GRACE AIRSTRIP
PRELIMINARY ASSESSMENT REPORT
CARIBOU COUNTY, IDAHO

STATE OF IDAHO

DEPARTMENT OF ENVIRONMENTAL QUALITY

December 2002

Submitted to:
U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, WA 98101

1.11.8.5

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706-1255 • (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Director

January 7, 2003

David Simpson
36 E. Booth
Lava Hot Springs, Idaho 83246

RE: Preliminary Assessment of the Grace Airstrip.

Dear Mr. Simpson:

The Department of Environmental Quality (DEQ) received public inquiries regarding the use of the Grace Airstrip (Site) by aerial applicators, and their wasting of potentially hazardous ore deleterious materials. Subsequently, DEQ completed Preliminary Assessment of the Site. The Preliminary Assessment Report (attached), which resulted from our visit, documents DEQ's findings relative to operations at the airport specifically dealing with the use, handling and disposal of hazardous or deleterious materials. In brief, DEQ did not find anything that we believe poses a risk to human health or the environment, and I am, therefore, not recommending any additional site visits or actions at the Site.

Although DEQ did not find any problems related to the Site, I would greatly appreciate the opportunity to assist you if you have and questions or concerns which may arise in the future. Thank you again.

Sincerely,

Bruce A. Schuld
Mine Waste Projects Coordinator
Waste Management & Remediation Division

BAS:ab C:\My Documents\Bruce\Correspondence\PA Letter Grace Airstripl January 7.doc

attachment

cc: Doug Tanner, DEQ Pocatello Regional Office
Source File
Reading File

1.11.8.5

RECEIVED
JUL 14 2003
D.E.Q. STATE WASTE
MANAGEMENT & REMEDIATION DIVISION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

July 9, 2003

Reply To
Attn Of: ECL-115

David Simpson
36 E. Booth
Lava Hot Springs, Idaho 83246

Dear Mr. Simpson:

The Idaho Department of Environmental Quality (DEQ) has completed a report summarizing the findings of a visit conducted at the Grace Airstrip site in September, 2002. A copy of the report, called a Preliminary Assessment, is enclosed.

Based on a review of this assessment, EPA has determined that no further action is warranted at the site. A no further action designation means that no additional steps under the Federal Superfund Program will be taken at the site unless new information warranting further Superfund consideration is discovered. EPA's no further action designation does not relieve your facility from complying with appropriate Idaho state regulations.

In accordance with EPA's decision regarding the tracking of no further action sites, the above named site will be removed from the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) data base and placed in a separate archival data base as a historical record. Archived sites may be returned to the CERCLIS site inventory if new information necessitating further Superfund consideration is discovered.

We appreciate your cooperation during the site visit. If you have any questions, please feel free to contact me at (206)553-2782.

Sincerely,

Ken Marcy
Site Assessment Manager

Enclosure

cc: Bruce Schuld, Idaho Department of Environmental Quality
Monica Lindeman, US EPA, ECL-115
Craig Conant, EPA SF Records Center, ECL-076

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:TTER RE REPORT SUMMARIZING T

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LIST OF ACRONYMS

Acronym	Definition
amsl	above mean sea level
DEQ	Department of Environmental Quality
EPA	United States Environmental Protection Agency
gpm	gallons per minute
PPE	Probable Point of Entry
TDL	Target Distance Limit

1. INTRODUCTION

The Department of Environmental Quality (DEQ) was contracted by Region 10 of the United States Environmental Protection Agency (EPA) to provide technical support for completion of a preliminary assessment (PA) at the Grace Airstrip site located near Grace, Idaho, in Caribou County. DEQ completed PA activities in accordance with the goals listed below.

The specific goals for the Grace Airstrip PA, as identified by DEQ, are to:

- Determine the potential threat to public health or the environment posed by the site.
- Determine the potential for a release of hazardous constituents into the environment.
- Determine the potential for placement of the site on the National Priorities List.

Conducting the PA included reviewing existing site information, collecting receptor information within the site's range of influence, determining regional characteristics, and conducting a site visit. This document includes a discussion of site background information (Section 2), a discussion of migration/exposure pathways and potential targets (Section 3), and a list of pertinent references. Photographic documentation is included in Appendix A and sample analyses are included in Appendix B.

