

ALASKA LEGISLATURE COMMITTEE FILES 2007-2008 HTA 12403 33

**4-101.19 Wood, Use Limitation.**

1. Abrishami, S.H., B.D. Tall, T.J. Bruursema, P.S. Epstein and D.B. Shah. Bacterial Adherence and Viability on Cutting Board Surfaces. Department of Microbiology, NSF International, Ann Arbor, MI and Division of Microbiological Studies, Center for Food Safety and Applied Nutrition, U.S. Food and Drug Administration, Washington, D.C. *Journal of Food Safety* 14 (1994) 153-172.
2. Agricultural Research Service, U.S. Department of Agriculture. ARS Affirms Plastic Cutting Board Policies. *Food Chemical News*, December 6, 1993, pp. 56-57.

**4-501.114 Manual and Mechanical Warewashing Equipment, Chemical Sanitization - Temperature, pH, Concentration, and Hardness.\***

1. Miller, M.P., Principal Investigator, 1984. Relationship of Factors Affecting Bactericidal Effectiveness of Chlorine Sanitizing Solutions. Final Report. National Sanitation Foundation, Ann Arbor, MI., subcontract No. 9013-092-108-H0620-101; Booz, Allen & Hamilton, Inc. contract No. 223-80-2295.
2. Miller, M.P., Principal Investigator, 1985. Relationship of Factors Affecting Bactericidal Effectiveness of Chlorine Sanitizing Solutions. Addendum to Final Report. National Sanitation Foundation, Ann Arbor, MI., subcontract No. 9013-092-108-H0620-101; Booz, Allen & Hamilton, Inc. contract No. 223-80-2295.
3. National Sanitation Foundation, Ann Arbor, MI. November, 1990. Report on the Bacterial Effectiveness of a Chlorine Sanitizing Solution at Contact Times of Less than Ten Seconds. Purchase Order #FDA 665531-00-90-RB.

**4-602.11 Equipment Food-Contact Surfaces and Utensils.\***

1. Tauxe, R.V., M.D., Chief, Foodborne and Diarrheal Diseases Branch, Division of Bacterial and Mycotic Diseases, National Center for Infectious Disease and M.L. Cohen, M.D., Director, Division of Bacterial and Mycotic Diseases, National Center for Infectious Diseases, memo dated January 10, 1996 re: "Bacterial Contamination of Iced Tea," to State and Territorial Epidemiologists and State and Territorial Public Health Laboratory Directors. Memo includes two fact sheets by the Tea Association of the U.S.A., Inc

**4-603.17 Returnables, Cleaning for Refilling.\***

1. Food and Drug Administration, 1985. Food Protection - Refilling of take-home beverage containers (8/29/85). Retail Food Protection Program Information Manual.

**4-703.11 Hot Water and Chemical.\***

1. Miller, M.P., Principal Investigator, 1984. Relationship of Factors Affecting Bactericidal Effectiveness of Chlorine Sanitizing Solutions. Final Report. National Sanitation Foundation, Ann Arbor, MI., subcontract No. 9013-092-108-H0620-101; Booz, Allen & Hamilton, Inc. contract No. 223-80-2295.
2. Miller, M.P., Principal Investigator, 1985. Relationship of Factors Affecting Bactericidal Effectiveness of Chlorine Sanitizing Solutions. Addendum to Final Report. National Sanitation Foundation, Ann Arbor, MI., subcontract No. 9013-092-108-H0620-101; Booz, Allen & Hamilton, Inc. contract no. 223-80-2295.
3. National Sanitation Foundation, Ann Arbor, MI. November, 1990. Report on the Bacterial Effectiveness of a Chlorine Sanitizing Solution at Contact Times of Less than Ten Seconds. Purchase Order #FDA 665531-00-90-RB.

**Chapter 5 Water, Plumbing and Waste**

1. Building Officials and Code Administrators International, Inc. The BOCA National Plumbing Code/1993, Country Club Hills, IL. 110pp.
2. International Association of Plumbing and Mechanical Officials. Uniform Plumbing Code, 1994 Edition, Walnut, CA. 441pp.
3. National Association of Plumbing-Heating-Cooling Contractors. 1993 National Standard Plumbing Code - Illustrated, Falls Church, VA. 439pp.
4. Southern Building Code Congress International, Inc. 1994 Standard Plumbing Code and 1995 Revisions, Birmingham, AL. 296pp.

**6-202.15 Outer Openings, Protected.**

1. National Fire Protection Association, "NFPA 101® Code for Safety to Life from Fire in Buildings and Structures, 1994 Edition."
2. National Fire Protection Association, "Handbook to the NFPA 101® Code for Safety to Life from Fire in Buildings and Structures, 1994 Edition."

**6-303.11 Intensity.**

1. Illuminating Engineering Society of North America, 1993. Lighting Handbook, 8th Ed., IESNA Publications Dept., New York, NY. 900+pp.

**Additional Chapter 7.0 Food Safety References:**

Mead, Paul S., Slutsker, Laurence, Dietz, Vance, McCaig, Linda F., Bresee, Joseph S., Shapiro, Craig, Griffin, Patricia M., and Tauxe, Robert V., 1999. Food-Related Illness and Death in the United States, Emerg Infect Dis [serial online]. September–October Vol. 5, No. 5. <<http://www.cdc.gov/ncidod/EID/eid.htm>>

Food and Drug Administration, Center for Food Safety and Applied Nutrition, 1998. Foodborne Pathogenic Microorganisms and Natural Toxins Handbook: The "Bad Bug Book". <<http://www.cfsan.fda.gov>>

Guzewich, Jack, Ross, Mariana P., 1999. Evaluation of Risks Related to Microbiological Contamination of Ready-to-eat Food by Food Preparation Workers and the Effectiveness of Interventions to Minimize Those Risks. Food and Drug Administration. <<http://www.cfsan.fda.gov>>

Food and Drug Administration, Center for Food Safety and Applied Nutrition, 2000. CFP 2000 Backgrounder: No Bare Hand Contact. March 30, 2000.

Larson, E., 1995. APIC Guidelines for Handwashing and Hand Antisepsis in Healthcare Settings, American Journal of Infection Control, 23:251-69.

NSF International, 1983. NSF C2-1983, Special Equipment and/or Devices (Food Service Equipment). Ann Arbor, MI.

NSF International, 1996. ANSI/NSF 2-1996, Food Equipment. Ann Arbor, MI.

NSF International, 1996. ANSI/NSF 3-1996, Commercial Spray-Type Dishwashing and Glasswashing Machines. Ann Arbor, MI.

NSF International, 1999. ANSI/NSF 4-1999, Commercial Cooking, Rethermalization, and Powered Hot Food Holding and Transport Equipment. Ann Arbor, MI.

NSF International, 1992. NSF 5-1992, Water Heaters, Hot Water Supply Boilers, and Heat Recovery Equipment. Ann Arbor, MI.

NSF International, 1996. ANSI/NSF 6-1996, Dispensing Freezers (for Dairy Dessert-Type Products) Ann Arbor, MI.

