

ALYESKA CONTAMINATED SITES RATING PROGRAM
PHASE I REPORT

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DEFINITIONS

Application: The software program developed to manage data. The application provides an interface between the user and the database which provides for security, documentation, validation, score generation, and a more user friendly interface.

Bolded Text: Bolded text in this report indicates reference to one of the 18 rating criteria (e.g. **Toxicity** indicates the toxicity rating criterion in the database).

Cut Off Score: The rating score a site must achieve to be placed into a particular relative risk category: less than 250 for low, 250 to 375 for medium, and more than 375 for high.

Database Program: The program used to develop the database and application is Microsoft Visual FoxPro 3.0.

Field: The name of a data element in a database table. Each of the 18 criteria are stored in specific named fields. All of the fields in a specific table comprise a row of data.

General Categories: Seven general categories are used in the rating model algorithm to calculate the rating score. Each general category is calculated from one or more rating criteria.

Rating Criterion: One of 18 criteria used to calculate a rating score. Criterion values are assigned by the person performing site rating after review of site information.

Rating Model: The mathematical algorithm and selection criteria used to calculate a rating score.

Rating Model Database: The Visual FoxPro 3.0 database that holds all of the site descriptive information, rating criteria values and justifications, score calculation program, and report formats for the rating model.

Rating Score: The value calculated by use of the rating criteria in the rating model. The Rating Score value has no intrinsic meaning, rather it is a comparative number useful for determining which sites pose relatively greater or lesser risk.

Relative Risk Category: A designation (high, medium, or low relative risk) assigned to each site based on its rating score. The relative risk categories are useful for comparing sites; sites in the low or medium relative risk category pose a lesser potential risk to human health and the environment than sites in the high relative risk category.

Row: All of the fields in a specific table pertaining to one record.

Spill Volume Database: The Visual FoxPro 3.0 database that holds all of the spill substance, spill volume, and spill date information for all spills documented by the BLM database, the Alyeska spill database, and spill information from the JPO library.

Table: A two dimensional matrix in the database which is comprised of fields and rows. The rating model database contains several tables.

EXECUTIVE SUMMARY

OASIS Environmental, Inc. used the Alyeska Contaminated Sites Rating Model to evaluate the relative potential environmental risk associated with historical spills at each of the Alyeska Pipeline Service Company's pipeline construction-era camps. Eighteen camps were rated as part of this effort.

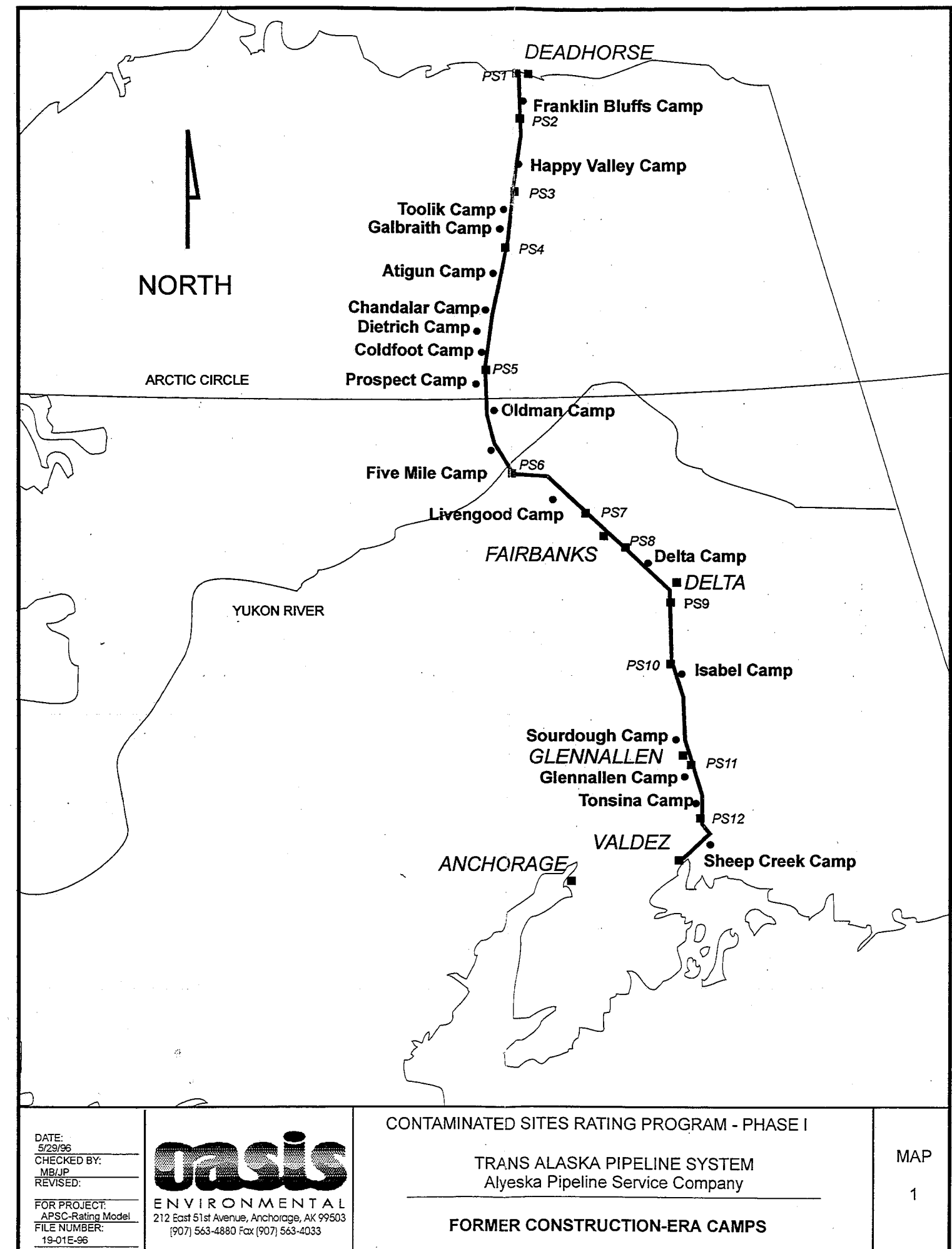
The rating model is a mathematical algorithm which uses input from seven general categories to rate potentially contaminated sites. The seven categories reflect site characteristics such as substance spilled, site history, soil conditions, human use, environmental considerations, land use, and regulatory status. The rating model is programmed into a FoxPro 3.0 database.

The information necessary to rate each former camp came from a number of sources:

- A report of Phase I site assessments of all former construction camps performed by AGRA Earth and Environmental during summer 1995,
- Alyeska internal files,
- ADEC spill database,
- BLM spill database,
- Joint Pipeline Office library,
- Miscellaneous resources (e.g., BLM and ADNR for land use information, Alaska State Climate Center for climate information).

The rating of the former construction camps resulted in a range of scores between 671 and 151. Galbraith Camp earned the highest score, and Tonsina Camp scored the lowest. These scores do not reflect absolute risk, but rather are a means to compare relative risk between different sites.

To assist in management decisions, three relative risk categories have been identified: high relative risk (>375 points), medium relative risk (between 250 and 375 points), and low relative risk (<250 points). Twenty-eight percent (five) of the camps were classified in the high relative risk category. These sites include Galbraith, Prospect, Franklin Bluffs, Toolik, and Happy Valley camps. Thirty-three percent (six) of the camps were classified in the medium relative risk category. These sites include Coldfoot, Chandalar, Atigun, Sourdough, Isabel, and Sheep Creek camps. The remaining thirty-nine percent (seven) of the sites were classified in the low relative risk category. These camps include Five Mile, Old Man, Livengood, Glennallen, Delta, Dietrich, and Tonsina camps.



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CONTAMINATED SITES RATING PROGRAM - PHASE I

TRANS ALASKA PIPELINE SYSTEM
Alyeska Pipeline Service Company

FORMER CONSTRUCTION-ERA CAMPS

MAP

1

1.0 INTRODUCTION

OASIS Environmental, Inc. (OASIS) has evaluated the relative potential environmental risk associated with historical spills at each of the Alyeska Pipeline Service Company (Alyeska) pipeline construction-era camps. The determination of relative potential environmental risk was limited to an evaluation of past practices and does not consider impacts after camp restoration and lease termination. This report, completed under Work Order 96-01E, presents results of Phase I of the Alyeska Contaminated Sites Rating Program.

The camps were evaluated using a rating model developed by EMCON Alaska, Inc. (EMCON) for Alyeska. The rating model calculates a numerical rating score for each camp based on 18 rating criteria. In this report, these 18 criteria are designated by bold text. The purpose of the model is to provide site managers with a tool to evaluate which construction camps pose the greatest potential risk to human health and the environment as a result of past incidents where land or water were contaminated by disposal or spillage of hazardous substances.

1.1 Scope of Work

The following tasks were performed as part of this project:

- Research Alyeska, Alaska Department of Environmental Conservation (ADEC), Federal Bureau of Land Management (BLM), and Joint Pipeline Office (JPO) files for information regarding spills and conditions at the former construction camps
- Document the research process
- Create a file of relevant information for each former camp and temporarily store the files at the OASIS office
- Work with EMCON to update the rating model from FoxPro 2.6 into Visual FoxPro 3.0
- Input information into the rating model to score the sites
- Evaluate results of site rating

1.2 Construction Camps Background Information

Eighteen camps were constructed to accommodate pipeline personnel and provide necessary support during the Trans-Alaska Pipeline System (TAPS) construction. The camps are listed in Table 1, along with their locations and brief site descriptions. Two other camps, Slope Mountain Camp and Ice Cut Hill, were identified by AGRA Earth and Environmental (AGRA) as construction-era camps. These camps were not included in this rating effort for two reasons: (1) no Alyeska land department file was found for either of these camps, and (2) no record of significant spills (greater than 100 gallons) was found for either of these camps. AGRA (1995) identified a 70,000-gallon diesel spill at Slope Mountain Camp; further investigation revealed that this spill occurred at the

Surfcoat Slope Camp, located in the Prudhoe Bay vicinity, and not at the Slope Mountain Camp location identified by AGRA.

Typical activities at the construction camps included: fuel transfer and storage, vehicle maintenance and storage, construction material stockpiling, and personnel lodging. Air strips were associated with most of the construction camps. Fuel was typically stored in bladder tanks within lined, bermed, secondary containment areas. Sanitary waste was typically treated through a physical-chemical sewage plant. Drinking water was typically obtained from groundwater wells. Most of the camps were situated in the close vicinity of a river or stream.

Alyeska's permits for all of the former construction camps have expired, and the camp sites are currently owned by the federal government, the state of Alaska, or private individuals or organizations, as indicated on Table 1. Restoration of the three privately-owned camp sites (Delta, Livengood, and Glennallen) was left to the discretion of the private land owners. The former construction camps on public lands were reclaimed per the Alyeska Erosion Control Plan, EV-002-2B, dated 1974. Reclamation of the camps was approved through the formal "Greensheet process," where "Greensheet" refers to a site-specific restoration plan. Restoration typically consisted of the removal of all above-ground man-made structures and regrading and revegetating the pad. The land owner or responsible agency approved both the reclamation and restoration plan and the reclamation and restoration work prior to terminating Alyeska's temporary use permits at the former construction camps.

1.3 Rating Model Summary

The Alyeska Contaminated Site Rating Model is described in detail in an April 1995 report prepared by EMCON titled *The Alyeska Contaminated Sites Ranking Model Code Book, Version 1.0*. The model is similar to the ADEC Contaminated Sites Ranking Model, which ranks contaminated sites on their present and perceived future impact to the environment and human receptors.

The Alyeska rating model uses input from seven different general categories to rate potentially contaminated sites. Within the general categories are a total of 18 data elements, or rating criteria, used to rate each site. In this report, rating criteria are designated by bold text. The rating score is generated by the following algorithm based on the seven general categories; the categories are defined below the rating score algorithm:

Rating Score =

$$(\text{substance} + \text{history} + \text{soil}) * (\text{human} + \text{environmental} + \text{land use}) * \text{regulatory status}$$

where:

| | | |
|-------------------|---|---|
| substance | = | toxicity * quantity * release * mobility |
| history | = | (multiple release + volume factor) * years since last spill |
| soil | = | soil classification + depth to groundwater + precipitation |
| human | = | access * population |
| environmental | = | (surface water + environmental/recreational) * observed impact |
| land use | = | land use + Alyeska owned |
| regulatory status | = | regulatory status |

The rating model was originally programmed into a FoxPro 2.6 database application. The database application provides data entry screens, database security, and auditing capabilities, in addition to documenting all rating scores generated. As part of this current project, OASIS updated the database application to FoxPro 3.0. The application produced the tables presented in this report.

2.0 RESEARCH PROCESS AND RESULTS

The information necessary to rate each former camp came from a number of sources. Initially, the *Environmental Site Assessments, Former Alyeska Work Camps and Spill Sites Trans Alaska Pipeline System* report prepared by AGRA Earth and Environment (AGRA) was researched. AGRA performed Phase I (non-intrusive) site assessments of all former construction camps and selected other sites along the pipeline during summer 1995. This information provided a baseline set of information.

OASIS investigated inconsistencies and data gaps in the information compiled by AGRA by researching Alyeska internal files, ADEC and BLM databases, and the JPO library. When information useful to the rating project was identified, copies were made and added to a site file currently maintained at the OASIS office. Appendix A provides a detailed summary of the information sources used for this project.

During the summer 1995 site visits, AGRA documented indications of potential recent spills associated with third party use of the former construction camps. For example, surface soil stains that appeared to be recent may be the result of leaks from recreational vehicles or trucks using the former camp pads or access roads. Several of the former camps (e.g., Glennallen) are currently being used by commercial operations that are storing drums of oil or other substances on the site. Because the purpose of this rating model analysis was to evaluate the relative environmental risk associated with Alyeska's use of the former construction camps, any evidence of potential recent environmental impact was not considered when scoring the sites.

OASIS constructed a spill volume database (Spill Volume Database) using the information obtained during the research for this project. The spill volume database is a Foxpro database separate from the rating model database. OASIS obtained copies of spill databases from Alyeska, ADEC, and BLM. The portions of these databases relevant to the former construction camps were combined into a database (Spill Volume Database) with fields such as spill date, spill volume, substance spilled, and comments. Additionally, similar information obtained from the JPO library reports was entered into the spill volume database. The spill information was verified to the extent possible with spill reports obtained from Alyeska Information Center historical microfilm and paper records.

Available and relevant information from the various sources identified above was ultimately used to develop input values for the rating model database. The information sources for each rating criterion are documented in the rating model database, in this report (specifically in Appendix A), and in the hardcopy files currently maintained at the OASIS office.

3.0 SITE RATING REPORTS

OASIS generated three report formats from the rating model database and one additional report from the spill volume database. The first report from the rating model database is titled "Sites List" and is presented as Table 2. The second report is titled "Detailed Rating Scores" and is presented as Table 3. The third report is titled "Sites Documentation Report" and is provided as Appendix B. Appendix C presents a report titled "Construction Camp Spills Greater Than 25 Gallons," which was generated from the spill volume database. Each of these reports is described below. These reports can be readily re-sorted and modified using appropriate database commands.

3.1 Rating Model Database Reports

The Sites List Report (Table 2) lists each site, the associated pipeline milepost location, a brief description, and the rating score. The report is organized from highest score (e.g. sites posing the greatest relative risk) to lowest score (e.g. sites posing the least relative risk).