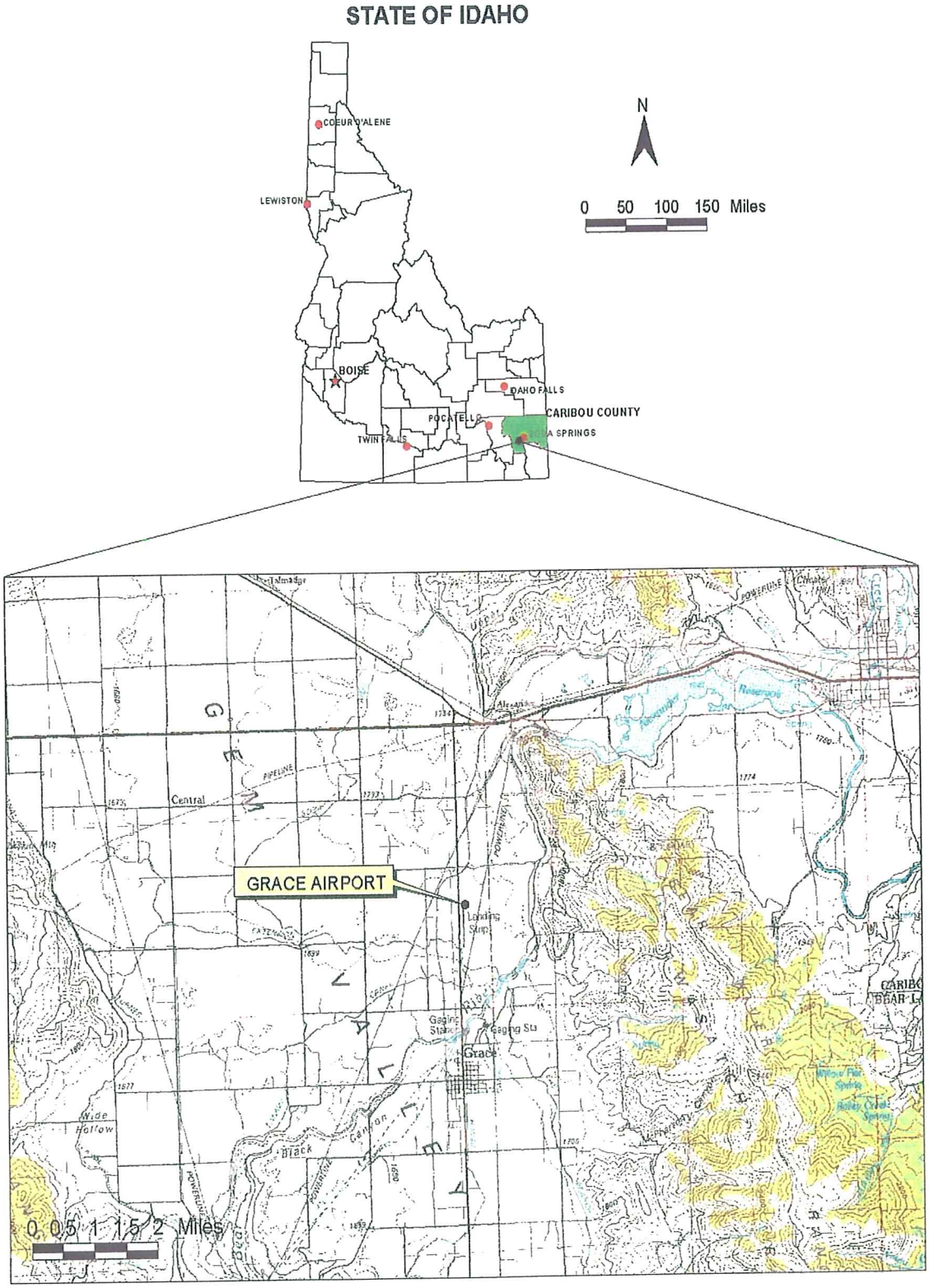
2. SITE BACKGROUND

2.1 SITE LOCATION

Site Name:	Grace Airstrip
CERCLIS ID No.:	
Location:	Caribou County, Idaho
Latitude:	42° 60' 93" N
Longitude:	111° 72' 67" W
Legal Description:	Section 25, Township 9S, Range 40E, Boise Meridian
Congressional District:	Idaho
Site Owner:	David Simpson 36 E. Booth Lava Hot Springs, Idaho 83246
Site Contact:	Owner

FIGURE 2-1

Fig. 2-1. Site Vicinity Map; Grace Airport



2.2 SITE DESCRIPTION/OWNERSHIP HISTORY

Grace Airstrip is a privately owned landing strip located in Caribou County, Idaho, approximately 2 miles north of Grace, Idaho and 10 miles southwest of Soda Springs, Idaho (Figure 2-1). The site is located in the northeastern portion of Gem Valley and west of the Bear River. The airstrip was constructed in 1946 and operated by the City of Grace until 1970. The airstrip was primarily utilized to supplement agricultural activities, specifically, the aerial application of chemicals.