NSF International, 1997. ANSI/NSF 7-1997, Commercial Refrigerators and

- Storage Freezers. Ann Arbor, MI.
- NSF International, 1992. ANSI/NSF 8-1992, Commercial Powered Food Preparation Equipment. Ann Arbor, MI.
- NSF International, 1992. ANSI/NSF 12-1992, Automatic Ice Making Equipment. Ann Arbor, MI.
- NSF International, 1992. ANSI/NSF 13-1992, Refuse Compactors and Compactor Systems. Ann Arbor, MI.
- NSF International, 1996. ANSI/NSF 18-1996, Manual Food and Beverage Dispensing Equipment. Ann Arbor, MI.
- NSF International, 1998. ANSI/NSF 20-1998, Commercial Bulk Milk Dispensing Equipment. Ann Arbor, MI.
- NSF International, 1996. ANSI/NSF 21-1996, Thermoplastic Refuse Containers. Ann Arbor, MI.
- NSF International, 1997. ANSI/NSF 25-1997, Vending Machines for Food and Beverages. Ann Arbor, MI.
- NSF International, 1980. NSF 26-1980, Pot, Pan, and Utensil Commercial Spray-Type Washing Machines. Ann Arbor, MI.
- NSF International, 1992. ANSI/NSF 29-1992, Detergent and Chemical Feeders for Commercial Spray-Type Dishwashing Machines. Ann Arbor, MI.
- NSF International, 1991. ANSI/NSF 35-1991, Laminated Plastics for Surfacing Food Service Equipment. Ann Arbor, MI.
- NSF International, 1996. ANSI/NSF 36-1996, Dinnerware. Ann Arbor, MI.
- NSF International, 1992. ANSI/NSF 37-1992, Air Curtains for Entranceways in Food and Food Service Establishments. Ann Arbor, MI.
- NSF International, 1997. ANSI/NSF 51-1997, Food Equipment Materials. Ann Arbor, MI.
- NSF International, 1992. ANSI/NSF 52-1992, Supplemental Flooring. Ann Arbor, MI.
- NSF International, 1997. ANSI/NSF 59-1997, Mobile Food Carts. Ann Arbor, MI.

## 14.8 Integrated Pest Management

U. S. Army, 1996. Cockroach IPM: Installation Integrated Pest Management Program For German Cockroach Control.

<<http://chppm-www.apgea.army.mil/ento/roachipm.htm#A>> .

Armed Forces Pest Management Board, 1994. Technical Information Memorandum No. 29. Integrated Pest Management in and Around Buildings. Defense Pest Management Information Analysis Center. Washington, DC.

Educational Foundation of the National Restaurant Association, 1992. Applied Foodservice Sanitation, 4th Ed. John Wiley & Sons, New York.

Code of Federal Regulations, Title 40, Parts 152-186. Federal Insecticide, Fungicide, and Rodenticide Act.

ServSafe®, 1999, The Educational Foundation of the National Restaurant Association, Chicago, IL.

National Restaurant Association. Pest Management in Restaurants. Washington, DC.

D'Agnese, J. J., 1996. Integrated Pest Management System Guide for Cruise Ships, 4th Ed. Cruise Ship Consultation Service, Fernandina Beach, FL.

## 14.9 Housekeeping

Collins, C.H. (Editor), 1981. Disinfectants: Their Use & Evaluation of Effectiveness. Technical Series No 16. Society for Applied Bacteriology. Academic Press. San Diego, CA.

Block, S. S., 1991. Disinfection, Sterilization & Preservation, 4th Edition. Williams & Wilkins. Philadelphia, PA.

Robinson, Marilynne, 1997. Housekeeping. Bantam Books. New York, NY.

Nester, Eugene, and Nester, Martha, 1997. Microbiology: A Human Perspective, 2nd Edition. McGraw Hill. New York, NY.

Tortora, Gerard, 1998. Microbiology: An Introduction, 6th Edition. Addison-Wesley. Reading, MA.

Black, J.G., 1995. Microbiology: Principles & Application, 3rd Edition. Prentice Hall.

Upper Saddle River, NJ.

APIC. 1996. Handbook of Infection Control (Second Edition). Association for Professionals in Infection Control & Epidemiology. Mosby, St. Louis, MO.

Rutala, R.W., 1996. APIC Guidelines for Selection and Use of Disinfectants, American Journal of Infection Control, 24:1-2.

Freije, M. R., Barbaree, J. M. (Ed.), and Olsen, R. N. (Ed.), 1996. Legionellae Control in Health Care Facilities: Minimizing Risk. HC Information Resources. Indianapolis, IN.

Freije, Matthew R., 1998. Minimizing the Risk of Legionella in Cooling Towers and Other HVAC Equipment. HC Information Resources. Indianapolis, IN.

Bollin, G. E., Plouffe, J. F., Para, M. F., Hackman, B., 1985. Aerosols Containing 'Legionella pneumophila' Generated by Shower Heads and Hot-Water Faucets. Ohio State Univ., Columbus. Div. of Infectious Diseases. Health Effects Research Lab., Research Triangle Park, NC.

NTIS, Springfield, VA.

Breiman, R., Fields, B., Volmer, L., et al., 1989. Definitive association of shower use with Legionnaires' disease: possible role of amoebae (Abstract). In: Program and abstracts of the 89th Annual Meeting of the American Society for Microbiology. American Society for Microbiology, 1989:126. Washington, DC.

#### 14.10 Child-Activity Centers

American Academy of Pediatrics & American Public Health Association Staff, 1992. Caring for Our Children: National Health & Safety Performance Standards. Washington, DC.

National Resource Center for Health & Safety in Child Care,  
<<http://nrc.uchsc.edu/national/index.html>> .

Rutala, R.W., 1996. APIC Guidelines for Selection and Use of Disinfectants, American Journal of Infection Control, 24:13-42.

Young, Frank E., 1989. In Day-Care Centers, Cleanliness Is a Must. FDA Consumer. U. S. Food and Drug Administration. Washington, DC.

#### 14.11 Administrative Guidelines

Centers for Disease Control and Prevention, 2001. Recommended Shipbuilding Construction Guidelines for Passenger Vessels Destined to Call on U.S. Ports.

Centers for Disease Control and Prevention. Summary of Sanitation Inspections of International Cruise Ships.  
[www.cdc.gov/nceh/vsp](http://www.cdc.gov/nceh/vsp).

*Northwest CruiseShip Association*  
*Discharge of Effluents in Certain Alaska Waters by Cruise Vessel*  
*Operations*

**2007 Operating Season**  
**Quality Assurance/Quality Control Plan**  
**For**  
**Sampling and Analysis of Treated Sewage and**  
**Graywater**  
**From**  
**Commercial Passenger Vessels**

*Submitted to fulfill certain requirements of*  
*33 CFR 159 United States Title 33 Code of Federal Regulations*  
*Part 159 and Alaska Statute 46.03.460 -- 46.03.490 and 18 AAC 69*