The Detailed Rating Scores Report (Table 3) lists the Rating Score for each site along with the values for each of the 18 rating criteria, which are the values used to calculate the total score. Table 3 is also organized from highest to lowest score and can be used to easily compare the rating criteria values among the sites.

The Site Documentation Report (Appendix B) presents detailed information used in determining the rating criteria values, which determine the overall site score. This report provides site descriptive information and lists the values and justifications for each of the 18 rating criteria.

3.2 Spill Volume Database Report

The spill volume database report (Appendix C) presents a summary of spills greater than 25 gallons that were documented at each of the construction camps. This report summarizes information from several sources: the BLM spills database, the ADEC spills database, the Alyeska spills database, Alyeska microfilm records, and information from both Alyeska Land Department files and the JPO library.

Generally, the BLM spills database provided the starting point for the spill volume database. This database typically contains only very brief descriptions of the reported spills; therefore, key information is sometimes missing. Additionally, some spill information is incomplete or inaccurate. Records in the BLM spills database were edited, as appropriate, using information gathered from the other sources listed above. In general, spill report information available on microfilm corroborated the BLM spills database records and was used to provide additional detail not available from the BLM database. OASIS edited the information in the BLM database by deleting spills which were duplicates of other reported spills and by adding spills not contained in the original BLM database. In addition, the database listed several very large spills (e.g., a 300,000 gallon "drum leak" at Livengood Camp) that appeared to be erroneous, due to both a lack of other documentation verifying these spills and unlikely circumstances (e.g., a

300,000 gallon drum). These apparently erroneous database entries were not considered when calculating the total spill volume for each site; however, they are noted on the "Site Documentation Report" (Appendix B), under the justification for the **quantity** criterion value.

Where possible, OASIS distinguished between spills in the construction camps and spills near the camps. The BLM database did not make this distinction; information from Alyeska microfilm and paper copy spill reports was used for this purpose. Appendix C contains a summary of all spills reported to have occurred within the camps and those with unknown locations. Spills identified as occurring outside of camp boundaries do not appear on this table. In terms of spill volume, vehicle wrecks are the most significant spill category occurring outside of the camp boundaries. In the BLM database, many of the spills resulting from vehicle wrecks were identified with the construction camp nearest the spill site. These spills are included in the comprehensive Alyeska spill site list but are excluded from the construction camp summary.

The information from the spill volume database was input into the rating model database to generate the values for **spill volume**, **toxicity**, **year**, and **multiple release** rating criteria.

4.0 SUMMARY OF RATING RESULTS

The scores ranged from 671 to 151, with Galbraith Camp scoring the highest and Tonsina Camp scoring the lowest. The many similarities among the former camps are reflected in similar scores for some of the rating criteria. All of the substances spilled are petroleum hydrocarbons, primarily diesel; therefore, the **release** and **mobility** criteria have similar scores for most sites. All of the releases are documented by historical records; therefore, the **release** criterion scores a 1.0 for each site. None of the camps are currently owned or operated by the TAPS owners; therefore, all score a 10 (maximum score) for the **land ownership** criterion. Most of the spills occurred more than ten years ago; therefore, the **years** criterion value is a minimum value for most camps. No active regulatory status is associated with most camps (except Galbraith); therefore, the **regulatory status** criterion for most camps is a minimum value.

The differences among the former camps are reflected in the significantly different scores calculated for some of the rating criteria. The quantities spilled vary significantly among the camps, as does the number of reported releases. Therefore, the **quantity**, **multiple releases**, and **volume factor** criteria vary significantly among the camps. The **population** criterion also varies significantly among camps; several camps have restricted access and no seasonal use, whereas several other camps receive significant recreational or commercial use. Most of the camps have surface water present either within camp boundaries or adjacent to the camp, so the few camps without surface water present score lower in the **surface water** criterion. Four of the former camps received a nonzero score for the **environmental/recreation** criterion. In order for a camp to receive a nonzero score in the **environmental/recreation** criterion, it must meet the criteria for a "Critical terrestrial environment," as defined in 18 AAC 75.630. Although most of the fourteen remaining camps receive some unofficial recreational use, they are not designated environmental or recreational areas and therefore score a zero for **environmental/recreation**.

4.1 High, Medium, and Low Relative Risk Categories

The spread on site rating scores was 520 points; the lowest score was 23 percent of the highest score. For site management and establishment of priorities, three relative potential-risk categories have been identified: high (> 375 points), medium (between 250 and 375 points), and low (<250 points).

The cut-off values were determined both numerically and by visual observation of the data. Figure 1 presents a graphical view of the site rating scores and the high and low rating cut-off values. The high relative risk category cut-off value of 375 points occurs at a break in the slope of the camp score curve. Numerically, approximately the top 28 percent of the site rating scores fall into the high relative risk category. The low relative risk category cut-off value of 250 points corresponds to another break in the slope of the curve. Numerically, approximately the lowest 39 percent of the site rating scores fall into the low relative risk category.

Twenty-eight percent (five) of the sites earned scores of 375 or above; these sites are classified in the high relative risk category. Review of the elements common to these "high relative risk category" sites indicates that a relatively larger population base (whether seasonal or permanent) in combination with on-site surface water and multiple releases of large quantities of substances is critical to calculating a high site score. This observation is consistent with the expected behavior of the model.

Within the high relative risk category, one camp (Galbraith Camp) has a rating between 600 and 700 points, and the other four camps (Prospect, Franklin Bluffs, Toolik, and Happy Valley camps) have ratings between 375 and 500 points. Galbraith Camp is the only camp that has an active regulatory file status; this status causes the subtotal score (447) to be multiplied by a factor of 1.5.

Thirty-three percent (six) of the sites earned scores of at least 250 but less than 350; these sites are classified in the medium relative risk category. Sites in the medium relative risk category generally have one or more individually highly-rated criteria but not the combination of criteria necessary to join the high relative risk category.

Thirty-nine percent (seven) of the sites earned scores under 250; these sites are classified in the low relative risk category. The distinguishing features of these sites include relatively low volume releases and no observed ecological or surface water impact. In addition, these sites are typically not in established environmental/recreation areas.

4.3 Conclusions

The Alyeska Contaminated Sites Rating Model was used to determine the relative potential environmental risk associated with historical spills at each of the TAPS construction-era camps. This project is the first application of the Rating Model, except for the initial model calibration, and the Model functioned well. Only minimal modifications were necessary to the rating criteria definitions to fit all of the parameters specific to this application of the Model. The relative ratings determined by this model correspond well with the qualitative observations made by OASIS staff while researching spills and conditions at the former construction camps.

Note that the scores must be considered in context. A score only has meaning when comparing several sites. Small differences in scores have little meaning in terms of potential risk. Although the cut-off points between the high, medium, and low ratings are based on some physical observations and data trends, the ratings can be adjusted if necessary to ensure that the rating model is a useful tool for determining which sites, if any, warrant further attention. As other sites are added to the database, the cut-off scores may require adjustment.

Table 1: Former Construction Camp Ownership

| Former Construction Camp | Land Owner (at time of camp use) | Land Owner (current) | Current/Planned Use | Owner/Use Information Source |
|--------------------------|----------------------------------|---|--|--|
| Atigun | Federal | BLM | DOT uses site to house equipment; BLM has no recreational use proposals for site | Mike Kleven, BLM (Fairbanks) |
| Chandalar | Federal | BLM | No plans, but land is part of "development node" | Mike Kleven, BLM (Fairbanks) |
| Coldfoot | Federal | State | State DOT&PF has management; camp is being reviewed by Dalton Hwy P&A Board for future development. | Ouina Rutledge, ADNR (Northern Region) |
| Delta | Alyeska | Private (Harry Purcell, Arctic Camps and Equipment) | unknown | Dennis Prendeville, Alyeska AGRA, 1995 |
| Dietrich | Federal | BLM | Access road washed out, BLM has no plans to replace road or use site | Mike Kleven, BLM (Fairbanks) |
| Five Mile | Federal | BLM | Proposed campground, RV dump station. Begin construction summer 96 | Mike Kleven, BLM (Fairbanks) |
| Franklin Bluffs | BLM, then State | State | Multiple users have permits from the state; camp is being reviewed by Dalton Hwy P&A Board for future development. Land has been selected by the NSB. | Ouina Rutledge, ADNR (Northern Region) |
| Galbraith | Federal | BLM | Campground | Mike Kleven, BLM (Fairbanks) |
| Glennallen | Private, Green Construction | Anchorage Community YMCA; *U.S. Bankruptcy Court | unknown | Stan Bronczyk, JPO; * AGRA, 1995 |
| Happy Valley | Federal | State | Transferred from BLM to State in 1992. Multiple users have permits from the state; camp is being reviewed by the Dalton Hwy P&A Board for future development; land has been selected by NSB (unresolved) | Mike Kleven, BLM (Fairbanks); Ouina Rutledge, ADNR (N. Region) |
| Isabel | State | State | Tanana Basin Area Plan designates land use as (primary) public recreation and (secondary) wildlife habitat. | Mike Bennett, ADNR (Anchorage) |
| Livengood | Alyeska | Private (Harry Purcell, Arctic Camps and Equipment) | unknown | Dennis Prendeville, Alyeska AGRA, 1995 |

Table 1: Former Construction Camp Ownership

| Former Construction Camp | Land Owner (at time of camp use) | Land Owner (current) | Current/Planned Use | Owner/Use Information Source |
|--------------------------|----------------------------------|----------------------|---|--------------------------------|
| Old Man | Federal | BLM | No recreational or other development plans | Mike Kleven, BLM (Fairbanks) |
| Prospect | Federal | BLM | Day use/picnic area | Mike Kleven, BLM (Fairbanks) |
| Sheep Creek | State | State | Land designated for "multiple use" with emphasis on recreation by Prince William Sound Plan | Mike Bennett, ADNR (Anchorage) |
| Sourdough | Federal | BLM | unknown | Stan Bronczyk, JPO |
| Tonsina | Federal | Chugach Natives | unknown | Stan Bronczyk, JPO |
| Toolik | Federal | BLM | BLM: designated as "Area of Critical Environmental Concern- Research & Natural Area" | Mike Kleven, BLM (Fairbanks) |

*: Starred land owners indicate disagreement between information sources. The starred land ownership information was provided in the AGRA (1995) report.

BLM: Federal Bureau of Land Management

JPO: Joint Pipeline Office

DOT&PF: State Department of Transportation and Public Facilities

P&A Board : Planning and Advisory Board

ADNR: Alaska Department of Natural Resources

NSB: North Slope Borough

Table 2: Sites List
(sorted by rating score)

| Site Name | Score | Pipeline Milepost | Description |
|----------------------|--------------|--------------------------|---|
| Galbraith Camp | 671 | 138 | Approximately 20 acres (Alignment Sheet 114, but camp is off sheet) |
| Prospect Camp | 478 | 275 | Former Construction Camp; adjacent to the Jim River, 1 mile W of the Dalton Highway (approximately 30 acres). Alignment Sheet 92 (camp is not on sheet, but airport is on AS 91) |
| Franklin Bluffs Camp | 462 | 040 | Former Construction Camp located E of Dalton Highway and approximately 1000 feet W of Sag River (approximately 140 acres plus airstrip). Alignment Sheet 131. |
| Toolik Camp | 412 | 130 | Former Construction Camp; located 2 miles W of pipeline on hill sloping down to the west (approximately 20 acres). Alignment Sheet 116 (camp is not on sheet). |
| Happy Valley Camp | 402 | 081 | Former Construction Camp; part of camp on W side of Dalton Highway, airstrip and subsequent expansions on the E side of Dalton Highway (approximately 20 acres). Alignment Sheet 124. |
| Coldfoot Camp | 336 | 238 | Former Construction Camp; located W of the town of Coldfoot (approximately 30 acres). |
| Chandalar Camp | 292 | 172 | Former Construction Camp; located on the NW side of the Dalton Highway (Alignment Sheet 109) |
| Atigun Camp | 274 | 163 | Former Construction Camp; located on N side of Atigun Pass (Alignment Sheet 111) |
| Sourdough Camp | 260 | 653 | Former Construction Camp; located 100 yards W of Richardson Highway (Alignment Sheet 26) |
| Isabel Camp | 252 | 606 | Former Construction Camp; located 1 mile E of Richardson Highway (approximately 93 acres). Alignment Sheet 34 (but camp is not on sheet). |
| Sheep Creek Camp | 251 | 778 | Former Construction Camp; located 200 feet S of Richardson Highway (Alignment Sheet 5) |

Table 2: Sites List
(sorted by rating score)

| Site Name | Score | Pipeline Milepost | Description |
|------------------|--------------|--------------------------|--|
| Five Mile Camp | 229 | 348 | Former Construction Camp; located 100 yards W of Dalton Highway (approximately 20 acres). Alignment Sheets 78, 79. |
| Old Man Camp | 211 | 301 | Former Construction Camp, located E. of Dalton Highway (Alignment Sheet 86). |
| Livengood Camp | 209 | 397 | Former Construction Camp, located 300 feet N of Manley Hot Springs Road (approximately 40 acres). Alignment Sheet 70. |
| Glennallen Camp | 205 | 689 | Former Construction Camp (also known as Tazlina Camp); located 100 feet W of Richardson Highway (Alignment Sheet 20, but camp is off sheet). |
| Delta Camp | 186 | 533 | Former Construction Camp; located 500 yards E of Richardson Highway (Alignment Sheet 47) |
| Dietrich Camp | 174 | 202 | Former Construction Camp; Located on approximately 30 acres east of the Dietrich River (Alignment Sheet 104) |
| Tonsina Camp | 151 | 731 | Former Construction Camp; located 100 feet W of Richardson Highway (Alignment Sheet 13) |

Table 3: Rating Criteria and Score Values

| Toxicity | Quantity | Release | Mobility | Access | Pop. | Surface Water | Env Rec | Observed Damage | Land Use | Land Owner | Multiple Release | Volume Factor | Years | Soil Class | GW Depth | Precip | Reg Stat |
|---------------------------------|----------|---------|----------|--------|------|---------------|---------|-----------------|----------|------------|------------------|---------------|-------|------------|----------|--------|----------|
| Site Name: Galbraith Camp | | | | | | | | | | | | | | | | | |
| Score: | 671 | | | | | | | | | | | | | | | | |
| 2.00 | 4.00 | 1.00 | 1.00 | 1.50 | 5.00 | 2.00 | 2.00 | 1.00 | 5.00 | 10.00 | 2.00 | 2.00 | 0.10 | 4.00 | 4.00 | 0.50 | 1.50 |
| Site Name: Prospect Camp | | | | | | | | | | | | | | | | | |
| Score: | 478 | | | | | | | | | | | | | | | | |
| 2.00 | 4.00 | 1.00 | 1.00 | 1.50 | 5.00 | 2.00 | 2.00 | 1.50 | 5.00 | 10.00 | 2.00 | 1.00 | 0.10 | 4.00 | 4.00 | 0.50 | 1.00 |
| Site Name: Franklin Bluffs Camp | | | | | | | | | | | | | | | | | |
| Score: | 462 | | | | | | | | | | | | | | | | |
| 2.00 | 4.00 | 1.00 | 1.00 | 2.00 | 3.00 | 3.00 | 0.00 | 1.50 | 5.00 | 10.00 | 5.00 | 1.50 | 0.10 | 5.00 | 4.00 | 0.50 | 1.00 |
| Site Name: Toolik Camp | | | | | | | | | | | | | | | | | |
| Score: | 412 | | | | | | | | | | | | | | | | |
| 2.00 | 3.00 | 1.00 | 1.00 | 2.00 | 3.00 | 3.00 | 2.00 | 1.50 | 2.50 | 10.00 | 2.00 | 1.70 | 0.10 | 5.00 | 4.00 | 0.50 | 1.00 |
| Site Name: Happy Valley Camp | | | | | | | | | | | | | | | | | |
| Score: | 402 | | | | | | | | | | | | | | | | |
| 2.00 | 3.00 | 1.00 | 1.00 | 2.00 | 5.00 | 2.00 | 0.00 | 1.00 | 5.00 | 10.00 | 2.00 | 2.20 | 0.10 | 4.00 | 4.00 | 0.50 | 1.00 |
| Site Name: Coldfoot Camp | | | | | | | | | | | | | | | | | |
| Score: | 336 | | | | | | | | | | | | | | | | |
| 2.00 | 2.00 | 1.00 | 1.10 | 1.00 | 5.00 | 2.00 | 0.00 | 1.00 | 5.00 | 10.00 | 2.00 | 1.80 | 0.10 | 5.00 | 4.00 | 1.50 | 1.00 |
| Site Name: Chandalar Camp | | | | | | | | | | | | | | | | | |
| Score: | 292 | | | | | | | | | | | | | | | | |
| 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 5.00 | 2.00 | 0.00 | 1.00 | 2.50 | 10.00 | 2.00 | 2.90 | 0.10 | 5.00 | 5.00 | 0.50 | 1.00 |
| Site Name: Aitgun Camp | | | | | | | | | | | | | | | | | |
| Score: | 274 | | | | | | | | | | | | | | | | |
| 2.00 | 2.00 | 1.00 | 1.00 | 1.50 | 3.00 | 2.00 | 0.00 | 1.00 | 2.50 | 10.00 | 2.00 | 1.90 | 0.50 | 5.00 | 3.00 | 0.50 | 1.00 |