The ownership history of the Grace Airstrip, also known as the Grace Airport, is clear. The airport was built in 1946 for use by aerial applicators. From 1950 until 1970, the City of Grace operated the airport (verbal communication, Simmons, 2002). In 1970, it was sold to David Simpson of nearby Lava Hot Springs, Idaho for his business activities. Mr. Simpson disperses agricultural chemicals to local farmers via aerial application

2.3 SITE OPERATIONS AND WASTE CHARACTERISTICS

The airstrip's runway measures approximately 2100 feet in length and lies 5,600 feet above mean sea level (amsl). The airstrip consists of graded dirt and gravel and includes an old hangar, located midway on the eastside of the runway. However, no aircraft are stored at this site. According to the owner, the airstrip is operated from May to October each year. The airstrip operates during daylight hours, only.

Previous work on the site was conducted by the Department of Health and Welfare's Division of Environmental Quality, now the Department Environmental Quality (DEQ), on August 5, 1994. In response to a complaint from the District Health office in Soda Springs, Boyd Roberts of the DEQ visited the site and conducted an inspection. Mr. Roberts observed a "sterile" area adjacent to the base of operation, as identified in the complaint. Mr. Roberts concluded, "From the gully washes, the staining of the area, the burned containers, and the lack of any vegetation in the immediate area, it appeared to me that someone had been washing chemicals and/or equipment, both recently and over a long period of time, in the area" (DEQ, 1994).

2.4 DEQ ACTIONS

DEQ conducted a site visit on September 25, 2002, and additional photographs of the site were taken on November 7, 2002. The owner of the property, David Simpson, was not present during either site visit. The site was fenced, but an entrance located near the south end of the site was not gated and easily accessible from the adjacent U.S. Highway 34. Site features include a hangar and such operational equipment as a fuel type tanker truck, a dispenser type tanker container, one utility truck, a portable fuel tank on a trailer and a small tractor stored in the hangar (Photos 1, 2 and 3).

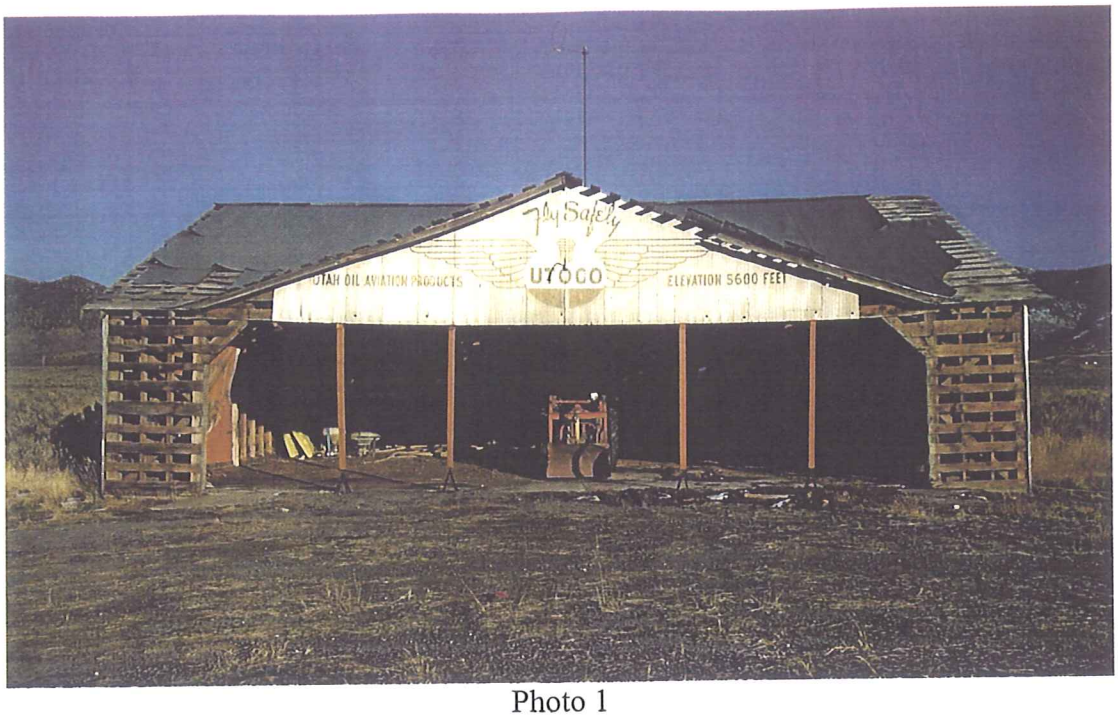


Photo 1
Hangar converted into Maintenance Shed

The hangar appears to be in poor condition, jack stands supporting the joists from collapse. During the site visit, no chemicals or waste were located in the hangar. The tractor is apparently used for grading the runway.