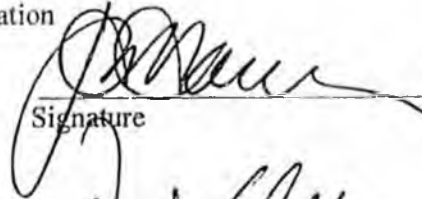
## TABLE OF CONTENTS

<b>APPROVAL PAGE</b>	<b>4</b>
<b>DISTRIBUTION LIST</b>	<b>5</b>
<b>ACRONYMS/ABBREVIATIONS USED</b>	<b>6</b>
<b>MANAGEMENT AND CONTRACTORS</b>	<b>7</b>
<b>2007 PROGRAM ORGANIZATIONAL CHART</b>	<b>9</b>
<b>PURPOSE</b>	<b>10</b>
<b>APPLICABILITY</b>	<b>10</b>
<b>Quality Objectives and Criteria for Measurement Data</b>	<b>12</b>
<b>Quantitative DQOs</b>	<b>12</b>
Reporting Limits.	12
Precision.	12
Accuracy.	13
Completeness.	13
<b>Qualitative DQOs</b>	<b>13</b>
Representativeness.	13
Comparability.	13
Special Training Requirements/Certification	14
<b>Documentation and Records</b>	<b>14</b>
Sample schedule and Vessel/Sample Identification	14
Field Records	15
Laboratory Records	15
Chain of Custody	16
<b>SAMPLING PROCESS DESIGN</b>	<b>16</b>
<b>Sampling Method Requirements</b>	<b>17</b>
Sample Collection Procedures	17
<b>Sample Handling and Custody Requirements</b>	<b>20</b>
Sample Custody	20
Sample Temperature and Condition	21
Sample Holding Times	21
Sample Disposal	21
<b>Analytical Methods and Quality Control Requirements</b>	<b>21</b>

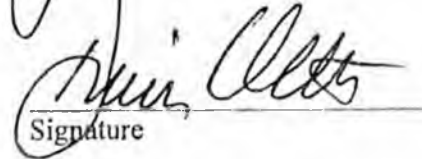
<b>Instrument/Equipment Testing, Inspection, and Maintenance Requirements; Calibration and Frequency</b>	<b>29</b>
<b>Inspection/Acceptance Requirements for Supplies and Consumables</b>	<b>30</b>
<b>Inspection/Acceptance Requirements (Non-Direct Measurements)</b>	<b>30</b>
<b>Data Management</b>	<b>30</b>
<b>ASSESSMENT/OVERSIGHT</b>	<b>30</b>
<b>Assessments and Response Actions</b>	<b>30</b>
Field Assessments	30
Laboratory Assessments	31
Duplicates	31
Corrective Action	32
<b>Reports to Management</b>	<b>32</b>
<b>DATA VALIDATION AND USABILITY</b>	<b>33</b>
Data Review, Verification, and Validation	33
Reconciliation with Data Quality Objectives	33
<b>BIBLIOGRAPHY</b>	<b>34</b>
<b>APPENDIX A - SAMPLING CHECKLIST</b>	<b>35</b>
<b>APPENDIX B - DATA REVIEW CHECKLIST</b>	<b>36</b>

**APPROVAL PAGE**

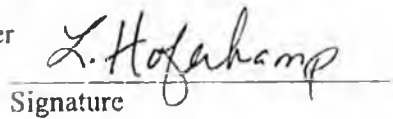
NorthWest Cruiseship Association

  
Signature \_\_\_\_\_ Date Jan 24 2007

Lab Project Manager

  
Signature \_\_\_\_\_ Date Feb 9 2007


Project Quality Assurance Officer

  
Signature \_\_\_\_\_ Date 02/13/07

U.S. Coast Guard Captain of the Port

  
Signature \_\_\_\_\_ Date 2/5/07

ADEC Project Manager

  
Signature \_\_\_\_\_ Date Feb 9 2007

ADEC Quality Assurance Officer

  
Signature \_\_\_\_\_ Date 02/09/07

Revision Number \_\_\_\_  
Revision Date: \_\_\_\_\_

This document control information will appear in the upper right corner of each page of the Quality Assurance/Quality Control Plan (QA/QCP). Each revision of the QA/QCP will be assigned a revision number obtained by adding 1 (one) to the previous revision number.

On the bottom of each page will be found:

Cruise Ship Wastewater Monitoring # Quality Assurance/ Quality Control  
Plan

### **Distribution List**

A copy via electronic format of each revision will be distributed to the following individuals:

#### **Individual**

CAPT Mark Guillory  
Albert Faure  
David Wetzel  
Sampling Team Leader  
Jim Gendron  
Vessel Representatives  
Lisa Hoferkamp  
John Hansen

#### **Organization**

U.S. Coast Guard COTP  
ADEC Project Manager  
Lab Project Manager  
Admiralty Environmental  
ADEC Quality Assurance Officer  
Individual Companies  
UAS, Project Quality Assurance Officer  
NorthWest Cruise Ship Association

### Acronyms/Abbreviations Used

ADEC	Alaska Department of Environmental Conservation
BNA	Base/Neutrals, Acids
BOD	Biochemical Oxygen Demand – 5-day test
CFR	Code of Federal Regulations
COC	Chain of Custody
COD	Chemical Oxygen Demand
COTP	US Coast Guard Captain of the Port
DQO	Data Quality Objective
EPA	Environmental Protection Agency
HDPE	High Density Polyethylene
HCl	Hydrochloric Acid
H <sub>2</sub> SO <sub>4</sub>	Sulfuric Acid
HNO <sub>3</sub>	Nitric Acid
MDL	Method Detection Limit
MSD	Marine Sanitation Device
NaOH	Sodium Hydroxide
%R	Percent Recovery
PQL	Practical Quantitation Limit (Minimum Reporting Level)
QA	Quality Assurance
QA/QCP	Quality Assurance/Quality Control Plan
QMP	Quality Management Plan
QC	Quality Control
RPD	Relative Percent Difference
RQ	Reportable Quantity per 40 CFR part 302
SM	Standard Methods
SW-846	Solid Waste Methods
SOP	Standard Operating Procedures
TSS	Total Suspended Solids
UAS	University of Alaska, Southeast
USCG	U.S. Coast Guard
VOCs	Volatile Organic Chemicals
VSSP	Vessel Specific Sampling Plan

## Management and Contractors

### North West CruiseShip Association

The North West CruiseShip Association (NWCA) represents the large cruise line companies undergoing wastewater testing during the 2007 Alaska cruise ship season. Individual NWCA members are funding the sampling and analysis program for their own respective vessels. The costs incurred by the Project QA Officer will be distributed evenly among all participants in the program. All NWCA member line cruise ships that operate in Alaska waters in 2007 will follow the provisions of this QA/QCP.

### Individual Vessel Representatives

The responsibility for adherence to the provisions of this QAQC plan rests with the owner or operator. Failure of vessel owners and operators to follow the provisions of this QAQC plan will result in enforcement action by the State of Alaska under AS 46.03.

### Small Cruise Ships and Alaska Marine Highway System

Many other small cruise ship companies and the Alaska Marine Highway System (AMHS) may choose to follow this QA/QCP or they may submit their own QA/QCP to the ADEC in order to satisfy obligations under Alaska Statute 46.03 and 18 AAC 69.025.

### Lab Project Manager

The Lab Project Manager is responsible for ensuring that individual project components are executed in a timely and appropriate fashion. However it is the vessel owner or operator that is responsible for compliance. Responsibilities include:

- Submitting results within the time frame specified by law and this document.
- Communicating project information to the Coast Guard, ADEC, and cruise lines.
- Assuring that project participants have necessary training.
- Fielding questions and requests for information that arise during and after the project.
- Managing the financial aspect of the project, including the determination of billing and payment mechanisms.

