/a	28000	--	--	--	--	--
	Zinc	200	a	**340**	ND	**--**	**--**	**--**	**--**

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
n/a - no comparison value available
bold exceeds applicable PRG

Table 3-12. Possible Demolition Site--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round										
				Summer 1981	Fall 1985	Spring 1987	Spring/Summer 1992	Summer 1996	Spring 1997	Summer 1997	Fall 2000	Spring 2001	Spring 2002	Spring 2004
G-21	1-Ethylhexylbenzene	n/a	n/a	400	--	--	--	--	--	--	--	--	--	--
	3,4-Dinitrotoluene	n/a	n/a	--	--	--	--	--	--	--	--	--	110	95
	Aluminum	36499	b	**--**	**--**	**--**	414	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Barium	2000	f	**2100**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Cadmium	18.2	b	3	ND	**--**	ND	ND	1.81	ND	ND	ND	ND	ND
	Chromium	n/a	n/a	ND	ND	--	ND	25.5	1.94	26	0.7	ND	ND	ND
	Copper	1459.998	b	14	1	**--**	ND	ND	**--**	**--**	**--**	**--**	**--**	**--**
	Diethyl phthalate	29199	b	**--**	**--**	**--**	3.6	ND	**--**	**--**	**--**	**--**	**--**	**--**
	HMX	1825	b	**--**	ND	**--**	ND	ND	ND	0.24	ND	ND	ND	ND
	Iron	10950	b	**--**	**--**	**--**	661	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Lead	n/a	n/a	ND	ND	--	ND	ND	5.37	ND	ND	3.2	ND	ND
	Magnesium	n/a	n/a	--	--	--	23000	--	--	--	--	--	--	--
	Manganese	876	b	**--**	**--**	**--**	199	8.19	**--**	**--**	**--**	**--**	**--**	**--**
	Mercury	n/a	n/a	--	ND	--	ND	ND	0.029	0.022	ND	ND	ND	ND
	Nickel	730	b	**--**	**--**	**--**	ND	31.2	**--**	**--**	**--**	**--**	**--**	**--**
	Nitrate	10000	b	260	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	RDX	0.611	b	**--**	ND	**--**	ND	ND	ND	0.16	ND	ND	ND	ND
	Selenium	182	b	**--**	ND	**--**	ND	ND	ND	ND	ND	5.1	ND	ND
	Silver	182	b	**--**	ND	**--**	ND	ND	ND	5.1	ND	ND	ND	ND
	Sulfate	n/a	n/a	12000	--	--	--	--	--	--	--	--	--	--
	Total phosphates	n/a	n/a	160	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	**--**	**--**	**--**	ND	7.47	**--**	**--**	**--**	**--**	**--**	**--**
	Zinc	10950	b	360	ND	**--**	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable RG

Table 3-13. Inert Disposal Area--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round	
				Summer 1991	Fall/Winter 1992
20SD0301	Arsenic	4.03	a	**9.72**	**--**
	Barium	63.4	a	**270**	**--**
	Beryllium	n/a	n/a	0.543	--
	Cadmium	8.47	a	1.53	**--**
	Chromium	n/a	n/a	36.8	--
	Copper	93.7	a	93.6	**--**
	Lead	n/a	n/a	280	--
	Mercury	0.96	a	0.205	**--**
	Nickel	511	a	23	**--**
	Silver	1.2	a	**1.25**	**--**
	Zinc	1620	a	449	**--**
20SD0601	Arsenic	4.03	a	**4.56**	**--**
	Barium	63.4	a	**171**	**--**
	Beryllium	n/a	n/a	0.766	--
	Chromium	n/a	n/a	22.8	--
	Copper	93.7	a	25	**--**
	Lead	n/a	n/a	17	--
	Mercury	0.96	a	0.0647	**--**
	Nickel	511	a	17.3	**--**
	Zinc	1620	a	116	**--**
20SD1101	Arsenic	4.03	a	**4.82**	**--**
	Barium	63.4	a	**94.3**	**--**
	Chromium	n/a	n/a	17.7	--
	Copper	93.7	a	20.3	**--**
	Lead	n/a	n/a	11	--
	Nickel	511	a	16.1	**--**
	Zinc	1620	a	257	**--**
R14SD0101	Aluminum	61.8	a	**--**	**11400**
	Arsenic	4.03	a	**--**	**11.7**
	Barium	63.4	a	**--**	**282**
	Cadmium	8.47	a	**--**	1.96
	Chromium	n/a	n/a	--	22.5
	Cobalt	n/a	n/a	--	11.1
	Copper	93.7	a	**--**	68.8
	Iron	n/a	n/a	--	20000
	Lead	n/a	n/a	--	212
	Magnesium	n/a	n/a	--	3930
	Manganese	n/a	n/a	--	998
	Mercury	0.96	a	**--**	0.229
	Nickel	511	a	**--**	23.6
	Selenium	1.06	a	**--**	**1.72**
	Silver	1.2	a	**--**	1.17
	Thallium	0.237	a	**--**	**15.4**
	Trichlorofluoromethane	n/a	n/a	--	0.009
	Vanadium	n/a	n/a	--	34.6
	Zinc	1620	a	**--**	372

Table 3-13. Inert Disposal Area--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round	
				Summer 1991	Fall/Winter 1992
R14SD0201	Aluminum	61.8	a	--	**5200**
	Anthracene	n/a	n/a	--	0.072
	Arsenic	4.03	a	--	**22**
	Barium	63.4	a	--	**310**
	Benzo[b]fluoranthene	n/a	n/a	--	0.52
	Benzo[k]fluoranthene	n/a	n/a	--	0.24
	Chromium	n/a	n/a	--	120
	Chrysene	n/a	n/a	--	0.36
	Cobalt	n/a	n/a	--	29
	Copper	93.7	a	--	**180**
	Fluoranthene	n/a	n/a	--	0.47
	Iron	n/a	n/a	--	440000
	Lead	n/a	n/a	--	7100
	Manganese	n/a	n/a	--	3100
	Mercury	0.96	a	--	0.0827
	Nickel	511	a	--	120
	Phenanthrene	n/a	n/a	--	0.27
	Pyrene	n/a	n/a	--	0.41
	Selenium	1.06	a	--	**2.93**
	Thallium	0.237	a	--	**260**
	Trichlorofluoromethane	n/a	n/a	--	0.01
	Zinc	1620	a	--	660
R14SD0301	Aluminum	61.8	a	--	**4490**
	Arsenic	4.03	a	--	**10.6**
	Barium	63.4	a	--	62.6
	Chromium	n/a	n/a	--	12.2
	Cobalt	n/a	n/a	--	5.27
	Copper	93.7	a	--	11.9
	Iron	n/a	n/a	--	19400
	Lead	n/a	n/a	--	11
	Magnesium	n/a	n/a	--	13000
	Manganese	n/a	n/a	--	264
	Nickel	511	a	--	19.4
	Selenium	1.06	a	--	**1.81**
	Tetracosane	n/a	n/a	--	0.6
	Thallium	0.237	a	--	**21.4**
	Vanadium	n/a	n/a	--	22.9
	Zinc	1620	a	--	43

Table 3-13. Inert Disposal Area--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round	
				Summer 1991	Fall/Winter 1992
R14SD0401	Aluminum	61.8	a	--	**7240**
	Arsenic	4.03	a	--	**8.19**
	Barium	63.4	a	--	**119**
	Beryllium	n/a	n/a	--	0.936
	Chromium	n/a	n/a	--	13.4
	Cobalt	n/a	n/a	--	6.98
	Copper	93.7	a	--	14.5
	Fluoranthene	n/a	n/a	--	0.31
	Iron	n/a	n/a	--	14600
	Lead	n/a	n/a	--	33
	Magnesium	n/a	n/a	--	5110
	Manganese	n/a	n/a	--	507
	Nickel	511	a	--	17.8
	Phenanthrene	n/a	n/a	--	0.22
	Pyrene	n/a	n/a	--	0.24
	Selenium	1.06	a	--	**1.16**
	Thallium	0.237	a	--	**15**
	Vanadium	n/a	n/a	--	24.1
	Zinc	1620	a	--	60.8
R14SD0501	Aluminum	61.8	a	--	**5190**
	Arsenic	4.03	a	--	**8.2**
	Barium	63.4	a	--	**100**
	Beryllium	n/a	n/a	--	0.734
	Chromium	n/a	n/a	--	10.5
	Cobalt	n/a	n/a	--	6.79
	Copper	93.7	a	--	13.4
	Iron	n/a	n/a	--	13900
	Lead	n/a	n/a	--	26
	Magnesium	n/a	n/a	--	7330
	Manganese	n/a	n/a	--	357
	Nickel	511	a	--	16.2
	Phenanthrene	n/a	n/a	--	0.059
	Selenium	1.06	a	--	**1.29**
	Vanadium	n/a	n/a	--	19.6
	Zinc	1620	a	--	51.5

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable RG

Table 3-14. Inert Disposal Area--Detections in Surface Water

Name	Analyte	PRG	Source	Sampling Round	
				Summer 1991	Fall/Winter 1992
20SW1001	1,1-Dichloroethene	n/a	n/a	5	--
	Antimony	n/a	n/a	181	--
	Arsenic	49	a	24.3	**--**
	Barium	280	a	**836**	**--**
	Beryllium	n/a	n/a	3.91	--
	Cadmium	8	a	**8.62**	**--**
	Chloromethane	n/a	n/a	2.2	--
	Chromium	n/a	n/a	81.5	--
	Copper	7.6	a	**124**	**--**
	Lead	n/a	n/a	36.4	--
	Nickel	16200	a	99.2	**--**
	Trichloroethene	n/a	n/a	4	--
	Zinc	200	a	**3360**	**--**
20SW1002	1,1-Dichloroethene	n/a	n/a	7.8	--
	2,6-Dinitrotoluene	n/a	n/a	1.05	--
	Arsenic	49	a	11.4	**--**
	Barium	280	a	262	**--**
	Lead	n/a	n/a	14	--
	Trichloroethene	n/a	n/a	6.3	--
	Zinc	200	a	**779**	**--**
R14SW0101	Barium	280	a	**--**	123
	Bis(2-ethylhexyl) phthalate	123	a	**--**	6.4
	Calcium	n/a	n/a	--	85600
	Chloroform	n/a	n/a	--	0.52
	Copper	7.6	a	**--**	**19.6**
	Iron	n/a	n/a	--	103
	Lead	n/a	n/a	--	4.56
	Magnesium	n/a	n/a	--	21900
	Manganese	n/a	n/a	--	34.4
	Potassium	n/a	n/a	--	3670
	Sodium	n/a	n/a	--	14400
	Zinc	200	a	**--**	44.7

Table 3-14. Inert Disposal Area--Detections in Surface Water

Name	Analyte	PRG	Source	Sampling Round	
				Summer 1991	Fall/Winter 1992
R14SW0201	Aluminum	13.7	a	--	**1380**
	Barium	280	a	--	171
	Bis(2-ethylhexyl) phthalate	123	a	--	8.9
	Calcium	n/a	n/a	--	86200
	Copper	7.6	a	--	**28.5**
	Iron	n/a	n/a	--	1470
	Lead	n/a	n/a	--	16.8
	Magnesium	n/a	n/a	--	21000
	Manganese	n/a	n/a	--	68.7
	Potassium	n/a	n/a	--	4170
	Sodium	n/a	n/a	--	13100
	Zinc	200	a	--	63.2
R14SW0301	1,1,1-Trichloroethane	n/a	n/a	--	2.9
	1,1-Dichloroethene	n/a	n/a	--	13
	1,2-Dichloroethane	n/a	n/a	--	1.9
	Aluminum	13.7	a	--	**658**
	Barium	280	a	--	111
	Bis(2-ethylhexyl) phthalate	123	a	--	6.7
	Calcium	n/a	n/a	--	180000
	HMX	n/a	n/a	--	2.59
	Iron	n/a	n/a	--	3720
	Magnesium	n/a	n/a	--	158000
	Manganese	n/a	n/a	--	2310
	Potassium	n/a	n/a	--	27700
	RDX	12900	a	--	17
	Sodium	n/a	n/a	--	100000
	Trichloroethene	n/a	n/a	--	11
	Vanadium	n/a	n/a	--	15.6
	Zinc	200	a	--	**247**

Table 3-14. Inert Disposal Area--Detections in Surface Water

Name	Analyte	PRG	Source	Sampling Round	
				Summer 1991	Fall/Winter 1992
R14SW0401	1,1,1-Trichloroethane	n/a	n/a	--	1.1
	Aluminum	13.7	a	**--**	**2100**
	Barium	280	a	**--**	125
	Bis(2-ethylhexyl) phthalate	123	a	**--**	6.4
	Calcium	n/a	n/a	--	131000
	Chloromethane	n/a	n/a	--	5.3
	Iron	n/a	n/a	--	3130
	Lead	n/a	n/a	--	2.71
	Magnesium	n/a	n/a	--	98400
	Manganese	n/a	n/a	--	632
	Potassium	n/a	n/a	--	12400
	RDX	12900	a	**--**	3.83
	Sodium	n/a	n/a	--	59700
	Vanadium	n/a	n/a	--	18.3
	Zinc	200	a	**--**	31
R14SW0501	Aluminum	13.7	a	**--**	**215**
	Barium	280	a	**--**	113
	Calcium	n/a	n/a	--	115000
	Iron	n/a	n/a	--	388
	Magnesium	n/a	n/a	--	46100
	Manganese	n/a	n/a	--	681
	Potassium	n/a	n/a	--	4460
	Sodium	n/a	n/a	--	29700

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable PRG

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round													
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
C-00-1	1,1,1-Trichloroethane	3172	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethane	811	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethene	7	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,2-Dichloroethane	5	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Alpha gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Beta gross	4	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Beta gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	5	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	cis-1,2-Dichloroethene	60.8	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Copper	1460	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Extractable Organic Halides (total)	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead 210	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead 212	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead 214	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Manganese	876	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nickel	730	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Potassium 40	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Radium 226	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Total organic carbon	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Trichloroethene	5	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 234	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 235	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 238	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-Dinitrophenol	73	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4,6-Dinitro-2-cresol	3.6	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Nitrophenol	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Alpha gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Alpha gross	10	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2000	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Beryllium	4	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Beryllium	73	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Beta gross	4	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Beta gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
C-00-2	Cadmium	5	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cesium 137	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	100	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Copper	1460	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	219	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead 210	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Manganese	300	d	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Manganese	876	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Mercury	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nickel	100	d	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nickel	730	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nickel	1	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Potassium 40	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Radium 226	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	50	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Silver	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-00-2	Total organic carbon	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium	30	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 234	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 235	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 238	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-00-3	Actinium 228	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Alpha gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Beta gross	4	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Beta gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cesium 137	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Copper	1460	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Extractable Organic Halides (total)	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead 210	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead 214	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Manganese	876	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nickel	730	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round													
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
	Potassium 40	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Radium 226	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Silver	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 234	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 235	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 238	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethane	811	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,3,5-Trinitrobenzene	1095	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,3-Dinitrobenzene	1	d	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,3-Dinitrobenzene	3.6	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4,6-Trinitrotoluene	2	d	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-Dinitrotoluene	73	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,6-Dinitrotoluene	36.5	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2-Amino-4,6-dinitrotoluene	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Amino-2,6dinitrotoluene	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Actinium 228	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Alpha gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Alpha gross	10	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Beta gross	4	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Beta gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-95-1	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cesium 137	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Copper	1460	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	HMX	1825	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead 210	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead 212	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead 214	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Manganese	876	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Mercury	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nickel	730	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nitrobenzene	3.40	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Potassium 40	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Radium 226	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
C-95-1	RDX	2	d	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Silver	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Tetryl	365	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 234	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 235	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 238	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
C-95-2	1,3,5-Trinitrobenzene	1095	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4,6-Trinitrotoluene	2	d	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4,6-Trinitrotoluene	2.24	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-Dinitrotoluene	73	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,6-Dinitrotoluene	36.5	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Actinium 228	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Alpha gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Alpha gross	10	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Beta gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cesium 137	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Copper	1460	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	HMX	1825	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead 210	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead 212	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Manganese	876	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Mercury	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Mercury	5	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nickel	730	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Potassium 40	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Radium 226	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Radium 226	2	d	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Silver	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 234	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 235	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium 238	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
CAMU-99-1D	2-Butanone / Methyl Ethyl Ketone	6968	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Methylphenol	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acetone	5475	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	6	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Diethyl phthalate	29199	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Perchlorate	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Silver	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
CAMU-99-1S	Silver	10	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2000	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	5	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	100	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Magnesium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Mercury	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	50	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Silver	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CAMU-99-2D	2-Butanone / Methyl Ethyl Ketone	6968	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4-Methylphenol	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acetone	5475	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	6	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Phenol	10950	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Silver	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
CAMU-99-2S	3-Nitrotoluene	122	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	3-Nitrotoluene	10	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2000	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzoic acid	145979	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	5	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	100	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Hexachlorocyclopentadiene	219	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Mercury	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	50	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Silver	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
CAMU-99-3S	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	59180	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2000	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	6	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	5	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	100	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Freon	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	50	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Silver	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
ET1	1,1-Dichloroethane	811	b	--	--	--	--	--	**6.3**	**5.5**	**ND**	**ND**	**6.3**	**5.4**	**5.6**	--	**6.6**	**6.1**
	Acetone	5475	b	--	--	--	--	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**25**	--	**51**	**13**
	Alpha gross	15	f	--	--	--	--	--	--	--	31.1	--	--	--	27.1	**17.8**	--	--
	Alpha gross	n/a	n/a	--	--	--	--	--	13	ND	--	ND	13	7.35	ND	--	--	--
	Aluminum	36499	b	--	--	--	--	--	**11800**	**5410**	**926**	**983**	**505**	**2010**	--	--	--	--
	Antimony	14.6	b	--	--	--	--	--	ND	4.12	ND	ND	ND	ND	--	--	--	--
	Barium	2555	b	--	--	--	--	--	398	329	342	268	257	280	**221**	**193**	**580**	--
	Beta gross	4	f	--	--	--	--	--	13.9	15.2	29.7	--	31.7	--	**37.7**	**25.1**	--	--
	Beta gross	6	f	--	--	--	--	--	--	--	--	--	--	--	100	--	--	--
	Chlorodifluoromethane	85167	b	--	--	--	--	--	--	--	--	--	--	--	40	--	--	--
	Chlorofluoromethane	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	100	--	200	100
	Chromium	n/a	n/a	--	--	--	--	--	**17.3**	**ND**	**ND**	**ND**	**ND**	**21.4**	ND	**ND**	**ND**	--
	cis-1,2-Dichloroethene	60.8	b	--	--	--	--	--	5.8	ND	ND	ND	ND	ND	--	--	--	5.7
	Diethyl ether	1217	b	--	--	--	--	--	--	--	--	--	--	--	6	--	--	8
	Fluoride	2190	b	--	--	--	--	--	810	ND	ND	ND	1760	ND	**ND**	**ND**	--	--
	Freon	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	50	--	**90**	--
	Iron	10950	b	--	--	--	--	--	ND	9410	1560	1770	810	3230	1560	127	**10500**	--
	Lead	n/a	n/a	--	--	--	--	--	7.07	ND	ND	ND	ND	ND	2.49	ND	ND	--
	Magnesium	n/a	n/a	--	--	--	--	--	110000	120000	100000	110000	110000	110000	--	--	--	--
	Manganese	300	d	--	--	--	--	--	955	597	384	320	--	780	3370	3470	8680	--
	Manganese	876	b	--	--	--	--	--	--	--	--	225	240	--	--	--	--	--
	Mercury	n/a	n/a	--	--	--	--	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**0.351**	**ND**	**ND**	--
	Methylene chloride	5	f	--	--	--	--	--	**69**	**67**	**56**	54	65	**52**	**62**	--	**79**	**73**
	Nitrate	10000	b	--	--	--	--	--	--	9300	687	--	8700	6400	--	--	--	--
	Nitrate		f	--	--	--	--	--	**11000**	--	--	**11000**	--	--	--	--	--	--
	Nitrite	1000	b	--	--	--	--	--	**308**	226	424	**260**	380	ND	--	--	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	--	--	--	--	--	**ND**	**ND**	**1300**	**9600**	**4300**	--	**9000**	**4800**	--	--
	Radium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	ND	8.08	--	--
	Radium 226	n/a	n/a	--	--	--	--	--	1	0.54	0.62	0.48	0.269	ND	--	--	--	--
	Sulfate	n/a	n/a	--	--	--	--	--	250000	220000	230000	240000	220000	230000	250000	210000	--	--
	Total 1,2-Dichloroethene	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	3.3	--	4.7	--
	Total organic carbon	n/a	n/a	--	--	--	--	--	5880	--	--	--	--	9020	36400	41000	--	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	0.773	--	--	--	--	108	935	106	--	--
	Trichlorofluoromethane	1288	b	--	--	--	--	--	--	--	--	--	--	--	5.5	--	4.1	ND
	Vanadium	36.5	b	--	--	--	--	--	26.3	ND	ND	ND	ND	ND	--	--	--	--
	Zinc	10950	b	--	--	--	--	--	**958**	**35.6**	**26.4**	**33.6**	**15.3**	**60**	--	--	--	--
	1,1,1-Trichloroethane	3172	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	**ND**	--	**0.98**	**ND**
	1,1-Dichloroethane	811	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	**1.7**	--	**1.6**	**ND**
	2,4-DB	292	b	--	--	--	--	--	1.73	ND	ND	ND	ND	--	--	--	--	--
	Alpha gross	15	f	--	--	--	--	--	24	30.9	--	27.4	46.5	--	34.1	--	--	--
	Alpha gross	n/a	n/a	--	--	--	--	--	--	--	ND	--	--	**10.9**	**ND**	**2.09**	--	--
	Aluminum	36499	b	--	--	--	--	--	**ND**	**1160**	**4200**	**10500**	**6850**	**13500**	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
ET2	Antimony	14.6	b	--	--	--	--	--	3.72	5.04	4.3	ND	ND	ND	--	--	--	--
	Barium	2555	b	**--**	**--**	**--**	**--**	**--**	333	185	234	251	231	269	**212**	**231**	**181**	**--**
	Beta gross	4	f	**--**	**--**	**--**	**--**	**--**	29	31.2	29.6	13.7	67	13	**23.3**	**18.2**	**--**	**--**
	Beta gross	6	f	**--**	**--**	**--**	**--**	**--**	--	--	--	--	--	--	80	14	--	**--**
	Chlorodifluoromethane	85167	b	**--**	--	--	--	--	--	--	--	--	--	--	20	--	10	--
	Chromium	n/a	n/a	--	--	--	--	--	50.9	ND	ND	15.3	ND	ND	9.28	12.6	ND	--
	Copper	1460	b	**--**	**--**	**--**	**--**	**--**	**27.1**	**ND**	**ND**	**ND**	**ND**	**ND**	--	**--**	--	**--**
	Fluoride	2190	b	--	--	--	--	--	321	289	403	ND	1070	ND	ND	ND	--	--
	Freon	n/a	n/a	**--**	**--**	**--**	**--**	**--**	--	--	--	--	--	--	**50**	**--**	**80**	**--**
	Iron	10950	b	**--**	**--**	**--**	**--**	**--**	ND	1650	6170	ND	8950	ND	4890	9600	**374**	**--**
	Lead	n/a	n/a	--	--	--	--	--	15.9	ND	ND	4.69	ND	4.92	4.12	3.15	ND	--
	Magnesium	n/a	n/a	**--**	**--**	**--**	**--**	**--**	63000	64000	58000	63000	66000	66000	--	--	--	**--**
	Manganese	300	d	--	--	--	--	--	565	--	--	304	--	341	--	361	--	--
	Manganese	876	b	--	--	--	--	--	ND	25.1	91.4	ND	174	7.03	164	23.5	14.8	--
	Mercury	n/a	n/a	**--**	**--**	**--**	**--**	**--**	**ND**	**ND**	**ND**	**ND**	**1.18**	**ND**	**ND**	**ND**	**ND**	**--**
	Mercury	5	f	**--**	**--**	**--**	**--**	**--**	12	8	6.8	11	--	7.9	11	--	9	**19**
	Nitrate	10000	b	--	--	--	--	--	9800	--	7600	9800	7600	7400	--	--	--	--
	Nitrate		f	**--**	**--**	**--**	**--**	**--**	**--**	**10000**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Nitrite	1000	b	**--**	**--**	**--**	**--**	**--**	25.7	**ND**	ND	ND	ND	ND	**--**	**--**	**--**	**--**
	Nitrite, nitrate - nonspecific	n/a	n/a	**--**	**--**	**--**	**--**	**--**	**--**	**9300**	**7400**	**9300**	**590**	**7300**	**8900**	**9400**	**--**	**--**