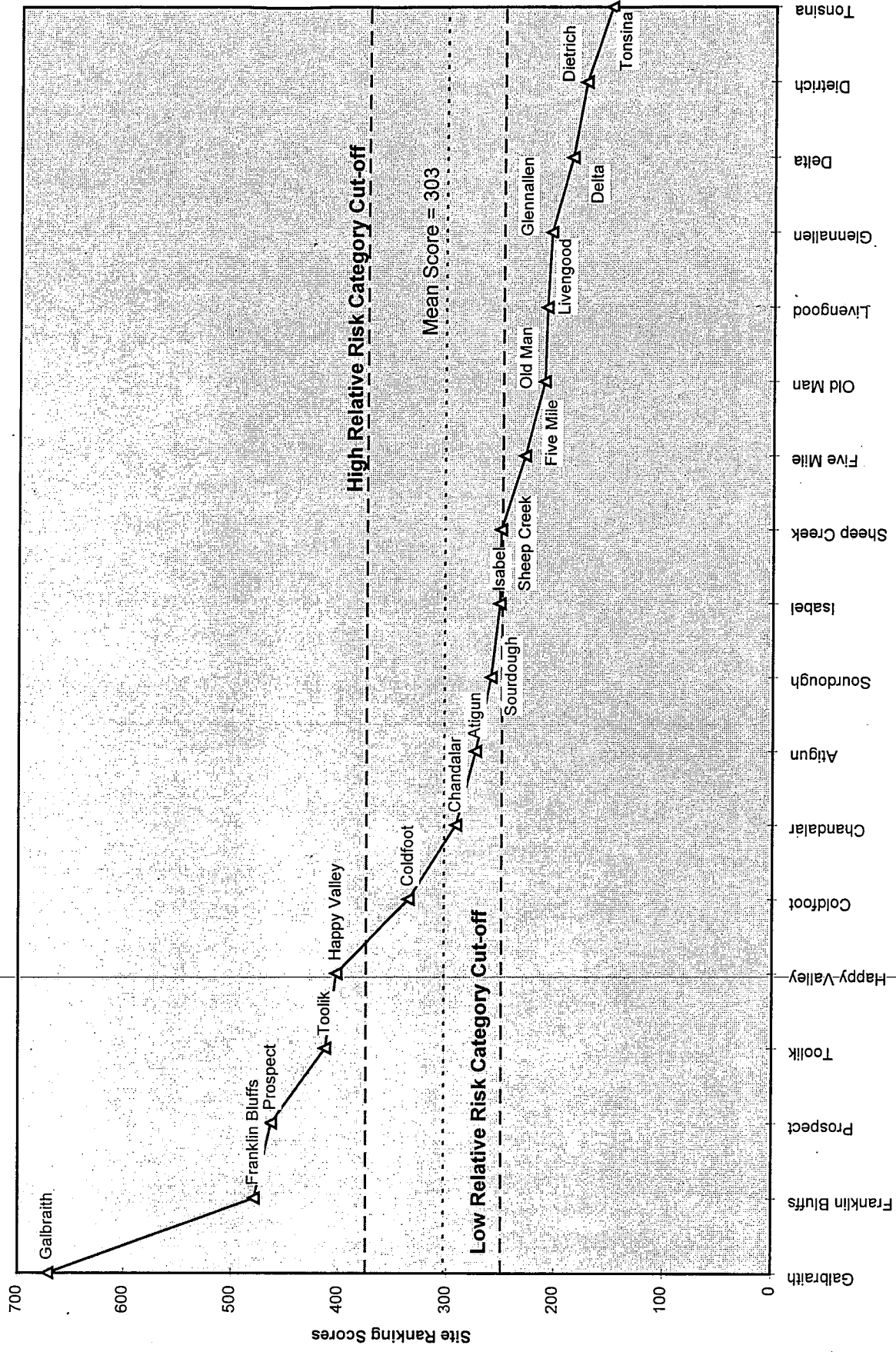
Table 3: Rating Criteria and Score Values

| Toxicity | Quantity | Release | Mobility | Access | Pop. | Surface Water | Env Rec | Observed Damage | Land Use | Land Owner | Multiple Release | Volume Factor | Years | Soil Class | GW Depth | Precip | Reg Stat |
|-----------------------------|----------|---------|----------|--------|------|---------------|---------|-----------------|----------|------------|------------------|---------------|-------|------------|----------|--------|----------|
| Site Name: Sourdough Camp | | | | | | | | | | | | | | | | | |
| Score: | 260 | | | | | | | | | | | | | | | | |
| 2.00 | 2.00 | 1.00 | 1.00 | 1.50 | 3.00 | 2.00 | 0.00 | 1.00 | 2.50 | 10.00 | 1.00 | 1.30 | 0.10 | 4.00 | 4.00 | 1.50 | 1.00 |
| Site Name: Isabel Camp | | | | | | | | | | | | | | | | | |
| Score: | 252 | | | | | | | | | | | | | | | | |
| 2.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 0.00 | 1.00 | 2.50 | 10.00 | 1.50 | 6.30 | 0.10 | 4.00 | 5.00 | 1.50 | 1.00 |
| Site Name: Sheep Creek Camp | | | | | | | | | | | | | | | | | |
| Score: | 251 | | | | | | | | | | | | | | | | |
| 2.00 | 2.00 | 1.00 | 1.00 | 0.00 | 0.00 | 2.00 | 0.00 | 1.00 | 2.50 | 10.00 | 2.00 | 1.70 | 0.10 | 4.00 | 4.00 | 5.00 | 1.00 |
| Site Name: Five Mile Camp | | | | | | | | | | | | | | | | | |
| Score: | 229 | | | | | | | | | | | | | | | | |
| 2.00 | 2.00 | 1.00 | 1.00 | 1.50 | 5.00 | 0.00 | 2.00 | 1.00 | 5.00 | 10.00 | 2.00 | 1.80 | 0.10 | 1.50 | 3.00 | 0.50 | 1.00 |
| Site Name: Old Man Camp | | | | | | | | | | | | | | | | | |
| Score: | 211 | | | | | | | | | | | | | | | | |
| 2.00 | 2.00 | 1.00 | 1.00 | 1.50 | 3.00 | 0.00 | 0.00 | 1.00 | 2.50 | 10.00 | 5.00 | 4.70 | 0.10 | 4.00 | 3.00 | 0.50 | 1.00 |
| Site Name: Livengood Camp | | | | | | | | | | | | | | | | | |
| Score: | 209 | | | | | | | | | | | | | | | | |
| 2.00 | 1.00 | 1.00 | 1.00 | 1.00 | 5.00 | 2.00 | 0.00 | 1.00 | 2.50 | 10.00 | 1.00 | 1.60 | 0.10 | 5.00 | 3.00 | 0.50 | 1.00 |
| Site Name: Glennallen Camp | | | | | | | | | | | | | | | | | |
| Score: | 205 | | | | | | | | | | | | | | | | |
| 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 5.00 | 2.00 | 0.00 | 1.00 | 5.00 | 10.00 | 2.00 | 1.20 | 0.10 | 1.50 | 3.00 | 0.50 | 1.00 |
| Site Name: Delta Camp | | | | | | | | | | | | | | | | | |
| Score: | 186 | | | | | | | | | | | | | | | | |
| 2.00 | 1.00 | 1.00 | 1.00 | 0.00 | 5.00 | 2.00 | 0.00 | 1.00 | 2.50 | 10.00 | 1.50 | 1.80 | 0.10 | 5.00 | 5.00 | 0.50 | 1.00 |

Table 3: Rating Criteria and Score Values

| Toxicity | Quantity | Release | Mobility | Access | Pop. | Surface Water | Env Rec | Observed Damage | Land Use | Land Owner | Multiple Release | Volume Factor | Years | Soil Class | GW Depth | Precip | Reg Stat |
|--------------------------|----------|---------|----------|--------|------|---------------|---------|-----------------|----------|------------|------------------|---------------|-------|------------|----------|--------|----------|
| Site Name: Dietrich Camp | | | | | | | | | | | | | | | | | |
| Score: | 174 | | | | | | | | | | | | | | | | |
| 2.00 | 2.00 | 1.00 | 1.00 | 1.00 | 0.00 | 2.00 | 0.00 | 1.00 | 2.50 | 10.00 | 2.00 | 3.00 | 0.10 | 4.00 | 3.00 | 0.50 | 1.00 |
| Site Name: Tonsina Camp | | | | | | | | | | | | | | | | | |
| Score: | 151 | | | | | | | | | | | | | | | | |
| 2.00 | 2.00 | 1.00 | 1.00 | 1.50 | 1.00 | 0.00 | 0.00 | 1.00 | 2.50 | 10.00 | 1.50 | 1.80 | 0.10 | 4.00 | 2.00 | 0.50 | 1.00 |

Figure 1: Former Construction Camp Scores



Appendix A - Summary of Information Sources

**Summary of Information Sources
Former Construction Camps**

| Source | Contact | Phone | Information Available/Received | Relevant Contents | Action |
|------------------------------------|----------------------------------|----------|--|--|--|
| AGRA Earth and Environmental | Kevin White (Project Manager) | 276-6480 | Reference (1) | Summaries of spill information collected by AGRA. AGRA visited each former construction camp during summer 1995 and recorded their observations in the report. | OASIS borrowed a copy of the report from the Alyeska Environment Dept. Site summary pages were copied. OASIS noted some discrepancies in spill volumes, and attempted to resolve these through other data sources. |
| EMCON Alaska, Inc. | Carl Benson or Cal Kerr | 562-3452 | Reference (2) | Explanation of the Alyeska Contaminated Site Ranking Model | |
| JPO Library | Kate Munson | 271-4390 | JPO (BLM) Construction Camp Spill Files -- References (3 through 8) | Copies of spill reports, compiled spill information. Spill files are incomplete but contain some very useful information. | OASIS reviewed the spill files. Relevant documents were copied. Spills were input into the OASIS spill volume database (in FoxPro). |
| Alyeska Spill Database | Ingrid Gadpaille | 265-8981 | APSC oil spills compiled into a database (1977 through 1989) | Spill date, location, amount, type, explanation. However, most construction camp spills were prior to 1977. | OASIS received hardcopy printout of database, dated 8/23/95. Relevant spills input into the OASIS spill volume database (in FoxPro). |
| Alyeska Land Dept. Files | Cindy Wick (Legal Dept.) | 265-8294 | One file for each former construction camp | Most contents were not relevant: typical contents include lease agreements, site plans, site restoration plans, water and wastewater permits. | OASIS received complete copies of the land files for 3 camps: Toolik, Prospect, and Happy Valley. OASIS reviewed the remaining land files and copied relevant documents. |
| Alyeska Engineering Dept. Files | Mike Fitzpatrick | 265-8498 | Geotechnical logs for pipeline/road construction | Soil type information | OASIS reviewed the geotechnical logs and copied relevant logs. |
| Alyeska Information Center Records | Margaret Byrum | 265-8332 | Spill reports and correspondence available on microfilm | M. Byrum searched the microfilm index system for documents pertaining to "oil spill" and retrieved a list of over 1400 documents | OASIS reviewed over 900 documents of the 1400 document list. Information relevant to construction camp spills was copied, filed, and inserted into the spill database. |

**Summary of Information Sources
Former Construction Camps**

| Source | Contact | Phone | Information Available/Received | Relevant Contents | Action |
|-----------------------------------|----------------|----------|---|--|---|
| Alaska Information Center Records | Margaret Byrum | 265-8332 | Spill reports located in Records Storage Box # 509110 (Otis Webb's files) | Files pertaining to "Major Oil Spills (Construction Era)", including: Galbraith, Slope Camp, Franklin Bluffs, Toolik, and Prospect. | OASIS copied maps and relevant information from these files. |
| Alaska Information Center Records | Margaret Byrum | 265-8332 | Spill reports located in Records Storage Box # 509110 (Otis Webb's files) | Oil Spill Tally Log (43 page log of oil spills between 8/71 and 4/21/77) | OASIS copied the Oil Spill Tally Log. |
| BLM - Fairbanks | Mike Kleven | 474-2317 | Proposed land use for northern former construction camps | BLM is planning recreation area development of several northern former construction camps. | OASIS completed verbal communication records of information. |
| JPO - BLM | Mike Wrabetz | 271-4336 | BLM Oil Spill Database | Spill date, location, amount, substance, reason for all spills reported to BLM during and after pipeline construction. Useful information, but cryptic and sources are not referenced. Also several "suspect" large volume spills are noted in database. | OASIS received a hard copy printout of database and scanned the pre-1980 data into a FoxPro database. Data were compiled into the OASIS spill volume database and obvious errors were edited. |
| JPO - BLM | Stan Bronczyk | 271-4331 | Current Land Ownership Status for former construction camps | | OASIS received a fax from Mr. Bronczyk listing the current land ownership status for the former construction camps. |
| ADEC | Gail Volt | 269-7557 | ADEC Oil Spill Database | Spill date, location, amount, substance for all spills reported to the ADEC. The database essentially contains data from 1980 to present. | OASIS obtained a digital copy of the database and loaded it into FoxPro. Data from this database were not included in the OASIS spill volume database. |
| Alaska State Climate Center | D. Pollard | 257-2737 | <i>Alaska Climate Summaries -- Reference</i> (9) | Rainfall summaries for all state weather stations through 1987. | OASIS purchased a copy of the Alaska Climate Summaries document. |

**Summary of Information Sources
Former Construction Camps**

| Source | Contact | Phone | Information Available/Received | Relevant Contents | Action |
|-------------------------------------|--------------------------------|----------------|---|-------------------|---|
| ADNR - Division of Land (N. Region) | Anna Plager, Ouina Rutledge | 1-907-451-2700 | Proposed Land Use for State-owned former construction camps | | OASIS received a letter report re: plans for F. Bluffs, Happy Valley, Slope Mtn., Coldfoot, Livengood, and Isabel Pass camps. |