### Sampling team Leader

The contract sampling team leader will coordinate and conduct all unannounced and continued compliance sampling. The VSSP must be submitted by the vessel owner or operator to the ADEC and US Coast Guard prior to sampling.<sup>1</sup> The ADEC will forward the approved VSSP to the sampling manager. The sampling team will design and keep confidential a sampling schedule. Vessel operators will not be aware of the timing of sample collection for the two **unannounced** sampling events.

Samplers are responsible for sample collection, sample integrity and custody, field measurements, and accurate notes. **THE SAMPLER MUST VERIFY THAT THE VESSEL IS DISCHARGING DURING THE UNANNOUNCED SAMPLES.** If discrepancies exist on the VSSP, the sampler

---

<sup>1</sup> ADEC: 21 days before sampling, 18 AAC 69.030  
Coast Guard: w/in 30 days of initial entry, 33 CFR 159.317(a)(3)

is to report them immediately to ADEC and the USCG. The sampler will provide a compilation of field notes, deviations from VSSP or QA/QCP plans (if applicable), and Chain of Custody to the laboratory personnel, Project Manager, and the Project Quality Assurance Officer upon completion of all sampling.

The sampler will notify the ADEC project manager 36 hours prior to the sampling event. This gives ADEC time to audit the sampling event.

#### **Wastewater analysis laboratory**

A laboratory, certified for drinking water analysis by ADEC, will be retained to analyze both conventional and priority pollutant samples according to their individual laboratory Quality Assurance Plan, and using EPA-approved analytical methods. If a sub-contract laboratory is used to meet holding times, that sub-contract laboratory must also be certified for drinking water analysis by ADEC or their equivalent state or province and adhere to the quality control procedures outlined in this document. The laboratory Quality Assurance Manager will certify the quality assurance programs of all subcontract laboratories. A list of ADEC certified microbiological labs is available at <http://www.dec.state.ak.us/eh/lab/labs.htm>  
Labs that provide chemical analysis can be found at <http://www.dec.state.ak.us/eh/lab/certchemlabs.aspx>.

#### **Project Quality Assurance Officer**

The Project Quality Assurance (QA) Officer is an independent individual that ensures that that ALL laboratories and sampling teams follow the laboratory's quality assurance program guidelines, this QA/QCP, and the VSSP. The Project QA Officer works independently to ensure quality of the data.

#### **US Coast Guard COTP**

The USCG COTP will use data gathered in accordance with this plan to determine compliance with federal law.

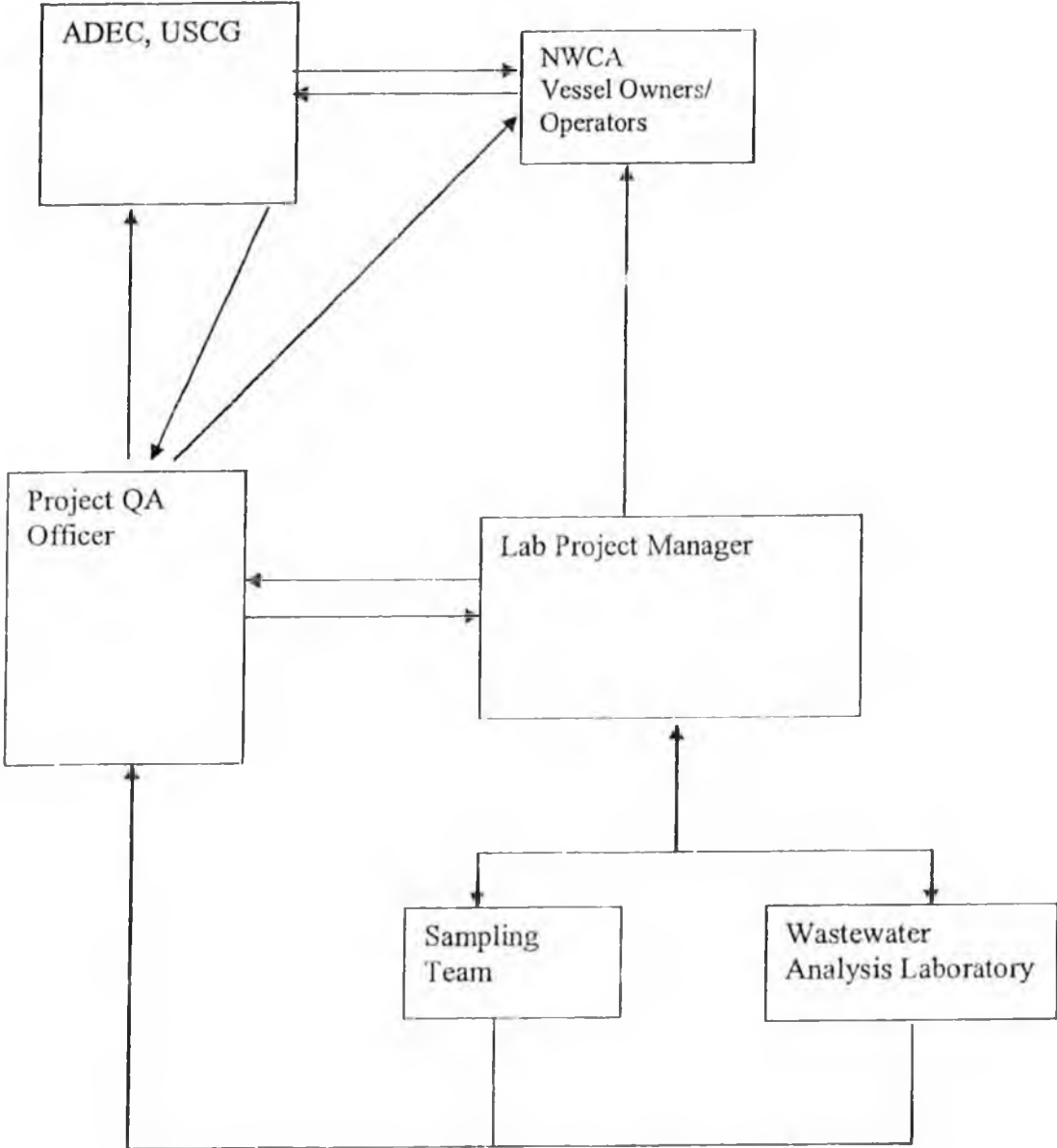
#### **ADEC Project Manager**

The ADEC project manager manages the program to meet the requirements in the Alaska statute, regulation, and the approved QA/QC plan.

#### **ADEC Water Quality Assurance Officer**

The ADEC Water Quality Assurance Officer will review the QA/QCP to determine if it meets the State of Alaska's objectives for the data collection effort. The ADEC WQA Officer may review data results and participate in sampling and laboratory audits.

2007 Program Organizational Chart



## Purpose

This document is prepared and submitted to fulfill certain requirements of United States Title 33 Code of Federal Regulations Part 159.317, Alaska Statute 46.03.460- 46.03.490, and 18 AAC 69.025. Federal law requires at least two **sampling events** per vessel in a season, and that these two sampling events are unannounced to the vessel beforehand. A "sampling event" is the collection of representative samples<sup>2</sup> of each wastewater type being discharged within Alaska waters. The number of samples in a sampling event is based upon the ship configuration, vessel wastewater management practices, and the wastewater quantities discharged while the sample team is on-board.

*The two unannounced samples must be taken at a point in the system directly before being discharged overboard.* Sample ports must be within 50 feet of the point of overboard discharge.<sup>3</sup>

One sample will be tested for conventional pollutants only. The second sample must be tested for conventional and priority pollutants.