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round													
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
ET2	PETN	n/a	n/a	--	--	--	--	--	ND	ND	ND	ND	ND	5.92	--	--	--	--
	Radium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	1.4	ND	--	--
	Radium 226	n/a	n/a	--	--	--	--	--	0.987	0.728	0.653	0.712	0.608	0.532	--	--	--	--
	Sulfate	n/a	n/a	--	--	--	--	--	60000	53000	56000	60000	58000	53000	59000	55000	--	--
	Total organic carbon	n/a	n/a	--	--	--	--	--	3140	ND	--	--	--	16100	8120	8700	--	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	0.027	--	--	--	--	74	212	38.7	--	--
	Trichlorofluoromethane	1288	b	--	--	--	--	--	--	--	--	--	--	--	15	--	13	13
	Vanadium	36.5	b	--	--	--	--	--	ND	ND	ND	22.2	ND	23.3	--	--	--	--
	Zinc	10950	b	--	--	--	--	--	**93.6**	**ND**	**28.5**	**52.9**	**34.6**	**52.9**	--	--	--	--
ET3	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	59180	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,1-Dichloroethane	811	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	**ND**	--	**ND**	**ND**
	1,2,4-Trimethylbenzene	12.3	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**ND**
	1,3,5-Trimethylbenzene	12.3	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
	1,3,5-Trinitrobenzene	1095	b	--	--	--	--	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	--
	1,3-Dinitrobenzene	1	d	--	--	--	--	--	--	--	--	--	--	--	--	--	**13.3**	--
	2,3,5,6-Tetrachlorophenol	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	3000	--
	2,4,5-Trichlorophenol	3650	b	--	--	--	--	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
	2,4,6-Trinitrotoluene	2	d	--	--	--	--	--	--	--	--	--	--	--	34	--	61	--
	2,4-Dichlorophenol	20	d	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4-Dichlorophenol	109	b	--	--	--	--	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
	2,4-Dimethylphenol	730	b	--	--	--	--	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
	2,4-Dinitrotoluene	73	b	--	--	--	--	--	ND	ND	ND	ND	0.596	ND	17	ND	4.99	ND
	2,6-Dinitrotoluene	36.5	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	35	ND	1.4	ND
	2-Amino-4,6-dinitrotoluene	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	ND	ND	2.9	--
	2-Butanone / Methyl Ethyl Ketone	6968	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	--	ND	ND
	2-Cresol	1825	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	2-Ethyl-1-hexanol	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	80	--	80	70
	2-Ethylhexanoic acid	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	1000	--	500	1000
	3,4-Dichlorophenol	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	50	800	1000	--
	3-Chlorophenol	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	70	300	--	--
	3-Nitrotoluene	122	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	4-Amino-2,6dinitrotoluene	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	ND	ND	66	--
	4-Chlorotoluene	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**ND**
	4-Methyl-2-Pentanone / Methyl Isobutyl Ketone	1993	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	4.9	--	ND	ND
	4-Methylphenol	182	b	--	--	--	--	--	120	ND	140	ND	ND	80	70	100	100	ND
	Acetone	5475	b	--	--	--	--	--	200	100	67	100	100	ND	47	--	42	72
	Alpha gross	15	f	--	--	--	--	--	53	--	22.9	--	--	--	44.7	--	--	--
	Alpha gross	n/a	n/a	--	--	--	--	--	--	3.63	ND	ND	ND	ND	ND	**7.24**	--	--
	Aluminum	36499	b	--	--	--	--	--	**9410**	**3470**	**632**	**406**	**228**	**243**	--	--	--	--
	Antimony	6	f	--	--	--	--	--	--	--	11.9	--	--	--	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
	Antimony	14.6	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--	--	--	--
	Antimony	10	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	--	--	496	453	517	424	441	484	**466**	**422**	**462**	--
	Benzoic acid	145979	b	--	--	--	--	--	**ND**	**ND**	**140**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
	Beryllium	73	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--	--	--	--
	Beta gross	4	f	--	--	--	--	--	49	27	48.3	37.8	25.3	--	77.1	26.5	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	**ND**	**ND**	**ND**	**ND**
	Cadmium	5	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	Camphor	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	50	--	--	**20**
	Carbon disulfide	1043	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	2.6	--	ND	ND

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
ET-3	Chloroethane	4.64	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	--	2.9	ND
	Chlorofluoromethane	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	200	--	300	70
	Chloromethane	30	d	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	cis-1,2-Dichloroethene	60.8	b	--	--	--	--	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	--	--	--	**ND**
	Cobalt	730	b	--	--	--	--	--	96.3	88.2	52.7	38.5	29.4	29.4	--	--	--	--
	Copper	1460	b	--	--	--	--	--	32.1	ND	ND	ND	ND	ND	--	--	--	--
	Dalapon	1095	b	--	--	--	--	--	3.97	ND	ND	ND	ND	--	--	--	--	--
	Dichlorodifluoromethane	395	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**ND**
	Diethyl ether	1217	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dimethyl sulfide	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Diphenyl ether	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**20**
	Ethylbenzene	1340	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	2.5	--	2.3	ND
	Fluoride	2190	b	--	--	--	--	--	2000	--	--	--	--	--	ND	ND	--	--
	HMX	1825	b	--	--	--	--	--	ND	ND	ND	209	10.2	ND	ND	**ND**	ND	--
	Iron	10950	b	--	--	--	--	--	9360	**4280**	**868**	**6460**	**3810**	--	9240	--	--	--
	Isopropylbenzene	658	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Isopropyltoluene	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	L-Camphor	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead	n/a	n/a	--	--	--	--	--	ND	ND	ND	ND	ND	ND	2.6	1.63	ND	--
	m- and/or p-Xylene	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Magnesium	n/a	n/a	--	--	--	--	--	330000	350000	330000	350000	350000	350000	--	--	--	--
	Manganese	300	d	--	--	--	--	--	9500	10000	8500	7300	7500	5300	3180	2490	2410	--
	Manganese	876	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Mercury	n/a	n/a	--	--	--	--	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	--
	Methylene chloride	4.28	b	--	--	--	--	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	--	**3.1**	**ND**
	m-Xylene	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Naphthalene	6.2	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	**ND**	ND	ND
	Naphthalene	100	d	--	--	--	--	--	--	--	--	--	--	--	--	--	400	335
	Nickel	100	d	--	--	--	--	--	153	188	156	107	110	102	--	--	--	--
	Nickel	730	b	--	--	--	--	--	--	--	--	**75.8**	--	**88**	--	--	--	--
	Nitrate	10000	b	--	--	--	--	--	**ND**	**ND**	**ND**	**ND**	**ND**	**2500**	--	--	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	--	--	--	--	--	**ND**	**ND**	**ND**	ND	**24.8**	--	**ND**	**ND**	--	--
	Nitrobenzene	3.40	b	--	--	--	--	--	ND	ND	ND	ND	ND	ND	**ND**	**ND**	**ND**	**ND**
	Nitrobenzene	5	d	--	--	--	--	--	710	--	--	380	270	--	--	--	--	--
	o-Xylene	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	p-Cymene	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**ND**
	p-Cymene	1	f	--	--	--	--	--	3000	20000	20000	5000	10000	2000	10000	10000	20000	9200
	PETN	n/a	n/a	--	--	--	--	--	1600	2100	ND	5800	650	ND	--	--	--	--
	Phenol	10950	b	--	--	--	--	--	**44**	**ND**	**130**	**ND**	**ND**	**64**	**ND**	**200**	**ND**	**110**
	Phenolics - nonspecific	n/a	n/a	--	--	--	--	--	612	1100	900	13200	660	830	990	650	--	--
	Radium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	2.29	3.3	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
	Radium 226	n/a	n/a	--	--	--	--	--	1.98	0.422	0.465	1.05	0.765	0.78	--	--	--	--
	Radium 226	2	d	--	--	--	--	--	--	--	--	--	2600	--	--	--	70.8	--
	Selenium	50	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	**--**	**--**	**--**	**--**	**--**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**--**
	Silver	182	b	**--**	**--**	**--**	**--**	**--**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**--**
	Sulfate	n/a	n/a	**--**	--	--	--	--	310000	250000	240000	310000	200000	260000	160000	150000	--	--
	Tetryl	365	b	**--**	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	Toluene	723	b	--	--	--	--	--	400	200	400	200	200	70	32	--	26	7.1
	Total 1,2-Dichloroethene	n/a	n/a	**--**	**--**	**--**	**--**	**--**	--	--	--	--	--	--	1.2	--	2.6	**--**
	Total organic carbon	n/a	n/a	**--**	**--**	**--**	**--**	**--**	4690	34000	--	--	--	360000	377000	**305000**	--	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	6.75	--	--	1200	--	9600	9460	10600	--	--
	Total Xylenes	206	b	--	--	--	--	--	ND	ND	5.4	ND	ND	5.7	14	--	10	6.7
	Uranium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	**--**	**--**	**--**	**--**	**--**	ND	ND	ND	ND	ND	ND	--	**--**	--	--
	Weedone / 2,4,5-T	365	b	--	--	--	--	--	0.686	ND	ND	ND	ND	--	--	--	--	--
	Zinc	10950	b	**--**	**--**	**--**	**--**	**--**	1390	44.8	33.6	36.6	23.4	32.6	**--**	**--**	**--**	**--**