List of References **Summary of Information Sources, Former APSC Construction Camps**

| Ref. # | Report Title | Date | Author | Report # |
|--------|---|-------|---|---|
| 1 | Environmental Site Assessments of Former Alyeska Work Camps and Release Sites of the Trans Alaska Pipeline | 10/95 | AGRA Earth and Environmental | |
| 2 | The Alyeska Contaminated Sites Ranking Model Code Book | 4/95 | EMCON Alaska, Inc. | |
| 3 | Letter to Mr. Edwin A. Kuhn (Northwest Alaskan Pipeline Company) from Charles E. Behlke, State Pipeline Coordinator | 4/81 | Charles E. Behlke, State Pipeline Coordinator | |
| 4 | Letter to Mr. A. Kohl, Bureau of Land Management; re: Monitoring and Rehabilitation of Camp Oil Spills | 11/79 | F. R. Rischer, Alyeska Pipeline Service Company | |
| 5 | An Analysis of the Problem of Oil Spills Associated with Construction of the Trans-Alaska Oil Pipeline | | Max C. Brewer | |
| 6 | Observations on the Environmental Monitoring and Surveillance of the Alyeska or Trans-Alaska Pipeline | 6/78 | D. G. Wright, Department of Fisheries and the Environment, Winnipeg, Manitoba | Fisheries and Marine Service Manuscript Report No. 1451 |
| 7 | Construction-related Oil Spills Along Trans-Alaska Pipeline | 1977 | N. Kavanagh and A. Townsend, Bureau of Land Management | Special Report No. 15 |
| 8 | Memorandum to Jerry Kreithner; re: Oil Spill Summary, 1975 | 7/75 | Doug Parker, State of Alaska | |
| 9 | Alaska Climate Summaries, Second Edition | 1989 | Lynn D. Leslie, Arctic Environmental Information and Data Center | Alaska Climate Center Technical Note No. 5 |
| 10 | Tanana Basin Area Plan for State Lands | 1991 | ADNR, ADF&G | |
| 11 | Prince William Sound Area Plan for State Lands | 1986 | ADNR, ADF&G | |

Appendix B - Site Documentation Report

Site Documentation Report

Site Description

| | |
|---|-----------------------|
| Site Name: Galbraith Camp Site Number: 000027 Milepost: 138 Location: S 26 and 35, T 11 S, R 11 E, Umiat Meridian Site Description: Approximately 20 acres (Alignment Sheet 114, but camp is off sheet) Score: 671 | Business Unit: |
|---|-----------------------|

Rating Criteria and Justification

| | | |
|--------------------|-------|---|
| Toxicity: | 2.00 | Reported spilled fuel is primarily diesel (small quantities of gasoline and jet fuel). |
| Quantity: | 4.00 | Quantity is difficult to determine. Approximately 122,300 gallons (62,500 gallons plus est. 40,000, plus other smaller spills). |
| Release: | 1.00 | Releases documented by BLM, ADEC, or APSC historical files. |
| Mobility: | 1.00 | Diesel. |
| Access: | 1.50 | Unrestricted site access. Surface contamination removed during summer 1995 (AGRA, 1995). |
| Pop: | 5.00 | BLM is planning to use site as a campground. |
| SW: | 2.00 | Camp Creek runs adjacent to Galbraith Camp, feeds into Galbraith Lake. No surface contamination noted (AGRA, 1995). |
| Env/Rec: | 2.00 | Site is planned to be an environmental/recreation area (BLM campground). |
| Obs Dam: | 1.00 | None observed, area disrupted during excavation of contaminated soil summer 1995 (AGRA, 1995). |
| Land Use: | 5.00 | Land is planned for use as a BLM campground. |
| Land Own: | 10.00 | Not Alyeska (Federally owned, BLM managed (JPO, 1995)). |
| Mul Rel: | 2.00 | 8 releases greater than or equal to 100 gallons are documented for Galbraith Camp. |
| Vol Fac: | 2.00 | Total estimated volume spilled = 122,200 gallons; largest single spill = 62,500 gallons. |
| Years: | 0.10 | 1977 |
| Soil Class: | 4.00 | Primarily sandy gravel with silt and silty sand with gravel (EMCON boring logs SB-1 through SB-20, EMCON, 1995). |
| GW Depth: | 4.00 | Meltwater layer present on top of permafrost, at a depth of less than 15 feet. |
| Precip: | 0.50 | 8.3 inches/year (Galbraith Lake Camp Weather Station). |
| Reg Stat: | 1.50 | Is an active ADEC contaminated site. |

Site Documentation Report

Site Description

| | |
|---|-----------------------|
| Site Name: Prospect Camp Site Number: 000013 Milepost: 275 Location: S 25 and 26, T 23 N, R 15 W, Fairbanks Meridian Site Description: Former Construction Camp; adjacent to the Jim River, 1 mile W of the Dalton Highway (approximately 30 acres). Alignment Sheet 92 (camp is not on sheet, but airport is on AS 91) Score: 478 | Business Unit: |
|---|-----------------------|

Rating Criteria and Justification

| | | |
|--------------------|-------|---|
| Toxicity: | 2.00 | Most recorded spills are diesel fuel, with small quantities of gasoline (200 gallons), hydraulic fluid, and jet fuel recorded. |
| Quantity: | 4.00 | Total quantity spilled = approx. 48,160 gallons. BLM database lists 220,000 gallon diesel spill "dropped from helicopter" which is not included in this total. Evidence in APSC files of extensive cleanup action regarding 40,000 gallon spill (intercept dikes, fuel and impacted snow/gravel dug up and burned). |
| Release: | 1.00 | Spills documented in BLM, ADEC, and/or APSC historical records. |
| Mobility: | 1.00 | Diesel. |
| Access: | 1.50 | Unrestricted access, no surface contamination found (AGRA, 1995). |
| Pop: | 5.00 | No permanent residents; site receives heavy seasonal recreational use (AGRA, 1995). |
| SW: | 2.00 | Camp is located adjacent to Jim River. Former borrow pits are now ponds. Slight sheen present at breach in road between Jim River and lagoon (AGRA, 1995). |
| Env/Rec: | 2.00 | BLM land. BLM is proposing the site as a day use area with picnic, parking, group picnic facilities. The site may be proposed as a campground in the future. |
| Obs Dam: | 1.50 | 1 area of stressed vegetation observed, maybe a result of contamination? (AGRA, 1995). |
| Land Use: | 5.00 | Site receives heavy recreational use and is planned for development into a picnic/recreational area. |
| Land Own: | 10.00 | Not Alyeska (Federally owned, managed by BLM (JPO, 1995)). |
| Mul Rel: | 2.00 | Approximately 4 spills greater than or equal to 100 gallons. |
| Vol Fac: | 1.00 | Total volume spilled = approximately 48,290 gallons; largest diesel spill = 40,000 gallons, largest gasoline spill = 47,500 gallons. |
| Years: | 0.10 | 1978 |
| Soil Class: | 4.00 | Sandy gravel (MS 91-3.1-1), sandy silt (TH65-8). |
| GW Depth: | 4.00 | Encountered water at 9' bgs (MS 91-3.1-1). |
| Precip: | 0.50 | 13.68 inches/year (Prospect Creek Camp Weather Sta; 11 year average). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

| | |
|---|-----------------------|
| Site Name: Franklin Bluffs Camp Site Number: 000008 Milepost: 040 Location: NE 1/4, S 9, T 4 N, R 14 E, Umat Meridian Site Description: Former Construction Camp located E of Dalton Highway and approximately 1000 feet W of Sag River (approximately 140 acres plus airstrip). Alignment Sheet 131. Score: 462 | Business Unit: |
|---|-----------------------|

Rating Criteria and Justification

| | | |
|--------------------|-------|---|
| Toxicity: | 2.00 | Recorded spills are primarily diesel (also jet fuel, hydraulic fluid, and "other"); AGRA observed a "solvent-like" smell on-site (AGRA, 1995). |
| Quantity: | 4.00 | Total of 45,820 gallons spilled (reported). Intercept trenches constructed for cleanup of 1975 30,000 gallon spill. |
| Release: | 1.00 | Spills documented in BLM, ADEC, APSC historical documents. Remedial action unknown. |
| Mobility: | 1.00 | Diesel. |
| Access: | 2.00 | Unrestricted site access; site is directly accessible from Dalton Highway. On-site surface water exhibits a sheen when disturbed (AGRA, 1995). |
| Pop: | 3.00 | No permanent population present. Site is used by ADOT&PF for gravel storage and by Western Geophysical for equipment maintenance and storage. |
| SW: | 3.00 | Sag River is approximately 1000 feet E of camp. Ponded water present on-site; sheen evident when sediments are disturbed (AGRA, 1995). |
| Env/Rec: | 0.00 | Not an environmental/recreation area. |
| Obs Dam: | 1.50 | Evidence of sheen in ponded surface water, petroleum odor in soils (AGRA, 1995). |
| Land Use: | 5.00 | Former camp is mostly vacant. ADOT&PF has gravel storage on-site, DNR has experimental revegetation plot, and Western Geophysical uses the airstrip and aircraft parking apron for equipment maintenance and storage (AGRA, 1995). Land has been selected by the NSB. |
| Land Own: | 10.00 | Not Alyeska. Site is owned by State of Alaska, part of it is leased to Western Geophysical (AGRA, 1995). |
| Mul Rel: | 5.00 | 14 reported spills greater than or equal to 100 gallons; 4 intercept trenches noted along W margin of site (summer 1995, AGRA). |
| Vol Fac: | 1.50 | Total estimated volume spilled = 45,360 gallons; largest single spill = 30,000 gallons. |
| Years: | 0.10 | 1982 |
| Soil Class: | 5.00 | Sandy gravel with scattered cobbles; bedrock below 23' bgs (TH 46-5). |
| GW Depth: | 4.00 | Little visible ice 0-29' bgs (TH 46-5), no dtw recorded. Bedrock at 23' bgs. Water source was 20' infiltration gallery (Alyeska land files), so depth to water is probably less than 15'. |
| Precip: | 0.50 | 3.76 inches/year (Franklin Bluff weather station). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

| | |
|--|-----------------------|
| Site Name: Toolik Camp Site Number: 000023 Milepost: 130 Location: S 21 and 28, T 9 S, R 11 E, Umiat Meridian Site Description: Former Construction Camp; located 2 miles W of pipeline on hill sloping down to the west (approximately 20 acres). Alignment Sheet 116 (camp is not on sheet). Score: 412 | Business Unit: |
|--|-----------------------|

Rating Criteria and Justification

| | | |
|--------------------|-------|---|
| Toxicity: | 2.00 | Most recorded spills are diesel releases, small quantities of gasoline, solvent, methanol, and hydraulic fluid also reported. |
| Quantity: | 3.00 | Quantity of release is uncertain due to high uncertainty in reporting. May 1974 spill: APSC est. 100 gallons, ADEC est. 5,000-20,000 gallons. August 1975: 75-100 gallons per day of diesel spilled for unknown duration. Estimate 14,900 gallons released. |
| Release: | 1.00 | Releases documented in ADEC, BLM, or APSC historical files. |
| Mobility: | 1.00 | Diesel. |
| Access: | 2.00 | Unrestricted site access. Airstrip not usable. Black surface seep observed on-site (AGRA, 1995). |
| Pop: | 3.00 | No permanent residents. Camp is being used by third parties: including recreational campers, and UAF research personnel were working nearby(AGRA, 1995). |
| SW: | 3.00 | Toolik Lake and numerous swales and ponds located on and near camp. Reddish-brown stained gravel observed in site surface water, ponds had similar coloration and sheen. |
| Env/Rec: | 2.00 | Area designated by BLM as an "Area of Critical Environmental Concern - Research and Natural Area (RNA)." RNA encompasses 86,000 acres, and Toolik camp pad is approximately in the middle of it. |
| Obs Dam: | 1.50 | Observed surface soil staining and petroleum-based sheens (presumably) in ponds on North and West parts of site. Distressed vegetation observed around ponds. Black surface seep observed (AGRA, 1995). |
| Land Use: | 2.50 | Some third party use observed (AGRA, 1995). |
| Land Own: | 10.00 | Not Alyeska (Federally owned, BLM managed (JPO, 1995)). |
| Mul Rel: | 2.00 | 6 spills greater than or equal to 100 gallons. |
| Vol Fac: | 1.70 | Total estimated spill volume=14,900 gallons; largest single release unknown: estimate 8,590 gallons. |
| Years: | 0.10 | 1976 |
| Soil Class: | 5.00 | Estimate: sandy gravelly soil. |
| GW Depth: | 4.00 | Estimate: Less than 15 feet. |
| Precip: | 0.50 | 8.3 inches/year (Galbraith Lake Camp Weather Station). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

Site Name: Happy Valley Camp

Business Unit:

Site Number: 000025

Milepost: 081

Location: S 30, T 3 S, R 14 E, Umiat Meridian

Site Description: Former Construction Camp; part of camp on W side of Dalton Highway, airstrip and subsequent expansions on the E side of Dalton Highway (approximately 20 acres). Alignment Sheet 124.

Score: 402

Rating Criteria and Justification

| | | |
|--------------------|-------|--|
| Toxicity: | 2.00 | Most reported spills are diesel, also small quantities of jet fuel, motor oil, and antifreeze reported. |
| Quantity: | 3.00 | Total of 18,000 gallons documented by spill reports |
| Release: | 1.00 | Releases documented by BLM, ADEC, or APSC historical files |
| Mobility: | 1.00 | Diesel |
| Access: | 2.00 | Access is unrestricted. There is some evidence of surface soil staining but no indication whether staining is associated with APSC spills (AGRA, 1995). |
| Pop: | 5.00 | No permanent population. Intensive seasonal use. UAF had field camp at site during summer 1995, and airstrip and apron used by various outfitters (AGRA, 1995). |
| SW: | 2.00 | Happy Valley Creek is located within approximately 100 feet of the camp. No evidence of surface water impact (AGRA, 1995). |
| Env/Rec: | 0.00 | Not an environmental/recreation area. |
| Obs.Dam: | 1.00 | None observed (AGRA, 1995). |
| Land Use: | 5.00 | Land was transferred from the BLM to the State in 1992. The North Slope Borough has requested the land, but their request has been held up. Future status unknown. |
| Land Own: | 10.00 | Not Alyeska (owned by state of Alaska but has also been selected by the North Slope Borough (BLM, 1995)). |
| Mul Rel: | 2.00 | 5 releases greater than or equal to 100 gallons are recorded for this camp. |
| Vol Fac: | 2.20 | Total estimated volume spilled = 17,300 gallons; largest single spill = 8000 gallons in 1973. Some evidence of intercept trenches was found (AGRA, 1995), and APSC files have record of cleanup for some spills. |
| Years: | 0.10 | 1978 |
| Soil Class: | 4.00 | Estimate: gravel, sand, silt. |
| GW Depth: | 4.00 | Estimate: less than 15 feet. |
| Precip: | 0.50 | 6.91 inches/year (Happy Valley Camp Weather Sta, 8 year record). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

| | |
|---|-----------------------|
| Site Name: Coldfoot Camp Site Number: 000009 Milepost: 238 Location: S 16, T 28 N, R 12 W, Fairbanks Meridian Site Description: Former Construction Camp; located W of the town of Coldfoot (approximately 30 acres). Score: 336 | Business Unit: |
|---|-----------------------|