Samples submitted to the USCG in order to obtain certification for continuous discharge must also follow this QA/QCP.

Lab reports should clearly state whether the sampling was conducted

- to obtain certification for continuous discharge
- to maintain continued compliance for continuous discharge
- to satisfy 33 CFR 159.317 and AS 46.03.465

The lab will submit the sample results directly to the DEC and USCG, but the owner/operator is responsible for meeting submittal deadlines.

## Applicability

This QA/QCP specifies the minimum requirements for sampling and analysis of treated sewage and/or graywater and other wastewaters as defined in AS 46.03.490, for the 2007 Alaska operating season for vessels that are members of the North West CruiseShip Association. This QA/QCP is also applicable for any commercial passenger vessel that discharges treated sewage, graywater and/or other wastewater in the applicable waters of Alaska as defined in 33 CFR 159.305 and the waters of the Alexander Archipelago as defined in AS 46.03.490. All unannounced and/or random sampling events required by 33 CFR 159 and AS 46.03 shall be conducted in accordance with this QA/QCP.

---

<sup>2</sup> The VSSP for each vessel will list the proper location and timing of wastewater sampling. The samples will be taken in a manner that seeks to capture a typical wastewater discharge while still meeting the fecal coliform 6-hour holding time.

<sup>3</sup> Samples taken at the treatment system are sometimes of different quality than the samples taken at the discharge port. This will make it possible to fairly compare the data from all ships.

Owner or operators must comply with the guidelines in 33 CFR 159, 40 CFR 136.3, AS 46.03.460-46.03.490, and 18 AAC 69, 18 AAC 70 and this plan.

**Applicable standards for wastewater discharges<sup>4</sup>**  
**FOR VESSELS DISCHARGING at least 1 nautical mile from shore and traveling a minimum of 6 knots**

Pollutant limits	Blackwater	Graywater
Total Suspended Solids (TSS)	150 mg/L	150 mg/L
Fecal Coliform	200 FC/100ml	200 FC/100ml

Each participating ship will be sampled within 30 days of initial entry into Alaska waters and subject to unannounced treated sewage and graywater sampling and analysis for conventional and priority pollutants as determined by the Coast Guard COTP. The second samples must be at least 21 days after the first sampling event. The twice per month continuous compliance sampling must be at least 24 hours apart. The ADEC may board vessels to perform sampling inspections as necessary to implement AS 46.03.

This QA/QCP covers sampling and analysis for the parameters listed below. Analysis for conventional and priority pollutant parameters as required by the USCG under 33 CFR 159.317 are listed below. A sample that fails to provide valid results for all required pollutants will not be counted as an acceptable sample for purposes of meeting the minimum requirement of two samplings for conventional pollutants and one sample for priority pollutants.

**Conventional pollutants (two sampling events):**

- Total Suspended Solids (TSS)
- Settleable Solids (SS)
- Biochemical Oxygen Demand (BOD)
- Chemical Oxygen Demand (COD)
- Oil and Grease
- Total Organic Carbon
- Ammonia - Total
- Fecal Coliform
- pH
- Total and Free Residual Chlorine
- Specific Conductance (to measure seawater influx)
- Alkalinity
- Total Nitrogen (Ammonia, Nitrate, Nitrite, and Total Kjeldahl Nitrogen (TKN))
- Total Phosphorus

**Priority Pollutants (one sampling event)**

- Base/Neutrals, Acids
- Total Aromatic and Total Aqueous Hydrocarbons using BNA and VOC data

<sup>4</sup> According to Title XIV, 33 CFR 159, 40 CFR 140, and AS 46.03.463

- Volatile Organic Chemicals (VOCs)
- Trace Metals (Total Recoverable and Dissolved)

### BLIND DUPLICATE SAMPLES

Blind sample duplicates will be collected on a minimum of 10% of the total number of samples or four samples total, whichever number is greater. All blind samples will be analyzed for conventional pollutants, but only half will be analyzed for priority pollutants.

The purpose of the blind sample duplicates is to assess sampling and laboratory error and to assess overall method variability. Precision between the sample and its duplicate will be determined by calculating the relative percent difference between the two samples, in the same way that precision is measured between two laboratory-fortified blanks or a matrix spike/matrix spike duplicate. The use of duplicate samples extends the test of precision to the sampling method itself. The use of blind samples provides a test of the laboratory and is used to assess bias or analytical errors not detected by the laboratory (e.g., a false positive). Every effort will be made to ensure that the labeling of the samples does not disclose the duplicate nature of the samples to the laboratory staff. The samples will be analyzed by the same lab and for the same parameters.

The sampler will need to take a cubitainer (10 liters) of wastewater and thoroughly mix it. The sampler should then pour the contents into individual sample bottles.

### **Quality Objectives and Criteria for Measurement Data**

Data Quality Objectives (DQOs) are quantitative and qualitative objectives that define usable data for meeting the requirements of this project. DQOs define the quality of services provided by the laboratory and are used in the quality assurance review of the field and laboratory data. Review of the quality control (QC) data against the DQOs determines if the data are fully usable, considered estimates, or rejected as unusable.

#### **Quantitative DQOs**

The quantitative DQOs for this project include reporting limits, precision, accuracy, and completeness.

#### Reporting Limits.

Reporting limits are determined by laboratory-provided or method-specified minimum levels, or by interim minimum levels where reporting limits at or near water quality criteria are not obtainable. Individual analyte reporting limits are listed in Table 2.

#### Precision.

Precision is the ability to replicate the measurement. It is expressed as Relative Percent Difference (RPD). Acceptance criteria for RPD are analysis-specific and are defined by the laboratories.

RPD is normally determined by matrix spike duplicates or by laboratory-fortified blank duplicates. The calculation for RPD is:

$$((X_1 - X_2) / ((X_1 + X_2)/2)) * 100,$$

and is expressed as a percent.  $X_1$  = first sample measurement and  $X_2$  = second sample measurement. Precision limits for specific analytes are listed in Table 2.

#### Accuracy.

Accuracy is the closeness of the measurement to the true level of the variable. Accuracy is expressed as percent recovery (%R). Acceptance criteria for %R vary depending on the method. %R is normally determined by the use of known traceable laboratory control standards. Acceptance limits for accuracy for each analyte are listed in Table 2.

#### Completeness.

Completeness is a measure of how many planned measurements for each constituent actually resulted in usable data. It is expressed as a percentage of the total number of samples collected. The completeness criterion for this project is 80 percent. Because of the variety of vessels and discharges sampled, and the possibility for weather or other shipping-related delays resulting in missed holding times, a completeness criterion of less than 100% is to be expected.

#### **Qualitative DQOs**

The qualitative DQOs are representativeness and comparability.

#### Representativeness.

Representativeness is a measure of how well the sample reflects the typical wastewater effluent. Sample representativeness will be established by collecting cruise ship graywater, blackwater, and other wastewater discharge samples following vessel specific sampling plans (VSSP). The owner and operator is responsible for developing and submitting VSSPs to both agencies for each vessel participating in the program.

The treatment system effluent will be considered representative for the two unannounced samples only if the vessel normally discharges continuously. If the vessel normally stores the wastewater in holding tanks before discharging, the effluent from the holding tank will be sampled. The VSSP is designed to ensure that consistent sampling methods are followed and that samples are collected from appropriate and representative locations at appropriate times.