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round													
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
G-4	4-Methylphenol	182	b	--	--	--	**ND**	**ND**	87	ND	ND	ND	ND	**ND**	**ND**	**ND**	**ND**	**ND**
	Acenaphthene	365	b	--	--	--	**ND**	**ND**	ND	ND	ND	ND	ND	ND	**ND**	**ND**	**ND**	**ND**
	Alpha gross	n/a	n/a	--	--	--	--	--	ND	10	ND	ND	10.8	ND	7.9	3.92	--	--
	Aluminum	36499	b	--	--	--	ND	ND	ND	ND	22700	ND	129	ND	--	--	--	--
	Antimony	14.6	b	--	--	--	ND	ND	ND	ND	4.8	ND	ND	ND	--	--	--	--
	Barium	2555	b	--	--	--	75.9	126	80.6	137	139	78.6	92.7	105	**78.5**	**72.5**	**108**	--
	Benzoic acid	145979	b	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	**ND**	**ND**	**ND**	**ND**
	Beryllium	73	b	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
	Beta gross	4	f	--	--	--	--	--	--	5.79	--	--	16.2	--	7.9	25.2	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	**ND**	--	**ND**	**ND**
	Bis(2-ethylhexyl) phthalate	6	f	--	--	--	--	--	--	--	--	--	--	--	--	**7.6**	--	--
	Bromacil	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	**4**	--	--
	Cadmium	18.2	b	--	**ND**	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	--
	Caprolactam	18250	b	--	--	--	3	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	**ND**	--	ND	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	--
	Copper	1460	b	--	2	--	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
	Diethyl phthalate	29199	b	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.7	ND
	Ethylbenzene	1340	b	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	**0.64**	--	--	--
	Fluoride	2190	b	--	--	--	--	--	260	355	314	347	333	236	ND	ND	--	--
	Iron	10950	b	--	--	--	111	223	ND	124	4630	ND	233	ND	ND	**ND**	**ND**	--
	Lead	n/a	n/a	--	**ND**	--	**3.47**	**2.28**	ND	ND	ND	ND	ND	ND	2.6	ND	**ND**	--
	Magnesium	n/a	n/a	--	--	--	27000	28500	25600	31800	27000	31700	26500	26400	--	--	--	--
	Manganese	300	d	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Manganese	876	b	--	--	--	17.1	11.5	28.1	12	84.3	18.1	13.1	7.03	ND	ND	19.6	--
	Mercury	n/a	n/a	--	**ND**	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	--
	Methylene chloride	4.28	b	--	**ND**	--	ND	ND	ND	ND	ND	ND	ND	ND	2.6	--	--	--
	Nickel	730	b	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
	Nitrate	10000	b	**2800**	--	--	--	--	902	976	980	1000	1040	1060	--	--	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	--	--	--	--	--	ND	980	980	980	1100	--	**1200**	**770**	--	--
	Nitrite, nitrate - nonspecific	1	f	--	--	--	--	--	20000	--	--	--	--	--	--	--	--	--
	Phenol	10950	b	--	--	--	ND	ND	5.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Radium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	**ND**	**1.06**	--	--
	Radium 226	n/a	n/a	--	--	--	--	--	0.178	ND	0.138	0.213	0.526	ND	--	--	--	--
	Selenium	182	b	--	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	Silver	182	b	--	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	Sulfate	n/a	n/a	**31000**	--	--	--	--	40000	38000	40000	43000	41000	36000	40000	39000	--	--
	Toluene	723	b	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	1.3	--	--	--
	Total organic carbon	n/a	n/a	--	--	--	--	--	2650	2850	--	ND	--	14700	4660	6540	--	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	0.122	40	--	ND	ND	25	57.1	**65.1**	--	--
	Total Xylenes	206	b	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	2.5	--	--	--
	Uranium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round													
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
	Zinc	10950	b	--	ND	--	ND	32.1	450	13.2	43.7	ND	18.3	16.3	--	--	--	--
G-5	Aluminum	36499	b	--	--	--	6920	3670	--	--	--	--	--	--	--	--	--	--
	Antimony	14.6	b	--	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--
	Antimony	10	f	--	--	--	17.7	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	517	413	--	--	--	--	--	--	--	--	**421**	--
	Beryllium	4	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Beryllium	73	b	--	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	--	**ND**	**ND**	--	--	--	--	--	--	--	--	**ND**	**4.1**
	Bis(2-ethylhexyl) phthalate	6	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	5	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	**ND**	--	**ND**	**ND**	--	--	--	--	--	--	--	--	**ND**	--
	Caprolactam	18250	b	--	--	--	6	--	--	--	--	--	--	--	--	--	--	--
	Chromium	100	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	**ND**	--	23.2	**12.8**	--	--	--	--	--	--	--	--	**ND**	--
	Copper	1460	b	--	**ND**	--	**19.5**	**ND**	--	--	--	--	--	--	--	--	--	--
	Diethyl phthalate	29199	b	--	--	--	ND	ND	--	--	--	--	--	--	--	--	2.5	ND
	Hexavalent chromium	109	b	--	10	--	--	--	--	--	--	--	--	--	--	--	--	--
	HMX	1825	b	--	**ND**	--	ND	ND	--	--	--	--	--	--	--	--	ND	--
	Iron	10950	b	--	--	--	--	**1750**	--	--	--	--	--	--	--	--	**10600**	--
	Lead	n/a	n/a	--	ND	--	12.8	2.17	--	--	--	--	--	--	--	--	ND	--
G-5	Magnesium	n/a	n/a	--	--	--	**51300**	52400	--	--	--	--	--	--	--	--	--	--
	Manganese	300	d	--	--	--	322	--	--	--	--	--	--	--	--	--	--	--
	Manganese	876	b	--	--	--	--	184	--	--	--	--	--	--	--	--	76.8	--
	Mercury	n/a	n/a	--	**ND**	--	**ND**	**ND**	--	--	--	--	--	--	--	--	**ND**	--
	Nickel	100	d	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nickel	730	b	--	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	**ND**	--	ND	ND	--	--	--	--	--	--	--	--	**ND**	--
	Silver	182	b	--	ND	--	ND	ND	--	--	--	--	--	--	--	--	ND	--
	Sulfate	n/a	n/a	**59000**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Toluene	723	b	--	--	--	ND	0.85	--	--	--	--	--	--	--	--	ND	ND
	Uranium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	--	--	--	33.1	27.5	--	--	--	--	--	--	--	--	--	--
	Zinc	10950	b	--	ND	--	90.1	40.9	--	--	--	--	--	--	--	--	--	--
G-5D	Barium	2555	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aluminum	36499	b	--	--	--	1190	--	--	--	--	--	--	--	--	--	--	--
	Antimony	14.6	b	--	--	--	**ND**	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	66.9	--	--	--	--	--	--	--	--	--	**212**	--
	Beryllium	73	b	--	--	--	ND	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	**ND**	--	ND	--	--	--	--	--	--	--	--	--	ND	--
	Chromium	n/a	n/a	--	ND	--	ND	--	--	--	--	--	--	--	--	--	38.2	--
	Copper	1460	b	--	ND	--	ND	--	--	--	--	--	--	--	--	--	--	--
	Iron	10950	b	--	--	--	1180	--	--	--	--	--	--	--	--	--	ND	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
G-6	Lead	n/a	n/a	--	ND	--	5.1	--	--	--	--	--	--	--	--	--	**9**	--
	Magnesium	n/a	n/a	--	--	--	19900	--	--	--	--	--	--	--	--	--	--	--
	Manganese	876	b	--	--	--	17.3	--	--	--	--	--	--	--	--	--	253	--
	Mercury	n/a	n/a	--	ND	--	ND	--	--	--	--	--	--	--	--	--	ND	--
	Nickel	730	b	--	--	--	ND	--	--	--	--	--	--	--	--	--	--	--
	Nitrate	10000	b	1300	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	**ND**	--	ND	--	--	--	--	--	--	--	--	--	**ND**	--
	Silver	182	b	--	**ND**	--	**ND**	--	--	--	--	--	--	--	--	--	**ND**	--
	Sulfate	n/a	n/a	**24000**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	--	--	--	ND	--	--	--	--	--	--	--	--	--	--	--
	Zinc	10950	b	--	ND	--	22.9	--	--	--	--	--	--	--	--	--	--	--
G-6R	Barium	2555	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Beryllium	73	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Copper	1460	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Manganese	876	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Mercury	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nickel	730	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Silver	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Uranium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
G-7	1-Ethylhexylbenzene	n/a	n/a	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aluminum	36499	b	--	--	--	**1300**	**3470**	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	1500	--	--	56.9	89.4	--	--	--	--	--	--	--	--	--	--
	Caprolactam	18250	b	--	--	--	6	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	ND	ND	--	ND	7.9	--	--	--	--	--	--	--	--	--	--
	Copper	1460	b	**12**	**1**	--	ND	**ND**	--	--	--	--	--	--	--	--	--	--
	Iron	10950	b	--	--	--	1710	3370	--	--	--	--	--	--	--	--	--	--
	Lead	n/a	n/a	ND	ND	--	4.23	4.88	--	--	--	--	--	--	--	--	--	--
	Magnesium	n/a	n/a	--	--	--	40000	20000	--	--	--	--	--	--	--	--	--	--
	Manganese	876	b	--	--	--	61.9	45.1	--	--	--	--	--	--	--	--	--	--
	Nitrate	10000	b	1600	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Sulfate	n/a	n/a	**17000**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Toluene	723	b	--	--	--	ND	1.2	--	--	--	--	--	--	--	--	--	--
	Total organic carbon	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	1660	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	**185**	--
	Zinc	10950	b	400	ND	--	24.4	44.3	--	--	--	--	--	--	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
IDA-MW1	Barium	2555	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	6	f	--	--	**--**	--	--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Cadmium	18.2	b	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Chromium	n/a	n/a	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Lead	n/a	n/a	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Selenium	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Total Xylenes	206	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
IDA-MW2	Acetone	5475	b	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Barium	2555	b	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Bis(2-ethylhexyl) phthalate	4.80	b	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Cadmium	18.2	b	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Chloromethane	158	b	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Chromium	n/a	n/a	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Ethylbenzene	1340	b	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Freon	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Lead	n/a	n/a	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Selenium	182	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Toluene	723	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Total Xylenes	206	b	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
JAW-26	Aluminum	36499	b	**--**	**--**	**--**	**--**	**23800**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Aluminum	10	f	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Barium	2555	b	**--**	**--**	**--**	**--**	259	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**186**	**--**
	Beryllium	73	b	**--**	**--**	**--**	**--**	**ND**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Cadmium	18.2	b	**--**	**--**	**--**	**--**	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	ND	**--**
	Chromium	n/a	n/a	**--**	**--**	**--**	**--**	35	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	ND	**--**
	Copper	1460	b	**--**	--	--	--	24.5	--	--	--	--	--	--	--	--	--	--
	HMX	1825	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	--
	Iron	10950	b	**--**	**--**	**--**	**--**	--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**1810**	**--**
	Lead	n/a	n/a	**--**	**--**	**--**	**--**	9.87	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	ND	**--**
	Magnesium	n/a	n/a	**--**	**--**	**--**	**--**	**44800**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	--	**--**
	Manganese	300	d	--	--	--	--	424	--	--	--	--	--	--	--	--	--	--
	Manganese	876	b	--	--	--	--	--	--	--	--	--	--	--	--	--	33.2	--
	Mercury	n/a	n/a	**--**	**--**	**--**	**--**	**ND**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**ND**	**--**
	Nickel	730	b	**--**	**--**	**--**	**--**	**44.1**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	--	**--**
	Selenium	182	b	--	**--**	**--**	**--**	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**ND**	**--**
	Silver	182	b	**--**	--	--	--	ND	--	--	--	--	--	--	--	--	ND	--
	Uranium	n/a	n/a	**--**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	**--**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Zinc	10950	b	--	--	--	--	130	--	--	--	--	--	--	--	--	--	--
	Aluminum	36499	b	**--**	**--**	**--**	**--**	**835**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Arsenic	10	f	**--**	**--**	**--**	**--**	16	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	Barium	2555	b	**--**	**--**	**--**	**--**	202	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
JAW-27	Benzothiazole	n/a	n/a	--	--	--	--	**6**	--	--	--	--	--	--	--	--	--	--
	Iron	10950	b	--	--	--	--	1120	--	--	--	--	--	--	--	--	--	--
	Magnesium	n/a	n/a	--	--	--	--	33300	--	--	--	--	--	--	--	--	--	--
	Manganese	300	d	--	--	--	--	436	--	--	--	--	--	--	--	--	--	--
	Toluene	723	b	--	--	--	--	4	--	--	--	--	--	--	--	--	--	--
	Total organic carbon	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	38400	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	**195**	--
	Zinc	10950	b	--	--	--	--	57.5	--	--	--	--	--	--	--	--	--	--
JAW-28	1,3,5-Trinitrobenzene	1095	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	--
	1,3-Dichlorobenzene	182.5	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	**ND**	**ND**
	1,3-Dichloropropane	122	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1,3-Dinitrobenzene	1	d	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	1-Nitroso-3,5-dinitro-1,3,5-triazacyclohexane	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2,4,6-Trinitrotoluene	2.24	b	--	--	--	--	**ND**	--	--	--	--	--	--	--	--	**ND**	--
	2-Butanone / Methyl Ethyl Ketone	6968	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	ND
	2-Chloroethyl vinyl ether	n/a	n/a	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	**ND**
	2-Chlorophenol	30.4	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	ND
	2-Chlorotoluene	122	b	--	--	--	--	--	--	--	--	--	--	--	--	--	--	ND
	2-Cresol	1825	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	ND
JAW-28	2-Hexanone / Methyl Butyl Ketone	n/a	n/a	--	--	--	--	**ND**	--	--	--	--	--	--	--	--	**ND**	ND
	3-Nitrotoluene	122	b	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	--
	4-Amino-2,6dinitrotoluene	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	ND	--
	4-Methyl-2-Pentanone / Methyl Isobutyl Ketone	1993	b	--	--	--	--	**ND**	--	--	--	--	--	--	--	--	ND	**ND**
	Acetone	5475	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	ND
	Aluminum	36499	b	--	--	--	--	1680	--	--	--	--	--	--	--	--	--	--
	Antimony	14.6	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	--	241	--	--	--	--	--	--	--	--	**191**	--
	Benzyl alcohol	10950	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	**ND**	**ND**
	Beryllium	73	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	2.3
	Cadmium	18.2	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	**ND**	--
	Chromium	100	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	--
	Copper	1460	b	--	--	--	--	**ND**	--	--	--	--	--	--	--	--	--	--
	Diethyl phthalate	29199	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	3.2	ND
	HMX	1825	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	**ND**	--
	Iron	10950	b	--	--	--	--	3910	--	--	--	--	--	--	--	--	328	--
	Lead	n/a	n/a	--	--	--	--	1.41	--	--	--	--	--	--	--	--	ND	--
	Magnesium	n/a	n/a	--	--	--	--	37100	--	--	--	--	--	--	--	--	--	--
	Manganese	300	d	--	--	--	--	--	--	--	--	--	--	--	--	--	302	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
	Manganese	876	b	--	--	--	--	233	--	--	--	--	--	--	--	--	298	--
	Mercury	n/a	n/a	--	--	--	--	**ND**	--	--	--	--	--	--	--	--	**ND**	--
	Methylene chloride	4.28	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	2.4	**ND**
	Nickel	730	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	--	--
	Nitrobenzene	3.40	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	ND
	Phenol	10950	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	**ND**	**ND**
	Selenium	182	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	--
	Silver	182	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	--
	Tetryl	365	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	--
	Toluene	723	b	--	--	--	--	0.98	--	--	--	--	--	--	--	--	ND	ND
	Uranium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	--	--	--	--	14.1	--	--	--	--	--	--	--	--	--	--
JAW-65	Aluminum	36499	b	--	--	--	--	6480	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	--	145	--	--	--	--	--	--	--	--	**110**	--
	Beryllium	73	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	--
	Chromium	n/a	n/a	--	--	--	--	11.8	--	--	--	--	--	--	--	--	ND	--
	Copper	1460	b	--	--	--	--	12.6	--	--	--	--	--	--	--	--	--	--
	HMX	1825	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	--
	Iron	10950	b	--	--	--	--	10800	--	--	--	--	--	--	--	--	**1680**	--
	Lead	n/a	n/a	--	--	--	--	7.05	--	--	--	--	--	--	--	--	ND	--
	Magnesium	n/a	n/a	--	--	--	--	28300	--	--	--	--	--	--	--	--	--	--
	Manganese	300	d	--	--	--	--	624	--	--	--	--	--	--	--	--	--	--
	Manganese	876	b	--	--	--	--	--	--	--	--	--	--	--	--	--	86.2	--
	Mercury	n/a	n/a	--	--	--	--	**ND**	--	--	--	--	--	--	--	--	**ND**	--
	MNX	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Nickel	730	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	--	--
	RDX	0.61	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	**ND**	--
	RDX	2	d	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	--	--	--	ND	--	--	--	--	--	--	--	--	ND	--
	Silver	182	b	--	--	--	--	**ND**	--	--	--	--	--	--	--	--	**ND**	--
	Uranium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	--	--	--	--	20.8	--	--	--	--	--	--	--	--	--	--
	Zinc	10950	b	--	--	--	--	45.1	--	--	--	--	--	--	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
JAW-66	Alpha gross	15	f	--	--	--	--	--	--	--	--	--	--	--	**29.9**	**15.6**	--	--
	Alpha gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	**2.7**	--	**2.51**	**5.92**
	Aluminum	36499	b	--	--	--	--	**28000**	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	--	--	281	--	--	--	--	--	--	145	122	87.3	--
	Beta gross	4	f	--	--	--	--	--	--	--	--	--	--	--	**26**	**19.7**	--	**11.8**
	Caprolactam	18250	b	--	--	--	--	--	--	--	--	--	--	--	**1000**	--	--	--
	Chromium	n/a	n/a	--	--	--	--	**57.5**	--	--	--	--	--	--	15.6	**8.42**	**ND**	--
	Copper	1460	b	--	--	--	--	44.9	--	--	--	--	--	--	--	--	--	--
	Iron	10950	b	--	--	--	--	--	--	--	--	--	--	--	7970	5490	109	--
	Lead	n/a	n/a	--	--	--	--	18.4	--	--	--	--	--	--	**4.88**	**2.28**	**1.41**	--
	Lead 214	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**21.2**
	Magnesium	n/a	n/a	--	--	--	--	43100	--	--	--	--	--	--	--	--	--	--
	Manganese	300	d	--	--	--	--	1120	--	--	--	--	--	--	453	304	--	--
	Manganese	876	b	--	--	--	--	--	--	--	--	--	--	--	44.7	15	8.54	--
	Mercury	n/a	n/a	--	--	--	--	**0.248**	--	--	--	--	--	--	**ND**	**ND**	**ND**	--
	N,N-Diethyl-m-toluamide (DEET)	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	20	--	--
	Nickel	730	b	--	--	--	--	62.4	--	--	--	--	--	--	--	--	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	2000	1800	--	--
	Phenolics - nonspecific	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	**ND**	**11.2**	--	--
	Radium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	3.41	29	ND	--
	Sulfate	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	60000	41000	--	--
	Toluene	723	b	--	--	--	--	0.78	--	--	--	--	--	--	ND	--	ND	ND
	Total organic carbon	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	8590	4210	--	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	278	**24.9**	--	--
	Zinc	10950	b	--	--	--	--	152	--	--	--	--	--	--	--	--	--	--
	2-Cyclohexen-1-ol	n/a	n/a	--	--	--	--	4	--	--	--	--	--	--	--	--	--	--
	2-Cyclohexen-1-one	n/a	n/a	--	--	--	--	4	--	--	--	--	--	--	--	--	--	--
	Actinium 228	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.51
	Alpha gross	15	f	--	--	--	--	--	--	--	--	--	--	--	76.6	--	--	--
	Alpha gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	6.54	9.09	7.62
	Antimony	6	f	--	--	--	--	**588**	--	--	--	--	--	**296**	--	--	--	--
	Barium	2555	b	--	--	--	--	926	--	--	--	--	--	1120	1120	647	592	--
	Beryllium	4	f	--	--	--	--	**6.65**	--	--	--	--	--	--	--	--	--	--
	Beta gross	4	f	--	--	--	--	--	--	--	--	--	--	--	95.2	28.6	7.47	**17.1**
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	--	--	**4.7**	--	--	--	--	--	**ND**	**4.5**	--	**ND**	**2.6**
	Bis(2-ethylhexyl) phthalate	6	f	--	--	--	--	--	--	--	--	--	--	--	**6.2**	**12**	--	--
	Cadmium	5	f	--	--	--	--	--	--	--	--	--	--	5.1	10.2	--	--	--
	Cadmium	18.2	b	--	--	--	--	**4.05**	--	--	--	--	--	**ND**	**ND**	**ND**	**ND**	--
	Caprolactam	18250	b	--	--	--	--	--	--	--	--	--	--	--	400	300	--	--
	Chlorodifluoromethane	85167	b	--	--	--	--	--	--	--	--	--	--	--	--	--	**7**	**10**
	Chromium	100	f	--	--	--	--	211	--	--	--	--	--	128	144	--	--	--
	Chromium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	**ND**	**35.3**	**33.1**	ND	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
JAW-67	Cobalt	730	b	--	--	--	--	**104**	--	--	--	--	--	**88.2**	--	--	--	--
	Copper	1460	b	--	--	--	--	223	--	--	--	--	--	140	--	--	--	--
	Cyclohexene oxide	n/a	n/a	--	--	--	--	9	--	--	--	--	--	--	--	--	--	--
	Diethyl phthalate	29199	b	--	--	--	--	ND	--	--	--	--	--	ND	**ND**	**ND**	**3.2**	**ND**
	Iron	10950	b	--	--	--	--	--	--	--	--	--	--	854	2650	5100	8880	--
	Lead	n/a	n/a	--	--	--	--	210	--	--	--	--	--	160	140	29.9	4.23	--
	Lead 214	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**18.8**
	Magnesium	n/a	n/a	--	--	--	--	102000	--	--	--	--	--	93000	--	--	--	--
	Manganese	300	d	--	--	--	--	10700	--	--	--	--	--	12000	10600	6650	5050	--
	Mercury	n/a	n/a	--	--	--	--	2.28	--	--	--	--	--	ND	2.18	0.52	ND	--
	Mercury	5	f	--	--	--	--	--	--	--	--	--	--	--	**7.2**	--	--	--
	Nickel	100	d	--	--	--	--	224	--	--	--	--	--	175	--	--	--	--
	Radium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	**17.3**	**15.2**	**1.18**	--
	Sulfate	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	13000	12000	--	--
	Toluene	723	b	--	--	--	--	0.68	--	--	--	--	--	ND	0.74	--	ND	ND
	Total organic carbon	n/a	n/a	--	--	--	--	--	--	--	--	--	--	9870	12000	9920	--	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	--	--	--	--	--	197	628	**182**	--	--
	Total Xylenes	206	b	--	--	--	--	0.94	--	--	--	--	--	ND	ND	--	ND	ND
	Zinc	10950	b	--	--	--	--	1090	--	--	--	--	--	1260	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round													
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
T-1	1,3,5-Trinitrobenzene	1095	b	--	--	--	--	--	**ND**	--	**ND**	**7**	**ND**	ND	ND	**ND**	--	--
	1,3-Dinitrobenzene	1	d	--	--	--	--	--	--	--	--	**42.8**	--	--	--	--	--	--
	Alpha gross	15	f	--	--	--	--	--	--	--	--	--	--	--	24.7	--	--	--
	Alpha gross	n/a	n/a	--	--	--	--	--	**4.45**	--	**ND**	**6.57**	**ND**	**ND**	**ND**	**1.64**	--	--
	Aluminum	36499	b	--	--	--	--	--	**ND**	--	**184**	**ND**	**176**	**ND**	--	--	--	--
	Antimony	14.6	b	--	--	--	--	--	ND	--	3.9	ND	ND	ND	--	--	--	--
	Barium	2000	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	**ND**	--	--	73.6	--	78.6	113	87.7	73.6	**99.5**	**89.3**	**83.5**	--
	Beryllium	73	b	--	--	--	--	--	**ND**	--	**ND**	**ND**	**ND**	**ND**	--	--	--	--
	Beta gross	4	f	--	--	--	--	--	4.01	--	--	--	12	--	40.4	--	--	--
	Beta gross	n/a	n/a	--	--	--	--	--	ND	--	ND	ND	--	ND	**ND**	**3.59**	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	--	--	--	--	--	**ND**	**ND**	**ND**	**ND**	**ND**	**4.5**	--	--
	Bis(2-ethylhexyl) phthalate	6	f	--	--	19	--	--	--	--	--	--	--	--	100	--	--	--
	Cadmium	18.2	b	--	--	**ND**	--	--	**ND**	--	ND	ND	ND	ND	ND	ND	**ND**	--
	Chromium	n/a	n/a	--	--	ND	--	--	ND	--	ND	ND	ND	ND	ND	ND	ND	--
	Copper	1460	b	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	--	--
	Fluoride	2190	b	--	--	--	--	--	--	--	300	361	338	279	ND	ND	--	--
	Iron	10950	b	--	--	--	--	--	ND	--	289	165	328	153	**85.2**	**264**	**113**	--
	Lead	n/a	n/a	--	--	--	--	--	**ND**	--	ND	ND	ND	ND	ND	ND	**ND**	--
	Magnesium	n/a	n/a	--	--	--	--	--	31500	--	33500	31700	32100	32700	--	--	--	--
	Manganese	876	b	--	--	--	--	--	10	--	11	20.1	14.1	9.04	10.2	12.6	8.47	--
	Mercury	n/a	n/a	--	--	0.2	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	--
	Mesityl Oxide	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	4	--	--	--
	Mesityl Oxide	5	f	--	--	12	--	--	--	--	--	--	--	--	--	--	--	--
	Nickel	730	b	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	--	--
	Nitrate	10000	b	--	--	--	--	--	--	--	**990**	**1030**	**980**	**917**	--	--	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	--	--	**1500**	--	--	ND	--	980	980	910	--	**1200**	**950**	--	--
	Nitrite, nitrate - nonspecific	5	d	--	--	--	--	--	--	--	--	300	--	--	--	--	--	--
	Phenolics - nonspecific	n/a	n/a	--	--	--	--	--	ND	--	ND	ND	ND	ND	9.67	ND	--	--
	Radium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	**1.48**	**3.27**	--	--
	Radium 226	n/a	n/a	--	--	--	--	--	ND	--	1.02	0.24	0.272	ND	--	--	--	--
	Radium 226	2	d	--	--	--	--	--	--	--	--	619	--	--	--	--	--	--
	Selenium	182	b	--	--	ND	--	--	2.61	ND	2.45	2.07	ND	2.12	3.73	4.37	4.15	--
	Silver	182	b	--	--	**ND**	--	--	**ND**	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	--
	Styrene	1641	b	--	--	10	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	--
	Sulfate	n/a	n/a	--	--	39000	--	--	--	--	18500	22000	21000	20000	23000	21000	--	--
	Tetryl	365	b	--	--	ND	--	--	ND	--	ND	2.9	ND	ND	ND	ND	--	--
	Total organic carbon	n/a	n/a	--	--	--	--	--	4000	160	--	ND	--	52700	5530	7750	--	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	524	**43**	--	ND	ND	ND	269	15.7	--	--
	Uranium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Vanadium	36.5	b	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	--	--
	Zinc	10950	b	--	--	--	--	--	274	--	ND	14.2	18.3	14.2	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round													
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
T-2	Actinium 228	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**12.4**
	Alpha gross	15	f	--	--	--	--	--	--	--	--	--	--	--	**19**	--	--	--
	Alpha gross	n/a	n/a	--	--	--	--	--	ND	10.5	6.71	ND	14	5.31	4.3	3.99	9.96	5.9
	Aluminum	36499	b	--	--	--	--	--	**ND**	**163**	**109**	**ND**	**ND**	**ND**	--	--	--	--
	Antimony	6	f	--	--	--	--	--	--	--	9.2	--	--	--	--	--	--	--
	Barium	2555	b	--	--	**ND**	--	--	164	173	301	157	110	95.8	**107**	**101**	**105**	--
	Beta gross	4	f	--	--	--	--	--	--	--	--	**5.97**	**12.8**	--	**30.2**	**7.35**	**13.3**	--
	Beta gross	n/a	n/a	--	--	--	--	--	ND	ND	ND	--	--	ND	ND	--	--	**2.83**
	Beta gross	6	f	--	--	--	--	--	--	--	--	--	--	--	**6.8**	--	--	--
	cis-1,2-Dichloroethene	60.8	b	--	--	--	--	--	8.1	ND	ND	ND	ND	ND	--	--	--	--
	Fluoride	2190	b	--	--	--	--	--	435	463	424	487	426	382	ND	ND	--	--
	Iron	10950	b	--	--	--	--	--	ND	266	142	759	ND	ND	**44.3**	**46.1**	**ND**	--
	Lead	n/a	n/a	--	--	--	--	--	ND	ND	ND	ND	ND	ND	ND	ND	**1.41**	--
	Lead 214	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**13.6**
	Magnesium	n/a	n/a	--	--	--	--	--	44700	31700	20100	44400	32300	34100	--	--	--	--
	Manganese	876	b	--	--	--	--	--	9.04	49.2	55.2	52.2	11	13.1	11.6	8.52	ND	--
	Methylene chloride	4.28	b	--	--	ND	--	--	--	ND	ND	ND	--	ND	3.2	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
T-2	Methylene chloride	5	f	--	--	--	--	--	12	--	--	--	7.7	--	--	--	--	--
	Nitrate	10000	b	--	--	--	--	--	**650**	848	613	677	**532**	760	--	--	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	--	--	**900**	--	--	**ND**	**176**	**590**	**680**	**7900**	--	**740**	**990**	--	--
	Radium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	ND	ND	1.41	--
	Radium 226	n/a	n/a	--	--	--	--	--	ND	0.254	0.591	ND	0.198	ND	--	--	--	ND
	Sulfate	n/a	n/a	--	--	26000	--	--	42000	31000	34000	36000	38000	34000	36000	31000	--	--
	Total 1,2-Dichloroethene	n/a	n/a	--	--	ND	--	--	--	--	--	--	--	--	0.8	--	--	--
	Total organic carbon	n/a	n/a	--	--	--	--	--	3610	ND	--	--	--	77000	4410	6670	--	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	475	--	--	--	--	20	238	18.2	--	--
	Zinc	10950	b	--	--	--	--	--	510	ND	16.3	16.3	23.4	14.2	--	--	--	--
T-3	Zinc	0.3	d	--	--	--	--	--	--	--	--	--	--	--	--	4	--	--
	Alpha gross	15	f	--	--	--	--	--	--	--	--	--	15.6	--	**21.5**	--	--	--
	Alpha gross	n/a	n/a	--	--	--	--	--	**ND**	**ND**	**9.25**	**ND**	**9.49**	**ND**	**12.3**	**ND**	**8.11**	--
	Aluminum	36499	b	--	--	--	--	--	**ND**	**502**	**235**	**416**	**512**	**ND**	--	--	--	--
	Antimony	14.6	b	--	--	--	--	--	4.6	5.05	ND	ND	ND	ND	--	--	--	--
	Barium	2555	b	--	--	**ND**	--	--	113	157	259	154	155	175	**183**	**174**	**178**	--
	Beta gross	4	f	--	--	--	--	--	--	7.7	4.34	--	22.4	--	**25.6**	**5.96**	**7.51**	--
	Beta gross	6	f	--	--	10	--	--	--	--	--	--	--	--	31	--	--	--
	Cadmium	5	f	--	--	--	--	--	--	--	**5.1**	--	--	--	--	--	--	--
	Camphor	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	**10**	--	--	--
	cis-1,2-Dichloroethene	60.8	b	--	--	--	--	--	ND	9.7	ND	5.9	9.3	8.3	--	--	--	--
	Diethyl ether	1217	b	--	--	--	--	--	--	--	--	--	--	--	5	--	--	--
	Fluoride	2190	b	--	--	--	--	--	493	403	370	454	868	375	**ND**	**ND**	--	--
	Iron	10950	b	--	--	--	--	--	**ND**	**842**	**986**	**759**	**915**	**ND**	376	**445**	**ND**	--
	Magnesium	n/a	n/a	--	--	--	--	--	31500	44000	24800	44400	45300	47000	--	--	--	--
	Manganese	876	b	--	--	--	--	--	47.2	53.2	64.3	52.2	61.2	7.03	28.2	34.6	ND	--
	Manganese	5	f	--	--	11	--	--	--	11	--	5.5	10	8.7	7.3	--	--	--
	Nitrate	10000	b	--	--	--	--	--	586	1130	644	1500	2020	644	--	--	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	--	--	**1500**	--	--	**ND**	**770**	**630**	**1400**	**2300**	--	**880**	**1300**	--	--
	Phenolics - nonspecific	n/a	n/a	--	--	--	--	--	ND	ND	ND	ND	240	ND	**ND**	**ND**	--	--
	Radium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	ND	2.97	ND	--
	Radium 226	n/a	n/a	--	--	--	--	--	0.269	0.65	0.337	0.536	0.585	ND	--	--	--	--
	Sulfate	n/a	n/a	--	--	42000	--	--	35000	33000	40000	37000	31000	36000	37000	38000	--	--
	Total 1,2-Dichloroethene	n/a	n/a	--	--	ND	--	--	--	--	--	--	--	--	7.5	--	--	--
	Total organic carbon	n/a	n/a	--	--	--	--	--	1820	ND	--	--	--	41300	7090	7780	--	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	103	--	--	23	28	24	240	50.9	--	--
	Zinc	10950	b	--	--	--	--	--	445	19.3	39.7	27.5	22.4	19.3	--	--	--	--
T-4	Actinium 228	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	12.2
	Barium	2555	b	--	--	**ND**	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	ND	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	ND	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	ND	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
T-4	Lead 214	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16.2
	Magnesium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Mercury	n/a	n/a	--	--	0.1	--	--	--	--	--	--	--	--	--	--	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	--	--	1000	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	--	ND	--	--	--	--	--	--	--	--	--	--	--	--
T-5	Barium	2555	b	--	--	ND	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	--	--	ND	--	--	--	--	--	--	--	--	--	--	--	--
	Bis(2-ethylhexyl) phthalate	6	f	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Cadmium	18.2	b	--	--	ND	--	--	--	--	--	--	--	--	--	--	--	--
	Chromium	n/a	n/a	--	--	ND	--	--	--	--	--	--	--	--	--	--	--	--
	Magnesium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Mercury	n/a	n/a	--	--	0.1	--	--	--	--	--	--	--	--	--	--	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	--	--	100	--	--	--	--	--	--	--	--	--	--	--	--
	Selenium	182	b	--	--	ND	--	--	--	--	--	--	--	--	--	--	--	--
	Sulfate	n/a	n/a	--	--	17000	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round													
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
T-6	Alpha gross	15	f	**--**	--	--	--	--	--	--	--	--	--	--	23.8	--	--	--
	Alpha gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	ND	1.42	--	--
	Arsenic	10	f	**--**	**--**	**28**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**35.4**	**32.3**	**--**	**--**
	Barium	2555	b	--	--	ND	--	--	--	--	--	--	--	--	107	111	--	--
	Beta gross	4	f	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**56.7**	**10.9**	**--**	**--**
	Bis(2-ethylhexyl) phthalate	6	f	**--**	**--**	30	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	6.1	6.2	**--**	**--**
	Di-n-butyl phthalate	3650	b	**--**	**--**	**12**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**ND**	**ND**	**--**	**--**
	Iron	10950	b	--	--	--	--	--	--	--	--	--	--	--	1210	958	--	--
	Manganese	876	b	**--**	**--**	--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	254	273	**--**	**--**
	Mercury	n/a	n/a	**--**	**--**	**0.7**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	ND	ND	**--**	**--**
	Mesityl Oxide	n/a	n/a	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	6	--	**--**	**--**
	Radium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	ND	3.3	--	--
	Sulfate	n/a	n/a	--	--	15000	--	--	--	--	--	--	--	--	12000	--	--	--
	Total organic carbon	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	4950	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	--	850	--
T-7	Alpha gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	11.2	ND	--	--
	Alpha gross	10	f	--	--	14	--	--	--	--	--	--	--	--	--	--	--	--
	Barium	2555	b	--	--	ND	--	--	--	--	--	--	--	95.8	95.5	90.9	--	--
	Beta gross	4	f	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**32.1**	**25.3**	**--**	**--**
	Beta gross	6	f	**--**	**--**	--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	8.6	13	15	**--**	**--**
	Hexadecanoic acid / Palmitic acid	n/a	n/a	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**10**	**--**	**--**
	Iron	10950	b	**--**	--	--	--	--	--	--	--	--	--	447	249	223	--	--
	Magnesium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	28900	--	--	--	--
	Manganese	876	b	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	215	168	187	**--**	**--**
	Mercury	n/a	n/a	--	--	0.2	--	--	--	--	--	--	--	ND	ND	ND	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	**--**	**--**	**1100**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	--	--	--	**--**	**--**
	Radium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	ND	2.43	--	--
	Stearic acid	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	9	--	--
	Total organic carbon	n/a	n/a	--	--	--	--	--	--	--	--	--	--	36000	--	--	3780	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	--	--	--	--	--	64	--	--	281	--
	Zinc	10950	b	--	--	--	--	--	--	--	--	--	--	27.5	--	--	--	--
T-8	Alpha gross	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	9.3	3.64	--	--
	Barium	2555	b	**--**	**--**	**ND**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	185	**172**	**174**	**--**	**--**
	Beta gross	4	f	--	--	--	--	--	--	--	--	--	--	--	14	8.76	--	--
	Bis(2-ethylhexyl) phthalate	4.80	b	**--**	**--**	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	ND	4.5	--	**--**	**--**
	Bis(2-ethylhexyl) phthalate	6	f	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**6.3**	**42**	**--**	**--**
	Di-n-butyl phthalate	3650	b	**--**	**--**	**ND**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**ND**	**ND**	**3.7**	**--**	**--**
	Hexadecanoic acid / Palmitic acid	n/a	n/a	**--**	--	--	--	--	--	--	--	--	--	--	--	40	--	--
	Iron	10950	b	**--**	**--**	--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	490	591	474	**--**	**--**
	Magnesium	n/a	n/a	--	--	--	--	--	--	--	--	--	--	30200	--	--	--	--
	Manganese	300	d	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	880	1010	850	**--**	**--**
	Radium	n/a	n/a	--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**ND**	**2.4**	**--**	**--**

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
	Stearic acid	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	--	50	--	--
	Total organic carbon	n/a	n/a	--	--	--	--	--	--	--	--	--	--	6800	--	--	4260	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	--	--	--	--	--	62	--	--	132	--
	Zinc	10950	b	--	--	--	--	--	--	--	--	--	--	24.4	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round														
				Summer 1981	Fall 1985	Fall 1989	Fall/Winter 1992	Spring/Summer 1993	December 1993	January 1994	February 1994	March 1994	Spring 1994	Fall 1994	Spring 1995	Summer 1995	Fall 1995	Spring 1996
T-9	2-Ethyl-1-hexanol	n/a	n/a	--	--	--	--	--	--	--	--	--	--	--	5	--	--	--
	Alpha gross	n/a	n/a	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	--	**14**	**ND**	**--**	**--**
	Barium	2555	b	--	--	ND	--	--	--	--	--	--	--	354	387	364	--	--
	Beta gross	4	f	--	--	--	--	--	--	--	--	--	--	--	13.2	10.8	--	--
	Beta gross	6	f	**--**	**--**	--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	53	--	6.8	**--**	**--**
	Iron	10950	b	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**831**	**1440**	**344**	**--**	**--**
	Magnesium	n/a	n/a	**--**	--	--	--	--	--	--	--	--	--	28200	--	--	--	--
	Manganese	300	d	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	3000	3860	2890	**--**	**--**
	Mercury	n/a	n/a	--	--	0.3	--	--	--	--	--	--	--	ND	ND	ND	--	--
	Methylene chloride	4.28	b	**--**	**--**	**ND**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**ND**	**2.5**	**--**	**--**	**--**
	Radium	n/a	n/a	--	**--**	--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	--	1.33	**2.24**	**--**	**--**
	Sulfate	n/a	n/a	**--**	--	21000	--	--	--	--	--	--	--	--	--	--	--	--
	Total organic carbon	n/a	n/a	--	--	--	--	--	--	--	--	--	--	11000	--	--	11000	--
	Total organic halogens (TOX)	n/a	n/a	--	--	--	--	--	--	--	--	--	--	26	--	--	293	--
	Zinc	10950	b	--	--	--	--	--	--	--	--	--	--	18.3	--	--	--	--