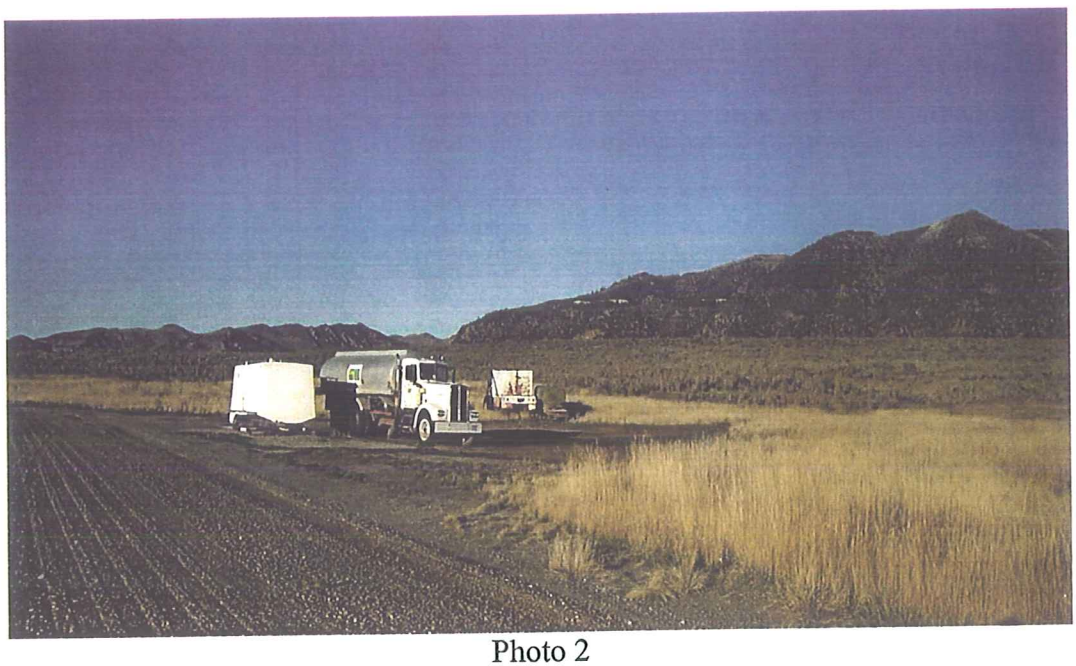


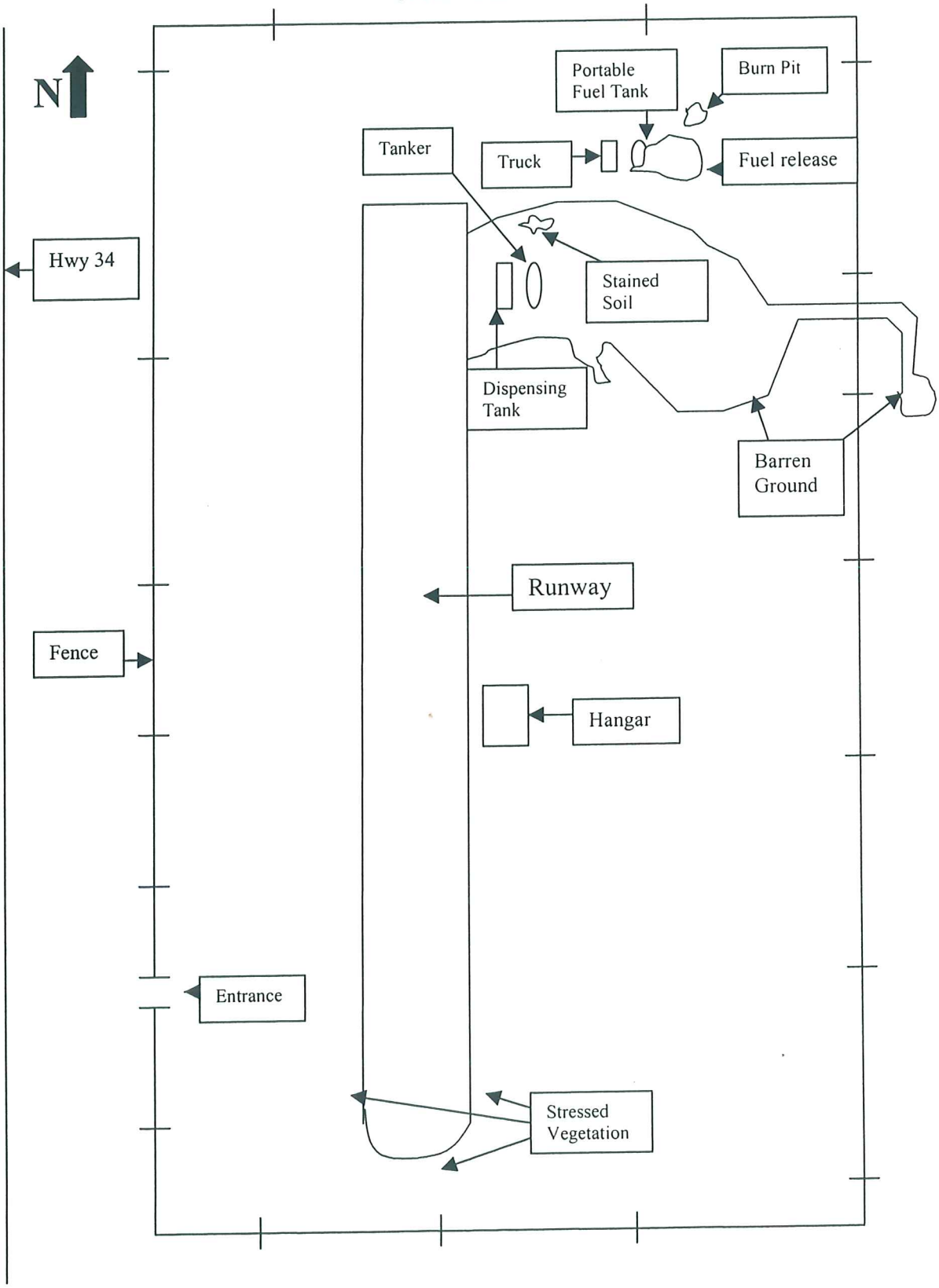
Photo 2
Runway (left foreground), dispensing tank (white), tanker truck (center), utility truck and portable fuel tank trailer (beyond barren ground)