Vessel operation that differs from the VSSP may result in State of Alaska rejection of samples.

#### Comparability.

Comparability is a measure of confidence with which one data set can be compared to another. It is addressed in the plan by 1) following EPA standardized sampling and analytical methods; 2) by using similar sampling and analytical methods as followed in last year's monitoring project; 3) ensuring that appropriate reporting limits are used; and 4) obtaining data of known and acceptable quality through the use of specified QC measures and QA data assessment.

Because of the different source types found on different vessels (e.g., a holding tank on some ships may contain both blackwater and graywater, while on others it may only contain graywater), careful definition of discharge types will be made in the VSSP. It is essential that these definitions be carried through to the end data user, as these differences could erroneously bias data interpretation.

The sampling team must make full use of ship records and logs, especially the Graywater and Sewage Discharge Record Book which includes the latitude and longitude at the beginning and end of discharge, identifying tanks, estimating volumes and calculating discharge rates (if any) at the time the sample is drawn. If the vessel is discharging continuously (not just certified but actually is in practice) then the sampler does not need to record latitude and longitude at the beginning and end of discharge, identifying tanks, estimating volumes of those tanks. The sampler needs to identify which treatment unit is discharging and the discharge rate. The vessel speed and longitude/latitude must be obtained by the sampler if the sample is taken while the vessel is discharging underway. Information added to the VSSP or changes to the VSSP during the sampling event must be recorded on the VSSP, COC, or in the field notes and must accompany the samples to the lab and be provided to the project data recipients as part of the complete unannounced sampling report.

#### Special Training Requirements/Certification

Samplers will be trained in sampling methods, sample handling, chain of custody, and field measurements as outlined in 40 CFR 136. Additionally, samplers will receive appropriate training through their employer or their employer's designee, in any necessary shipboard safety procedures.

Laboratories used will have a current Alaska Department of Environmental Conservation Drinking Water certification for microbiologicals or inorganics or home state or provincial equivalent. Laboratory analysts will be trained in accordance with each laboratory's QA Plan and Standard Operating Procedures (SOPs). Records of current certification, analyst training, and the laboratory QA documents listed above will be made available to the Project Manager and the Project QA Officer, and ADEC upon request. Laboratories will employ approved methods, including as outlined in 40 CFR 136, or as directed by the methods listed in table 2.

### **Documentation and Records**

#### Sample schedule and Vessel/Sample Identification

The sampling team will work with the USCG and ADEC to develop a schedule of unannounced sampling events as required in 33 CFR 159.317 (a). The sampler must also notify the ADEC of its intent to sample at least 36 hours prior to sample collection. The two sampling events must be a minimum 21 days apart unless being conducted as allowed under 18 AAC 69.070.

Samples will be identified clearly on the chain of custody and sample bottles. For example, a sample from the overboard discharge from the *M/V Hypothetica* will be identified as "OB Discharge," as the description with associated dates and times. The Sample ID should clearly state

where the sample was taken. All samplers should use the same sample ID system. From continuous discharges with one discharge point "OB Discharge" is appropriate. The sampler should fill out the checklist in Appendix A.

#### Field Records (Required for both unannounced and continued compliance samples)

Field notes will be collected in bound field notebooks with numbered pages. On-board staff will witness the sampling and will initial the field notes. Included in the field notes for each sample are:

- Vessel name (e.g., *Hypothetica*),
- Sampling personnel,
- Shipboard assistants,
- Signature or initials by the vessel crew in the field notes indicating that the sample port is correct,
- Sample date and times,
- Field measurements: pH, chlorine residual, and temperature,
- Records on discharge flow rates (always) and holding tank volumes (only for underway sampling),
- Samples collected,
- Nature of sample: Composite or Grab,
- Waste type: blackwater, graywater, or mixed,
- Deviations from VSSP and/or QA/QCP,
- Unusual conditions and explanation of data anomalies,
- Latitude/longitude and speed at time of discharge being sampled (only for underway sampling),
- Copy of the Discharge record for the sampled discharge.

Cruise ship operators maintain a sewage and graywater discharge record book that records the date, times, volumes, and vessel location (latitude and longitude) for each wastewater discharge. These records will be provided to the sampler. The sampler will transcribe relevant information from the record book to the sample data sheets as an aid to subsequent determination of conventional and priority pollutant mass input. Submit the discharge logs and field notes to the USCG, ADEC and company representative within three days of the sampling. This information will also be included in final laboratory reports.

#### Laboratory Records

Upon completion of laboratory analysis, laboratory data review, and data validation, the laboratory will issue a full report in an electronic format describing the results of analysis for each sample submitted. Prior to issuance of the analytical report to the vessel's representatives, ADEC, and the COTP, the laboratory's QA manager will review and approve the report.

The final laboratory reports will identify whether a sample was taken to satisfy 33 CFR 159.317 and AS 46.03.465 or done in order to seek USCG approval for discharge without distance or speed limitations or is a continuous discharge compliance sample.

Components of the analytical report include:

- A short summary sheet discussing the sampling event and results.
- Sample information: ship name, sample names, waste type, date and time collected.

- Parameter name and method reference.
- Analytical result.
- Method Detection Limit.
- Practical Quantitation Limit (reporting limit).
- Date and time of sample preparation and date and time of analysis.
- Quality control information: blank results, spiked blank or laboratory control standard recovery, matrix spike/spike duplicate recoveries, relative percent differences between duplicate spike analyses.
- Chain of custody.
- Holding times met or not.
- Case Narrative of deviations from methods, procedural problems with sample analysis, holding time exceedances, and any additional information that is necessary for describing the sample. This narrative should explain when results are outside the precision and accuracy required and the corrective actions taken to rectify these QC problems.
- Discharge logs and field notes.
- Cooler receipt forms, including information on each lab receiving samples.
- Photograph of sampling port taken during sampling event (unannounced samples only)
- Latitude and longitude information pertaining to each sample including which overboard port the waste was discharged through and the speed the vessel was traveling.
- Explanation of data abnormalities.
- A completed checklist containing all components of sampling (Appendix A).
- A completed checklist containing all components analysis and reporting (Appendix B).
- Electronic data file containing all laboratory results in Excel .xml format.
- *(FOR ADEC ONLY) If applicable, a notification that this sample is a resample under 18 AAC 69.070*

### Chain of Custody

The original chain of custody form will accompany the sample to the laboratory. When portions of the sample are sent to another laboratory (e.g., for many of the priority pollutants), a copy of the chain of custody will be made and this will accompany the samples. At each transfer of the sample, the transfer will be indicated on the chain of custody form. The person listed on the Chain of Custody should have full sight or control of the sample at all times until it the COC is relinquished by that person and received by the next party signed on the COC.

**A copy of the original chain of custody will be included with the final report including the COC transferring samples to other labs. Electronic scanned copies in PDF form are sufficient.**

### **Sampling Process Design**

A vessel specific sampling plan (VSSP) will be developed for each ship by the ship engineers and submitted to the sampling team 30 days prior to entry into Alaska waters. The plan will include, as a minimum, the following:

- Vessel name.
- Passenger and crew capacity of ship.
- Daily water use per individual.
- Locations and capacities for treated sewage, graywater, and other wastewater tanks.
- Type of wastewater treatment systems.