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable PRG

Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
--	--	--	--	--	--	34	--	19	20	15	16	13	13
--	**--**	**--**	**--**	**--**	**--**	**3**	**--**	**3**	**5**	**2**	**2**	**2**	**2**
--	**--**	**--**	**--**	**--**	**--**	140	**--**	99	99	70	75	69	68
--	**--**	**--**	**--**	**--**	**--**	14	**--**	12	12	7	7	8	8
--	**--**	**--**	**--**	**--**	**--**	**0.73**	**--**	**4.1**	**4.85**	**--**	**--**	**4.39**	**3.89**
--	**--**	**--**	**--**	**--**	**--**	**162**	**179**	**167**	**190**	**165**	**195**	**169**	**207**
--	--	--	--	--	--	--	--	--	--	--	--	4.87	7.29
--	**--**	**--**	**--**	**--**	**--**	2.6	--	3.4	2.1	--	--	ND	--
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**5.8**
--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	0.05	--
--	**--**	**--**	**--**	**--**	**--**	**0.3**	**0.3**	**1.1**	**ND**	**ND**	**ND**	**1.8**	**ND**
--	**--**	**--**	**--**	**--**	**--**	2	--	ND	ND	1	1	1	**2**
--	--	--	--	--	--	0.8	0.8	0.6	ND	ND	1.1	0.85	25
--	**--**	**--**	**--**	**--**	**--**	--	**--**	70	80	60	70	ND	ND
--	**--**	**--**	**--**	**--**	**--**	--	--	--	1.44	--	--	--	--
--	--	--	--	--	--	ND	--	4.2	3.31	--	--	4.14	ND
--	--	--	--	--	--	ND	--	ND	ND	--	--	-2.5	ND
--	--	--	--	--	--	128	201	90.7	131	64.7	182	54.4	176
--	--	--	--	--	--	1.2	4.3	2	ND	2.3	ND	4	ND
--	**--**	**--**	**--**	**--**	**--**	ND	--	ND	21.9	--	--	ND	ND
--	**--**	**--**	**--**	**--**	**--**	--	--	ND	0.231	--	--	ND	ND
--	--	--	--	--	--	ND	ND	ND	ND	3.7	ND	6.3	ND
--	--	--	--	--	--	1300	1800	1800	1900	1400	1500	1600	1500
--	**--**	**--**	**--**	**--**	**--**	ND	90	--	--	--	--	--	--
--	--	--	--	--	--	26	--	18	18	15	14	12	15
--	--	--	--	--	--	5.7	5.4	5.9	3.9	3.5	3.6	3.9	4.2
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**1.94**	**2.72**	**1.95**	**3.44**	**2.27**
--	--	--	--	--	--	ND	--	ND	0.14	0.272	ND	0.347	0.384
--	--	--	--	--	--	--	--	--	1.46	1.43	1.09	1.76	1.51
--	--	--	--	--	--	1.9	2.3	1.9	ND	ND	1.4	1.4	ND
--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	4	ND
--	**--**	**--**	**--**	**--**	**--**	ND	ND	ND	ND	ND	--	2	ND
--	**--**	**--**	**--**	**--**	**--**	--	ND	ND	ND	ND	ND	1	ND
--	**--**	**--**	**--**	**--**	**--**	1.8	--	2.9	2.08	--	**--**	ND	3.2
--	--	--	--	--	--	--	--	1920	2180	--	--	--	1882.9
--	--	--	--	--	--	--	--	2070	2360	--	--	--	2157.3
--	**--**	**--**	**--**	**--**	**--**	**145**	**545**	**146**	**166**	**142**	**150.09**	**144**	**142.23**
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**46.9**	**52.3**	**--**	**--**	**--**	**49.56**
--	**--**	**--**	**--**	**--**	**--**	ND	ND	ND	ND	ND	ND	ND	0.22
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**4.25**
--	**--**	**--**	**--**	**--**	**--**	1.6	--	3.2	2.65	--	--	ND	--
--	**--**	**--**	**--**	**--**	**--**	**ND**	**ND**	**2**	**ND**	**ND**	**ND**	**ND**	**ND**

Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
--	--	--	--	--	--	--	--	50	51.5	--	--	--	48.33
--	**--**	**--**	**--**	**--**	**--**	ND	ND	ND	0.72	ND	ND	ND	1.22
--	**--**	**--**	**--**	**--**	**--**	**ND**	**--**	**ND**	**3.66**	**--**	**--**	**ND**	**ND**
--	**--**	**--**	**--**	**--**	**--**	--	--	204	210	--	--	--	198.82
--	--	--	--	--	--	0.9	ND	0.83	0.78	1.5	ND	1.9	0.69
--	**--**	**--**	**--**	**--**	**--**	**ND**	**0.7**	**252**	**269**	**ND**	**ND**	**ND**	**257.28**
--	--	--	--	--	--	ND	ND	ND	ND	ND	ND	3	ND
--	**--**	**--**	**--**	**--**	**--**	ND	8	496	528	ND	ND	55.655	478.5
--	**--**	**--**	**--**	**--**	**--**	--	--	--	2.34	--	--	--	--
--	--	--	--	--	--	--	--	445	518	--	--	--	492.02
--	--	--	--	--	--	3.9	ND	ND	2.17	ND	ND	51.715	ND
--	**--**	**--**	**--**	**--**	**--**	**ND**	**ND**	**5**	**5**	**ND**	**ND**	**5.2647**	**4.8952**
--	**--**	**--**	**--**	**--**	**--**	--	--	500	503	--	--	--	468.78
--	--	--	--	--	--	1	1	ND	ND	ND	ND	55.207	ND
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**1**	**--**
--	**--**	**--**	**--**	**--**	**--**	ND	--	93.9	ND	--	--	ND	ND
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**ND**	**0.253**	**--**	**--**	ND	**ND**
--	--	--	--	--	--	--	--	1730	2080	--	--	56.112	1674.2
--	--	--	--	--	--	ND	ND	ND	ND	5.5	ND	5.5	ND
--	**--**	**--**	**--**	**--**	**--**	**ND**	**0.4**	**47.1**	**51.5**	**ND**	**ND**	**51.781**	**50**
--	**--**	**--**	**--**	**--**	**--**	ND	ND	ND	12400	ND	10500	12143	ND
--	**--**	**--**	**--**	**--**	**--**	--	--	348	53.3	--	127.89	108.37	104.29
--	--	--	--	--	--	3.4	3	3.3	2.16	1.8	2	1.9	2
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**1.8**	**1.38**	**1.52**	**2.37**	**2.27**
--	--	--	--	--	--	ND	--	ND	0.109	0.306	0.175	0.848	0.215
--	--	--	--	--	--	--	--	--	1.02	0.66	0.813	1.46	0.82
--	--	--	--	--	--	1.4	1.1	ND	ND	ND	0.54	0.83	0.75
--	--	--	--	--	--	ND	--	ND	19.4	ND	--	ND	ND
--	**--**	**--**	**--**	**--**	**--**	2.3	--	3.9	14.9	--	--	6.16	10.7
--	--	--	--	--	--	1300	511	524	612	475	471	559	468
--	--	--	--	--	--	--	--	--	8	--	--	4.62	26.6
--	**--**	**--**	**--**	**--**	**--**	2.3	--	3.5	--	--	--	--	--
--	**--**	**--**	**--**	**--**	**--**	**ND**	**--**	**ND**	**ND**	**ND**	**ND**	**0.02**	**ND**
--	--	--	--	--	--	ND	--	ND	3.77	--	--	ND	ND
--	**--**	**--**	**--**	**--**	**--**	1.6	**1.6**	ND	1.1	ND	ND	1.3	ND
--	--	--	--	--	--	3.6	ND	1.7	7.4	ND	2.4	2.1	25
--	--	--	--	--	--	--	--	ND	98	ND	ND	ND	ND
--	**--**	**--**	**--**	**--**	**--**	1.8	4.6	ND	4.5	ND	ND	0.22	ND
--	--	--	--	--	--	--	--	--	1.53	--	--	--	--
--	--	--	--	--	--	ND	--	ND	6.69	--	--	ND	ND
--	--	--	--	--	--	93.5	110	76.2	55.7	48.1	41.8	41.9	37.8
--	--	--	--	--	--	3	3	ND	3.1	ND	ND	3.7	ND

Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
--	--	--	--	--	--	ND	--	49.5	74.7	--	--	ND	ND
--	--	--	--	--	--	--	--	ND	0.217	--	--	ND	ND
--	--	--	--	--	--	ND	ND	ND	3.3	4.2	5.3	2.2	ND
--	--	--	--	--	--	ND	0.4	ND	ND	ND	ND	ND	ND
--	--	--	--	--	--	4.9	4.5	4.8	3.1	2.7	2.9	2.8	2.6
--	--	--	--	--	--	--	--	--	3.06	3.08	2.4	5.06	3.08
--	--	--	--	--	--	ND	--	ND	ND	0.248	0.292	0.326	0.317
--	--	--	--	--	--	--	--	--	1.31	1.08	1.37	1.72	1.28
--	--	--	--	--	--	2.4	3	0.8	ND	ND	0.56	1	ND
--	--	--	ND	ND	--	ND	ND	ND	3	ND	1	1	1
--	--	--	**1.2**	**ND**	--	0.59	--	ND	0.54	ND	ND	ND	0.68
--	--	--	--	2	--	--	--	--	2.5	--	--	--	--
--	--	--	0.23	--	--	ND	--	ND	--	ND	ND	ND	ND
--	--	--	**72**	**31**	--	**4.7**	--	**5.3**	**4.7**	**3.3**	**2.4**	**3.3**	**3**
--	--	--	0.57	**ND**	--	ND	**ND**	ND	**ND**	ND	ND	ND	ND
--	--	--	**2.1**	**2.35**	--	**0.77**	**1**	**3.7**	**0.82**	**ND**	**0.52**	**2**	**0.81**
--	--	--	--	18	--	9.2	--	11	11	10	10	15	15
--	--	--	--	29	--	9.3	--	10	9.7	9	8	13	11
--	--	--	--	--	--	ND	--	ND	ND	ND	--	ND	12.9
--	--	--	--	--	--	4.9	--	4	4.39	--	--	5.65	8.41
--	--	--	--	--	--	--	10	--	--	--	--	--	--
--	--	--	160	153	--	149	163	172	165	136	154	145	154
--	--	--	--	--	--	**4.8**	--	--	--	--	--	**7.21**	**14.3**
--	--	--	--	--	--	--	--	ND	1.99	--	--	ND	--
--	--	--	**2.4**	**ND**	--	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
--	--	--	ND	ND	--	ND	ND	ND	0.88	ND	ND	0.01	ND
--	--	--	--	--	--	ND	--	ND	5.04	--	--	ND	-2.22
--	--	--	4.8	ND	--	ND	0.3	ND	0.77	ND	ND	1.8	ND
--	--	--	2.2	--	--	ND	ND	ND	ND	3.4	ND	0.55	ND
--	--	--	6.3	ND	--	1.1	--	ND	2.5	0.71	0.81	1	0.88
--	--	--	7.4	**ND**	--	1.4	3.4	ND	ND	ND	ND	0.09	ND
--	--	--	--	--	--	--	--	--	4.59	--	--	--	--
--	--	--	--	--	--	ND	--	ND	2.87	--	--	ND	-2.83
--	--	--	--	--	--	ND	--	ND	4.32	--	--	ND	2.02
--	--	--	5.3	--	--	1.9	6.1	3.9	7.6	1.1	7.4	3.3	ND
--	--	--	20	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
--	--	--	28	--	--	1.6	40	2	1.9	1.8	ND	4.6	ND
--	--	--	0.63	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
--	--	--	--	--	--	ND	--	53.8	6.31	--	--	54.1	43.5
--	--	--	0.0055	--	--	--	--	ND	0.276	--	--	ND	0.152

Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
--	--	--	15	23	--	3.5	4.9	5.9	5.6	4.1	4	6.2	5.3
--	--	--	ND	ND	--	ND	1.7	ND	ND	ND	ND	11.1	ND
--	**--**	**--**	**ND**	**--**	**--**	**ND**	**0.4**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
--	--	--	0.35	ND	--	2.7	--	ND	ND	ND	ND	ND	ND
--	--	--	--	--	--	8.5	6.9	8.4	5.2	4.6	5.3	5.4	6.9
--	**--**	**--**	--	--	**--**	--	**--**	--	2.05	2.56	2.9	2.79	4.59
--	--	--	--	--	--	ND	--	ND	0.234	0.306	ND	0.577	0.937
--	--	--	--	--	--	--	--	--	1.66	1.96	1.97	2.89	3.34
--	--	--	1.6	--	--	0.7	1	ND	ND	ND	0.72	0.95	ND
--	--	--	0.92	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
--	**--**	**--**	34	**--**	**--**	--	--	--	--	--	--	--	--
--	**--**	**--**	0.17	ND	**--**	ND	ND	ND	ND	ND	ND	ND	ND
--	**--**	**--**	**0.36**	**ND**	**--**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
--	**--**	**--**	1.2	ND	**--**	ND	ND	ND	ND	ND	ND	ND	ND
--	**--**	**--**	ND	--	**--**	ND	--	ND	14.2	ND	--	ND	ND
--	**--**	**--**	ND	--	**--**	ND	--	3.1	3.13	--	--	ND	ND
--	--	--	--	--	--	--	10	--	--	--	--	--	--
--	--	--	160	152	--	156	163	143	235	199	151	133	120
--	**--**	**--**	**ND**	**--**	**--**	**ND**	--	**2.7**	**1.74**	**--**	**--**	**ND**	**ND**
--	**--**	**--**	2.5	ND	**--**	ND	ND	ND	ND	ND	ND	ND	ND
--	--	--	ND	ND	--	ND	ND	ND	0.98	ND	ND	ND	ND
--	**--**	**--**	ND	--	**--**	ND	--	ND	3.19	--	--	ND	ND
--	**--**	**--**	4.8	ND	**--**	1.5	ND	1.9	1.3	1.9	ND	1.6	ND
--	--	--	0.8	--	--	ND	0.7	ND	ND	3.3	1.5	0.53	ND
--	--	--	1.8	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
--	**--**	**--**	1.3	**ND**	**--**	ND	4.8	ND	ND	ND	ND	0.08	ND
--	**--**	**--**	--	--	**--**	--	--	--	2.44	--	--	--	--
--	--	--	ND	--	--	ND	--	ND	2.24	--	--	ND	ND
--	--	--	ND	--	--	8.3	6.3	13.7	7.3	4.3	ND	3.9	ND
--	--	--	20	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
--	**--**	**--**	11	**--**	**--**	--	--	--	--	--	--	--	--
--	--	--	22	--	--	1.3	40	ND	ND	ND	ND	3.3	ND
--	**--**	**--**	**ND**	**--**	**--**	**ND**	**--**	**44.7**	**ND**	**--**	**--**	**ND**	**ND**
--	**--**	**--**	ND	**--**	**--**	--	--	ND	0.0858	--	--	ND	ND
--	--	--	13	--	--	--	--	--	--	--	--	--	--
--	--	--	1.6	ND	--	ND	ND	ND	4.2	5.9	ND	8	ND
--	**--**	**--**	**ND**	**--**	**--**	**ND**	**0.4**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
--	--	--	--	--	--	1.2	1.1	1.1	ND	0.73	ND	0.7	0.63
--	--	--	--	--	--	--	--	--	0.671	0.323	0.616	1.24	1.05
--	--	--	--	--	--	ND	--	ND	0.0663	0.123	ND	0.326	0.264
--	--	--	--	--	--	--	--	--	0.347	0.335	0.295	0.635	0.444
--	--	--	1.3	--	--	1.6	1.7	1.9	ND	ND	0.61	1	ND

Table 3-15. Inert Disposal Area--Detections in Groundwater

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
--	--	--	--	--	10	100	--	4	0.7	ND	ND	ND	ND
--	**--**	**--**	--	**--**	**ND**	1	--	ND	ND	ND	ND	ND	ND
--	**--**	**--**	**--**	**--**	40	ND	**--**	ND	ND	ND	ND	2	ND
--	**--**	**--**	**--**	**--**	264	336	**--**	236	212	172	179	232	186
--	**--**	**--**	**--**	**--**	--	--	**--**	4	4	2	3	--	--
--	**--**	**--**	**--**	**--**	36	12	**--**	--	--	--	--	--	23
--	**--**	**--**	**--**	**--**	**ND**	**0.6**	**--**	ND	ND	ND	ND	**ND**	**ND**
--	**--**	**--**	**--**	**--**	**ND**	**0.7**	**--**	**ND**	**5.5**	**ND**	**0.87**	**0.86**	**ND**
--	**--**	**--**	**--**	**--**	ND	ND	**--**	ND	4	ND	ND	ND	ND
--	--	--	--	--	ND	2.4	--	ND	ND	ND	ND	ND	ND
--	**--**	**--**	**--**	**--**	--	--	**--**	--	42000	--	--	--	--
--	--	--	--	--	0.5	ND	--	ND	ND	ND	ND	ND	ND

Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
--	--	--	--	--	--	--	--	2010	--	--	--	--	--
--	--	--	--	--	--	--	--	2070	--	--	--	--	--
--	--	--	--	--	67	62.9	--	74.6	58.6	81.3	53.7	108	65
--	--	--	--	--	4	ND	--	ND	ND	ND	ND	ND	2
--	--	--	--	--	--	--	--	47.7	--	--	--	--	--
--	--	--	--	--	ND	ND	--	0.62	ND	ND	ND	ND	ND
--	--	--	--	--	--	--	--	200	--	--	--	--	--
--	--	--	--	--	2.9	ND	--	3.25	4.4	ND	7.2	5.6	ND
--	--	--	--	--	ND	ND	--	499	ND	ND	ND	ND	ND
--	--	--	--	--	--	101000	--	--	--	--	--	--	--
--	--	--	--	--	ND	ND	--	5.11	ND	ND	5.0358	ND	ND
--	--	--	--	--	--	--	--	1930	--	--	--	--	--
--	--	--	--	--	ND	ND	--	ND	ND	3.9	ND	3.3	ND
--	--	--	--	--	ND	ND	--	50.8	ND	ND	ND	ND	ND
--	--	--	--	--	65	6	--	ND	ND	ND	ND	ND	ND
--	--	--	--	--	27	ND	--	ND	ND	ND	ND	ND	ND
--	--	--	--	--	29	ND	--	ND	ND	ND	ND	2	2
--	--	--	--	--	348	220	--	243	219	227	140	144	146
--	--	--	--	--	--	--	--	--	2	2	3	2	--
--	--	--	--	--	15	29	--	9	--	--	--	--	8
--	--	--	--	--	0.3	1.9	--	ND	ND	ND	ND	ND	ND
--	--	--	--	--	ND	0.5	--	ND	2.6	ND	0.41	0.51	ND
--	--	--	--	--	ND	ND	--	3	2.9	6.8	ND	ND	ND
--	--	--	--	--	1	ND	--	ND	ND	ND	ND	ND	ND
--	--	--	--	--	ND	ND	--	ND	4.2	4.6	2.9	ND	ND
--	--	--	--	--	ND	ND	--	0.41	ND	ND	ND	ND	ND
--	--	--	--	--	ND	ND	--	ND	ND	ND	0.27	ND	ND
--	--	--	--	--	--	--	--	--	2590	--	--	--	--
--	--	--	--	--	--	--	--	--	2670	--	--	--	--
--	--	--	--	--	99.3	66.3	--	64.1	1870	73.9	91.2	78.18	84
--	--	--	--	--	--	--	--	ND	ND	ND	ND	9	ND
--	--	--	--	--	2	ND	--	ND	ND	ND	1	ND	2
--	--	--	--	--	--	--	--	--	62.6	--	--	--	--
--	--	--	--	--	ND	ND	--	ND	0.6	ND	ND	ND	ND
--	--	--	--	--	--	--	--	--	254	--	--	--	--
--	--	--	--	--	3.2	2.1	--	ND	2.88	ND	21.3	2.2	ND
--	--	--	--	--	ND	ND	--	ND	ND	ND	ND	4	ND
--	--	--	--	--	1.7	ND	--	2.7	634	ND	ND	ND	ND
--	--	--	--	--	ND	ND	--	ND	5.35	ND	ND	5.0731	4.6258
--	--	--	--	--	--	--	--	--	2480	--	--	1644.4	--
--	--	--	--	--	ND	2.1	--	ND	3.6	5.8	4.1	3.1	ND
--	--	--	--	--	ND	ND	--	ND	62.3	ND	ND	46.73	ND

Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
--	--	--	--	--	--	--	--	1	ND	1	1	ND	ND
--	--	--	--	--	--	--	--	--	--	--	1945.4	--	2054.4
--	--	--	--	--	--	--	--	--	--	--	--	--	2214.2
--	--	--	--	--	**146**	**102**	--	**110**	**128**	**116**	**1882.1**	**98.4**	**100.8**
--	--	--	--	--	--	**ND**	--	**ND**	**1**	**2**	**ND**	**ND**	**1**
--	--	--	--	--	300	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	47.55	--	52.92
--	--	--	--	--	**ND**	**ND**	--	**ND**	**ND**	**ND**	**ND**	**ND**	**2.23**
--	--	--	--	--	--	--	--	--	--	--	**187.94**	--	**216.94**
--	--	--	--	--	4.4	4.4	--	ND	2.7	ND	0.72	4	1.35
--	--	--	--	--	--	**2**	--	--	--	--	--	--	--
--	--	--	--	--	ND	ND	--	3	ND	ND	ND	ND	525.04
--	--	--	--	--	--	--	--	--	--	--	1811.5	--	1830.6
--	--	--	--	--	ND	2.4	--	5.9	ND	5.4	4.38	ND	5.35
--	--	--	--	--	**ND**	**ND**	--	**ND**	**ND**	**ND**	**47.21**	**ND**	**53.85**

Table 3-15. Inert Disposal Area--Detections in Groundwater

d													
Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
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Table 3-15. Inert Disposal Area--Detections in Groundwater

d													
Spring/Summer 1996	**Spring 1997**	**Fall 1997**	**Fall 1998**	**Fall 1999**	**Fall 2000**	**Spring 2001**	**Fall 2001**	**Spring 2002**	**Fall 2002**	**Spring 2003**	**Fall 2003**	**Spring 2004**	**Fall 2004**
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Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
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--	--	--	--	--	--	--	--	ND	2	ND	ND	ND	ND
--	ND	ND	ND	ND	--	--	ND	ND	ND	ND	1	1	1
--	2.8	ND	3.7	--	--	--	1.8	ND	ND	ND	1	ND	ND
--	ND	ND	ND	--	--	--	0.5	ND	ND	ND	ND	ND	ND
--	1.76	ND	ND	8	--	--	ND	ND	ND	4.7	ND	2.7	ND
--	14.3	29	17	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
ND	ND	100	ND	57.6	--	--	3	3	ND	ND	ND	ND	ND
--	5	4	5.9	43.2	--	--	--	--	--	--	--	--	--
--	51	--	--	--	--	--	--	--	--	--	--	--	--
ND	--	ND	8.7	ND	--	--	4	3	ND	ND	ND	ND	ND
ND	ND	ND	ND	37.7	--	--	ND	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	--	--	ND	10	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	--	--	4	24	ND	ND	5.5	ND	ND
--	--	--	--	51.2	--	--	ND	ND	ND	2.6	6.4	6.3	ND
--	--	ND	ND	ND	--	--	3.3	ND	ND	ND	ND	ND	ND
ND	ND	ND	2.1	34	--	--	ND	ND	ND	ND	ND	ND	ND
--	300	--	70	--	--	--	--	--	--	--	--	--	--
--	--	2000	--	--	--	--	--	--	--	--	--	--	--
--	--	--	40	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	62	--	--	ND	ND	ND	3.5	ND	ND	ND
--	5.1	ND	ND	--	--	--	ND	ND	ND	ND	ND	ND	ND
--	--	ND	ND	ND	--	--	ND	ND	ND	ND	ND	ND	ND
ND	91	--	72	ND	--	--	--	12	ND	19	ND	ND	--
--	--	110	55	11	--	--	ND	25	9	ND	12	11	9
--	--	--	--	--	--	--	--	--	--	--	--	--	--
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Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
2.41	**--**	**--**	**ND**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	**--**	**--**	**--**	**11.6**	**--**	**--**	**18.1**	**15.6**	**--**	**17.5**	**12.7**	**18.7**	**23.5**
441	**399**	**650**	980	**569**	**--**	**--**	**1850**	**554**	**208**	**550**	**492**	**573**	**552**
ND	**440**	**800**	**ND**	**ND**	**--**	**--**	**96**	**38**	**ND**	**ND**	**ND**	**ND**	**43**
2.37	2.57	ND	ND	--	**--**	**--**	ND	ND	ND	ND	ND	ND	ND
--	--	--	--	--	**--**	**--**	--	--	--	--	--	--	--
ND	ND	ND	ND	**ND**	**--**	**--**	2	ND	ND	ND	ND	ND	ND
46	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	2.59	ND	ND	ND	**--**	**--**	0.63	ND	0.69	ND	ND	0.28	ND
--	100	--	--	--	**--**	**--**	--	--	--	--	--	--	--
--	--	ND	ND	ND	--	--	ND	ND	ND	ND	ND	ND	ND

Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
--	**ND**	ND	ND	ND	**--**	**--**	1.7	2	ND	ND	3	3	3
--	--	--	100	--	--	--	--	--	--	--	--	--	--
--	50	--	--	--	**--**	**--**	--	--	--	--	--	--	--
28.6	5.76	0.46	8.6	ND	--	--	ND	ND	3.1	ND	ND	8.4	ND
--	**--**	**ND**	**2.5**	**--**	**--**	**--**	**2.6**	**2**	**2**	**ND**	**2**	**2**	**2**
--	--	--	--	--	--	--	--	--	--	--	--	--	--
26.7	**24.9**	28	53	**--**	**--**	**--**	22.2	7	ND	1.7	3.2	3.5	10.9
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	ND	ND	ND	**--**	**--**	**--**	ND	ND	ND	ND	5	ND	4
--	**--**	**--**	**30**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	--	--	30	**--**	**--**	**--**	--	--	--	--	--	--	--
--	**--**	**--**	--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	2.2	ND	2.9	ND	--	--	1.3	ND	ND	ND	ND	ND	ND
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	ND	ND	51	ND	**--**	**--**	ND	ND	ND	ND	ND	ND	ND
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	ND	--	--	--	**--**	**--**	0.7	ND	ND	ND	2	ND	ND
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**2**	**ND**	**ND**	**ND**	**ND**	**1**
--	--	**--**	**50**	**--**	**--**	**--**	--	--	--	--	--	--	--
13.7	22.9	9	2.8	5.3	--	--	6.2	ND	ND	ND	ND	0.58	ND
--	--	ND	9.6	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
1850	1320	2100	620	--	--	--	899	851	--	703	731	651	653
--	--	--	ND	--	--	--	--	--	210	--	--	--	--
25	**20**	**62**	**20**	**ND**	**--**	**--**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
--	**ND**	**ND**	ND	**ND**	**--**	**--**	**ND**	**ND**	ND	**ND**	**ND**	**1**	**ND**
--	3	--	--	--	--	--	--	--	--	--	--	--	--
ND	2.1	ND	1.2	ND	**--**	**--**	1.2	ND	ND	ND	ND	ND	ND
--	--	--	--	--	--	--	--	--	--	--	--	--	--
152	157	160	--	--	**--**	**--**	--	--	--	--	--	--	--
--	**--**	**--**	**58**	**--**	**--**	**--**	**51.5**	**24.6**	**9.4**	**25.5**	**16**	**30.4**	**22.1**
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	**--**	**--**	--	**--**	**--**	**--**	--	--	--	--	--	--	--
ND	**2.86**	**ND**	**2.7**	**ND**	**--**	**--**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	3.5	ND	5.3	--	**--**	**--**	2	ND	ND	ND	ND	1	1
--	**2.9**	**ND**	**5**	**--**	**--**	**--**	**1.2**	**--**	**--**	**--**	**--**	**--**	**--**
14000	15200	24000	14400	1500	--	--	3900	1600	1400	4400	1900	250	2800
--	--	--	--	--	--	--	--	--	--	--	--	--	--
ND	**130**	**540**	**110**	**27.8**	**--**	**--**	**50.8**	**23**	**ND**	**6**	**26**	**ND**	**26**
--	--	--	--	--	--	--	--	--	--	--	--	--	--
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Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	6	--	--	2.2	4.5	--	4.4	--	2.4	--
128	--	--	--	--	--	--	--	--	--	--	--	--	--
ND	**5.66**	**ND**	**ND**	**ND**	**--**	**--**	**2.2**	**ND**	**ND**	**3.6**	**ND**	**19.4**	**ND**
10.1	**5.02**	**ND**	**ND**	**--**	**--**	**--**	**0.4**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	ND	ND	ND	--	--	--	ND	ND	ND	ND	ND	1.1	ND
--	9.3	ND	7.4	ND	--	--	2	1	ND	ND	1	1	1
--	--	--	--	**ND**	**--**	**--**	--	--	--	--	--	--	--
--	--	--	--	--	**--**	**--**	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	10	--	--	3.1	2	1	ND	1	1	1
--	--	--	--	--	--	--	1.8	1.3	2.2	0.88	ND	1.5	1.6
8.23	**ND**	**ND**	**2.6**	--	**--**	**--**	5.6	3.7	ND	3.7	3.3	5.4	ND
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	**--**	**--**	**--**	--	--	--	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
ND	**ND**	**ND**	**ND**	**ND**	**--**	**--**	**--**	**ND**	**ND**	**ND**	**ND**	**ND**	**--**
ND	**ND**	**ND**	**ND**	**ND**	**--**	**ND**	**0.65**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
--	--	--	--	--	**--**	**--**	**--**	--	--	--	--	--	**--**
--	--	--	--	--	**--**	--	--	--	--	--	--	--	--
2.84	--	--	ND	--	--	--	--	--	--	--	--	--	--
99.4	**92.8**	**73**	**100**	**97.8**	**--**	**141**	**155**	**176**	**209**	**142**	**144**	**140**	**138**
ND	**ND**	**ND**	ND	**ND**	**--**	**ND**	**10**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
ND	0.67	ND	ND	--	**--**	ND	1.8	ND	ND	ND	ND	ND	ND
--	--	--	--	--	**--**	--	--	--	--	--	--	--	--
ND	ND	ND	3.2	**0.76**	**--**	ND	--	ND	ND	ND	ND	ND	--
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**7**
--	--	--	--	--	**--**	--	**--**	--	--	--	--	--	**--**
ND	**ND**	**ND**	**0.49**	**ND**	**--**	**ND**	**0.4**	**ND**	**1.1**	**ND**	**ND**	**0.06**	**ND**
--	--	--	--	--	**--**	--	--	--	--	--	--	--	--
8.73	**1.91**	**ND**	**4.6**	**ND**	**--**	**0.4**	**0.64**	**ND**	**0.45**	**0.85**	**ND**	**1.6**	**ND**
1.5	4.89	ND	29	--	--	ND	0.79	0.97	ND	ND	1.5	0.98	ND
ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
--	ND	--	--	**--**	**--**	--	--	--	--	--	--	--	--
--	--	--	--	--	**--**	--	--	--	--	--	--	--	--
--	--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
2.3	**7.2**	**ND**	**0.67**	**ND**	**--**	**1.9**	**3.4**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	--	--	--	--	--	--	709	--	--	--	--	--	--
0.41	1.4	ND	34	--	--	ND	--	12.3	19.9	ND	5.5	0.41	ND
25	**69.4**	**25**	**20**	**ND**	**--**	**ND**	**0.08**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
--	ND	--	--	**--**	**--**	--	**--**	--	--	--	--	--	--
37.3	69.4	62	21	--	--	0.8	6.9	3	6.1	2	19.8	4.1	ND
--	--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	--	--	--	**--**	**--**	--	--	--	--	--	--	--	--
--	**--**	**10**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
ND	ND	ND	ND	1.21	--	ND	ND	ND	ND	ND	ND	ND	ND
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	--	--	--	--	**--**	--	--	--	--	--	--	--	--
ND	1.8	ND	ND	ND	--	ND	7.6	ND	4.6	5.7	ND	3.2	ND
ND	ND	ND	ND	--	--	ND	0.4	ND	ND	ND	ND	ND	ND
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	ND	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	1300	1400	1000	1200	1200	1100
--	--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	1.7	1.4	1.9	1.4	0.89	ND	0.89	0.92
2.8	**ND**	**ND**	**1.4**	**--**	**--**	**1.1**	**1.2**	**1.6**	**ND**	**ND**	**0.56**	**1.1**	**ND**

Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.16	--	--	ND	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
352	333	400	410	414	--	424	545	252	226	227	185	137	151
--	--	--	--	--	--	--	5	--	--	--	--	--	--
ND	0.87	ND	ND	--	--	ND	--	ND	ND	ND	ND	ND	ND
ND	ND	--	4.3	ND	--	ND	ND	ND	ND	ND	ND	ND	2
--	--	16	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	5	--	--	--	--	--	--
ND	2.87	ND	ND	ND	--	ND	--	ND	ND	ND	ND	0.07	ND
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	210	--	--	--	--	--	--	--	--	--	--
28.6	2.98	3.8	7.4	ND	--	ND	--	ND	ND	ND	ND	2.3	ND
2.6	4.44	14	0.62	--	--	ND	ND	ND	ND	ND	1.5	0.55	ND
ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
--	--	--	--	--	--	--	--	--	--	--	--	--	--
ND	ND	0.2	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.45	20.3	ND	ND	ND	--	1.2	--	ND	ND	ND	ND	ND	ND
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	710	--	--	--	--	353	--	--	--	--	--
70.3	57.7	76	57	--	--	79.6	99.5	--	197	201	195	137	131
25	20	25	45	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
--	117	130	--	--	--	--	--	--	--	--	--	--	--
80.9	--	--	28	--	--	ND	2.3	2.8	2.8	3	ND	7.5	ND
5.32	ND	ND	ND	ND	--	ND	6.4	ND	ND	ND	ND	3.1	ND
69.9	ND	ND	ND	--	--	ND	0.4	ND	ND	ND	ND	ND	ND
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
--	--	--	--	--	--	0.91	0.14	8.5	10	8.2	12.1	12.6	13
7.49	ND	ND	22	--	--	0.3	0.5	ND	ND	ND	0.79	0.93	ND
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1.29	--	--	ND	--	--	--	--	--	--	--	--	--	--
64.4	76.7	68	73.1	82.2	--	--	--	--	--	--	--	--	--
ND	0.92	ND	ND	--	--	--	--	--	--	--	--	--	--
ND	1.48	ND	ND	ND	--	--	--	--	--	--	--	--	--
7.09	2.18	ND	7	ND	--	--	--	--	--	--	--	--	--
1.14	6.06	1.7	18	--	--	--	--	--	--	--	--	--	--
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Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
0.22	10.2	ND	ND	**ND**	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
2.12	2.27	ND	1.2	--	--	--	--	--	--	--	--	--	--
25	20	25	20	ND	--	--	--	--	--	--	--	--	--
25.3	55.2	51	13	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.41	3.1	ND	2	**ND**	--	--	--	--	--	--	--	--	--
0.35	**ND**	**ND**	**ND**	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
2.18	ND	ND	1.9	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	**122**	**116**	**110**	**113**	**107**	**106**	**101**	**107**
--	--	--	--	--	--	**ND**	**1.8**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
--	--	--	--	--	--	ND	0.52	ND	ND	ND	ND	0.29	ND
--	--	--	--	--	--	0.7	1.2	ND	0.86	1.7	ND	3.8	ND
--	--	--	--	--	--	0.8	1.2	0.79	ND	ND	3.7	0.74	ND
--	--	--	--	--	--	ND	3.1	ND	ND	ND	ND	0.34	ND
--	--	--	--	--	--	96.8	59.4	84.9	101	109	159	25.1	141
--	--	--	--	--	--	ND	0.08	ND	ND	ND	ND	ND	ND
--	--	--	--	--	--	2	1.7	ND	2.1	1.9	ND	4.9	ND
--	--	--	--	--	--	ND	4.3	ND	ND	ND	ND	1.2	ND
--	--	--	--	--	--	ND	0.4	ND	ND	ND	ND	ND	ND
--	--	--	--	--	--	3.7	3.5	3.5	2.3	1.5	ND	1.7	1.5
--	--	--	--	--	--	1.4	1.3	1.4	ND	ND	1.1	1.2	ND
--	--	--	--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	ND	--	--	--	--	--	--	--
650	810	620	730	ND	--	1200	1200	1400	1100	ND	ND	1000	ND
ND	**ND**	**16**	**20**	**16.7**	--	ND	**50**	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
--	--	--	--	--	178	1200	--	310	--	330	324	265	--
--	**--**	**--**	**--**	**--**	**9**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	**--**	**--**	**--**	**--**	0.6	ND	**--**	ND	**--**	ND	ND	ND	**--**
--	**--**	**--**	**--**	**--**	**4.1**	**4.5**	**--**	**4.5**	**--**	**2.7**	**11.4**	**3.4**	**--**
--	**--**	**--**	**--**	**--**	ND	ND	**--**	ND	**--**	3.6	ND	ND	**--**
--	--	--	--	--	1.7	4.4	--	ND	--	ND	ND	ND	--
--	--	--	--	--	1	ND	--	ND	--	ND	ND	ND	--
--	**--**	**--**	**--**	**--**	16	ND	**--**	ND	**--**	ND	ND	ND	**--**
--	**--**	**--**	**--**	**--**	75.1	1290	**--**	61	**--**	60.1	48.4	42.3	**--**
--	**--**	**--**	**--**	**--**	3	ND	**--**	ND	**--**	ND	ND	ND	**--**
--	**--**	**--**	**--**	**--**	ND	ND	**--**	ND	**--**	ND	ND	0.64	**--**
--	**--**	**--**	**--**	**--**	9	ND	**--**	ND	**--**	ND	ND	ND	**--**
--	**--**	**--**	**--**	**--**	4	3.5	**--**	0.82	**--**	6.3	0.42	ND	**--**
--	**--**	**--**	**--**	**--**	1	ND	**--**	ND	**--**	ND	ND	ND	**--**
--	--	--	--	--	--	4	--	--	--	--	--	--	--
--	**--**	**--**	**--**	**--**	ND	5.9	**--**	ND	**--**	3.4	ND	ND	**--**
--	--	--	--	--	ND	4.7	--	ND	--	ND	ND	ND	--
--	--	--	--	--	2	ND	--	ND	--	ND	ND	ND	--
--	**--**	**--**	**--**	**--**	3	ND	**--**	ND	**--**	ND	ND	ND	**--**
--	**--**	**--**	**--**	**--**	--	--	**--**	--	**--**	--	--	--	**--**
--	**--**	**--**	**--**	**--**	--	--	**--**	--	**22.3**	--	--	--	**--**
214	**ND**	**168**	**150**	**142**	**--**	**170**	**178**	**171**	**713**	**166**	**177**	**152**	**211**
ND	**ND**	**ND**	**ND**	**--**	**--**	**ND**	**1.8**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
ND	ND	ND	ND	ND	**--**	ND	ND	ND	ND	ND	ND	0.1	ND
11.6	29	ND	12	ND	**--**	1.1	ND	ND	4	1.2	ND	1.9	ND
2.94	ND	ND	2.4	--	--	ND	830	0.86	27.7	ND	1	1.3	ND
ND	ND	ND	0.38	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
--	--	--	--	**--**	**--**	--	--	--	--	--	--	--	--
0.47	124	ND	ND	ND	**--**	ND	2.1	ND	2.7	ND	ND	ND	ND
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	--	--	--	--	--	--	--	--	839	--	--	--	--
7.85	43.1	ND	4.4	--	--	183	247	217	--	8.3	32.4	56.2	280
25	**20**	**25**	**23**	**ND**	**--**	**ND**	**0.08**	**ND**	**ND**	**ND**	**ND**	**0.33**	**ND**
64.7	ND	90	18	**--**	**--**	6.1	4	5	**32.2**	ND	ND	4.9	8.4
10.5	ND	ND	ND	**ND**	**--**	ND	4.2	ND	ND	ND	ND	1.8	ND
0.64	ND	ND	ND	--	--	0.8	ND	ND	ND	ND	ND	ND	ND
--	--	--	--	--	--	3.5	2.7	2.6	2.1	1.9	2.3	2.1	2.4
3.68	ND	ND	3.3	--	--	0.9	0.72	0.66	ND	ND	1.4	0.92	ND
--	--	--	--	--	--	--	--	--	--	--	--	--	--
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--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
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--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	--	--	--	--	--	ND	--	--	--	--	--	--	--
8090	7530	8100	9600	6900	--	11000	11000	12000	12800	10000	11000	12000	11000
ND	**ND**	**ND**	**ND**	**15.4**	**--**	ND	**50**	**--**	**--**	**--**	**--**	**--**	**--**
--	--	--	--	--	--	--	--	--	--	--	--	--	--
ND	ND	ND	ND	ND	--	ND	1.1	ND	ND	ND	ND	ND	ND
ND	**ND**	**ND**	**ND**	**ND**	**--**	**ND**	**5**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
--	ND	--	--	--	**--**	ND	3	--	--	--	--	--	--
--	--	--	--	--	**--**	--	1.1	--	--	--	--	--	--
--	--	**--**	**--**	**--**	**--**	ND	1.3	**--**	**--**	**--**	**--**	**--**	**--**
ND	**0.06**	**ND**	**ND**	**ND**	**--**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
--	--	ND	ND	ND	--	ND	10	ND	ND	ND	ND	ND	ND
--	--	ND	ND	--	**--**	--	10	ND	ND	ND	ND	ND	ND
ND	**ND**	ND	ND	ND	**--**	ND	5	ND	ND	ND	ND	ND	ND
--	ND	ND	ND	--	--	ND	3	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	**--**	ND	5	ND	ND	ND	ND	ND	ND
--	--	ND	ND	**ND**	**--**	ND	10	ND	ND	ND	ND	ND	ND
--	--	--	--	ND	**--**	ND	1.1	ND	ND	ND	ND	ND	ND
--	--	--	--	ND	--	ND	1.1	ND	ND	ND	ND	ND	ND
--	**--**	**ND**	**ND**	ND	**--**	ND	10	ND	ND	ND	ND	ND	ND
--	--	ND	ND	ND	--	ND	10	ND	ND	ND	ND	ND	ND
--	**--**	--	--	--	**--**	--	--	--	--	--	--	--	--
5.4	**--**	--	ND	--	**--**	--	--	--	--	--	--	--	--
167	**191**	**220**	**240**	**210**	**--**	**264**	**313**	**306**	**334**	**303**	**315**	**319**	**314**
ND	**ND**	**ND**	ND	**ND**	**--**	**ND**	**5**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
ND	0.75	ND	ND	--	**--**	ND	1.8	ND	ND	ND	ND	ND	ND
ND	3.2	ND	2.5	ND	**--**	ND	--	ND	ND	ND	ND	ND	ND
ND	1.27	ND	ND	**ND**	**--**	ND	0.79	ND	0.68	ND	ND	0.05	ND
--	--	--	230	--	**--**	--	--	--	--	--	--	--	--
27.5	1.64	ND	4.6	ND	--	0.6	0.53	ND	ND	ND	ND	2.2	ND
5.38	**7.71**	**7.6**	**3**	**--**	**--**	**0.7**	**1.8**	**ND**	**ND**	**ND**	**ND**	**0.93**	**ND**
ND	ND	ND	ND	ND	--	ND	--	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	**ND**	**--**	ND	1.1	ND	ND	ND	ND	ND	ND
--	--	--	--	--	**--**	--	**--**	--	--	--	--	--	--
2.06	12	ND	0.5	ND	**--**	1.7	4.6	ND	ND	ND	ND	0.81	ND
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
537	--	--	590	--	--	493	--	--	483	--	--	--	--

Table 3-15. Inert Disposal Area--Detections in Groundwater

d

Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
--	47.6	60	27	--	--	--	70.4	97.3	--	144	120	80.4	84.1
25	**20**	**25**	**20**	**ND**	**--**	**ND**	**0.08**	**ND**	**ND**	**ND**	**0.008**	**ND**	**ND**
--	ND	ND	ND	**ND**	**--**	**ND**	ND	ND	**ND**	ND	ND	ND	ND
60.6	78.4	87	20	--	--	3.6	2.5	1.5	3.5	3.5	ND	5.8	ND
ND	ND	ND	ND	ND	**--**	ND	1.1	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	**ND**	**--**	ND	5	ND	ND	ND	ND	ND	ND
4.76	1.56	ND	ND	ND	**--**	ND	5.7	ND	ND	ND	ND	1.3	ND
0.54	ND	ND	ND	--	--	ND	0.4	ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	--	ND	1.1	ND	ND	ND	ND	ND	ND
--	ND	ND	ND	ND	--	ND	ND	ND	ND	ND	ND	ND	ND
--	--	--	--	--	**--**	2.3	3.8	4.3	2	2.4	2.8	2.9	3
7.52	ND	ND	1.9	--	**--**	1.1	1.3	0.91	ND	ND	0.39	1.1	ND
--	--	--	--	--	--	--	--	--	--	--	--	--	--
88.5	86.9	91	135	**96**	**--**	109	115	107	135	103	143	101	151
ND	**ND**	**ND**	**ND**	**--**	**--**	**ND**	**1.8**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
ND	1.69	ND	ND	ND	**--**	ND	0.4	ND	1.1	ND	ND	0.04	ND
8.81	2.55	ND	12	ND	**--**	16.8	3	3.2	15.1	1.7	ND	2.7	ND
1.9	9.18	5.9	2	--	--	ND	1	ND	ND	ND	3.3	1.3	25
ND	ND	ND	0.26	ND	--	ND	ND	ND	2.6	1.4	2.9	2.4	8.8
--	--	--	--	**--**	**--**	--	--	--	--	--	--	--	--
ND	15.8	ND	ND	ND	**--**	1.2	3.3	ND	ND	ND	ND	0.19	ND
--	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
--	--	--	330	--	--	--	--	--	--	--	--	--	--
19.3	6.21	56	7.5	--	--	46.1	22.1	27.8	29.4	24.5	56	29.1	ND
25	**20**	**25**	**35**	**ND**	**--**	**ND**	**0.08**	**ND**	**ND**	**ND**	**ND**	**0.18**	**ND**
--	--	--	--	**--**	**--**	--	--	ND	ND	ND	ND	ND	0.37
47.6	80.5	86	28	--	--	4.6	4.6	8.7	10.6	5.7	ND	7.1	9.9
ND	ND	ND	ND	**ND**	**--**	ND	--	ND	--	0.55	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	4.9
12.4	ND	ND	ND	ND	**--**	ND	**3.1**	ND	**ND**	ND	**ND**	**4.3**	**ND**
0.63	**ND**	**ND**	**ND**	**--**	**--**	**ND**	**0.4**	**ND**	**ND**	**ND**	**ND**	**ND**	**ND**
--	--	--	--	--	--	2.3	1.9	2	1.2	0.93	ND	0.97	0.69
2.71	ND	ND	31	--	--	1.6	1.4	1	ND	ND	1.5	1.4	ND
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Table 3-15. Inert Disposal Area--Detections in Groundwater

d													
Spring/Summer 1996	**Spring 1997**	**Fall 1997**	**Fall 1998**	**Fall 1999**	**Fall 2000**	**Spring 2001**	**Fall 2001**	**Spring 2002**	**Fall 2002**	**Spring 2003**	**Fall 2003**	**Spring 2004**	**Fall 2004**
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Table 3-15. Inert Disposal Area--Detections in Groundwater

d													
Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
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Table 3-15. Inert Disposal Area--Detections in Groundwater

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77.9	76.3	78	92	97.4	--	92.9	--	95.4	123	93.6	90.6	102	97.6
ND	1.29	ND	ND	--	--	ND	1.8	ND	ND	ND	ND	ND	ND
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ND	1.32	ND	ND	ND	--	ND	0.43	ND	ND	ND	ND	0.04	ND
10.8	1.92	ND	10	ND	--	0.5	0.4	ND	ND	0.96	ND	2.2	ND
1.4	5.67	ND	11	--	--	ND	0.5	ND	ND	ND	ND	0.44	ND
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0.15	7.39	ND	ND	ND	--	1.1	4.9	ND	3.2	ND	ND	ND	ND
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3.49	3.99	ND	3.4	--	--	4.5	4.8	4.2	39.8	11.4	10.5	3.9	140
25	20	25	20	--	--	ND	0.08	ND	ND	ND	ND	ND	ND
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43.4	79.2	78	18	--	--	ND	1.3	ND	2.3	ND	ND	3.4	ND
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8.6	7.95	ND	7.9	--	--	9.2	11.1	ND	7.1	7.9	3.7	5	ND
1.27	ND	ND	ND	--	--	ND	0.4	ND	ND	ND	ND	ND	ND
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--	--	--	--	--	--	1.8	1.8	1.9	1.3	1.2	ND	1.2	1.2
3.37	ND	ND	2.9	--	--	0.7	0.82	0.83	ND	ND	0.39	1.1	ND
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Table 3-15. Inert Disposal Area--Detections in Groundwater