The barren ground previously identified (DEQ, 1994) was possibly caused by chemical release associated with equipment cleaning. The barren ground extends beyond the eastern boundary.

Photo 3
Dispensing Tank and tanker truck

Barren ground beyond the runway extends for several feet and channels through the vegetation. The channeled area clearly delineated by lack of vegetation (Figure 2-2).

Figure 2-2
SITE MAP



3. MIGRATION/EXPOSURE PATHWAYS AND TARGETS

The following sections describe migration/exposure pathways and potential targets within the site's range of influence (Figures 3-1 and 3-2).

3.1 GROUND WATER MIGRATION PATHWAY

Grace Airstrip lies in the northeast portion of Gem Valley. A half-graben, faulted only on the eastern margin, Gem Valley is bordered by Paleozoic sedimentary rocks, mainly carbonates. "Much of the valley floor consists of Cenozoic basalt flows from vents in the southeastern part of the valley and from an extensive volcanic field northeast of the valley" (Zohdy, et al, 1974). A veneer of wind blown sediment (loess) eventually covered the basalt flows. "In Gem Valley, most water is obtained from Pliocene and younger basaltic-rock aquifers. The depth to water in wells ranges from about 10 to about 180 feet. Well yields range from about 30 to about 2,700 gallons per minute " (USGS, 1994).

Several springs are located within 4.0 miles east and southeast from the airstrip. However, the springs lie across the Bear River from the site and do not appear to influence local groundwater behavior.

Precipitation data, recorded from 1907 to 2000, shows the mean annual precipitation for this period was 14.84 inches, the mean annual snowfall was 50.1 inches and the maximum 24-hour precipitation event was 2.09 inches (WRCC, 2002).

There are several drinking water wells within the 4-mile Target Distance Limit (TDL). One well is located approximately 0.9 miles south from the site; four are located 1.25 to 1.5 miles south-southwest from the site; one well is located 2.8 miles northwest from the site; and two wells are located 3.25 and 3.75 miles west from the site (Figure 3-1). The site is located within a wellhead protection area (DEQ, 2002).

3.2 AIR MIGRATION PATHWAY

The nearest residence to the Grace Airstrip is approximately 0.5 miles west from the site. The city of Grace lies 2 miles south from the site and has a population of 990 (USCB, 2002).

The site is comprised of a thin covering (thickness unknown) of loess and fairly compacted and graded soil and gravel on the runway. The likelihood of aerial dispersal from the site appears low.

3.3 SOIL EXPOSURE PATHWAY

Access to the Grace Airstrip is marginally restricted. The site is completely fenced, though ready access is gained via a dirt driveway near the south part of the airport from U.S. Highway 34. No evidence of cattle activity was observed within the airport. However, cattle activity was apparent on the property located adjacent to the eastern fence-line where

off-site channeling had occurred. At the time of the site visit, there were no workers or residences within 200 feet of the site. The nearest residence to the Grace Airstrip is 0.9 miles south from the site. The City of Grace lies 2 miles south from the site and has a population of 990 (USCB, 2002). No schools or day-care facilities are located within 200 feet of the site.