- Each discharge pump type and rate
- Vessel schematic of discharge ports and corresponding sampling ports. **The sample port must be no more than 50 feet from the OVERBOARD port.**
- Description of discharges, including anticipated flow rates and tank volumes.
- Table containing type of discharge, type of sample (grab or composite), parameters (conventional or priority pollutants), location on the vessel where each sample is to be collected, and special circumstances.
- A narrative description of the time at which each sample is to be taken based upon circumstances that will yield a sample most likely to be representative of the average discharge that passes through the location where the sample is taken
- A description of the standards the owner or operator will use to determine a deviation from the plan
- Equipment required.

Each VSSP will be dated and a copy will be provided to the Project Manager, the cruise ship companies, Alaska Department of Conservation and the U.S. Coast Guard. The VSSP will be submitted to the COTP and the ADEC Project Manager within 30 days of each vessel's initial entry into the applicable waters of Alaska. The ADEC must approve the VSSP prior to sampling. After the first sampling event on a vessel, the VSSP may be updated. If it is updated, copies of the updated sampling plan will also be provided to the Project Manager, the vessel's owner or operator, ADEC and the U.S. Coast Guard before the second round of sampling occurs.

The purpose of providing the VSSP to the Project Manager and the cruise ship companies prior to sampling is to provide certainty that consistent sampling methods are followed and that samples are collected from appropriate and representative locations. Deviations from the sampling plan may well occur; these will be noted in the field notes.

## Sampling Method Requirements

### Sample Collection Procedures

Specific sampling techniques for each vessel will be detailed in the VSSP. The following general guidelines are listed to provide consistency among the vessels utilizing this QA/QCP.

Samples will reflect a representative discharge of treated blackwater, graywater and other wastewaters into applicable waters of Alaska from an operable marine sanitation device, other treatment system, a holding tank or some combination as specified in the VSSP. In port sampling, in compliance with ADEC sampling events, will be conducted only if the vessel is certified to discharge in port. If samples must be taken while the ship is underway, care will be taken to assure sample representativeness and homogeneity. See VSSP for further details on sampling.

A volume of water equal to at least ten times the volume of the sample discharge line will first be discharged into a bucket or similar container to clear the line of standing water and possible contamination.

Samplers will work in teams of two for sampling events that must be performed while the vessel is underway to ensure that proper sampling techniques are followed and adequate notes are taken during the sampling event. One sampler will be sufficient for all in-port sampling events.

Samplers will wear disposable gloves, protective clothing and safety eyewear and will observe precautions while collecting samples, remaining aware of the potential biohazard present.

Samplers will contain all solid and liquid wastes generated during sampling (used gloves, paper towels, chlorine test waste) and remove it from the ship at the conclusion of the sampling event.

Samplers will take care not to touch the insides of bottles or lids/caps during sampling.

Samples will be listed as "grab" on the Chain of Custody form.

Bottles will be pre-cleaned and will not require rinsing with sample. When sample bottles are pre-preserved, bottles must never be rinsed but will be filled only once with sample.

The required field tests will be performed prior to sampling in order to determine if residual chlorine is present. This will dictate the preservation procedures for the VOC and BNA analyses.

Sample fractions for microbiology will be cooled immediately in an ice-water bath and then placed into a cooler containing frozen blue ice or ice and water mixture to maintain a sample temperature of 0 - 6° C. Temperature will be measured and recorded at the time of sample collection and a note shall be made of the temperature of the cooler contents upon arrival at the laboratory.

Sample bottles will be filled sequentially. Bottles will normally be filled to the shoulder of the bottle, leaving a small space for expansion and mixing. VOC bottles will be filled leaving a convex meniscus at the top of the bottle, with no air bubbles present; when the VOC lid is screwed on a small volume of water will be displaced and no air will be present in the bottle. Filtering of dissolved metals will be performed immediately upon receipt at the laboratory followed by preservation through acidification.

**TABLE 1 Sample Containers, Preservations, Holding Times, and Sample Types**

LAB PARAMETER	CONTAINER	PRESERVATION	HOLDING TIME	Grab or Composite	Sample Timing/Collection
<b>Conventional Pollutants</b>					
Total Suspended Solids	From BOD bottle	4° C	7 days	Grab Only	Dependent upon vessel (see individual vessel sampling plan)
Settleable Solids	1 liter HDPE, white label	4° C	48 hours	Grab Only	
Biochemical Oxygen Demand	1 liter HDPE, white label	4° C	48 hours	Grab Only	

LAB PARAMETER	CONTAINER	PRESERVATION	HOLDING TIME	Grab or Composite	Sample Timing/ Collection
Ammonia – Total	250 ml HDPE, yellow label	H <sub>2</sub> SO <sub>4</sub> , pH <2, 4° C Lab pre-preserved	28 days	Grab Only	
Chemical Oxygen Demand	From ammonia bottle	H <sub>2</sub> SO <sub>4</sub> , pH <2, 4° C Lab pre-preserved	28 days	Grab Only	
Specific Conductance	From BOD bottle	4° C	28 days	Grab Only	
Fecal Coliforms	100 ml sterile plastic	Sodium Thiosulfate, 4° C	6 hours	Grab Only	
Alkalinity	From BOD bottle	4° C	14 days	Grab Only	
pH	100 ml HDPE and from BOD bottle	4° C	ASAP In field and lab	Grab Only	
Oil and Grease	1 liter glass	H <sub>2</sub> SO <sub>4</sub> , pH <2, 4° C Lab pre-preserved	28 days	Grab Only	
Total Organic Carbon	125 ml glass	HCl, pH < 4° C Lab pre-preserved	28 days	Grab Only	
Total Nitrogen	500 ml HDPE, yellow label	H <sub>2</sub> SO <sub>4</sub> , pH <2, 4° C Lab pre-preserved	28 days	Grab Only	
Total Phosphorus	From ammonia bottle	H <sub>2</sub> SO <sub>4</sub> , pH <2, 4° C Lab pre-preserved	28 days	Grab Only	
Temperature	From pH Bottle	N/A	ASAP in field	Grab Only	
Chlorine Residual	From pH bottle	N/A	ASAP In field	Grab Only	
<b>Priority Pollutants</b>					
BNA	1 liter glass***	4° C; Ascorbic acid if residual chlorine is detected above 0.1 mg/L	7 days until extraction	Grab Only	Dependent upon vessel (see individual vessel sampling plan)
VOCs	(4) 40-ml VOC vials	(2) vials w/HCl, 4° C; Ascorbic acid if residual chlorine is present (2) vials unpreserved	Preserved: 14 days until analysis Unpreserved: 7 days until analysis	Grab Only	

LAB PARAMETER	CONTAINER	PRESERVATION	HOLDING TIME	Grab or Composite	Sample Timing/Collection
Total Aromatic and Total Aqueous Hydrocarbons**	See BNAs and VOCs				
Total Recoverable Metals	1 liter HDPE *	HNO <sub>3</sub> , pH <2, 4° C	28 days Hg/ 6 mos. Others	Grab Only	
Dissolved Metals		Filtration w/0.45 micron filter in lab, HNO <sub>3</sub> , pH <2	6 months	Grab Only	

Sample containers will normally be pre-preserved by the laboratory. The sampler must measure the chlorine level before taking the VOC, BNA or PCB samples. If chlorine residual is detected above 0.1 mg/L during field measurement of chlorine, ascorbic acid provided by the lab will be added in the field to the BNA and PCB sample bottles until no chlorine is detected. The lab will provide decanting bottles with ascorbic acid. When chlorine is detected, the sample will be added first to the decanting bottle, and then will be decanted into the VOC vials. \*The metals sample will be taken in the field as a single 1-liter fraction. The laboratory will filter 500 ml of this sample using acid-washed filters (dissolved fraction), and then the remaining unfiltered fraction (total recoverable) and dissolved fraction will be preserved with nitric acid in the lab. \*\*Total Aromatic and Total Aqueous Hydrocarbons will be calculated from the BNA and VOC results. \*\*\*Additional volume of sample is required for matrix spike determination during the BNA analysis. The sampling team will take an additional 2L of sample from all duplicate sampling events for this purpose to provide matrix spike data at a frequency of 10% for project related samples.