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Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
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Table 3-15. Inert Disposal Area--Detections in Groundwater

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Table 3-15. Inert Disposal Area--Detections in Groundwater

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Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
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Table 3-15. Inert Disposal Area--Detections in Groundwater

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Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
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Table 3-15. Inert Disposal Area--Detections in Groundwater

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Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
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Table 3-15. Inert Disposal Area--Detections in Groundwater

d													
Spring/Summer 1996	Spring 1997	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004
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6880	ND	ND	5300	4500	--	6800	7000	7200	7700	6600	6700	7400	6700
20	ND	ND	ND	19	--	ND	50	--	--	--	--	--	--
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Table 3-16. Explosive Waste Incinerator--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round			
					Summer 1991	Spring/Summer 1992	Spring 1995	Fall 2004
25SS0101	Arsenic	0.5 ft	41.4	a	6.06	--	--	--
	Barium		66577	b	161	--	--	--
	Beryllium		1940.69	b	0.69	--	--	--
	Chromium		448.3169	b	29.4	--	--	--
	Copper		40876.66	b	18.6	--	--	--
	Lead		12100	a	21	--	--	--
	Nickel		20439.16	b	18.3	--	--	--
	Zinc		100000	b	98	--	--	--
25SS0201	1,1,2,2-Tetrachloroethane	0.5 ft	0.92939	b	0.26	--	--	--
	Arsenic		41.4	a	4.98	--	--	--
	Barium		66577.35	b	161	--	--	--
	Beryllium		1940.69	b	0.994	--	--	--
	Chromium		448.3169	b	21.3	--	--	--
	Copper		40876.66	b	27.2	--	--	--
	Lead		12100	a	24	--	--	--
	Mercury		0.14	c	**0.239**	--	--	--
	Nickel		20439.16	b	16.8	--	--	--
	Zinc		100000	b	89.1	--	--	--
EWI-SSI-001-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	7.7
	Barium		66577.35	b	--	--	--	180
	Beryllium		1940.69	b	--	--	--	0.9
	Boron		100000	b	--	--	--	4.8
	Chromium		448.3169	b	--	--	--	21
	Lead		12100	a	--	--	--	16
	Mercury		0.05	a	--	--	--	0.018
EWI-SSI-002-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	6.7
	Barium		66577.35	b	--	--	--	170
	Beryllium		1940.69	b	--	--	--	0.83
	Boron		100000	b	--	--	--	3.8
	Chromium		448.3169	b	--	--	--	21
	Lead		12100	a	--	--	--	13
	Mercury		0.05	a	--	--	--	0.019
EWI-SSI-003-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	--	7.5
	Barium		66577.35	b	--	--	--	180
	Beryllium		1940.69	b	--	--	--	0.89
	Boron		100000	b	--	--	--	3.8
	Chromium		448.3169	b	--	--	--	24
	Lead		12100	a	--	--	--	13
	Mercury		0.05	a	--	--	--	0.012

Table 3-16. Explosive Waste Incinerator--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round			
					Summer 1991	Spring/Summer 1992	Spring 1995	Fall 2004
R17SA601	Aluminum	3 ft	n/a	n/a	--	--	12700	--
	Arsenic		1.590408	b	--	--	**9.33**	--
	Barium		259	b	--	--	202	--
	Calcium		n/a	n/a	--	--	4320	--
	Chromium		n/a	n/a	--	--	19.1	--
	Cobalt		53.2	b	--	--	7.11	--
	Copper		703	b	--	--	15.6	--
	Iron		n/a	n/a	--	--	19200	--
	Lead		12100	b	--	--	20.4	--
	Magnesium		n/a	n/a	--	--	3170	--
	Manganese		5110	b	--	--	306	--
	Nickel		1040	b	--	--	16.5	--
	Vanadium		202	b	--	--	40	--
	Zinc		n/a	n/a	--	--	57.8	--
R17SA602	Aluminum		n/a	n/a	--	--	1180	--
	Arsenic		41.4	b	--	--	0.492	--
	Barium		259	b	--	--	9.15	--
	Calcium		n/a	n/a	--	--	4900	--
	Cobalt		53.2	b	--	--	2.75	--
	Copper		703	b	--	--	4.05	--
	Iron		n/a	n/a	--	--	4600	--
	Lead		12100	b	--	--	9.11	--
	Magnesium		n/a	n/a	--	--	1530	--
	Manganese		5110	b	--	--	87.9	--
	Nickel		1040	b	--	--	7.12	--
	Trichlorofluoromethane		n/a	n/a	--	--	0.0065	--
	Vanadium		202	b	--	--	9.4	--
R17SS0101	1,3,5-Trinitrobenzene	0.5 ft	18468.19	b	--	1.06	--	--
	Aluminum		100000	b	--	5980	--	--
	Arsenic		41.4	a	--	3.3	--	--
	Barium		66577.35	b	--	192	--	--
	Calcium		n/a	n/a	--	160000	--	--
	Chromium		448.3169	b	--	15.6	--	--
	Cobalt		1921.353	b	--	3.88	--	--
	Copper		40876.66	b	--	36	--	--
	HMX		30780.31	b	--	4.8	--	--
	Iron		100000	b	--	7990	--	--
	Lead		12100	a	--	27	--	--
	Magnesium		n/a	n/a	--	2330	--	--
	Manganese		19458.11	b	--	506	--	--
	Mercury		0.14	c	--	**0.195**	--	--
	Nickel		20439.16	b	--	11.8	--	--
	RDX		1.3	e	--	**7.07**	--	--
	Toluene		520	b	--	0.0035	--	--
	Vanadium		1021.998	b	--	13.8	--	--
	Zinc		100000	b	--	68	--	--

Table 3-16. Explosive Waste Incinerator--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round			
					Summer 1991	Spring/Summer 1992	Spring 1995	Fall 2004
R17SS601	Aluminum	0.5 ft	100000	b	--	--	1700	--
	Arsenic		41.4	a	--	--	1.23	--
	Barium		66577.35	b	--	--	8.58	--
	Calcium		n/a	n/a	--	--	290000	--
	Cobalt		1921.353	b	--	--	2.83	--
	Copper		40876.66	b	--	--	5.51	--
	Iron		100000	b	--	--	3880	--
	Lead		12100	a	--	--	2.53	--
	Magnesium		n/a	n/a	--	--	2280	--
	Manganese		19458.11	b	--	--	707	--
	Nickel		20439.16	b	--	--	11.4	--
	Trichlorofluoromethane		2000	b	--	--	0.0058	--
	Zinc		100000	b	--	--	11.8	--
R17SS602	1,3-Dimethylnaphthalene	0.5 ft	n/a	n/a	--	--	0.42	--
	2,10-Dimethylundecane		n/a	n/a	--	--	0.52	--
	2,6,10,14-Tetramethylpentadecane		n/a	n/a	--	--	0.63	--
	2,6-Dimethylundecane		n/a	n/a	--	--	1	--
	Aluminum		100000	b	--	--	1160	--
	Arsenic		41.4	a	--	--	2.99	--
	Barium		66577.35	b	--	--	7.37	--
	Calcium		n/a	n/a	--	--	220000	--
	Copper		40876.66	b	--	--	4	--
	Decane		n/a	n/a	--	--	6.3	--
	Dodecane		n/a	n/a	--	--	2.1	--
	Hendecane / Undecane		n/a	n/a	--	--	42	--
	Heptacosane		n/a	n/a	--	--	0.31	--
	Heptadecane		n/a	n/a	--	--	0.84	--
	Hexadecane		n/a	n/a	--	--	2.1	--
	Iron		100000	b	--	--	8230	--
	Lead		12100	a	--	--	3.8	--
	Magnesium		n/a	n/a	--	--	23100	--
	Manganese		19458.11	b	--	--	628	--
	m-Propyltoluene / 3-Propyltoluene		n/a	n/a	--	--	6.3	--
	Naphthalene		187.6909	b	--	--	0.58	--
	Nickel		20439.16	b	--	--	5.98	--
	Octacosane		n/a	n/a	--	--	0.42	--
	p-Cymene		n/a	n/a	--	--	21	--
	Pentadecane		n/a	n/a	--	--	3.1	--
	Tetradecane		n/a	n/a	--	--	4.2	--
	Trichlorofluoromethane		2000	b	--	--	0.0063	--
	Vanadium		1021.998	b	--	--	5.5	--
	Zinc		100000	b	--	--	11	--

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable RG

Table 3-17. Explosive Waste Incinerator--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round		
				Summer 1991	Spring/Summer 1992	Fall 2004
25SD0301	Arsenic	n/a	n/a	3.31	--	--
	Barium	63.4	a	**149**	**--**	**--**
	Beryllium	n/a	n/a	0.998	--	--
	Chromium	n/a	n/a	31.3	--	--
	Copper	n/a	n/a	11.8	--	--
	Lead	n/a	n/a	19	--	--
	Nickel	n/a	n/a	24.2	--	--
	Zinc	n/a	n/a	49.3	--	--
EWI-SD-001-0001-SD	Arsenic	4.03	a	**--**	**--**	**6.6**
	Barium	63.4	a	**--**	**--**	**460**
	Benzo[a]anthracene	n/a	n/a	--	--	0.0086
	Benzo[a]pyrene	n/a	n/a	--	--	0.012
	Benzo[b]fluoranthene	n/a	n/a	--	--	0.013
	Benzo[ghi]perylene	n/a	n/a	--	--	0.016
	Benzo[k]fluoranthene	n/a	n/a	--	--	0.0083
	Beryllium	n/a	n/a	--	--	0.89
	Boron	n/a	n/a	--	--	3.9
	Chromium	n/a	n/a	--	--	18
	Chrysene	n/a	n/a	--	--	0.0084
	Dibenz[ah]anthracene	n/a	n/a	--	--	0.013
	Fluoranthene	n/a	n/a	--	--	0.011
	Indeno[1,2,3-C,D]pyrene	n/a	n/a	--	--	0.016
	Lead	n/a	n/a	--	--	15
	Mercury	n/a	n/a	--	--	0.036
	Naphthalene	n/a	n/a	--	--	0.0067
	Phenanthrene	n/a	n/a	--	--	0.0089
	Pyrene	n/a	n/a	--	--	0.0092
EWI-SD-002-0001-SD	Arsenic	4.03	a	**--**	**--**	**7.3**
	Barium	63.4	a	**--**	**--**	**210**
	Benzo[ghi]perylene	n/a	n/a	--	--	0.0061
	Beryllium	n/a	n/a	--	--	1
	Boron	n/a	n/a	--	--	4.3
	Chromium	n/a	n/a	--	--	21
	Dibenz[ah]anthracene	n/a	n/a	--	--	0.0064
	Indeno[1,2,3-C,D]pyrene	n/a	n/a	--	--	0.0047
	Lead	n/a	n/a	--	--	13

Table 3-17. Explosive Waste Incinerator--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round		
				Summer 1991	Spring/Summer 1992	Fall 2004
EWI-SD-003-0001-SD	Arsenic	4.03	a	**--**	**--**	**7.6**
	Barium	63.4	a	**--**	**--**	**170**
	Benzo[a]anthracene	n/a	n/a	--	--	0.0072
	Benzo[a]pyrene	n/a	n/a	--	--	0.0089
	Benzo[b]fluoranthene	n/a	n/a	--	--	0.0098
	Benzo[ghi]perylene	n/a	n/a	--	--	0.012
	Benzo[k]fluoranthene	n/a	n/a	--	--	0.0055
	Beryllium	n/a	n/a	--	--	0.91
	Boron	n/a	n/a	--	--	4.4
	Chromium	n/a	n/a	--	--	17
	Chrysene	n/a	n/a	--	--	0.0069
	Dibenz[ah]anthracene	n/a	n/a	--	--	0.0086
	Fluoranthene	n/a	n/a	--	--	0.015
	Indeno[1,2,3-C,D]pyrene	n/a	n/a	--	--	0.011
	Lead	n/a	n/a	--	--	18
	Mercury	n/a	n/a	--	--	0.013
	Phenanthrene	n/a	n/a	--	--	0.012
	Pyrene	n/a	n/a	--	--	0.011
	Selenium	n/a	n/a	--	--	0.5
EWI-SD-004-0001-SD	Arsenic	n/a	n/a	--	--	3.9
	Barium	63.4	a	**--**	**--**	**140**
	Beryllium	n/a	n/a	--	--	0.83
	Boron	n/a	n/a	--	--	3.7
	Chromium	n/a	n/a	--	--	16
	Lead	n/a	n/a	--	--	12
EWI-SD-005-0001-SD	Arsenic	4.03	a	**--**	**--**	**7.8**
	Barium	63.4	a	**--**	**--**	**170**
	Beryllium	n/a	n/a	--	--	0.95
	Boron	n/a	n/a	--	--	3.9
	Chromium	n/a	n/a	--	--	18
	Lead	n/a	n/a	--	--	17
	Mercury	n/a	n/a	--	--	0.012
EWI-SD-006-0001-SD	Arsenic	4.03	a	**--**	**--**	**10**
	Barium	63.4	a	**--**	**--**	**170**
	Beryllium	n/a	n/a	--	--	1.1
	Boron	n/a	n/a	--	--	4
	Cadmium	n/a	n/a	--	--	0.12
	Chromium	n/a	n/a	--	--	18
	Lead	n/a	n/a	--	--	26
	Mercury	n/a	n/a	--	--	0.012

Table 3-17. Explosive Waste Incinerator--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round		
				Summer 1991	Spring/Summer 1992	Fall 2004
EWI-SD-007-0001-SD	Arsenic	4.03	a	**--**	**--**	**8.6**
	Barium	63.4	a	**--**	**--**	**89**
	Beryllium	n/a	n/a	--	--	0.95
	Boron	n/a	n/a	--	--	3.9
	Chromium	n/a	n/a	--	--	14
	Lead	n/a	n/a	--	--	11
	Mercury	n/a	n/a	--	--	0.017
RBWSD0501	Aluminum	61.8	a	**--**	**6070**	**--**
	Arsenic	4.03	a	**--**	**9.47**	**--**
	Barium	63.4	a	**--**	**226**	**--**
	Beryllium	n/a	n/a	--	1.11	--
	Chromium	n/a	n/a	--	9.83	--
	Cobalt	n/a	n/a	--	16.8	--
	Copper	n/a	n/a	--	10.4	--
	Iron	n/a	n/a	--	21600	--
	Lead	n/a	n/a	--	22	--
	Magnesium	n/a	n/a	--	2330	--
	Manganese	n/a	n/a	--	1260	--
	Nickel	n/a	n/a	--	17.7	--
	Selenium	1.06	a	**--**	**1.82**	**--**
	Tetrachloroethene	n/a	n/a	--	0.0022	--
	Trichlorofluoromethane	n/a	n/a	--	0.014	--
	Vanadium	n/a	n/a	--	33.2	--
	Zinc	n/a	n/a	--	76.7	--

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable RG

Table 3-18. Explosive Waste Incinerator--Detections in Surface Water

Name	Analyte	PRG	Source	Sampling Round
				Spring/Summer 1992
RBWSW0501	Aluminum	13.7	a	**917**
	Barium	280	a	122
	Benzene	n/a	n/a	**ND**
	HMX	n/a	n/a	**ND**
	Iron	n/a	n/a	956
	Isophorone	n/a	n/a	**ND**
	Lead	n/a	n/a	13
	Linedane	n/a	n/a	**ND**
	Magnesium	n/a	n/a	24000
	Manganese	n/a	n/a	109
	RDX	12900	a	**ND**
	Selenium	0.75	a	**3.51**
	Vanadium	n/a	n/a	12.5

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable PRG

Table 3-19. Explosive Waste Incinerator--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round
				Spring 2003
FTP-MW7	Alkalinity	-	-	270000
	Barium	2555	b	130
	Cadmium	18.25	b	0.06
	Calcium	-	-	67400
	Carbon dioxide	-	-	26000
	Chloride	-	-	22000
	Chromium	-	-	4.2
	Freon	-	-	3
	Lead	-	-	0.16
	Magnesium	-	-	27200
	Nitrite, nitrate - nonspecific	-	-	2000
	RDX	0.6112	b	0.35
	Selenium	182.5	b	1
	Silver	182.5	b	0.34
	Sodium	-	-	11400
	Sulfate	-	-	36000
FTP-MW8	Alkalinity	-	-	410000
	Ammonia nitrogen	-	-	130
	Barium	2555	b	86.8
	Calcium	-	-	80900
	Carbon dioxide	-	-	30000
	Chloride	-	-	17000
	Chromium	-	-	1
	Lead	-	-	0.44
	Magnesium	-	-	33600
	Mercury	-	-	0.022
	Nitrogen by Kjeldahl Method	-	-	400
	Selenium	182.5	b	4.1
	Silver	182.5	b	0.1
	Sodium	-	-	46400
	Sulfate	-	-	56000
	Total organic carbon	-	-	1100

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable PRG

Table 3-20. Construction Debris Landfill--Detections in Soil

Name	Analyte	Depth Range	RG	Source	SamplingRound				
					Summer 1991	Fall/Winter 1992	Spring/Summer 1992	Spring/Summer 1993	Fall 2004
22SA0201	Arsenic	0.5 ft	41.4	a	8.46	--	--	--	--
	Barium		66577	b	230	--	--	--	--
	Beryllium		1941	b	1.02	--	--	--	--
	Chromium		448	b	31.2	--	--	--	--
	Copper		40877	b	25.1	--	--	--	--
	Fluoranthene		22000	b	0.12	--	--	--	--
	Lead		12100	a	40	--	--	--	--
	Nickel		20439	b	21.6	--	--	--	--
	Pyrene		29126	b	0.24	--	--	--	--
	Zinc		100000	b	113	--	--	--	--
28SS0101	Aroclor 1260	0.5 ft	2.2	a	0.0718	--	--	--	--
	Arsenic		41.4	a	5.59	--	--	--	--
	Barium		66577	b	211	--	--	--	--
	Beryllium		1941	b	0.637	--	--	--	--
	Chromium		448	b	24.5	--	--	--	--
	Copper		40877	b	17.4	--	--	--	--
	DDD		9.95	b	0.0569	--	--	--	--
	DDE		7.02	b	0.0079	--	--	--	--
	DDT		7.02	b	0.0303	--	--	--	--
	Dieldrin		0.11	b	0.0134	--	--	--	--
	Endrin		185	b	0.0156	--	--	--	--
	HMX		30780	b	0.746	--	--	--	--
	Lead		12100	a	19	--	--	--	--
	Nickel		20439	b	19.4	--	--	--	--
	Zinc		100000	b	64	--	--	--	--
28SS0201	1,3-Dinitrobenzene	0.5 ft	0.6	a	**0.966**	--	--	--	--
	Aroclor 1260		2.2	a	0.075	--	--	--	--
	Arsenic		41.4	a	5.97	--	--	--	--
	Barium		66577	b	187	--	--	--	--
	Beryllium		1941	b	0.664	--	--	--	--
	Chromium		448	b	18.8	--	--	--	--
	Copper		40877	b	15.8	--	--	--	--
	DDD		9.95	b	0.0108	--	--	--	--
	DDE		7.02	b	0.006	--	--	--	--
	DDT		7.02	b	0.0297	--	--	--	--
	Dieldrin		0.11	b	0.0092	--	--	--	--
	Lead		12100	a	23	--	--	--	--
	Nickel		20439	b	20.4	--	--	--	--
	Zinc		100000	b	55.9	--	--	--	--

Table 3-20. Construction Debris Landfill--Detections in Soil

Name	Analyte	Depth Range	RG	Source	SamplingRound				
					Summer 1991	Fall/Winter 1992	Spring/Summer 1992	Spring/Summer 1993	Fall 2004
28SS0301	Aroclor 1260	0.5 ft	2.2	a	0.13	--	--	--	--
	Arsenic		41.4	a	7.12	--	--	--	--
	Barium		259	a	**323**	--	--	--	--
	Beryllium		1941	b	0.717	--	--	--	--
	beta-Endosulfan /		n/a	n/a	0.0179	--	--	--	--
	Chromium		448	b	17.7	--	--	--	--
	Copper		40877	b	17.4	--	--	--	--
	DDD		9.95	b	0.0183	--	--	--	--
	DDE		7.02	b	0.0319	--	--	--	--
	DDT		7.02	b	0.0634	--	--	--	--
	Dieldrin		0.11	b	0.0613	--	--	--	--
	Endrin		185	b	0.019	--	--	--	--
	Lead		12100	a	18	--	--	--	--
	Nickel		20439	b	24.1	--	--	--	--
	Zinc		100000	b	49	--	--	--	--
CDL-TS-001-0001-SO	Aroclor 1254	6 - 8 ft	2.21	b	--	--	--	--	0.081
	Arsenic		1.59	b	--	--	--	--	**6.4**
	Barium		259	b	--	--	--	--	160
	Beryllium		n/a	n/a	--	--	--	--	0.87
	Boron		n/a	n/a	--	--	--	--	5.1
	Cadmium		30	b	--	--	--	--	0.35
	Chromium		n/a	n/a	--	--	--	--	20
	Dieldrin		0.07	b	--	--	--	--	0.0023
	Lead		12100	b	--	--	--	--	90
CDL-TS-003-0001-SO	Arsenic	5 ft	1.59	b	--	--	--	--	**8.6**
	Barium		259	b	--	--	--	--	**280**
	Beryllium		n/a	n/a	--	--	--	--	1.1
	Boron		n/a	n/a	--	--	--	--	6
	Chromium		n/a	n/a	--	--	--	--	21
	Lead		12100	b	--	--	--	--	20
CDL-TS-004-0001-SO	alpha-Chlordane	7 ft	n/a	n/a	--	--	--	--	0.0016
	Aroclor 1260		2.2	b	--	--	--	--	0.023
	Arsenic		1.59	b	--	--	--	--	**9.1**
	Barium		259	b	--	--	--	--	230
	Beryllium		n/a	n/a	--	--	--	--	1.2
	Boron		n/a	n/a	--	--	--	--	8.4
	Chromium		n/a	n/a	--	--	--	--	22
	DDE		n/a	n/a	--	--	--	--	0.0024
	Lead		12100	b	--	--	--	--	21
	Mercury		0.05	b	--	--	--	--	**0.051**
CDL-TS-005-0001-SO	Aroclor 1254	2 ft	2.21	b	--	--	--	--	0.048
	Arsenic		1.59	b	--	--	--	--	**10**
	Barium		259	b	--	--	--	--	**270**
	Beryllium		n/a	n/a	--	--	--	--	1.1
	Boron		n/a	n/a	--	--	--	--	6.6
	Chromium		n/a	n/a	--	--	--	--	19
	Lead		12100	b	--	--	--	--	32
	Mercury		0.05	b	--	--	--	--	0.016

Table 3-20. Construction Debris Landfill--Detections in Soil

Name	Analyte	Depth Range	RG	Source	SamplingRound				
					Summer 1991	Fall/Winter 1992	Spring/Summer 1992	Spring/Summer 1993	Fall 2004
CDL-TS-006-0001-SO	Arsenic	6 ft	1.59	b	--	--	--	--	**7.7**
	Barium		259	b	--	--	--	--	97
	Beryllium		n/a	n/a	--	--	--	--	1.6
	Boron		n/a	n/a	--	--	--	--	61
	Chromium		n/a	n/a	--	--	--	--	15
	Lead		12100	b	--	--	--	--	21
	Selenium		4.32	b	--	--	--	--	0.59
JAW-08	Aluminum	5 ft	n/a	n/a	--	--	--	16500	--
	Arsenic		1.59	b	--	--	--	**14**	--
	Barium		259	b	--	--	--	242	--
	Beryllium		n/a	n/a	--	--	--	1.35	--
	Chromium		n/a	n/a	--	--	--	23.3	--
	Cobalt		53.2	b	--	--	--	11.9	--
	Copper		703	b	--	--	--	24.2	--
	Iron		n/a	n/a	--	--	--	26900	--
	Lead		12100	b	--	--	--	12.2	--
	Magnesium		n/a	n/a	--	--	--	4820	--
	Manganese		5110	b	--	--	--	782	--
	Nickel		1040	b	--	--	--	30.1	--
	Vanadium		202	b	--	--	--	37.3	--
	Zinc		n/a	n/a	--	--	--	79.9	--
JAW-09	Aluminum	5 ft	n/a	n/a	--	--	--	15300	--
	Arsenic		1.59	b	--	--	--	**11**	--
	Barium		259	b	--	--	--	198	--
	Beryllium		n/a	n/a	--	--	--	1.37	--
	Chromium		n/a	n/a	--	--	--	22.2	--
	Cobalt		53.2	b	--	--	--	13.9	--
	Copper		703	b	--	--	--	23.3	--
	Iron		n/a	n/a	--	--	--	24800	--
	Lead		12100	b	--	--	--	17	--
	Magnesium		n/a	n/a	--	--	--	4020	--
	Manganese		5110	b	--	--	--	611	--
	Nickel		1040	b	--	--	--	28.4	--
	Vanadium		202	b	--	--	--	37	--
	Zinc		n/a	n/a	--	--	--	68.9	--