Rating Criteria and Justification

| | | |
|--------------------|-------|--|
| Toxicity: | 2.00 | Most reported spills are diesel, largest spill is JP-4. |
| Quantity: | 2.00 | A total of approximately 8,980 gallons of spills are recorded. |
| Release: | 1.00 | Spills documented in ADEC, BLM, or APSC historical records. |
| Mobility: | 1.10 | JP-4, Diesel. |
| Access: | 1.00 | Part of camp is currently a fenced DOT&PF compound. Also, equipment owned by a private citizen is stored on site. No visible surface impact, but 5 2,000-pound soil bags were staged on-site (AGRA, 1995). |
| Pop: | 5.00 | Half of former camp is used by third parties. Fenced DOT&PF camp on site, UAF Archaeology Dept. excavating former building foundations. Hotel across the street, state fish & wildlife officer and state trooper beside the airstrip (AGRA, 1995). |
| SW: | 2.00 | Camp bordered by Slate Creek and Koyukuk River. No visible impact noted to surface water by AGRA (1995). |
| Env/Rec: | 0.00 | Not an environmental/recreation area. |
| Obs Dam: | 1.00 | None observed, 2 surface stains 1 (1 sq yd) on access road and 1 (25 sq yd) adjacent to DOT&PF burn pile (AGRA, 1995). |
| Land Use: | 5.00 | Site is owned by the State of Alaska. Part of site is fenced compound for ADOT&PF. Site is being reviewed by Dalton Highway Planning and Advisory Board for future development. |
| Land Own: | 10.00 | Not Alyeska (owned by the state of Alaska (JPO, 1995)). |
| Mul Rel: | 2.00 | 5 spills greater than or equal to 100 gallons. Largest spill is 8,000 gallons. No data on cleanup operations. |
| Vol Fac: | 1.80 | Total spilled volume = approximately 11,250 gallons; largest single spill = 8,000 gallons. |
| Years: | 0.10 | 1978 |
| Soil Class: | 5.00 | Sandy gravel with some silt (TH 201-27); silty gravel with some sand (TH 201-28). |
| GW Depth: | 4.00 | Approximately 10' bgs (TH 201-27 and 201-28). |
| Precip: | 1.50 | 15.37 inches/year (Coldfoot Weather Station; 8 year average). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

| | |
|--|-----------------------|
| Site Name: Chandalar Camp Site Number: 000011 Milepost: 172 Location: S 33, T 35 N, R 10 W, Fairbanks Meridia Site Description: Former Construction Camp; located on the NW side of the Dalton Highway (Alignment Sheet 109) Score: 292 | Business Unit: |
|--|-----------------------|

Rating Criteria and Justification

| | | |
|--------------------|-------|--|
| Toxicity: | 2.00 | Records indicate diesel spills; no direct evidence of recorded spills visible during summer 1995 (AGRA, 1995). |
| Quantity: | 2.00 | Approximately 1,300 gallons of diesel. |
| Release: | 1.00 | Spills documented in BLM, APSC, ADEC historical information. |
| Mobility: | 1.00 | Diesel. |
| Access: | 1.00 | Unrestricted by fencing, etc. Limited by AK DOT&PF activity on site. No surface contamination observed (AGRA, 1995). |
| Pop: | 5.00 | No permanent population. Site is in use by AK DOT&PF - heavy (seasonal?) use. On-site buildings used by DOT&PF, and during summer 1995, DOT&PF were constructing a new bunkhouse (AGRA, 1995). |
| SW: | 2.00 | Camp is located along the Dietrich River; no visual evidence of surface water impacts (AGRA, 1995). |
| Env/Rec: | 0.00 | Camp is part of a BLM "development node;" BLM will accept proposals for development but has no firm proposals at this time; the camp is not currently a recreation area. |
| Obs Dam: | 1.00 | None observed (2 surface stains observed, no organic vapors detected by OVM) (AGRA, 1995). |
| Land Use: | 2.50 | AK DOT&PF has title to northern 3/4 of property. Site heavily used by DOT&PF (AGRA, 1995). BLM currently has no development plans, but site is a "development node." |
| Land Own: | 10.00 | Not Alyeska (Federally owned - managed by BLM (JPO, 1995), or AK DOT&PF owns some (AGRA, 1995)). |
| Mul Rel: | 2.00 | 4 spills greater than or equal to 100 gallons documented. |
| Vol Fac: | 2.90 | Total volume spilled = approximately 1,460 gallons; largest single spill = 510 gallons (6/75). |
| Years: | 0.10 | 1977 |
| Soil Class: | 5.00 | Sandy gravel, bedrock at 24' bgs (TH 60-30), bedrock at 15' bgs (TH 62-31). |
| GW Depth: | 5.00 | 1 foot bgs (TH 62-31). |
| Precip: | 0.50 | 9.38 inches/year (Chandalar Lake Station; 20 year average). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

| | |
|---|-----------------------|
| Site Name: Atigun Camp | Business Unit: |
| Site Number: 000026 | |
| Milepost: 163 | |
| Location: S 5 and 6, T 14 S, R 12 E, Umiat Meridian | |
| Site Description: Former Construction Camp; located on N side of Atigun Pass (Alignment Sheet 111) | |
| Score: 274 | |

Rating Criteria and Justification

| | | |
|--------------------|-------|---|
| Toxicity: | 2.00 | Most reported spills are diesel. |
| Quantity: | 2.00 | Approximately 1,650 spilled gallons are recorded. |
| Release: | 1.00 | Release documented in APSC, BLM, or ADEC historical records. |
| Mobility: | 1.00 | Diesel. |
| Access: | 1.50 | Unrestricted. No evidence of surface impact (AGRA, 1995). |
| Pop: | 3.00 | No permanent residents. Recreational campers and AK DOT&PF use the site. |
| SW: | 2.00 | Atigun River and Sten Creek adjacent to camp. No evidence of surface water impact (AGRA, 1995). |
| Env/Rec: | 0.00 | Not an environmental/recreation area. |
| Obs Dam: | 1.00 | None observed, but abundant shallowly buried debris was observed (AGRA, 1995). |
| Land Use: | 2.50 | Camp re-opened in 1990 for Atigun re-route project. All surficial camp material is gone except for 1 building (The Fire House). BLM has no current development plans. |
| Land Own: | 10.00 | Not Alyeska (Federally owned - managed by BLM). |
| Mul Rel: | 2.00 | 4 spills greater than or equal to 100 gallons are recorded. |
| Vol Fac: | 1.90 | Total volume spilled = approximately 1,600 gallons; maximum single spill = 825 gallons. |
| Years: | 0.50 | 1989 |
| Soil Class: | 5.00 | Estimate: gravelly sand. |
| GW Depth: | 3.00 | Estimate: less than 25 feet. |
| Precip: | 0.50 | 9.38 inches/year (Chandalar Lake Station; 20 year average). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

| | |
|---|-----------------------|
| Site Name: Sourdough Camp | Business Unit: |
| Site Number: 000019 | |
| Milepost: 653 | |
| Location: TAPS MP 653 | |
| Site Description: Former Construction Camp; located 100 yards W of Richardson Highway (Alignment Sheet 26) | |
| Score: 260 | |

Rating Criteria and Justification

| | | |
|--------------------|-------|--|
| Toxicity: | 2.00 | Reported spill = diesel. |
| Quantity: | 2.00 | 750 gallons diesel spilled (reported 12/75). |
| Release: | 1.00 | Spill documented in APSC, BLM, or ADEC historical records. |
| Mobility: | 1.00 | Diesel. |
| Access: | 1.50 | Unrestricted, no evidence of surface contamination (AGRA, 1995). |
| Pop: | 3.00 | Evidence of third party camping evident on site (AGRA, 1995). |
| SW: | 2.00 | Surface water in FCMR in SW part of camp. Gulkana River within 500 feet of the SW corner of the camp. No surface water impacts evident (AGRA, 1995). |
| Env/Rec: | 0.00 | Not an environmental/recreation area. |
| Obs Dam: | 1.00 | None observed. Several small (< 3-foot diameter) surface stains of unknown origin were observed (AGRA, 1995). |
| Land Use: | 2.50 | Camp was apparently used by BLM as a temporary camp when establishing permanent Sourdough Campground - site apparently not being used now. Unknown future plans. |
| Land Own: | 10.00 | Not Alyeska (Federally owned, managed by BLM (JPO, 1995)). |
| Mul Rel: | 1.00 | One release documented. |
| Vol Fac: | 1.30 | One release documented. |
| Years: | 0.10 | 1975 |
| Soil Class: | 4.00 | Sand, silty sand, sand with some gravel (TH 13-77 and 26 APL/AMS-2). |
| GW Depth: | 4.00 | Groundwater at 11' bgs (TH 13-77). |
| Precip: | 1.50 | 15.21 inches/year (Sourdough 1N Station; 17 year average). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

| | |
|--|-----------------------|
| Site Name: Isabel Camp Site Number: 000018 Milepost: 606 Location: S 7, T 20 S, R 12 E, Fairbanks Meridian Site Description: Former Construction Camp; located 1 mile E of Richardson Highway (approximately 93 acres). Alignment Sheet 34 (but camp is not on sheet). Score: 252 | Business Unit: |
|--|-----------------------|

Rating Criteria and Justification

| | | |
|--------------------|-------|--|
| Toxicity: | 2.00 | Reported spills are primarily diesel and hydraulic fluid, plus small quantities of lube oil and "other." |
| Quantity: | 2.00 | Total of approximately 800 gallons reported spilled. NOTE: AGRA reported a 579 gallon spill (1975), which was not documented elsewhere and is not included in this total. |
| Release: | 1.00 | Spills documented in BLM, ADEC, or APSC historical records. |
| Mobility: | 1.00 | Diesel. |
| Access: | 2.00 | Unrestricted, 50 yards of gravel stockpiled on site. |
| Pop: | 1.00 | No permanent population. Airstrip unofficially used by miners, recreational users. |
| SW: | 2.00 | No surface water on site. Gulkana River within 1/4 mile of camp and Summit Lake within 2 miles of camp. |
| Env/Rec: | 0.00 | Not an environmental/recreation area. |
| Obs Dam: | 1.00 | None observed, numerous soil stains observed, varying from 6 square feet to 30 square feet. 50 cy stockpiled gravel within fenced enclosure with Alyeska sign observed (AGRA, 1995). |
| Land Use: | 2.50 | No apparent current use by APSC or third parties, except airstrip (AGRA, 1995). Active mining lease in area. Tanana Basin Area Plan (ADNR, 1991) designates land use as (primary) public recreation and (secondary) wildlife habitat. |
| Land Own: | 10.00 | Not Alyeska (owned by the state of Alaska (JPO, 1995)). |
| Mul Rel: | 1.50 | 2 reported spills greater than or equal to 100 gallons, multiple spills greater than 25 gallons are recorded. |
| Vol Fac: | 6.30 | Total volume spilled = approximately 950 gallons; largest single spill = 150 gallons. |
| Years: | 0.10 | 1976 |
| Soil Class: | 4.00 | Silty sand with gravel and sandy gravel with silt (TH 90-8), sand with some silt (TH 90-10) |
| GW Depth: | 5.00 | 0' bgs (TH 90-10). |
| Precip: | 1.50 | 18.17 inches/year (Summit Lake Weather Station; 7 year average). |
| Reg Stat: | 1.00 | The ADEC has dug some test pits and found minimal soil contamination at this camp. ADNR provided the funding for this assessment (source=Scott Rose, ADEC). Because of this work, the ADEC has a file on this camp, but this camp does not meet the input criteria to be considered a contaminated site. |

Site Documentation Report

Site Description

Site Name: Sheep Creek Camp

Business Unit:

Site Number: 000022

Milepost: 778

Location: S 7, T 9 S, R 3 W, Copper River Meridian

Site Description: Former Construction Camp; located 200 feet S of Richardson Highway (Alignment Sheet 5)

Score: 251

Rating Criteria and Justification

| | | |
|--------------------|-------|--|
| Toxicity: | 2.00 | Most reorted spills are diesel fuel, with some gasoline, hydraulic fluid, and lube oil. |
| Quantity: | 2.00 | Total spills of approximately 3,000 gallons reported. |
| Release: | 1.00 | Releases documented in APSC, BLM, or ADEC historical records. |
| Mobility: | 1.00 | Diesel. |
| Access: | 0.00 | Site access is limited by pipeline access gate with key required (AGRA, 1995). |
| Pop: | 0.00 | No population, no evidence of third party use (AGRA, 1995). |
| SW: | 2.00 | Camp N of and adjacent to the Lowe River. No evidence of impacted surface water (AGRA, 1995). |
| Env/Rec: | 0.00 | Not an environmental/recreation area. |
| Obs.Dam: | 1.00 | None observed, small amount of surface debris noted (AGRA, 1995). |
| Land Use: | 2.50 | No evidence of third party use (AGRA, 1995). Prince William Sound Plan designates land for "multiple use" with emphasis on recreation. Area suitable for state recreation area, but no current plans (ADNR, 1986). |
| Land Own: | 10.00 | Not Alyeska (owned by state of Alaska (JPO, 1995)). |
| Mul Rel: | 2.00 | 6 releases greater than or equal to 100 gallons documented on site. |
| Vol Fac: | 1.70 | Total volume spilled = approximately 3,000 gallons; largest single spill = 1,760 gallons. |
| Years: | 0.10 | 1977 |
| Soil Class: | 4.00 | Gravelly sand with some silt and sandy gravel with some silt, silty sand (TH 54-54 and TH 73-8). |
| GW Depth: | 4.00 | Depth to groundwater = 6 feet (TH 54-54) [Note: 37,050 gpd water well was permitted for camp]. |
| Precip: | 5.00 | 63.89 inches/year (Valdez Weather Station; 43 year average) |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

| | |
|---|-----------------------|
| Site Name: Five Mile Camp Site Number: 000015 Milepost: 348 Location: SW 1/4, S 26, T 13 N, R 11 W, Fairbanks Meridian Site Description: Former Construction Camp; located 100 yards W of Dalton Highway (approximately 20 acres). Alignment Sheets 78, 79. Score: 229 | Business Unit: |
|---|-----------------------|

Rating Criteria and Justification

| | | |
|--------------------|-------|---|
| Toxicity: | 2.00 | Most reported spills are diesel, some jet fuel (700 gallons) and small quantities of gasoline and hydraulic fluid reported. |
| Quantity: | 2.00 | Total quantity spilled = 7,290 gallons (400,000 gallon jet fuel spill 1974? recorded in BLM database, not included in total here). |
| Release: | 1.00 | Spills documented in BLM, ADEC, or APSC historical records. |
| Mobility: | 1.00 | Primarily Diesel. |
| Access: | 1.50 | Unrestricted road access, except "No Trespassing" signs on part of property. No surface contamination seen (AGRA, 1995). |
| Pop: | 5.00 | Area has been heavily used by campers and truckers (AGRA, 1995). |
| SW: | 0.00 | No surface water evident at camp |
| Env/Rec: | 2.00 | BLM has proposed plans for campground and RV dump. RV dump to be constructed summer 1996. |
| Obs Dam: | 1.00 | None observed. AGRA (1995) advanced 13 test pits to 12 inches below grade and no petroleum impacted soil was encountered. |
| Land Use: | 5.00 | BLM land, no trespassing signs along S side of area, "BLM Native Land Allotment." BLM plans to convert to campground and RV dump beginning summer 1996. |
| Land Own: | 10.00 | Not Alyeska (Federally owned, managed by BLM (JPO, 1995)). |
| Mul Rel: | 2.00 | 6 reported spills greater than or equal to 100 gallons. |
| Vol Fac: | 1.80 | Total volume spilled = approximately 7,300 gallons; largest single spill = 4000 gallons. |
| Years: | 0.10 | 1977 |
| Soil Class: | 1.50 | Silt (TH 4-5, TH 81-2) to 48' bgs, silty gravel underneath. |
| GW Depth: | 3.00 | Unknown [Artesian well on site is 275' deep]. |
| Precip: | 0.50 | 8.96 inches/year (Five Mile Camp Weather Station; 9 year average). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

Site Name: Old Man Camp

Business Unit:

Site Number: 000014

Milepost: 301

Location: S 29 and 30, T 19 N, R 14 W, Fairbanks

Site Description: Former Construction Camp, located E. of Dalton Highway (Alignment Sheet 86).