DEQ collected two representative samples of stained soil; one from the site and one off-site near the eastern fence-line (Appendix B). The color of the soil appeared light yellow. Analyses showed higher concentrations of 4,4'DDE and 4,4'DDT in the off-site sample. Analytical results indicate all constituents are well below a 1 x E-6 risk, conservatively assuming an industrial exposure scenario (EPA, 2002).

One area of concern is the release of petroleum product, airplane fuel, to the ground adjacent to the portable tank. The vegetation appeared severely stressed by the release (Photo 4).

Photo 4
Fuel laden portable tank, oily residue on ground (foreground and center)

One Probable Point of Entry (PPE) is infiltration of chemical substances to ground water. Based upon subsurface geology and hydrology of the locale, access to aquifer(s) could be possible.

3.4 SURFACE WATER MIGRATION PATHWAY

The site slopes gently to the south towards the N. Extension Canal. The canal lies approximately 20 yards from the south fenced boundary, but nearly 0.4 miles from the base of operations.

Soil survey data for the site is unavailable, but Zohdy, et al (1974) suggests wind blown material is an integral component. Direct observation revealed a fine-grained sandy loam underlain by fractured basalt (outcrop near canal). Based upon observation during the site visit, moderate to high infiltration rates would be expected.

The maximum 24-hour rainfall event for Grace was 2.09 inches (WRCC, 2002). Based upon the topography, climate and observations at the site, the potential for flooding would appear to be remote.

There are no drinking water intakes within the TDL as the N. Extension Canal traverses west and later south, thereby bypassing the City of Grace. Traversing west, the surface water pathway flows into the Turner Canal at 6.25 miles from the site. Turner Canal continues within the 15-mile TDL for another 8.75 miles to the south.

Commercial and subsistence fishing are not conducted within the surface water TDL. It is not known whether sport fishing is conducted in either the N. Extension or Turner Canals.

The bald eagle (Haliaeetus Leucocephalus) populates the Bear River which lies approximately 0.75 miles east and 1.0 miles south from the site (FWS, 2002). According to the U.S. Fish and Wildlife Service (2002), a large wetland is inventoried within the TDL, approximately 2.5 miles west from the site. Approximately 19.5 acres of wetlands border the N. Extension Canal.

It is expected the surface water be used for crop irrigation and by livestock and wildlife for drinking water. The topography does not suggest an appreciable overland flow towards the canal. Therefore, the likelihood of a release to surface water is remote.

Fig 3-1 Grace Airport Site 4-Mile Radius Map

Grace Airport Site
T & E Locations
Candidate Species
Listed Endangered
Listed Threatened
Species of Concern
Watch Species
Watch/Species of Concern
Experimental Species
T & E (Streams)
Bald Eagle
Harlequin Duck
Trumpeter Swan
Id 303(d) Streams
1998 Delisted 303(d)
1998 303(d) Additions
Current 303(d)
Drinking Water Wells
Mine Site
Landfill
Protected Areas
0 0.5 1 Miles
N