Table 3-20. Construction Debris Landfill--Detections in Soil

Name	Analyte	Depth Range	RG	Source	SamplingRound				
					Summer 1991	Fall/Winter 1992	Spring/Summer 1992	Spring/Summer 1993	Fall 2004
JAW-10	Aluminum	8 ft	n/a	n/a	--	--	--	18100	--
	Arsenic		1.59	b	**--**	**--**	**--**	**2.7**	**--**
	Barium		259	b	**--**	**--**	**--**	162	**--**
	Beryllium		n/a	n/a	--	--	--	1.49	--
	Chromium		n/a	n/a	--	--	--	20.7	--
	Cobalt		53.2	b	**--**	**--**	**--**	3.8	**--**
	Copper		703	b	**--**	**--**	**--**	17.4	**--**
	Iron		n/a	n/a	--	--	--	21000	--
	Lead		12100	b	**--**	**--**	**--**	12.7	**--**
	Magnesium		n/a	n/a	--	--	--	2900	--
	Manganese		5110	b	**--**	**--**	**--**	77.8	**--**
	Nickel		1040	b	**--**	**--**	**--**	16	**--**
	Vanadium		202	b	**--**	**--**	**--**	31.8	**--**
	Zinc		n/a	n/a	--	--	--	29.8	--
R20-0003E	1,3,5-Trinitrobenzene	0 - 0.5 ft	18468	b	**--**	2	**--**	**--**	**--**
R20GP0301E	1,3,5-Trinitrobenzene	0.5 ft	18468	b	**--**	2	**--**	**--**	**--**
R20SS0202	DDD	0.5 ft	9.95	b	**--**	**--**	0.0159	**--**	**--**
	DDE		7.02	b	**--**	**--**	0.0095	**--**	**--**
	DDT		7.02	b	**--**	**--**	0.0242	**--**	**--**
R20SS0401	Aroclor 1254	0.5 ft	2.21	a	**--**	**--**	0.365	**--**	**--**
R20SS0701	alpha-Chlordane	0.5 ft	n/a	n/a	--	--	0.0144	--	--
	DDD		9.95	b	**--**	**--**	0.0116	**--**	**--**
	Dieldrin		0.11	b	**--**	**--**	0.0094	**--**	**--**
	gamma-Chlordane		n/a	n/a	--	--	0.0186	--	--

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable RG

Table 3-21. Construction Debris Landfill--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round	
				Summer 1991	Fall 2004
22SD0101	Arsenic	4.03	a	**18.4**	**--**
	Barium	63.4	a	**233**	**--**
	Beryllium	n/a	n/a	0.97	--
	Bis(2-ethylhexyl) phthalate	310	a	4.4	**--**
	Chromium	n/a	n/a	27.5	--
	Copper	93.7	a	17.4	**--**
	Lead	n/a	n/a	36	--
	Nickel	511	a	26.1	**--**
	Phenanthrene	n/a	n/a	0.24	--
	Pyrene	n/a	n/a	11	--
	Toluene	n/a	n/a	0.44	--
	Zinc	1620	a	220	**--**
CDL-SD-001-0001-SD	Arsenic	4.03	a	**--**	**8.3**
	Barium	63.4	a	**--**	**150**
	Beryllium	n/a	n/a	--	0.84
	Boron	n/a	n/a	--	3.8
	Chromium	n/a	n/a	--	13
	Lead	n/a	n/a	--	17
CDL-SD-002-0001-SD	Aroclor 1254	n/a	n/a	--	0.093
	Arsenic	4.03	a	**--**	**9.8**
	Barium	63.4	a	**--**	**130**
	Beryllium	n/a	n/a	--	1.2
	Boron	n/a	n/a	--	33
	Cadmium	8.47	a	**--**	0.41
	Chromium	n/a	n/a	--	11
	DDE	n/a	n/a	--	0.056
	Lead	n/a	n/a	--	32
	Mercury	0.96	a	**--**	0.13
	Selenium	1.06	a	**--**	0.89
CDL-SD-003-0001-SD	Arsenic	4.03	a	**--**	**4.9**
	Barium	63.4	a	**--**	**140**
	Beryllium	n/a	n/a	--	0.62
	beta-BHC	n/a	n/a	--	0.0037
	Boron	n/a	n/a	--	3.1
	Chromium	n/a	n/a	--	11
	Lead	n/a	n/a	--	14

Table 3-21. Construction Debris Landfill--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round	
				Summer 1991	Fall 2004
CDL-SD-004-0001-SD	Aroclor 1260	n/a	n/a	--	0.017
	Arsenic	4.03	a	**--**	**6.4**
	Barium	63.4	a	**--**	**96**
	Beryllium	n/a	n/a	--	0.64
	Boron	n/a	n/a	--	3.2
	Chromium	n/a	n/a	--	11
	DDT	6.78	a	**--**	0.0008
	Lead	n/a	n/a	--	9.6
CDL-SD-005-0001-SD	Aroclor 1254	n/a	n/a	--	0.033
	Arsenic	4.03	a	**--**	**6.2**
	Barium	63.4	a	**--**	**130**
	Beryllium	n/a	n/a	--	1.1
	beta-BHC	n/a	n/a	--	0.14
	Boron	n/a	n/a	--	30
	Cadmium	8.47	a	**--**	0.28
	Chromium	n/a	n/a	--	11
	Lead	n/a	n/a	--	26
	Mercury	0.96	a	**--**	0.1
	Selenium	1.06	a	**--**	**1.3**

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable RG

Table 3-22. Construction Debris Landfill--Detections in Surface Water

Name	Analyte	PRG	Source	Sampling Round
				Spring/Summer 1992
R20SW1001	1,3,5-Trinitrobenzene	n/a	n/a	0.532
	Aluminum	13.7	a	**604**
	Barium	280	a	89.4
	Chloroform	n/a	n/a	1.44
	Iron	n/a	n/a	728
	Magnesium	n/a	n/a	27100
	Manganese	n/a	n/a	20.5

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable PRG

Table 3-23. Construction Debris Landfill--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round				
				Fall/Winter 1992	Spring/Summer 1993	Summer 1996	Spring 1997	Summer 1997
JAW-08	Antimony	14.6	b	--	--	0.35	--	--
	Barium	2554.993	b	--	--	90.5	895	94.2
	Chromium	n/a	n/a	--	--	18	**ND**	11.6
	Copper	1459.998	b	--	--	1.72	--	--
	Lead	n/a	n/a	--	16.8	**ND**	62.6	**ND**
	Manganese	875.9992	b	--	--	1.08	--	--
	Nickel	729.9995	b	--	--	33.1	--	--
	Selenium	182.5	b	--	**ND**	2.24	**ND**	2.63
	Silver	182.5	b	--	--	**ND**	36.2	**ND**
	Vanadium	36.5	b	--	--	5.26	--	--
JAW-09	Antimony	14.6	b	--	--	1.21	--	--
	Barium	2554.993	b	--	--	89.5	774	83.7
	Chromium	n/a	n/a	--	--	23.9	**ND**	13.7
	Copper	1459.998	b	--	--	1.91	--	--
	Lead	n/a	n/a	--	7.05	**ND**	104	**ND**
	Manganese	875.9992	b	--	--	31.8	--	--
	Nickel	729.9995	b	--	--	51.9	--	--
	Selenium	182.5	b	--	**ND**	4.83	**ND**	ND
	Vanadium	36.5	b	--	--	7.11	--	--
JAW-10	Antimony	14.6	b	--	--	0.95	--	--
	Barium	2554.993	b	--	--	87.9	760	88.5
	Chromium	n/a	n/a	--	--	31.3	**ND**	18.7
	Copper	1459.998	b	--	--	3.11	--	--
	Lead	n/a	n/a	--	48.7	**ND**	85.3	**ND**
	Manganese	875.9992	b	--	--	16.4	--	--
	Nickel	729.9995	b	--	--	64.8	--	--
	Selenium	182.5	b	--	**ND**	6	**ND**	ND
	Toluene	723.4234	b	--	0.98	--	--	--
	Vanadium	36.5	b	--	--	8.97	--	--

Table 3-23. Construction Debris Landfill--Detections in Groundwater

Name	Analyte	PRG	Source	Sampling Round				
				Fall/Winter 1992	Spring/Summer 1993	Summer 1996	Spring 1997	Summer 1997
R20PZ0901	4-Methylphenol	182.5	b	6.2	--	--	--	--
	Aluminum	36498.67	b	11100	--	--	--	--
	Antimony	6	f	**72.7**	--	--	--	--
	Barium	2554.993	b	280	--	--	--	--
	Bis(2-ethylhexyl) phthalate	6	f	**71**	--	--	--	--
	Butyl stearate	n/a	n/a	50	--	--	--	--
	Chromium	n/a	n/a	27.5	--	--	--	--
	Copper	1459.998	b	16.2	--	--	--	--
	Diethyl phthalate	29199.15	b	3.1	--	--	--	--
	Lead	n/a	n/a	17.9	--	--	--	--
	Magnesium	n/a	n/a	68900	--	--	--	--
	Manganese	300	d	**407**	--	--	--	--
	Nickel	100	d	**117**	--	--	--	--
	Nitrite, nitrate - nonspecific	n/a	n/a	60	--	--	--	--
	Zinc	10949.88	b	118	--	--	--	--
R20PZ1201	4-Methylphenol	182.5	b	6.7	--	--	--	--
	Antimony	6	f	**53.1**	--	--	--	--
	Barium	2000	f	**2240**	--	--	--	--
	Beryllium	4	f	**46.8**	--	--	--	--
	Bis(2-ethylhexyl) phthalate	6	f	**8.3**	--	--	--	--
	Cadmium	5	f	**5.71**	--	--	--	--
	Chromium	100	f	**660**	--	--	--	--
	Cobalt	729.9995	b	248	--	--	--	--
	Copper	1459.998	b	581	--	--	--	--
	Diethyl phthalate	29199.15	b	7.1	--	--	--	--
	Lead	n/a	n/a	190	--	--	--	--
	Magnesium	n/a	n/a	459000	--	--	--	--
	Manganese	300	d	**8360**	--	--	--	--
	Mercury	n/a	n/a	0.65	--	--	--	--
	Nickel	100	d	**828**	--	--	--	--
	Triphenyl phosphate	n/a	n/a	6	--	--	--	--
	Zinc	10949.88	b	1740	--	--	--	--

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable PRG

Table 3-24. Line 3A Pond--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round		
					Summer 1991	Spring 1995	Fall 2004
41SA0201	Arsenic	3 ft	1.59	b	**8.23**	**--**	**--**
	Barium		259	b	117	**--**	**--**
	Chromium		n/a	n/a	24	--	--
	Copper		703	b	15.6	**--**	**--**
	Lead		12100	b	8	**--**	**--**
	Nickel		1040	b	25.7	**--**	**--**
	Sulfate		n/a	n/a	31.3	--	--
	Zinc			n/a	41.3	--	--
41SA0301	Barium	7 ft	259	b	145	**--**	**--**
	Chromium		n/a	n/a	31.8	--	--
	Copper		703	b	13.1	**--**	**--**
	Lead		12100	b	11	**--**	**--**
	Nickel		1040	b	14.7	**--**	**--**
	Sulfate		n/a	n/a	15.6	--	--
	Zinc		n/a	n/a	42.9	--	--
L3AP-SB-001-0001-SO	Arsenic	7 - 9 ft	1.59	b	**--**	**--**	**4.8**
	Barium		259	b	**--**	**--**	63
	Beryllium		n/a	n/a	--	--	0.6
	Boron		n/a	n/a	--	--	0.88
	Chromium		n/a	n/a	--	--	11
	Lead		12100	b	**--**	**--**	6.8
	Mercury		0.05	b	**--**	**--**	0.012
L3AP-SB-002-0001-SO	Arsenic	7 - 9 ft	1.59	b	**--**	**--**	**4.4**
	Barium		259	b	**--**	**--**	83
	Beryllium		n/a	n/a	--	--	1.1
	Chromium		n/a	n/a	--	--	15
	Lead		12100	b	**--**	**--**	8.5
	Mercury		0.05	b	**--**	**--**	0.028
L3AP-SB-003-0001-SO	Arsenic	7 - 9 ft	1.59	b	**--**	**--**	**8.3**
	Barium		259	b	**--**	**--**	57
	Beryllium		n/a	n/a	--	--	1.2
	Chromium		n/a	n/a	--	--	11
	Lead		12100	b	**--**	**--**	8.1
	Mercury		0.05	b	**--**	**--**	0.024
L3AP-SB-004-0001-SO	Arsenic	7 - 9 ft	1.59	b	**--**	**--**	**6**
	Barium		259	b	**--**	**--**	96
	Beryllium		n/a	n/a	--	--	0.68
	Chromium		n/a	n/a	--	--	13
	Lead		12100	b	**--**	**--**	9.3
	Mercury		0.05	b	**--**	**--**	0.036
	Selenium		4.32	b	**--**	**--**	0.5

Table 3-24. Line 3A Pond--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round		
					Summer 1991	Spring 1995	Fall 2004
L3AP-SB-005-0001-SO	Arsenic	7 - 9 ft	1.59	b	--	--	**4.5**
	Barium		259	b	--	--	74
	Beryllium		n/a	n/a	--	--	0.48
	Boron		n/a	n/a	--	--	1.2
	Chromium		n/a	n/a	--	--	17
	Lead		12100	b	--	--	6.5
	Mercury		0.05	b	--	--	0.032
L3AP-SB-006-0001-SO	Arsenic	7 - 9 ft	1.59	b	--	--	**5.7**
	Barium		259	b	--	--	74
	Beryllium		n/a	n/a	--	--	0.63
	Chromium		n/a	n/a	--	--	13
	Lead		12100	b	--	--	8.1
	Mercury		0.05	b	--	--	0.018
	Selenium		4.32	b	--	--	0.51
L3AP-SB-007-0001-SO	Arsenic	7 - 9 ft	1.59	b	--	--	**2.7**
	Barium		259	b	--	--	89
	Beryllium		n/a	n/a	--	--	0.6
	Chromium		n/a	n/a	--	--	13
	Lead		12100	b	--	--	8.8
	Mercury		0.05	b	--	--	0.049
L3AP-SB-008-0001-SO	Arsenic	7 - 9 ft	1.59	b	--	--	**14**
	Barium		259	b	--	--	46
	Beryllium		n/a	n/a	--	--	1.7
	Boron		n/a	n/a	--	--	1.1
	Chromium		n/a	n/a	--	--	11
	Lead		12100	b	--	--	8.2
	Mercury		0.05	b	--	--	0.027
	Selenium		4.32	b	--	--	0.5
L3AP-SB-009-0001-SO	Arsenic	7 - 9 ft	1.59	b	--	--	**6.8**
	Barium		259	b	--	--	**280**
	Beryllium		n/a	n/a	--	--	0.43
	Boron		n/a	n/a	--	--	1.5
	Cadmium		30	b	--	--	0.34
	Chromium		n/a	n/a	--	--	12
	Lead		12100	b	--	--	6.7
	Mercury		0.05	b	--	--	0.013
	Selenium		4.32	b	--	--	0.58
L3AP-SB-010-0001-SO	Arsenic	7 - 9 ft	41.4	b	--	--	1
	Barium		259	b	--	--	85
	Beryllium		n/a	n/a	--	--	0.69
	Chromium		n/a	n/a	--	--	12
	Lead		12100	b	--	--	9.3
	Mercury		0.05	b	--	--	**0.055**

Table 3-24. Line 3A Pond--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round		
					Summer 1991	Spring 1995	Fall 2004
L3AP-SB-011-0001-SO	Arsenic	7 - 9 ft	1.59	b	--	--	**1.8**
	Barium		259	b	--	--	98
	Beryllium		n/a	n/a	--	--	0.87
	Chromium		n/a	n/a	--	--	16
	Lead		12100	b	--	--	11
	Mercury		0.05	b	--	--	**0.06**
	Selenium		4.32	b	--	--	0.51
L3AP-SB-012-0001-SO	Arsenic	7 - 9 ft	1.59	b	--	--	**9.4**
	Barium		259	b	--	--	73
	Beryllium		n/a	n/a	--	--	0.57
	Boron		n/a	n/a	--	--	1.7
	Chromium		n/a	n/a	--	--	13
	Lead		12100	b	--	--	7
	Mercury		0.05	b	--	--	0.015
	Selenium		4.32	b	--	--	0.67
L3AP-SB-013-0001-SO	Arsenic	7 - 9 ft	1.59	b	--	--	**5.4**
	Barium		259	b	--	--	72
	Beryllium		n/a	n/a	--	--	0.52
	Chromium		n/a	n/a	--	--	9
	Lead		12100	b	--	--	6.6
	Mercury		0.05	b	--	--	0.041
L3AP-SB-014-0001-SO	Arsenic	7 - 9 ft	1.59	b	--	--	**4.1**
	Barium		259	b	--	--	64
	Beryllium		n/a	n/a	--	--	0.49
	Chromium		n/a	n/a	--	--	9.4
	Lead		12100	b	--	--	7.4
	Mercury		0.05	b	--	--	0.042
	Selenium		4.32	b	--	--	0.44
L3AP-SSI-001-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	7.9
	Barium		66577	b	--	--	170
	Beryllium		1941	b	--	--	0.77
	Boron		100000	b	--	--	3.8
	Chromium		448	b	--	--	17
	Lead		12100	a	--	--	15
	Mercury		0.05	a	--	--	0.019
L3AP-SSI-002-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	8.5
	Barium		66577	b	--	--	180
	Beryllium		1941	b	--	--	0.82
	Boron		100000	b	--	--	4.2
	Chromium		448	b	--	--	21
	Lead		12100	a	--	--	15
	Mercury		0.05	a	--	--	0.028

Table 3-24. Line 3A Pond--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round		
					Summer 1991	Spring 1995	Fall 2004
L3AP-SSI-003-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	7.8
	Barium		66577	b	--	--	160
	Beryllium		1941	b	--	--	0.84
	Boron		100000	b	--	--	3.2
	Chromium		448	b	--	--	23
	Lead		12100	a	--	--	14
	Mercury		0.05	a	--	--	0.034
L3AP-SSI-004-0001-SO	Arsenic	0 - 1 ft	41.4	a	--	--	8.6
	Barium		66577	b	--	--	170
	Beryllium		1941	b	--	--	0.66
	Boron		100000	b	--	--	3.6
	Chromium		448	b	--	--	25
	Lead		12100	a	--	--	15
	Mercury		0.05	a	--	--	0.027
	Selenium		0.72	c	--	--	0.72
R29SB601	Aluminum	9 ft	n/a	n/a	--	8320	--
	Arsenic		41.4	b	--	0.38	--
	Barium		259	b	--	49.9	--
	Bis(2-ethylhexyl) phthalate		n/a	n/a	--	1.9	--
	Chromium		n/a	n/a	--	15.4	--
	Cobalt		53.2	b	--	11.5	--
	Copper		703	b	--	11.4	--
	Iron		n/a	n/a	--	18900	--
	Lead		12100	b	--	6.13	--
	Magnesium		n/a	n/a	--	1180	--
	Manganese		5110	b	--	247	--
	Nickel		1040	b	--	11.9	--
	Trichlorofluoromethane		n/a	n/a	--	0.0064	--
	Vanadium		202	b	--	39.1	--
	Zinc		n/a	n/a	--	20.6	--

Table 3-24. Line 3A Pond--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round		
					Summer 1991	Spring 1995	Fall 2004
R29SB602	Aluminum	9 ft	n/a	n/a	--	11100	--
	Arsenic		1.59	b	**--**	**6.18**	**--**
	Barium		259	b	**--**	223	**--**
	Beryllium		n/a	n/a	--	1.19	--
	Chlorobenzene		n/a	n/a	--	0.0011	--
	Chromium		n/a	n/a	--	16.9	--
	Cobalt		26.4	c	**--**	**31.2**	**--**
	Copper		703	b	**--**	20.3	**--**
	Iron		n/a	n/a	--	20200	--
	Lead		12100	b	**--**	6.8	**--**
	Magnesium		n/a	n/a	--	1670	--
	Manganese		1933	c	**--**	**2140**	**--**
	Nickel		1040	b	**--**	48.9	**--**
	Toluene		n/a	n/a	--	0.00099	--
	Trichlorofluoromethane		n/a	n/a	--	0.0074	--
	Vanadium		53.8	c	**--**	**67.2**	**--**
	Zinc		n/a	n/a	--	41.4	--

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable RG

Table 3-25. Line 3A Pond--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round
				Spring/Summer 1992
R29SD0101	Aluminum	61.8	a	**8540**
	Arsenic	4.03	a	**9.72**
	Barium	63.4	a	**225**
	Beryllium	n/a	n/a	1.15
	Chromium	n/a	n/a	13.1
	Cobalt	n/a	n/a	46.3
	Copper	93.7	a	12.3
	Iron	n/a	n/a	18400
	Lead	n/a	n/a	14.8
	Magnesium	n/a	n/a	2450
	Manganese	n/a	n/a	2390
	Nickel	511	a	20.8
	tert-Butyl alcohol	n/a	n/a	0.0152
	Vanadium	n/a	n/a	37.1
	Zinc	1620	a	44.6
R29SD0201	Aluminum	61.8	a	**8540**
	Arsenic	4.03	a	**10.8**
	Barium	63.4	a	**154**
	Beryllium	n/a	n/a	1.2
	Chromium	n/a	n/a	14.1
	Cobalt	n/a	n/a	9.11
	Copper	93.7	a	12.3
	Iron	n/a	n/a	16800
	Lead	n/a	n/a	15
	Magnesium	n/a	n/a	2090
	Manganese	n/a	n/a	746
	Nickel	511	a	14.1
	tert-Butyl alcohol	n/a	n/a	0.0116
	Vanadium	n/a	n/a	31.5
	Zinc	1620	a	53.5
R29SD0301	Aluminum	61.8	a	**7110**
	Arsenic	4.03	a	**6.4**
	Barium	63.4	a	**176**
	Beryllium	n/a	n/a	1.17
	Chromium	n/a	n/a	12.9
	Cobalt	n/a	n/a	12
	Copper	93.7	a	12.2
	Iron	n/a	n/a	15700
	Lead	n/a	n/a	13.2
	Magnesium	n/a	n/a	1750
	Manganese	n/a	n/a	841
	Nickel	511	a	15.6
	tert-Butyl alcohol	n/a	n/a	0.0135
	Vanadium	n/a	n/a	30.1
	Zinc	1620	a	71.5

Table 3-25. Line 3A Pond--Detections in Sediment

Name	Analyte	RG	Source	Sampling Round
				Spring/Summer 1992
RBWSD11	Aluminum	61.8	a	**5940**
	Arsenic	4.03	a	**9.36**
	Barium	63.4	a	**182**
	Beryllium	n/a	n/a	1.56
	Chromium	n/a	n/a	10.9
	Cobalt	n/a	n/a	12.4
	Copper	93.7	a	10.7
	Iron	n/a	n/a	14500
	Lead	n/a	n/a	20
	Magnesium	n/a	n/a	1610
	Manganese	n/a	n/a	1140
	Nickel	511	a	14.5
	Selenium	1.06	a	0.67
	Trichlorofluoromethane	n/a	n/a	0.01
	Vanadium	n/a	n/a	30.3
	Zinc	1620	a	57.6

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable RG

Table 3-26. Line 3A Pond--Detections in Surface Water

Name	Analyte	PRG	Source	Sampling Round
				Spring/Summer 1992
R29SW0101	Aluminum	13.7	a	**616**
	Barium	280	a	92.4
	Iron	n/a	n/a	519
	Lead	n/a	n/a	8.24
	Magnesium	n/a	n/a	12300
	Manganese	n/a	n/a	8.24
R29SW0201	Aluminum	13.7	a	**1620**
	Barium	280	a	96.3
	Iron	n/a	n/a	1440
	Lead	n/a	n/a	2.06
	Magnesium	n/a	n/a	11700
	Manganese	n/a	n/a	16.8
R20SW0301	Aluminum	13.7	a	**1000**
	Barium	280	a	100
	Iron	n/a	n/a	945
	Magnesium	n/a	n/a	11700
	Manganese	n/a	n/a	29.9