Score: 211

Rating Criteria and Justification

| | | |
|--------------------|-------|---|
| Toxicity: | 2.00 | All reported spills are diesel. |
| Quantity: | 2.00 | Total spill volume reported = approximately 6,020 gallons. |
| Release: | 1.00 | Spills documented in BLM, ADEC, or APSC historical files. |
| Mobility: | 1.00 | Diesel. |
| Access: | 1.50 | Unrestricted, no surface contamination noted (AGRA, 1995). |
| Pop: | 3.00 | Some active use by recreational miners, campers (AGRA, 1995). |
| SW: | 0.00 | No surface water on site. |
| Env/Rec: | 0.00 | Not an environmental/recreation area. |
| Obs Dam: | 1.00 | None observed (several small surface soil stains and scattered surface debris observed but no observed ecological damage (AGRA, 1995)). |
| Land Use: | 2.50 | Evidence of third party use observed (AGRA, 1995). Unknown future plans for site. BLM has no specific development plans for this land. |
| Land Own: | 10.00 | Not Alyeska (Federally owned, managed by BLM (JPO, 1995)). |
| Mul Rel: | 5.00 | 11 reported spills greater than or equal to 100 gallons. |
| Vol Fac: | 4.70 | Total spilled volume = approximately 6,470 gallons; largest single spill = 1,375 gallons. |
| Years: | 0.10 | 1978 |
| Soil Class: | 4.00 | Sand with silt. Bedrock at 14' bgs (TH 82-13, TH 203-5). No visible ice. |
| GW Depth: | 3.00 | Static water level estimated at 55 feet (1 well log) and 6 feet (another well log). Intermediate value used. |
| Precip: | 0.50 | 12.74 inches/year (Old Man Weather Station; 2 year average). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

Site Name: Livengood Camp

Business Unit:

Site Number: 000016

Milepost: 397

Location: SW 1/4, S 31, T 8 N, R 5 W, Fairbanks Meridian

Site Description: Former Construction Camp, located 300 feet N of Manley Hot Springs Road (approximately 40 acres).
Alignment Sheet 70.

Score: 209

Rating Criteria and Justification

| | | |
|--------------------|-------|--|
| Toxicity: | 2.00 | Three reported spills of "unknown", waste oil, and diesel fuel. APSC files document 170 drums of radiographic waste stored at Livengood 12/76 (it was to be trucked to 5 Mi Camp for incineration). |
| Quantity: | 1.00 | Total spilled = Approximately 160 gallons + furnace leak and subsequent fire, where presumably all/most of the leaked fuel was burned. Also, 300,000 gallon "drum leak" recorded in BLM database but not included in total here. |
| Release: | 1.00 | Spills documented in BLM, ADEC, or APSC historical records. |
| Mobility: | 1.00 | Diesel. |
| Access: | 1.00 | Half of site fenced (40 acres), half not fenced. No access without permission (AGRA, 1995). |
| Pop: | 5.00 | Caretaker lives on site. |
| SW: | 2.00 | Tolovana River outside SW corner of site. No evidence of impact to surface water (AGRA, 1995). |
| Env/Rec: | 0.00 | Not an environmental/recreation area per 18 AAC 75.630. Tanana Basin Area Plan specifies Livengood camp area land use as (primary) wildlife habitat and minerals, and (secondary) public recreation and forestry. |
| Obs Dam: | 1.00 | None observed. Approximately 20 55-gallon drums stored on-site, most were empty. Five fuel containment berms were observed which had evidence of petroleum impact (AGRA, 1995). |
| Land Use: | 2.50 | Caretaker living on site. Land used and reportedly owned by Arctic Camps and Equipment (AGRA, 1995). Land owned and managed by the State of Alaska (ADNR, 1996) with no specific development plans. |
| Land Own: | 10.00 | Not Alyeska (State-owned (JPO, 1995) or owned by Arctic Camps and Equipment (AGRA, 1995)). |
| Mul Rel: | 1.00 | 1 spill > 100 gallons reported. |
| Vol Fac: | 1.60 | Total spill volume = approximately 160 gallons; largest single spill = 103 gallons. |
| Years: | 0.10 | 1976 |
| Soil Class: | 5.00 | Gravel (TH 208-1) to bedrock at 27' bgs. Gravel with sand and silt (TH 5-441). |
| GW Depth: | 3.00 | Depth to water = 20 feet bgs (TH 208-2). |
| Precip: | 0.50 | 13.25 inches/year (Livengood Weather Station; 18 year average). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

| | |
|--|-----------------------|
| Site Name: Glennallen Camp Site Number: 000020 Milepost: 689 Location: S 8 and 9, T 3 N, R 1 W, Copper River Meridian Site Description: Former Construction Camp (also known as Tazlina Camp); located 100 feet W of Richardson Highway (Alignment Sheet 20, but camp is off sheet). Score: 205 | Business Unit: |
|--|-----------------------|

Rating Criteria and Justification

| | | |
|--------------------|-------|---|
| Toxicity: | 2.00 | All reported spills are diesel. |
| Quantity: | 2.00 | Approximately 8,340 gallons of diesel reportedly spilled. |
| Release: | 1.00 | Release documented in APSC spill reports, BLM database. |
| Mobility: | 1.00 | Diesel. |
| Access: | 1.00 | Site apparently has 3 lessees (Mr. Paul Wilson, K&K Recycling, and unknown 3rd party), access somewhat restricted (AGRA, 1995). |
| Pop: | 5.00 | Caretaker on site at truck service area, trailer park and campground N of site (AGRA, 1995). |
| SW: | 2.00 | No surface water in camp. Camp located approximately 1,000 to 2,000 feet S of the Tazlina River. |
| Env/Rec: | 0.00 | Not an environmental/recreation area. |
| Obs Dam: | 1.00 | Vegetation appears stressed, suspect recent herbicide use (AGRA, 1995). 40 cy exposed contaminated soil pile on Mr. Wilson's property - caretaker stated pile belongs to Alyeska, is from Meier's Lake spill. |
| Land Use: | 5.00 | Land is leased by 3 parties from U.S. Bankruptcy Court, which seized property from Progressive Transport (AGRA, 1995). Land use plans are unknown. |
| Land Own: | 10.00 | Not Alyeska (owned by Anchorage Community YMCA (JPO, 1995) or U.S. Bankruptcy Court (AGRA, 1995)). |
| Mul Rel: | 2.00 | 3 releases greater than or equal to 100 gallons documented. |
| Vol Fac: | 1.20 | Total volume spilled = approximately 8,340 gallons; largest single spill = 7,000 gallons. |
| Years: | 0.10 | 1978 |
| Soil Class: | 1.50 | Clayey silt (TH 301-39, TH 28), little visible ice. |
| GW Depth: | 3.00 | Groundwater at 22 feet bgs (TH 28) [81,250 gpd groundwater well was permitted at camp]. |
| Precip: | 0.50 | 10.13 inches/year (Glennallen Station; 23 year average). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

| | |
|---|-----------------------|
| Site Name: Delta Camp Site Number: 000017 Milepost: 533 Location: S 8, T 9 S, R 10 E, Fairbanks Meridian Site Description: Former Construction Camp; located 500 yards E of Richardson Highway (Alignment Sheet 47) Score: 186 | Business Unit: |
|---|-----------------------|

Rating Criteria and Justification

| | | |
|--------------------|-------|--|
| Toxicity: | 2.00 | Reported spills are lube oil, diesel fuel, and hydraulic fluid. Largest spill (350 gallons) = diesel fuel. |
| Quantity: | 1.00 | Approximately 280 spilled gallons recorded. |
| Release: | 1.00 | Reported spill in ADEC, BLM, or APSC historical records. |
| Mobility: | 1.00 | Diesel. |
| Access: | 0.00 | Site is fenced with locked gates. |
| Pop: | 5.00 | Caretaker may live on site (AGRA 1995). |
| SW: | 2.00 | Tanana River off the NW corner of the camp. No surface water impact observed (AGRA, 1995). |
| Env/Rec: | 0.00 | Not an environmental/recreation area. |
| Obs Dam: | 1.00 | None observed, several small excavations observed in vegetated area but no evidence of petroleum hydrocarbons in excavated material. Sumps noted within shop buildings (AGRA, 1995). |
| Land Use: | 2.50 | Land used and reportedly owned by Arctic Camps and Equipment. No caretaker on site (AGRA, 1995). |
| Land Own: | 10.00 | Not Alyeska (privately owned, owner unknown (JPO, 1995) or owned by Arctic Camps and Equipment (AGRA, 1995)). |
| Mul Rel: | 1.50 | One release reported greater than or equal to 100 gallons, 7 releases reported greater than 25 gallons. |
| Vol Fac: | 1.80 | Total spilled volume=630 gallons, largest single release=350 gallons (1977). |
| Years: | 0.10 | 1977 |
| Soil Class: | 5.00 | Sandy silt to silty sand (TH 9-84); Sandy gravel (TH 7-91 and TH 7-92), bedrock at approx. 72' bgs (TH 7-92). |
| GW Depth: | 5.00 | 2 feet bgs (TH 7-91), 6.2 feet bgs (TH 7-92). |
| Precip: | 0.50 | 12.35 inches/year (Delta Junction Weather Station; 4 year average). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

Site Name: Dietrich Camp

Business Unit:

Site Number: 000012

Milepost: 202

Location: SE 1/4, S 14, T 33 N, R 10 W, Fairbanks Meridian

Site Description: Former Construction Camp; Located on approximately 30 acres east of the Dietrich River (Alignment Sheet 104)

Score: 174

Rating Criteria and Justification

| | | |
|--------------------|-------|---|
| Toxicity: | 2.00 | Most reported spills are diesel, one (150 gallon) gasoline spill and several hydraulic fluid spills reported. |
| Quantity: | 2.00 | Approximately 2,850 gallons spilled (of which 150 gallons is gasoline, remainder is diesel, lube oil, and hydraulic fluid). |
| Release: | 1.00 | Releases documented by BLM, ADEC, and/or APSC historical records. |
| Mobility: | 1.00 | Diesel. |
| Access: | 1.00 | Somewhat restricted; main access road has been washed out by Dietrich River. Current access via TAPS ROW and overgrown path (AGRA, 1995). This value = 1 due to population value = 0. |
| Pop: | 0.00 | No third party use observed (AGRA, 1995). |
| SW: | 2.00 | 2 small lakes located S of camp are abandoned borrow pits. Camp is adjacent to Dietrich River. No indications of surface water contamination (AGRA, 1995). |
| Env/Rec: | 0.00 | Not an environmental/recreation area. |
| Obs Dam: | 1.00 | None observed. Distressed vegetation was observed over the entire site, but the cause of the distressed state was believed to be from a poor revegetation job, not from contamination. 2 dry wells observed on-site (AGRA, 1995). |
| Land Use: | 2.50 | No third party use observed (AGRA, 1995), unknown future plans for land. BLM has no current development plans. |
| Land Own: | 10.00 | Not Alyeska (Federally owned, managed by BLM (JPO, 1995)). |
| Mul Rel: | 2.00 | 7 spills greater than or equal to 100 gallons recorded. |
| Vol Fac: | 3.00 | Total volume spilled = approximately 3,040 gallons; largest single spill = 1,000 gallons. |
| Years: | 0.10 | 1977 |
| Soil Class: | 4.00 | Sandy gravel with some silt, little to no visible ice (TH 84-13, 84-14). |
| GW Depth: | 3.00 | unknown. |
| Precip: | 0.50 | 8.92 (Dietrich Weather Sta; 3 year average). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Site Documentation Report

Site Description

Site Name: Tonsina Camp

Business Unit:

Site Number: 000021

Milepost: 731

Location: S 21 and 22, T 4 S, R 1 E, Copper River Meridian

Site Description: Former Construction Camp; located 100 feet W of Richardson Highway (Alignment Sheet 13)

Score: 151

Rating Criteria and Justification

| | | |
|--------------------|-------|---|
| Toxicity: | 2.00 | Recorded spills are diesel, lube oil, unknown oil, and jet fuel. |
| Quantity: | 2.00 | Total 550 spilled gallons recorded. Additionally, "Discharge of oil upon the lands of the state on May 15, 1975" documented in APSC land file, but no volume given. Possibly result of oil impacted surface water flooding. |
| Release: | 1.00 | Release documented in APSC, BLM, or ADEC historical records. |
| Mobility: | 1.00 | Diesel. |
| Access: | 1.50 | Unrestricted access. No evidence of surface contamination (AGRA, 1995). |
| Pop: | 1.00 | No permanent residents. Hunters camping in vicinity of helipad, abandoned homestead in area. |
| SW: | 0.00 | No surface water on site. Camp located approximately 2,000 - 3,000 feet E of Little Tonsina River. |
| Env/Rec: | 0.00 | Not an environmental/recreation area. |
| Obs Dam: | 1.00 | None observed, several surface soil stains and evidence of metallic debris noted on site (AGRA, 1995). |
| Land Use: | 2.50 | Third party recreational use by hunters. Unknown future plans for land. |
| Land Own: | 10.00 | Not Alyeska (owned by Chugach Natives (JPO, 1995)). |
| Mul Rel: | 1.50 | Two releases greater than or equal to 100 gallons documented. |
| Vol Fac: | 1.80 | Total volume spilled = approximately 550 gallons; largest single spill = 300 gallons. |
| Years: | 0.10 | 1976 |
| Soil Class: | 4.00 | Silty sand with some gravel (TH 200-60, TH 90-18). |
| GW Depth: | 2.00 | Depth to water = 37.5 feet bgs (TH 200-60). |
| Precip: | 0.50 | 12.39 inches/year (Tonsina Lodge Weather Station; 25 year average). |
| Reg Stat: | 1.00 | No regulatory/compliance action. |

Appendix C - Spill Volume Database Report

CONSTRUCTION CAMP SPILLS GREATER THAN 25 GALLONS

| Date | Location Description | In Camp? | Substance | Gallons |
|---------------------------|--|----------|-----------------|---------|
| Atigun Camp | | | | |
| 08/13/74 | ATIGUN-NEAR FUEL STORAGE AREA | In Camp | DIESEL FUEL | 50 |
| 05/10/75 | ATIGUN STA 700+00 | Unknown | DIESEL FUEL | 311 |
| 10/29/75 | ATIGUN CAMP - S END | In Camp | DN 600 | 50 |
| 05/24/76 | ATIGUN CAMP-BETWEEN POWER HOUSE AND HELO PAD | In Camp | DIESEL FUEL | 100 |
| 06/10/76 | ATIGUN-TANK FARM | In Camp | DIESEL FUEL | 35 |
| 10/31/76 | ATIGUN CAMP-S. OF CENTER WAREHOUSE | In Camp | DIESEL FUEL | 824 |
| 09/12/88 | ATIGUN PASS | Unknown | HYDRAULIC FLUID | 42 |
| 08/08/89 | ATIGUN CAMP | Unknown | DIESEL FUEL | 200 |
| 03/24/90 | ATIGUN CAMP | Unknown | DIESEL FUEL | 40 |
| Subtotal for Atigun Camp: | | 1,652 | gallons spilled | |