FIGURE 3-2

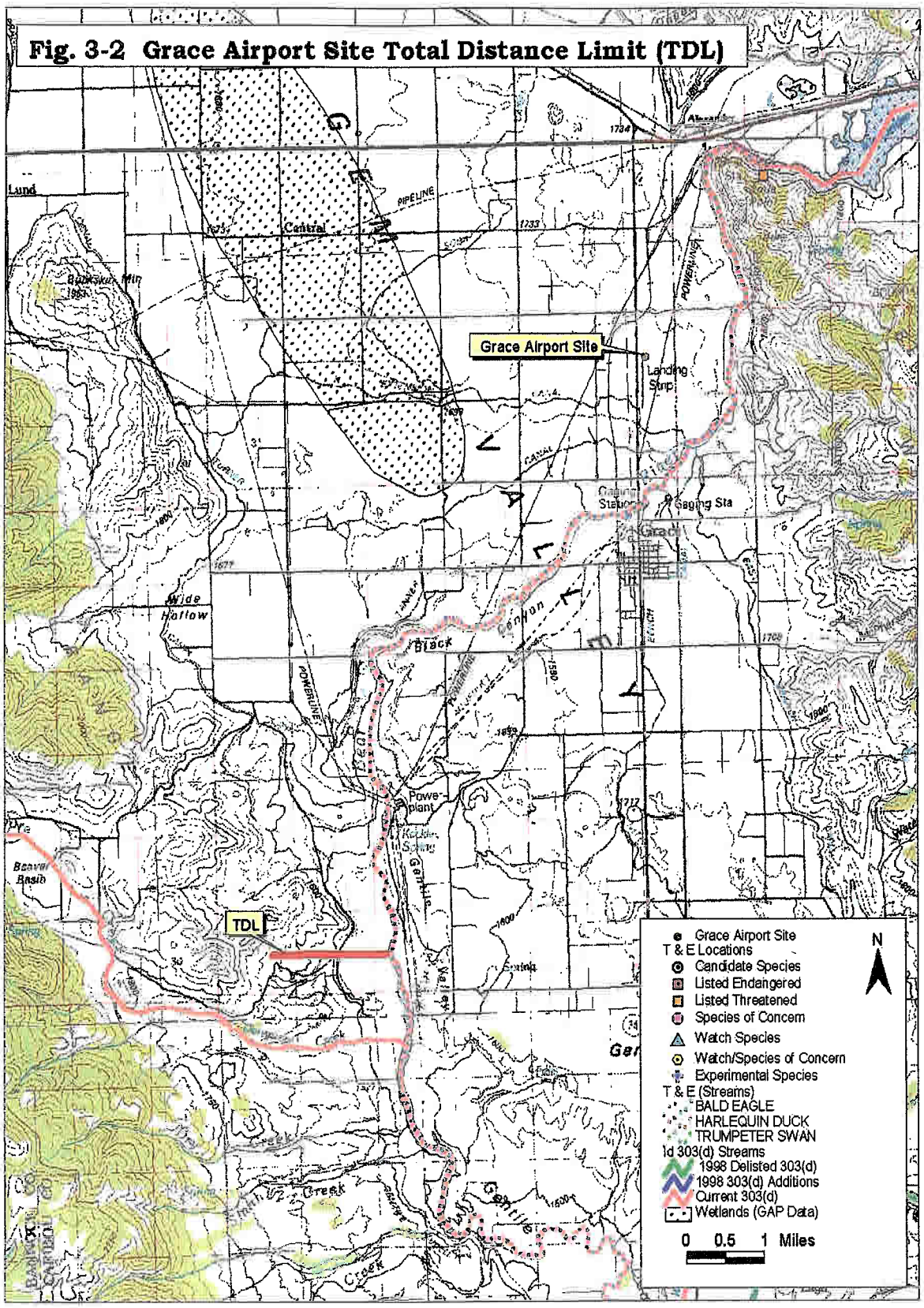


Fig. 3-2 Grace Airport Site Total Distance Limit (TDL)
Grace Airport Site
Landing Strip
TDL
Lund
Central
Wide Hollow
Black Canyon
Gaging Sta
Power plant
Beaver Basin
Gentile
Grace
PIPELINE
POWERLINE
CANAL
Grace Airport Site
T & E Locations
Candidate Species
Listed Endangered
Listed Threatened
Species of Concern
Watch Species
Watch/Species of Concern
Experimental Species
T & E (Streams)
BALD EAGLE
HARLEQUIN DUCK
TRUMPETER SWAN
303(d) Streams
1998 Delisted 303(d)
1998 303(d) Additions
Current 303(d)
Wetlands (GAP Data)
0 0.5 1 Miles
N

REFERENCES

DEQ (Department of Environmental Quality), 2002, Personal Communication from R. Taylor, Technical Services Division.

DEQ (Department of Environmental Quality), September 9, 1994, Investigation Report.

EPA (U.S. Environmental Protection Agency), 2002, Region 9 Preliminary Remediation Goals
http://www.epa.gov/region09/waste/sfund/prg/files/02table.pdf

F&G (Idaho Department of Fish and Game), 2002.
http://www2.state.id.us/fishgame/info/cdc/plants/vasc_plants&status_n-r.htm

FWS, United States Fish and Wildlife Service, 2002.
http://ecos.fws.gov/servlet/TESSWebpageVipListed?code=V&listings=0#E

Simmons, C. D., 2002, Verbal Communication, former Mayor of the City of Grace

USCB (U.S. Census Bureau), 2002.
http://www.census.gov/census2000/states/id.html

United States Fish and Wildlife Service, 2002.
http://wetlands.fws.gov/

USGS (U.S. Geological Survey), 1994, GROUND WATER ATLAS of the UNITED STATES - Idaho, Oregon, Washington, HA-730-H.
http://capp.water.usgs.gov/gwa/ch_h/H-text7.html

WRCC (Western Regional Climate Center), 2002.
http://www.wrcc.dri.edu/htmlfiles/id/id.ppt.ext.html

Zohdy, A.A.R., G.P. Eaton and D.R. Mabey, 1974, Application of Surface Geophysics to Ground-water Investigations, Techniques of Water-Resources Investigations of the United States Geological Survey, Collection of Environmental Data, Book 2.

APPENDIX A

PHOTO LOG

GRACE AIRSTRIP

Photo 1	View to east, old hangar building used as maintenance shed.
Photo 2	View to north, operations area is located at north end of runway, dispensing tank (white), tanker truck (center), utility truck and fuel tank trailer (beyond barren ground).
Photo 3	View to southeast across runway, tanker truck and dispensing tank.
Photo 4	View to north, fuel laden portable tank (left), oily residue on ground (foreground and center).