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable PRG

Table 3-27. Central Test Area--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round	
					Spring 1995	Fall 2004
CTA-001-ES	Nitrobenzene	0 - 1 ft	103	b	--	0.054
CTA-002-ES	Nitrobenzene	0 - 1 ft	103	b	--	0.034
CTA-006-ES	1,3-Dinitrobenzene	0 - 1 ft	62	b	--	0.03
	2,4,6-Trinitrotoluene		47	e	--	**110**
	2,4-Dinitrotoluene		1231	b	--	1.2
	2,6-Dinitrotoluene		616	b	--	3.8
	2-Amino-4,6-dinitrotoluene		n/a	n/a	--	22
	2-Nitrotoluene		2.25	b	--	2
	4-Amino-2,6dinitrotoluene		n/a	n/a	--	21
CTA-007-ES	Nitrocellulose	0 - 1 ft	n/a	n/a	--	13
CTA-008-ES	Nitrobenzene	0 - 1 ft	103	b	--	1.7
R06SA605	Aluminum	3 ft	n/a	n/a	6890	--
	Arsenic		1.59	b	**5.31**	--
	Barium		259	b	208	--
	Beryllium		n/a	n/a	1	--
	Cadmium		0.97	c	**9.09**	--
	Chromium		n/a	n/a	11.2	--
	Cobalt		53.2	b	4.92	--
	Copper		703	b	16.3	--
	Iron		n/a	n/a	12200	--
	Lead		12100	b	12.6	--
	Magnesium		n/a	n/a	2020	--
	Manganese		5110	b	540	--
	Nickel		1040	b	12	--
	Potassium		n/a	n/a	584	--
	Vanadium		202	b	24.7	--
	Zinc		n/a	n/a	73.7	--
R06SA606	Aluminum	3 ft	n/a	n/a	10800	--
	Arsenic		1.59	b	**5.82**	--
	Barium		368	c	**369**	--
	Beryllium		n/a	n/a	1.18	--
	Cadmium		0.97	c	**1.21**	--
	Chromium		n/a	n/a	15.8	--
	Cobalt		53.2	b	19.4	--
	Copper		703	b	28.3	--
	Iron		n/a	n/a	34900	--
	Lead		12100	b	5.8	--
	Magnesium		n/a	n/a	3090	--
	Manganese		1933	c	**2440**	--
	Nickel		1040	b	63.6	--
	Potassium		n/a	n/a	505	--
	Vanadium		202.00	b	35	--
	Zinc		n/a	n/a	68.2	--

Table 3-27. Central Test Area--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round	
					Spring 1995	Fall 2004
R06SA607	Aluminum	3 ft	n/a	n/a	20000	--
	Arsenic		1.59	b	**5.67**	**--**
	Barium		259	b	**314**	**--**
	Beryllium		n/a	n/a	0.731	--
	Chromium		n/a	n/a	25.1	--
	Cobalt		53.2	b	14.2	**--**
	Copper		703	b	18.8	**--**
	Iron		n/a	n/a	26300	--
	Lead		12100	b	15	**--**
	Magnesium		n/a	n/a	4460	--
	Manganese		5110	b	933	**--**
	Nickel		1040	b	29.3	**--**
	Potassium		n/a	n/a	954	--
	Vanadium		202	b	47.2	**--**
	Zinc		n/a	n/a	82.8	--
R06SA608	Aluminum	3 ft	n/a	n/a	12600	--
	Arsenic		1.59	b	**6.15**	**--**
	Barium		259	b	**262**	**--**
	Beryllium		n/a	n/a	0.836	--
	Chromium		n/a	n/a	20.4	--
	Cobalt		53.2	b	17.2	**--**
	Copper		703	b	26.9	**--**
	Iron		n/a	n/a	24900	--
	Lead		12100	b	22	**--**
	Magnesium		n/a	n/a	3880	--
	Manganese		5110	b	856	**--**
	Nickel		1040	b	35.9	**--**
	Potassium		n/a	n/a	742	--
	Vanadium		202.00	b	47.8	**--**
	Zinc		n/a	n/a	72.3	--
R06SS605	Aluminum	0.5 ft	100000	b	80000	**--**
	Arsenic		41.40	a	2.44	**--**
	Barium		66577	b	39.1	**--**
	Beryllium		1941	b	3.4	**--**
	Cadmium		1000	e	**1100**	**--**
	Chromium		448.32	b	152	**--**
	Cobalt		1921	b	15	**--**
	Copper		2445	c	**3200**	**--**
	Iron		100000	b	**220000**	**--**
	Lead		12100	a	190	**--**
	Magnesium		n/a	n/a	1100	--
	Manganese		1933	c	**2300**	**--**
	Nickel		78.99	c	**99.8**	**--**
	Potassium		n/a	n/a	217	--
	Silver		0.83	c	**1.43**	**--**
	Vanadium		1022	b	24	**--**
	Zinc		100000	b	3500	**--**

Table 3-27. Central Test Area--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round	
					Spring 1995	Fall 2004
R06SS606	Aluminum	0.5 ft	100000	b	5750	--
	Arsenic		41.4	a	4.98	--
	Barium		66577	b	210	--
	Beryllium		1941	b	0.922	--
	Cadmium		0.97	c	**2.96**	--
	Chromium		448	b	9.81	--
	Cobalt		1921	b	5.8	--
	Copper		40877	b	12.6	--
	Iron		100000	b	8650	--
	Lead		12100	a	23.8	--
	Magnesium		n/a	n/a	1480	--
	Manganese		19458	b	596	--
	Nickel		20439	b	11.1	--
	Potassium		n/a	n/a	747	--
	Vanadium		1022	b	22.9	--
	Zinc		100000	b	165	--
R06SS607	2,4,6-Trinitrotoluene	0.5 ft	57.46	b	0.576	--
	Aluminum		100000	b	4070	--
	Arsenic		41.4	a	2.25	--
	Barium		66577	b	78	--
	Beryllium		1941	b	0.797	--
	Cadmium		0.97	c	**4.5**	--
	Chromium		448.32	b	7.7	--
	Cobalt		1921	b	3.74	--
	Copper		40877	b	8.9	--
	Iron		100000	b	6530	--
	Lead		12100	a	20	--
	Magnesium		n/a	n/a	2510	--
	Manganese		19458	b	713	--
	Nickel		20439	b	11.9	--
	Potassium		n/a	n/a	784	--
	Vanadium		1022	b	12	--
	Zinc		100000	b	242	--

Table 3-27. Central Test Area--Detections in Soil

Name	Analyte	Depth Range	RG	Source	Sampling Round	
					Spring 1995	Fall 2004
R06SS608	Aluminum	0.5 ft	100000	b	18900	--
	Arsenic		41.40	a	6.84	--
	Barium		259	a	**275**	--
	Beryllium		1941	b	0.744	--
	Chromium		448.32	b	23.4	--
	Cobalt		1921	b	3.64	--
	Copper		40877	b	19.3	--
	Iron		100000	b	21700	--
	Lead		12100	a	15	--
	Magnesium		n/a	n/a	3620	--
	Manganese		19458	b	216	--
	Nickel		20439	b	16.8	--
	Potassium		n/a	n/a	1190	--
	Vanadium		1022	b	38.4	--
	Zinc		100000	b	96.2	--

Notes:
(a) - from *Baseline Ecological Risk Assessment* (BERA)
(b) - USEPA Region 9 PRGs for industrial soil
(c) - background concentrations
(e) - OU-1 RGs from ROD
(f) - Maximum Contaminant Level (MCL)
n/a - no comparison value available
bold exceeds applicable RG

Table 4-1. Proposed Soil Sampling Quantities and Rationale

Sample Location ID	Rationale	0-1 foot	1-2 feet	2-4 feet	4-6 feet	6-8 feet	10+ feet	Installation Method
Line 3A Pond								
3AP-TTSB-001	characterization of leach field S end			explosives, metals, pH	explosives, metals, pH			DPT
3AP-TTSB-002	characterization leach field center			explosives, metals, pH	explosives, metals, pH			DPT
3AP-TTSB-003	characterization of leach field N end			explosives, metals, pH	explosives, metals, pH			DPT
3AP-TTSB-004	characterization of chemical pit			explosives, metals, VOCs, SVOCs, pH		explosives, metals, VOCs, SVOCs, pH		DPT
3AP-TTSB-005	characterization of chemical pit			explosives, metals, VOCs, SVOCs, pH		explosives, metals, VOCs, SVOCs, pH		DPT
Construction Debris Landfill								
CDL-SS-001	characterization of surface debris disposal areas							hand auger
CDL-SS-001	characterization of surface debris disposal areas							hand auger
CDL-SS-002	characterization of surface debris disposal areas							hand auger
CDL-SS-003	characterization of surface debris disposal areas							hand auger
CDL-SS-004	characterization of surface debris disposal areas							hand auger
CDL-SS-004	characterization of surface debris disposal areas							hand auger
CDL-SS-005	characterization of surface debris disposal areas							hand auger
CDL-SS-006	characterization of surface debris disposal areas							hand auger
CDL-TTSB-001	delineation at Trench 6						explosives, metals, PAHs	DPT
CDL-TTSB-002	delineation at Trench 6						explosives, metals, PAHs	DPT
CDL-TTSB-003	delineation at Trench 6 / characterization of extent of fly ash						explosives, metals, PAHs	DPT
CDL-TTSB-004	delineation at Trench 6 / characterization of extent of fly ash						explosives, metals, PAHs	DPT
CDL-TTSB-005	delineation at Trench 6						explosives, metals, PAHs	DPT
CDL-TTSB-006	determination extent of flyash--no sample						explosives, metals, PAHs	DPT
CDL-TTSB-007	characterization/extent of flyash						explosives, metals, PAHs	DPT
CDL-TTSB-008	characterization/extent of flyash						explosives, metals, PAHs	DPT
CDL-TTSB-009	determination extent of flyash--no sample						explosives, metals, PAHs	DPT
CDL-TTSB-010	determination extent of flyash--no sample						explosives, metals, PAHs	DPT

Table 4-1. Proposed Soil Sampling Quantities and Rationale

Sample Location ID	Rationale	0-1 foot	1-2 feet	2-4 feet	4-6 feet	6-8 feet	10+ feet	Installation Method
CDL-TTSB-011	characterization/extent of flyash						explosives, metals, PAHs	DPT
CDL-TTSB-012	determination extent of flyash						explosives, metals, PAHs	DPT
CDL-TTSB-013	determination extent of flyash						explosives, metals, PAHs	DPT
CDL-TTSB-014	determination extent of flyash						explosives, metals, PAHs	DPT
CDL-TTSB-015	determination extent of flyash						explosives, metals, PAHs	DPT
CDL-TTSB-016	determination extent of flyash						explosives, metals, PAHs	DPT
CDL-TTSB-017	characterization/extent of flyash						explosives, metals, PAHs	DPT
CDL-TTSB-018	field reconnaissance grab sample	explosives, metals,	explosives, metals,					hand auger
CDL-TTSB-019	field reconnaissance grab sample	explosives, metals,	explosives, metals,					hand auger
CDL-TTSB-020	field reconnaissance grab sample	explosives, metals,	explosives, metals,					hand auger
CDL-TTSB-021	field reconnaissance grab sample	explosives, metals,	explosives, metals,					hand auger
CDL-TTSB-022	field reconnaissance grab sample	explosives, metals,	explosives, metals,					hand auger
Incendiary Disposal Area								
InDA-TTSB-001	characterization of 1945 aerial of InDA	explosives, metals	explosives, metals					hand auger
InDA-TTSB-002	characterization of 1945 aerial of InDA	explosives, metals	explosives, metals					hand auger
InDA-TTSB-003	characterization of 1945 aerial of InDA	explosives, metals	explosives, metals					hand auger
InDA-TTSB-004	characterization of 1945 aerial of InDA	explosives, metals	explosives, metals					hand auger
InDA-TTSB-005	characterization of 1945 aerial of InDA	explosives, metals	explosives, metals					hand auger
InDA-TTSB-006	characterization of 1945 aerial of InDA	explosives, metals	explosives, metals					hand auger
InDA-TTSB-007	delineation of SB-005	metals	explosives, metals					hand auger
InDA-TTSB-008	delineation of SB-006	metals	metals					hand auger
InDA-TTSB-009	delineation of SB-007	metals	metals					hand auger
InDA-TTSB-010	delineation of SB-008	metals	metals					hand auger
InDA-TTSB-011	delineation of SB-009	metals	metals					hand auger
Possible Demolition Site								
PDS-TTSB-001	characterization of 1945 aerial of PDS	explosives, metals	explosives, metals	explosives, metals				hand auger
PDS-TTSB-002	characterization of 1945 aerial of PDS	explosives, metals	explosives, metals	explosives, metals				hand auger

Table 4-1. Proposed Soil Sampling Quantities and Rationale

Sample Location ID	Rationale	0-1 foot	1-2 feet	2-4 feet	4-6 feet	6-8 feet	10+ feet	Installation Method
PDS-TTSB-005	characterization of 1945 aerial of PDS and subgrid 004-021B	explosives, metals	explosives, metals	explosives, metals				hand auger
PDS-TTSB-007	characterization of scarred area 1957 aerial and subgrid 005-041A	explosives, metals	explosives, metals	explosives, metals				hand auger
PDS-TTSB-008	characterization of scarred area 1957 aerial and subgrid 005-041B and delineation of SS-002	explosives, metals	explosives, metals	explosives, metals				hand auger
PDS-TTSB-011	characterization of scarred area 1957 aerial	explosives, metals	explosives, metals	explosives, metals				hand auger
PDS-TTSB-014	characterization of scarred area 1957 aerial	explosives, metals	explosives, metals	explosives, metals				hand auger
PDS-TTSB-017	characterization of scarred area 1957 aerial	explosives, metals	explosives, metals	explosives, metals				hand auger
PDS-TTSB-018	characterization of scarred area 1957 aerial and subgrid 002-021D	explosives, metals	explosives, metals	explosives, metals				hand auger
PDS-TTSB-028	subgrid 004-041C and adjacent SS-004-0041		explosives, metals					hand auger
PDS-TTSB-029	subrgrid 004-041D	explosives, metals	explosives, metals					hand auger
PDS-TTSB-030	subgrid 005-031A	explosives, metals	explosives, metals					hand auger
PDS-TTSB-031	subgrid 005-031B and adjacent SS-003-0031	explosives, metals	explosives, metals					hand auger
PDS-TTSB-032	characterization of 1945 aerial of PDS	explosives, metals	explosives, metals	explosives, metals				hand auger
PDS-TTSB-033	subgrid 005-031D	explosives, metals	explosives, metals					hand auger
PDS-TTSB-034	subgrid 005-041C	explosives, metals	explosives, metals					hand auger
PDS-TTSB-035	subgrid 005-041D and delineation of SS-002	explosives, metals	explosives, metals					hand auger
PDS-TTSB-037	subgrid 005-011C	explosives, metals	explosives, metals					hand auger
PDS-TTSB-038	subgrid 005-011D	explosives, metals	explosives, metals					hand auger
PDS-TTSB-039	subgrid 005-011B and adjacent SS-005-011		explosives, metals					hand auger
PDS-TTSB-040	subgrid 005-021A	explosives, metals	explosives, metals	explosives, metals				hand auger
PDS-TTSB-041	subgrid 005-021B		explosives, mercury	Explosives, mercury				hand auger
PDS-TTSB-042	subgrid 005-021C		mercury	mercury				hand auger
PDS-TTSB-043	subgrid 005-021D and adjacent SS-005-021		mercury	mercury				hand auger
PDS-TTSB-048	subgrid 002-041C	explosives, metals	explosives, metals					hand auger
PDS-TTSB-052	subgrid 002-011D	explosives, metals	explosives, metals					hand auger
PDS-TTSB-055	subgrid 002-021C	explosives, metals	explosives, metals					hand auger
Central Testing Area								
CTA-TTSB-001	characterize 1957 bare area - northwest side	explosives, metals	explosives, metals					hand auger
CTA-TTSB-002	characterize 1957 bare area - northwest side	explosives, metals	explosives, metals					hand auger

Table 4-1. Proposed Soil Sampling Quantities and Rationale

Sample Location ID	Rationale	0-1 foot	1-2 feet	2-4 feet	4-6 feet	6-8 feet	10+ feet	Installation Method
CTA-TTSB-003	characterize 1957 bare area - northwest side	explosives, metals	explosives, metals					hand auger
CTA-TTSB-004	characterize 1957 bare area - northwest side	explosives, metals	explosives, metals					hand auger
CTA-TTSB-005	characterize 1957 bare area - northwest side	explosives, metals	explosives, metals					hand auger
CTA-TTSB-006	characterize 1957 bare area - northwest side	explosives, metals	explosives, metals					hand auger
CTA-TTSB-007	characterize 1957 bare area - northwest side	explosives, metals	explosives, metals					hand auger
CTA-TTSB-008	characterize 1957 bare area - northwest side	explosives, metals	explosives, metals					hand auger
CTA-TTSB-009	characterize 1957 bare area - northwest side	explosives, metals	explosives, metals					hand auger
CTA-TTSB-010	characterize 1957 bare area - northwest side and subsurface test fire pit	explosives, metals	explosives, metals	explosives, metals	explosives metals			DPT
CTA-TTSB-011	characterize 1957 bare area - northwest side	explosives, metals	explosives, metals					hand auger
CTA-TTSB-012	characterize 1957 bare area - northwest side	explosives, metals	explosives, metals					hand auger
CTA-TTSB-013	characterize 1957 bare area - northwest side	explosives, metals	explosives, metals					hand auger
CTA-TTSB-014	characterize 1957 bare area - northwest side and walkway	explosives, metals	explosives, metals					hand auger
CTA-TTSB-015	characterize 1957 aerial bare spot - southeast	explosives, metals	explosives, metals					hand auger
CTA-TTSB-016	characterize 1957 aerial bare spot - southeast	explosives, metals	explosives, metals					hand auger
CTA-TTSB-017	characterize 1957 aerial bare spot - southeast	explosives, metals	explosives, metals					hand auger
CTA-TTSB-018	characterize 1957 aerial bare spot - southeast	explosives, metals	explosives, metals					hand auger
CTA-TTSB-019	characterize 1957 aerial bare spot - southeast	explosives, metals	explosives, metals					hand auger
CTA-TTSB-020	characterize subsurface at firing pit		explosives, metals	explosives, metals	explosives, metals			DPT
CTA-TTSB-021	characterize walkway	explosives, metals	explosives, metals					hand auger
CTA-TTSB-022	characterize walkway	explosives, metals	explosives, metals					hand auger
CTA-TTSB-023	characterize tripod	explosives, metals	explosives, metals					hand auger
CTA-TTSB-024	characterize western anomaly	explosives, metals	explosives, metals					hand auger
CTA-TTSB-025	characterize western anomaly	explosives, metals	explosives, metals					hand auger
CTA-TTSB-029	characterize western anomaly	explosives, metals	explosives, metals					hand auger

Table 4-1. Proposed Soil Sampling Quantities and Rationale

Sample Location ID	Rationale	0-1 foot	1-2 feet	2-4 feet	4-6 feet	6-8 feet	10+ feet	Installation Method
CTA-TTSB-027	characterize western anomaly	explosives, metals	explosives, metals					hand auger
CTA-TTSB-028	characterize western anomaly	explosives, metals	explosives, metals					hand auger
CTA-TTSB-031	characterize western anomaly	explosives, metals	explosives, metals					hand auger
CTA-TTSB-032	characterize western anomaly	explosives, metals	explosives, metals					hand auger
FAP-TTSS-001	characterize surface fly ash for explosives (chose location in field)	explosives						hand auger
FAP-TTSS-002	characterize surface fly ash for explosives (chose location in field)	explosives						hand auger
FAP-TTSS-003	characterize surface fly ash for explosives (chose location in field)	explosives						hand auger

Table 4-2. Proposed Groundwater Sampling Quantities and Rationale

Sample Location ID	Rationale	Groundwater	Installation method
Line 3A Pond			
3AP-TTTW-001	characterization of leach field center - 3AP-TTSB-002	explosives, metals (total & dissolved), pH	DPT screen point
3AP-TTTW-002	characterization of chemical pit--3AP-TTSB-004	explosives, metals, (total & dissolved) VOCs, SVOCs, pH	DPT screen point
Incendiary Disposal Area			
InDA-TTTW-001	characterization of downgradient groundwater	explosives, metals (total & dissolved)	DPT screen point
Central Testing Area			
CTA-TTTW-001	characterization of downgradient groundwater	explosives, metals (total & dissolved)	DPT screen point
CTA-TTTW-002	characterization of groundwater at firing pit	explosives, metals (total & dissolved)	DPT screen point
Possible Demolition Site			
PDS-TTTW-001	characterization of groundwater at PDS	explosives, metals (total & dissolved)	DPT screen point
Construction Debris Landfill			
JAW-08	confirmation samples	explosives, metals (total & dissolved), pesticides/herbicide, VOCs, SVOCs	existing well
JAW-09	confirmation samples	explosives, metals (total & dissolved), pesticides/herbicide, VOCs, SVOCs	existing well
JAW-10	confirmation samples	explosives, metals (total & dissolved), pesticides/herbicide, VOCs, SVOCs	existing well
Old Fly Ash Waste Pile			
FAP-TTTW-001	characterization; confirmation of boron exceedance	explosives, metals, (total & dissolved), PAHs	DPT
FAP-TTTW-002	characterization; delineation of downgradient extent of boron exceedanceconfirmation of boron exceedance	explosives, metals, (total & dissolved), PAHs	DPT

Table 4-3. Proposed Sediment/Surface Water Sampling Quantities and Rationale

Sample Location ID	Rationale	Surface Water	Sediment
Construction Debris Disposal Area			
CDL-TTSW-001	characterization of surface water downstream of site	explosives, metals, herbicides/pesticides, PAHs	
CDL-TTSW-002	characterization of surface water downstream of site	explosives, metals, herbicides/pesticides, PAHs	
CDL-TTSW-003	characterization of surface water downstream of site	explosives, metals, herbicides/pesticides, PAHs	
CDL-TTSW-004	characterization of surface water downstream of site	explosives, metals, herbicides/pesticides, PAHs	
CDL-TTSW-005	characterization of surface water downstream of site	explosives, metals, herbicides/pesticides, PAHs	
Incendiary Disposal Area			
InDA-TTSW-001	characterization of surface water (if present) upstream of InDA	explosives, metals, alkalinity, field parameters	
InDA-TTSW-002	characterization of surface water at InDA	explosives, metals, alkalinity, field parameters	
InDA-TTSW-003	characterization of surface water (if present) downstream of InDA	explosives, metals, alkalinity, field parameters	
Possible Demolition Site			
PDS-TTSD/SW-001	characterization of sediment/surface water upstream	explosives, metals	explosives, metals
PDS-TTSD/SW-002	characterization of sediment/surface water at site	explosives, metals	explosives, metals
PDS-TTSW/SD-003	characterization of sediment/surface water downstream of site	explosives, metals	explosives, metals
Old Fly Ash Waste Pile			
FAP-TTSW-001	characterization of surface water upstream of site	explosives, metals, PAHs	
FAP-TTSW-002	characterization of surface water downstream of site	explosives, metals, PAHs	
FAP-TTSW-003	characterization of surface water at sloughed fly ash in Brush Creek	explosives, metals, PAHs	

Table 5-1
Summary of Sampling and Analysis Requirements
OU-4 Supplemental RI
Iowa Army Ammunition Plant

Parameter	Method	Media	Sample Volume / Bottle	Preservative	Holding Time	Number of Samples
Nitroaromatic Explosive Compounds	SW-846 8330	Soil, sediment	8-oz jar	Ice to 4°C ± 2°C	Extraction 7 days, Analysis 40 days	386
Nitroaromatic Explosive Compounds	SW-846 8330	Groundwater, surface water	1-Liter amber glass	Ice to 4°C ± 2°C	Extraction 7 days, Analysis 40 days	31
VOCs	SW-846 8260B	Soil	Two samplers	Ice to 4°C ± 2°C	48 hours	5
VOCs	SW-846 8260B	Groundwater	Two 40-ml VOAs	HCl, Ice to 4°C ± 2°C	14 days	2
SVOCs (including PAHs)	SW-846 8270C	Soil	8-oz jar	Ice to 4°C ± 2°C	Extraction 14 days, Analysis 40 days	28
SVOCs (including PAHs)	SW-846 8270C	Groundwater	l-Liter amber glass	Ice to 4°C ± 2°C	Extraction 14 days, Analysis 40 days	11
TAL-ICP Metals	SW-846 6010B/7471	Groundwater	1-liter poly	HNO_3, Ice to 4°C ± 2°C	Analysis 6 mos (28 days Hg)	31
TAL-ICP Metals	SW-846 6010B/7471	Soil, sediment	8-oz jar	Ice to 4°C ± 2°C	Analysis 6 mos (28 days Hg)	417
TCLP Metals	SW-846 1311	Soil	8-oz jar	Ice to 4°C ± 2°C	Analysis 6 mos (28 days Hg)	6
pH	SW-846 9045	Soil	4-oz jar	None	7 days	14

Notes: Quantities include 5% QA samples.
Explosives and SVOCs in soil may be extracted from the same jar.