Chandalar Camp

| | | | | |
|------------------------------|-----------------------------|---------|-----------------|-----|
| 03/18/75 | CHANDALAR | Unknown | OTHER | 40 |
| 06/10/75 | CHANDALAR CAMP-BLADDER AREA | In Camp | DIESEL FUEL | 510 |
| 10/02/76 | CHANDALAR-GENERATOR PLANT | In Camp | DIESEL FUEL | 35 |
| 04/01/77 | | Unknown | DIESEL FUEL | 85 |
| 06/20/77 | CHANDALAR | Unknown | DIESEL FUEL | 196 |
| 12/01/77 | CHANDALAR | Unknown | DIESEL FUEL | 300 |
| 06/05/81 | CHANDALAR | Unknown | DIESEL FUEL | 35 |
| 03/18/82 | CHANDALAR | Unknown | DIESEL FUEL | 50 |
| 03/23/91 | CHANDALAR CAMP | Unknown | HYDRAULIC FLUID | 55 |
| Subtotal for Chandalar Camp: | | 1,306 | gallons spilled | |

Coldfoot Camp

| | | | | |
|-----------------------------|---|---------|-----------------|-------|
| 06/24/74 | COLDFOOT CAMP-DAY TANK AND CONTAINMENT AREA | In Camp | DIESEL FUEL | 270 |
| 04/24/75 | COLDFOOT CAMP-FREIGHT UNLOADING AREA | In Camp | DIESEL FUEL | 100 |
| 09/21/75 | COLDFOOT CAMP-DITCH BEHIND GENERATOR BLDG | In Camp | DIESEL FUEL | 100 |
| 05/01/77 | | Unknown | WASTE OIL | 30 |
| 02/11/78 | COLDFOOT | Unknown | JP 4 | 8,000 |
| 10/25/78 | COLDFOOT | Unknown | DIESEL FUEL | 480 |
| Subtotal for Coldfoot Camp: | | 8,980 | gallons spilled | |

| Date | Location Description | In Camp? | Substance | Gallons |
|--------------------------|--------------------------------------|----------|-------------------|---------|
| Delta Camp | | | | |
| 02/24/75 | DELTA EQUIP YARD | In Camp | LUBE OIL | 28 |
| 03/17/75 | PARKING AREA DELTA | In Camp | OIL (UNSPECIFIED) | 50 |
| 03/22/75 | SEWAGE PLANT DELTA | Unknown | DIESEL FUEL | 50 |
| 02/27/76 | DELTA CAMP | Unknown | HYDRAULIC FLUID | 47 |
| 04/12/76 | DELTA CAMP | Unknown | HYDRAULIC FLUID | 30 |
| 06/13/76 | DELTA CAMP-LOWER YARD AT HAMMER SHOP | In Camp | LUBE OIL | 40 |
| 10/20/76 | DELTA CAMP-LOWER YARD | In Camp | LUBE OIL | 35 |
| Subtotal for Delta Camp: | | 280 | gallons spilled | |

| | | | | |
|-----------------------------|--|---------|-----------------|-------|
| Dietrich Camp | | | | |
| 02/22/72 | DIETRICH CAMP | Unknown | DIESEL FUEL | 300 |
| 12/12/74 | DIETRICH CAMP-UTILIDOR AND ROAD NEAR KITCHEN | In Camp | DIESEL FUEL | 150 |
| 01/27/75 | DIETRICH CAMP-BEHIND MAIN WAREHOUSE | In Camp | DIESEL FUEL | 100 |
| 06/26/75 | DIETRICH CAMP-BEHIND A AND B SHOPS | In Camp | DIESEL FUEL | 1,000 |
| 09/29/75 | DIETRICH SHOP YARD | In Camp | DIESEL FUEL | 70 |
| 10/02/75 | DIETRICH CAMP-POWER HOUSE | In Camp | DIESEL FUEL | 175 |
| 10/24/75 | DIETRICH CAMP-POL GAS STA | In Camp | GASOLINE | 150 |
| 10/28/75 | 103.2 DIETRICH CAMP | Unknown | HYDRAULIC FLUID | 45 |
| 11/03/75 | DIETRICH CAMP | Unknown | LUBE OIL | 80 |
| 11/25/75 | DIETRICH CAMP | Unknown | DIESEL FUEL | 49 |
| 03/30/76 | DIETRICH CAMP | Unknown | DIESEL FUEL | 45 |
| 04/01/76 | DIETRICH CAMP-POL BLADDER FARM | In Camp | DIESEL FUEL | 75 |
| 04/01/76 | DIETRICH CAMP-POL AREA | In Camp | DIESEL FUEL | 75 |
| 04/07/76 | DIETRICH CAMP-BETW. S AND T BARRACKS | In Camp | DIESEL FUEL | 50 |
| 04/14/76 | DIETRICH CAMP, STA 495+50 | Unknown | LUBE OIL | 60 |
| 04/28/76 | DIETRICH CAMP-10,000 GAL TANK AT GENERATOR PLANT | In Camp | DIESEL FUEL | 75 |
| 04/28/76 | DIETRICH CAMP | Unknown | DIESEL FUEL | 60 |
| 05/07/76 | DIETRICH CAMP | Unknown | DIESEL FUEL | 75 |
| 05/20/76 | DIETRICH CAMP-WASTE OIL TANK FARM | In Camp | WASTE OIL | 100 |
| 06/01/77 | | Unknown | DIESEL FUEL | 80 |
| 07/01/77 | | Unknown | DIESEL FUEL | 40 |
| Subtotal for Dietrich Camp: | | 2,854 | gallons spilled | |

| Date | Location Description | In Camp? | Substance | Gallons |
|-----------------------|--|----------|-----------------|---------|
| Five Mile Camp | | | | |
| 05/27/74 | FIVE MILE CAMP- HELO PAD FUEL STORAGE AREA | In Camp | JET FUEL | 700 |
| 12/03/74 | FIVE MILE CAMP | In Camp | GASOLINE | 33 |
| 12/05/74 | FIVE MILE CAMP-BLADDER FARM | In Camp | DIESEL FUEL | 1,500 |
| 01/12/75 | FIVE MILE-TIRE & LUBE BLDG | In Camp | DIESEL FUEL | 300 |
| 08/03/75 | FIVE MILE-POL LOADING DOCK | In Camp | DIESEL FUEL | 40 |
| 11/12/75 | FIVE MILE CAMP | Unknown | OTHER | 40 |
| 12/18/75 | FIVE MILE CAMP-POL AREA | In Camp | DIESEL FUEL | 250 |
| 03/15/76 | FIVE MILE CAMP-DRUM STORAGE AREA | In Camp | HYDRAULIC FLUID | 53 |
| 03/16/76 | FIVE MILE CAMP-DRUM STORAGE AREA | In Camp | HYDRAULIC FLUID | 53 |
| 04/05/76 | FIVE MILE CREEK | Unknown | DIESEL FUEL | 30 |
| 04/09/76 | FIVE MILE CAMP | Unknown | LUBE OIL | 30 |
| 06/09/76 | FIVE MILE-POL AREA | In Camp | DIESEL FUEL | 34 |
| 06/23/76 | FIVE MILE CAMP-UTILIDOR NEAR TIRE SHOP | In Camp | DIESEL FUEL | 4,000 |
| 07/29/76 | FIVE MILE-"D" BARRACKS PARKING LOT | In Camp | DIESEL FUEL | 30 |
| 05/01/77 | | Unknown | DIESEL FUEL | 50 |
| 10/01/77 | | Unknown | DIESEL FUEL | 150 |

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|------------------------------|-----------------------|
| Subtotal for Five Mile Camp: | 7,293 gallons spilled |
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Franklin Bluffs Camp

| | | | | |
|----------|--|---------|-------------------|-----|
| 07/08/74 | FRANKLIN BLUFFS-BLADDER FARM | In Camp | DIESEL FUEL | 100 |
| 07/27/74 | FRANKLIN BLUFFS-FUEL TRANSFER APRON | In Camp | JP-4 | 40 |
| 11/09/74 | FRANKLIN BLUFFS | Unknown | JET FUEL | 55 |
| 01/03/75 | FRANKLIN BLUFF CAMP-"FUEL BLADDER AND AIRPORT" | In Camp | DIESEL FUEL | 500 |
| 01/07/75 | FRANKLIN BLUFF CAMP-B2 BARRACKS | In Camp | DIESEL FUEL | 100 |
| 01/15/75 | FRANKLIN BLUFF CAMP-BETWEEN SHOPS 1 AND 2 | In Camp | DIESEL FUEL | 103 |
| 02/11/75 | FRANKLIN BLUFFS | Unknown | HYDRAULIC FLUID | 45 |
| 02/12/75 | FRANKLIN BLUFFS | Unknown | DIESEL FUEL | 48 |
| 02/15/75 | FRANKLIN BLUFFS-ON CAMP PAD | In Camp | DIESEL FUEL | 65 |
| 02/15/75 | FRANKLIN BLUFFS | Unknown | DIESEL FUEL | 70 |
| 02/15/75 | FRANKLIN BLUFFS-POWER HOUSE #2 | In Camp | DIESEL FUEL | 75 |
| 03/07/75 | FRANKLIN BLUFFS | In Camp | DIESEL FUEL | 30 |
| 03/08/75 | FRANKLIN BLUFFS | In Camp | DIESEL FUEL | 30 |
| 03/09/75 | CAMP FUEL TANK FRKLN | Unknown | DIESEL FUEL | 30 |
| 03/15/75 | 128-3 FRANKLIN BLUFF | Unknown | DIESEL FUEL | 30 |
| 03/20/75 | EQUIP YD FRANKLIN BF | Unknown | OTHER | 30 |
| 04/01/75 | WAREHOUSE 5 FRKLN BF | Unknown | UNKNOWN OIL | 40 |
| 04/04/75 | INSIDE SHOP#3 FRANKLIN BLUFFS | In Camp | DIESEL FUEL | 150 |
| 04/10/75 | FRANKLIN BLUFFS-OIL STORAGE AREA | In Camp | OTHER (DELUCO 30) | 55 |
| 04/16/75 | A1/A2 FRANKLIN BLUFF | Unknown | DIESEL FUEL | 35 |
| 04/18/75 | 135-3 FRANKLIN BLUFF | Unknown | HYDRAULIC FLUID | 30 |
| 04/26/75 | BLADDER3 FRANKLIN BF | Unknown | DIESEL FUEL | 40 |

| Date | Location Description | In Camp? | Substance | Gallons |
|----------|--|----------|-----------------|---------|
| 04/29/75 | DIESEL SHACK FRKLN B | Unknown | OIL & WATER | 30 |
| 05/04/75 | FRANKLIN BLUFFS-BLADDER FARM | In Camp | DIESEL FUEL | 75 |
| 05/18/75 | 128-3 FRANKLIN BLUFF | Unknown | HYDRAULIC FLUID | 30 |
| 05/29/75 | SHOP #2 FRANKLIN BLF | Unknown | LUBE OIL | 35 |
| 05/30/75 | WESCO INC FRKLN BLUF | Unknown | DIESEL FUEL | 50 |
| 06/05/75 | JP 4 SHACK FRKLN BI.F | Unknown | JP 4 | 30 |
| 07/01/75 | FRANKLIN BLUFFS CAMP | Unknown | DIESEL FUEL | 1,500 |
| 09/18/75 | FRANKLIN BLUFFS CAMP SHOP #2 | In Camp | DIESEL FUEL | 30,000 |
| 01/23/76 | FRANKLIN BLUFFS-BARRACKS B4 | In Camp | DIESEL FUEL | 2,400 |
| 03/22/76 | FRANKLIN BLUFFS-POL DIESEL WORK HOUSE | In Camp | DIESEL FUEL | 100 |
| 06/06/76 | FRANKLIN BLUFFS-AIRCRAFT APRON, POL YARD | In Camp | DIESEL FUEL | 55 |
| 08/24/76 | FRANKLIN BLUFFS-PARKING AREA E OF SHOPS | In Camp | MOTOR OIL | 40 |
| 09/09/76 | FRANKLIN BLUFFS-POL PAD | In Camp | DIESEL FUEL | 100 |
| 09/12/76 | FRANKLIN BLUFFS-GAS STORAGE TANKS | In Camp | GASOLINE | 200 |
| 01/18/77 | FRANKLIN BLUFFS-UNDER BARRACKS B-O | In Camp | DIESEL FUEL | 5,000 |
| 02/25/77 | FRANKLIN BLUFFS CAMP | In Camp | DIESEL FUEL | 60 |
| 03/09/77 | FRANKLIN BLUFFS CAMP | Unknown | DIESEL FUEL | 250 |
| 03/22/77 | FRANKLIN BLUFFS | In Camp | DIESEL FUEL | 40 |
| 03/23/77 | FRANKLIN BLUFFS PAD | In Camp | HYDRAULIC FLUID | 35 |
| 04/05/77 | FRANKLIN BLUFFS CAMP | Unknown | DIESEL FUEL | 150 |
| 05/17/77 | FRANKLIN BLUFFS CAMP | Unknown | LUBE OIL | 40 |
| 05/17/79 | FRANKLIN BLUFFS-UNDER B4 BARRACKS | In Camp | DIESEL FUEL | 300 |
| 06/20/82 | FRANKLIN BLUFFS | Unknown | DIESEL FUEL | 3,600 |

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| Subtotal for Franklin Bluffs Camp: | 45,821 gallons spilled |
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Galbraith Camp

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|----------|--|---------|-----------------|--------|
| 02/07/75 | N SIDE GALBRAITH LAKE CAMP | In Camp | DIESEL FUEL | 62,500 |
| 05/22/75 | GALBRAITH ARTIC OFC. | Unknown | HEATING FUEL | 30 |
| 11/02/75 | GALBRAITH | Unknown | GASOLINE | 150 |
| 12/01/75 | GALBRAITH | Unknown | HYDRAULIC FLUID | 50 |
| 12/02/75 | GALBRAITH | Unknown | DIESEL FUEL | 500 |
| 12/07/75 | GALBRAITH | Unknown | DIESEL FUEL | 200 |
| 01/19/76 | GALBRAITH CAMP PARKING AREA (E SIDE OF CAMP) | In Camp | DIESEL FUEL | 2,200 |
| 01/28/76 | GALBRAITH CAMP-UNDER BECHTEL OFFICE | In Camp | DIESEL FUEL | 40,000 |
| 03/08/76 | GALBRAITH CAMP | Unknown | HYDRAULIC FLUID | 30 |
| 03/20/76 | GALBRAITH CAMP | Unknown | HYDRAULIC FLUID | 30 |
| 03/21/76 | GALBRAITH CAMP | Unknown | HYDRAULIC FLUID | 30 |
| 03/21/76 | GALBRAITH CAMP | Unknown | HYDRAULIC FLUID | 40 |
| 04/14/76 | GALBRAITH CAMP DAY TANKS | In Camp | DIESEL FUEL | 125 |
| 06/26/76 | GALBRAITH CAMP-GENERATOR RESERVE TANK | In Camp | DIESEL FUEL | 150 |
| 08/16/76 | WASTE OIL DOCK, GALBRAITH CAMP | In Camp | WASTE OIL | 35 |
| 10/22/76 | GALBRAITH CAMP GAS STATION | In Camp | GASOLINE | 40 |
| 11/27/76 | GALBRAITH CAMP MESS HALL | In Camp | HYDRAULIC FLUID | 40 |

| Date | Location Description | In Camp? | Substance | Gallons |
|----------|--------------------------------|----------|-------------|---------|
| 05/08/77 | GALBRAITH AIRPORT BLADDER FARM | Unknown | DIESEL FUEL | 16,000 |
| 07/13/77 | | Unknown | DIESEL FUEL | 30 |
| 01/17/80 | GALBRAITH AIRPORT | Unknown | DIESEL FUEL | 56 |
| 10/19/80 | GALBRAITH AIRPORT | Unknown | JP-4 | 30 |
| 01/28/89 | GALBRAITH AIRPORT | Unknown | JP-4 | 30 |