APPENDIX B

ANALYTICAL DATA

ALCHEM LABORATORIES

Alchem Laboratories, Inc.

104 West 31st Street
Boise, Idaho 83714

Phone (208) 336-1172
FAX (208) 336-7124

Water, Waste Water and Soil Analysis

LABORATORY REPORT

BUREAU OF LABORATORIES
ATTN: WALLY BAKER
2220 OLD PENITENTIARY RD.
BOISE, IDAHO 83712

DATE COLLECTED: 09/25/02
TIME COLLECTED: 16 :38
DATE RECEIVED: 09/27/02
DATE REPORTED: 10/29/02
SAMPLED BY: BRIAN GABER

PROJECT: P.A.
SOURCE: #9-629 GRACE AIRSTRIP
MATRIX: SOIL

PESTICIDES & PCBs by Method 8081
LAB SAMPLE NUMBER - 47023

COMPOUND	METHOD DETECTION LEVEL (µg/kg)	ANALYTICAL RESULTS (µg/kg)
Alpha - BHC	3.35	ND
Aldrin	3.35	ND
Beta - BHC	3.35	ND
Delta - BHC	3.35	ND
Gamma - BHC (Lindane)	3.35	ND
Technical Chlordane	67.0	ND
4,4'-DDD	3.35	ND
4,4'-DDE	3.35	ND
4,4'-DDT	3.35	4.00
Dieldrin	3.35	ND
Endosulfan I	3.35	500.0
Endosulfan II	3.35	69.9
Endosulfan Sulfate	3.35	ND
Endrin	3.35	ND
Endrin Aldehyde	3.35	ND
Endrin Ketone	3.35	ND
Heptachlor	3.35	ND
Heptachlor epoxide	3.35	ND
Methoxychlor	3.35	ND
Toxaphene	67.0	ND
Aroclor-1016	33.5	ND
Aroclor-1221	33.5	ND
Aroclor-1232	33.5	ND
Aroclor-1242	33.5	ND
Aroclor-1248	33.5	ND
Aroclor-1254	33.5	ND
Aroclor-1260	33.5	ND
SURROGATE RECOVERY	ACCEPTANCE LIMITS 70% - 130%	87%

ND = None Detected

Analyst: D. ROUSSELLE
Date Extracted: 10/03/02
Date Analyzed: 10/18/02

Suzanne Howell, Laboratory Manager

ALCHEM LABORATORIES

Alchem Laboratories, Inc.

104 West 31st Street
Boise, Idaho 83714

Phone (208) 336-1172
FAX (208) 336-7124

Water, Waste Water and Soil Analysis

LABORATORY REPORT

BUREAU OF LABORATORIES
ATTN: WALLY BAKER
2220 OLD PENITENTIARY RD.
BOISE, IDAHO 83712

DATE COLLECTED: 09/25/02
TIME COLLECTED: 16 :50
DATE RECEIVED: 09/27/02
DATE REPORTED: 10/29/02
SAMPLED BY: BRIAN GABER

PROJECT: P.A.
SOURCE: #9-630 GRACE AIRSTRIP OFFSITE NEAR FENCE
MATRIX: SOIL

PESTICIDES & PCBs by Method 8081
LAB SAMPLE NUMBER - 47024

COMPOUND	METHOD DETECTION LEVEL (µg/kg)	ANALYTICAL RESULTS (µg/kg)
Alpha - BHC	3.35	ND
Aldrin	3.35	ND
Beta - BHC	3.35	150.0
Delta - BHC	3.35	ND
Gamma - BHC (Lindane)	3.35	ND
Technical Chlordane	67.0	ND
4,4'-DDD	3.35	ND
4,4'-DDE	3.35	19.3
4,4'-DDT	3.35	43.3
Dieldrin	3.35	ND
Endosulfan I	3.35	ND
Endosulfan II	3.35	ND
Endosulfan Sulfate	3.35	ND
Endrin	3.35	ND
Endrin Aldehyde	3.35	ND
Endrin Ketone	3.35	ND
Heptachlor	3.35	ND
Heptachlor epoxide	3.35	ND
Methoxychlor	3.35	ND
Toxaphene	67.0	ND
Aroclor-1016	33.5	ND
Aroclor-1221	33.5	ND
Aroclor-1232	33.5	ND
Aroclor-1242	33.5	ND
Aroclor-1248	33.5	ND
Aroclor-1254	33.5	ND
Aroclor-1260	33.5	ND
SURROGATE RECOVERY	ACCEPTANCE LIMITS 70% - 130%	98%

ND = None Detected

Analyst: D. ROUSSELLE
Date Extracted: 10/03/02
Date Analyzed: 10/22/02

Suzanne Howell, Laboratory Manager