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|------------------------------|-------------------------|
| Subtotal for Galbraith Camp: | 122,296 gallons spilled |
|------------------------------|-------------------------|

Glennallen Camp

| | | | | |
|----------|------------------------------|---------|-------------|-------|
| 12/17/75 | 30 MI NO GLENNALLEN | Unknown | DIESEL FUEL | 150 |
| 02/15/76 | GLENNALLEN-30' N OF UTILIDOR | In Camp | DIESEL FUEL | 1,100 |
| 04/10/76 | GLENNALLEN CAMP | Unknown | DIESEL FUEL | 28 |
| 10/06/77 | | Unknown | DIESEL FUEL | 30 |
| 12/08/77 | | Unknown | DIESEL FUEL | 30 |
| 02/12/78 | GLENNALLEN CAMP | Unknown | DIESEL FUEL | 7,000 |

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| Subtotal for Glennallen Camp: | 8,338 gallons spilled |
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Happy Valley Camp

| | | | | |
|----------|--|---------|---------------|-------|
| 12/01/70 | HAPPY VALLEY-CAMP "A" EQUIPMENT PARKING AREA | In Camp | DIESEL FUEL | 6,000 |
| 06/15/72 | HAPPY VALLEY | Unknown | JET FUEL | 30 |
| 06/21/72 | HAPPY VALLEY-BETW. BLADDER FARM AND UTILITY BLDG | Unknown | DIESEL FUEL | 1,000 |
| 05/04/73 | HAPPY VALLEY CAMP-BLADDER FARM | In Camp | DIESEL FUEL | 8,000 |
| 07/17/74 | 1500 FT S OF HAPPY VALLEY | In Camp | LUBE OIL | 110 |
| 12/03/74 | HAPPY VALLEY-FUEL STORAGE AREA | In Camp | DIESEL FUEL | 30 |
| 04/14/75 | HAPPY VALLEY-CAMP "A" DAY TANK | In Camp | DIESEL FUEL | 1,800 |
| 09/29/75 | HAPPY VALLEY CAMP PAD "A" | In Camp | DIESEL FUEL | 40 |
| 10/04/75 | HAPPY VALLEY CAMP "A" PAD | In Camp | DIESEL FUEL | 45 |
| 03/01/76 | HAPPY VALLEY CAMP-BLADDER FARM | In Camp | DIESEL FUEL | 70 |
| 05/06/76 | HAPPY VALLEY-ADJACENT TO PROPANE TANK | In Camp | MOTOR OIL | 30 |
| 09/04/76 | HAPPY VALLEY CAMP-BEHIND SHOP #2 | In Camp | ANTIFREEZE | 30 |
| 10/25/76 | HAPPY VALLEY-BACK OF POWER HOUSE CAMP A | In Camp | DIESEL FUEL | 40 |
| 02/22/77 | HAPPY VALLEY CAMP | Unknown | DIESEL FUEL | 285 |
| 03/04/77 | HAPPY VALLEY CAMP | Unknown | DIESEL FUEL | 200 |
| 04/02/77 | HAPPY VALLEY CAMP | Unknown | WASTE OIL | 100 |
| 04/25/77 | HAPPY VALLEY CAMP AIC SHOP AREA | In Camp | HYDRAULIC OIL | 40 |
| 01/08/78 | HAPPY VALLEY | Unknown | DIESEL FUEL | 150 |

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|---------------------------------|------------------------|
| Subtotal for Happy Valley Camp: | 18,000 gallons spilled |
|---------------------------------|------------------------|

| Date | Location Description | In Camp? | Substance | Gallons |
|--------------------|----------------------------------|----------|-----------------|---------|
| Isabel Camp | | | | |
| 11/12/75 | MOUNT SI ISABELL PAS | Unknown | OTHER | 30 |
| 02/23/76 | ISABEL PASS CAMP | Unknown | HYDRAULIC FLUID | 40 |
| 03/05/76 | ISABEL PASS CAMP | Unknown | HYDRAULIC FLUID | 30 |
| 03/08/76 | ISABEL PASS CAMP | Unknown | HYDRAULIC FLUID | 35 |
| 03/10/76 | ISABEL PASS CAMP | Unknown | DIESEL FUEL | 50 |
| 03/17/76 | ISABEL PASS CAMP | Unknown | HYDRAULIC FLUID | 30 |
| 03/19/76 | ISABEL PASS CAMP | Unknown | HYDRAULIC FLUID | 35 |
| 04/05/76 | ISABEL PASS CAMP | Unknown | OTHER | 40 |
| 04/07/76 | ISABEL PASS CAMP | Unknown | LUBE OIL | 30 |
| 04/11/76 | ISABEL PASS CAMP | Unknown | HYDRAULIC FLUID | 30 |
| 04/12/76 | ISABEL PASS CAMP | Unknown | DIESEL FUEL | 30 |
| 04/13/76 | ISABEL PASS | Unknown | LUBE OIL | 40 |
| 04/13/76 | ISABEL PASS- DIESEL LOADING PUMP | In Camp | DIESEL FUEL | 75 |
| 04/15/76 | ISABEL PASS CAMP | Unknown | DIESEL FUEL | 30 |
| 04/15/76 | ISABEL PASS CAMP | Unknown | DIESEL FUEL | 40 |
| 04/16/76 | ISABEL PASS CAMP | Unknown | DIESEL FUEL | 35 |
| 04/20/76 | ISABEL PASS | Unknown | DIESEL FUEL | 75 |
| 09/04/76 | ISABEL PASS CAMP-POL PUMP #8 | In Camp | DIESEL FUEL | 129 |

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|---------------------------|---------------------|
| Subtotal for Isabel Camp: | 804 gallons spilled |
|---------------------------|---------------------|

Livengood Camp

| | | | | |
|----------|---|---------|-------------|-----|
| 04/14/75 | LIVENGOD-NW CORNER OF CAMP | In Camp | UNKNOWN | 30 |
| 04/17/75 | FUEL DRIVEWAY LIVENGOD-AS 68 STA 2555 | In Camp | WASTE OIL | 30 |
| 07/18/76 | LIVENGOD CAMP-N SIDE PUMP #2 BLADDER FARM | In Camp | DIESEL FUEL | 103 |

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|------------------------------|---------------------|
| Subtotal for Livengood Camp: | 163 gallons spilled |
|------------------------------|---------------------|

Old Man Camp

| | | | | |
|----------|--|---------|-------------|-------|
| 01/29/75 | OLD MAN CAMP | Unknown | DIESEL FUEL | 55 |
| 02/28/75 | OLD MAN CAMP | Unknown | DIESEL FUEL | 225 |
| 07/01/75 | OLD MAN CAMP-POL AREA | In Camp | DIESEL FUEL | 100 |
| 02/10/76 | OLD MAN CAMP-UNDER "D" BARRACKS | In Camp | DIESEL FUEL | 1,100 |
| 02/14/76 | OLD MAN CAMP-POL AREA | In Camp | DIESEL FUEL | 200 |
| 02/24/76 | OLD MAN CAMP-3000 GALLON DAY TANK | In Camp | DIESEL FUEL | 125 |
| 02/28/76 | OLD MAN CAMP-GENERATOR BLDG DAY TANK | In Camp | DIESEL FUEL | 1,375 |
| 04/01/76 | OLD MAN CAMP-GENERATOR DAY TANK | In Camp | DIESEL FUEL | 950 |
| 05/03/76 | OLD MAN CAMP-GENERATOR DAY TANK | In Camp | DIESEL FUEL | 600 |
| 11/14/76 | OLD MAN CAMP-FUEL TANK BEHIND POWERHOUSE | In Camp | DIESEL FUEL | 1,250 |
| 10/26/78 | OLD MAN CAMP | Unknown | DIESEL FUEL | 42 |

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|----------------------------|-----------------------|
| Subtotal for Old Man Camp: | 6,022 gallons spilled |
|----------------------------|-----------------------|

| Date | Location Description | In Camp? | Substance | Gallons |
|-----------------------------|---------------------------------|----------|-----------------|---------|
| Prospect Camp | | | | |
| 01/14/75 | PROSPECT CAMP-FUELING AREA | In Camp | GASOLINE | 200 |
| 02/06/75 | EQUIP YD PROSPECT | Unknown | DIESEL FUEL | 40 |
| 04/30/75 | PS5 PROSPECT I MI NO | Unknown | DIESEL FUEL | 45 |
| 06/14/75 | HWY 7MI N PROSPECT | Unknown | DIESEL FUEL | 30 |
| 10/20/75 | BLADDER FARM PROSPECT | Unknown | DIESEL FUEL | 40 |
| 12/31/75 | PROSPECT CAMP-NE LAUNDRY BLDG | In Camp | DIESEL FUEL | 47,500 |
| 05/07/76 | PROSPECT CREEK | Unknown | JET FUEL | 30 |
| 05/28/76 | PROSPECT CAMP-BLADDER FARM | In Camp | DIESEL FUEL | 100 |
| 08/25/76 | PROSPECT CAMP BLADDER FARM | In Camp | DIESEL FUEL | 30 |
| 11/04/76 | PROSPECT CREEK CAMP-BARREL YARD | In Camp | WASTE OIL | 40 |
| 01/31/78 | MP 278 PROSPECT | Unknown | JP 4 | 100 |
| Subtotal for Prospect Camp: | | 48,155 | gallons spilled | |

Sheep Creek Camp

| | | | | |
|----------|---|---------|-------------|-------|
| 05/07/75 | SHEEP CREEK CAMP-SEWAGE BUILDING | In Camp | DIESEL FUEL | 75 |
| 09/27/75 | SHEEP CREEK CAMP-POL SERVICE STA. | In Camp | GASOLINE | 75 |
| 02/13/76 | SHEEP CREEK CAMP-POL AREA | In Camp | DIESEL FUEL | 1,760 |
| 03/18/76 | SECTION 1 SHEEP CK | Unknown | JP 4 | 35 |
| 04/18/76 | SHEEP CREEK CAMP-S END OF CAMP PAD | In Camp | DIESEL FUEL | 150 |
| 06/12/76 | SHEEP CREEK CAMP-UPPER NORTH YARD | In Camp | OIL | 40 |
| 07/18/76 | SHEEP CREEK CAMP-UPPER NORTH YARD | In Camp | LUBE OIL | 40 |
| 08/02/76 | SHEEP CREEK CAMP POL GAS STATION | In Camp | DIESEL FUEL | 60 |
| 08/06/76 | SHEEP CREEK CAMP-POL GAS STATION | In Camp | DIESEL FUEL | 300 |
| 08/21/76 | SHEEP CREEK CAMP-POL AREA | In Camp | DIESEL FUEL | 200 |
| 10/22/76 | SHEEP CREEK CAMP-S. SHOP AREA | In Camp | LUBE OIL | 30 |
| 10/25/76 | SHEEP CREEK CAMP-HELIPAD | In Camp | DIESEL FUEL | 40 |
| 10/26/76 | SHEEP CREEK CAMP-S. YARD, OILER'S SHACK | In Camp | LUBE OIL | 30 |
| 11/07/76 | SHEEP CREEK-STP PLANT | In Camp | WASTE OIL | 35 |
| 11/14/76 | SHEEP CREEK CAMP | Unknown | OTHER | 30 |
| 08/01/77 | SHEEP CREEK | Unknown | DIESEL FUEL | 100 |

Subtotal for Sheep Creek Camp: 3,000 gallons spilled

Sourdough Camp

| | | | | |
|----------|----------------|---------|-------------|-----|
| 12/10/75 | SOURDOUGH | Unknown | DIESEL FUEL | 150 |
| 12/18/75 | SOURDOUGH CAMP | Unknown | DIESEL FUEL | 600 |

Subtotal for Sourdough Camp: 750 gallons spilled

| Date | Location Description | In Camp? | Substance | Gallons |
|----------------------------|--|---------------------|-------------------|---------|
| Tonsina Camp | | | | |
| 04/06/75 | PIPE YD TONSINA | Unknown | UNKNOWN OIL | 29 |
| 12/27/75 | TONSINA CAMP-BETWEEN WATER TMT AND GENERATOR | In Camp | DIESEL FUEL | 300 |
| 02/12/76 | TONSINA CAMP | Unknown | LUBE OIL | 35 |
| 06/12/76 | TONSINA CAMP-JP4 TANK BERM PIT | In Camp | JP 4 | 150 |
| 09/04/76 | TONSINA CAMP-STORAGE YARD | In Camp | OIL (UNSPECIFIED) | 40 |
| Subtotal for Tonsina Camp: | | 554 gallons spilled | | |

| | | | | |
|---------------------------|---|------------------------|-----------------|-------|
| Toolik Camp | | | | |
| 05/29/74 | TOOLIK CAMP-BLADDER FARM | In Camp | DIESEL FUEL | 5,000 |
| 12/16/74 | TOOLIK CAMP 10,000 GALLON DAY TANK | In Camp | DIESEL FUEL | 100 |
| 05/29/75 | TOOLIK CAMP | Unknown | DIESEL FUEL | 200 |
| 06/21/75 | TOOLIK CAMP-W PERIMETER (W OF GENERATOR SHOP) | In Camp | DIESEL FUEL | 200 |
| 08/30/75 | TOOLIK CAMP-BETWEEN BARRACKS 12 & 13 | In Camp | DIESEL FUEL | 8,590 |
| 04/03/76 | TOOLIK CAMP | Unknown | MO GAS | 35 |
| 04/07/76 | TOOLIK CAMP | Unknown | HYDRAULIC FLUID | 40 |
| 05/09/76 | TOOLIK CAMP-DEADLINE TRUCK PARKING AREA | In Camp | DIESEL FUEL | 350 |
| 05/25/76 | TOOLIK CAMP BARREL FARM | In Camp | OIL (DN-600) | 40 |
| 09/01/76 | TOOLIK CAMP | In Camp | SOLVENT | 30 |
| 09/05/76 | TOOLIK CAMP-N END OF TIRE SHOP | In Camp | METHANOL | 55 |
| 09/27/76 | TOOLIK CAMP-N OF SPACE HEATER SHOP | In Camp | DIESEL FUEL | 35 |
| 11/29/76 | TOOLIK CAMP PAD | Unknown | HYDRAULIC FLUID | 30 |
| 07/01/77 | | Unknown | DIESEL FUEL | 40 |
| 07/23/77 | | Unknown | DIESEL FUEL | 40 |
| 09/01/77 | | Unknown | DIESEL FUEL | 40 |
| 09/01/77 | | Unknown | DIESEL FUEL | 35 |
| 10/15/77 | | Unknown | DIESEL FUEL | 40 |
| Subtotal for Toolik Camp: | | 14,900 gallons spilled | | |