### Sample Handling and Custody Requirements

#### Sample Custody

Samples and sample containers will be maintained in a secure environment, from the time the bottles leave the laboratory until the time the samples are received at the laboratory. The laboratories will maintain custody of bottles and samples using their normal custody procedures.

Blind field duplicates will be identified with discrete sampling labels and recorded as blind field duplicates in the sampler's field notebook.

To maintain the secure environment for samples on board ship and during transport, samples must be: 1) in the sampler's possession (line of sight); or 2) in a cooler sealed with signed and dated friable evidence tape on opposing sides of the cooler; or 3) in a locked cooler for which only the sampler has the key. When the cooler is sealed, the method of securing the samples must be such that tampering with samples or bottles is not possible: The cooler must be secured so that the lid cannot be removed without breaking the evidence tape or cutting the lock, so that tampering would be evident.

Transfer of samples will be accomplished using the laboratory's chain of custody form. When samples are transferred between personnel, such transfer will be indicated on the chain of custody form with

signature, date and time of transfer. The chain of custody will remain with the samples until received by the laboratory.

At any time during sample transfer, if custody is broken, a note must be made on the chain of custody form accompanying the sample. Upon receipt at the laboratory, the laboratory sample custodian will make note if a breach of custody has occurred (for example, if a custody seal has broken during transport).

#### Sample Temperature and Condition

Samples will be held at 0 - 6° C. A 1 liter temperature blank will be placed into the cooler at the same time as the first sample and will accompany all samples, and will be measured at the laboratory upon receipt of the samples to verify the temperature. The temperature of this blank will be recorded on the chain of custody upon receipt of the sample at the lab.

To maintain the temperature, extra blue ice will be kept frozen on board ship or ship ice will be used. Blue ice or ship ice will be exchanged just before shipment of samples to the lab, and may be exchanged more frequently during the sampling trip, as required.

Some samples may be at a temperature near body temperature (37° C) at time of sample collection. This temperature encourages growth of fecal coliform bacteria and thus these samples must be cooled as quickly as possible, without freezing them. The sample bottles for microbial testing shall be placed in a water bath containing ice cubes provided on board ship. The bottles should be immersed in the water to the shoulder, rotated frequently, and ice should be added/water drained off as the ice melts for at least one hour or until the sample reaches a temperature of 4° C. To ensure custody of these samples that may not be able to be sealed in the cooler until the temperature is lowered, these bottles can be sealed with custody tape individually, as necessary.

In no event will samples be placed in refrigerators meant for human food or beverages.

#### Sample Holding Times

Sample holding times are as described in Table 1 above. Planned sample shipping schedules will allow for the meeting of these holding times.

The most critical holding time will be that of fecal coliforms, which is defined by EPA as 6 hours. To meet this holding time, a stringent scheduling effort will be required by the laboratory and sampling team. If the normal discharge pattern is altered in order to adhere to this holding time, a note will be made of the change in the field notes and in the final quality control review.

#### Sample Disposal

Samples collected for analysis shall be held by the laboratory for not less than three months from the sample collection date, or for an extended time period on an individual basis as directed by the Coast Guard and AL prior to the three month date.

#### **Analytical Methods and Quality Control Requirements**

The USCG requires the analytical report within 15 calendar days after the sampling date for conventional pollutant analyses. The USCG requires the analytical report within 30 calendar days from the sampling

date for priority pollutant analysis and associated conventional pollutant analyses from the same sampling event. The ADEC requires conventional and priority pollutants reports within 21 days of completion of laboratory analysis.

The MDL referred to in Table 2 is a statistically derived method detection limit, typically arrived at by repeat analyses performed by the laboratory, with a statistical EPA-defined calculation then performed (40 CFR 136 Appendix B). It is sometimes method-defined (as in BOD). The PQL (Practical Quantitation Limit) is the level at which the laboratory QA department feels comfortable reporting data. Because the MDL is statistically derived, data can be detected at and near the MDL that are not accurate and that are frequently false positives. For this reason, many labs do not report at the MDL but report at some level, often approximately 3 times greater than the MDL (again, for statistical purposes). The MDL's and Reporting Limits are usually laboratory-specific standards and are not tied to compliance limits, and are not regulatory action levels. The MDL and PQL values in this document reflect typical laboratory performance at the present time and will serve as general targeted levels for this project. Actual data reporting levels may change due to ongoing detection limit studies and sample dilution due to matrix interferences. Current targeted guidelines for MDL's, RL's (minimum levels, PQL), and precision and accuracy requirements for the project are listed in the following table.

Table 2. ANALYTICAL METHODS AND QUALITY CONTROL REQUIREMENTS

PARAMETER	METHOD*	MDL (mg/l)	Reporting Level (Minimum Level) (mg/l)	PRECISION (RPD)	ACCURACY (% Recovery)
<b>Conventional Pollutants</b>					
Alkalinity	SM 2320 B	0.5	2	<20%	85 - 115 %
Ammonia - Total	350.2/350.3	0.15	0.5	<20%	80 - 120 %
Biochemical Oxygen Demand	405.1	2	2	<20%	70 - 130 %
Chemical Oxygen Demand	410.4	5	15	<20%	85 - 115 %
Chlorine Residual (total/free)	SM 4500 Cl-G	0.1	0.1	N/A	N/A
Fecal Coliforms	SM 9221E/SM 9222D	2 FC/100 ml	2 FC/100 ml	N/A	N/A
Oil and Grease	1664	1.5	5	<20%	60-150%
pH	150.1	0.10 standard units	0.10 standard units	<20%	N/A
Settleable Solids	160.5	0.10 (ml/L)	0.10 (ml/L)	<20%	N/A
Specific Conductance	120.1	1 µmhos/cm	2 µmhos/cm	<20%	85 - 115 %
Total Nitrogen	EPA various	1	1	N/A	N/A
Total Organic Carbon	SM 5310 B	0.3	1	<20%	85 - 115 %
Total Phosphorus	EPA 365.2	0.03	0.1	<20%	85 - 115 %
Total Suspended Solids	160.2	1.3	4	<20%	85 - 115 %
		□	□		
<b>Priority Pollutants</b>					
• Total Aromatic and Total Aqueous Hydrocarbons using BNA and VOC data					

PARAMETER	METHOD*	MDL ( $\mu\text{g/l}$ )	Reporting Level (Minimum Level) ( $\mu\text{g/l}$ )	PRECISION (RPD)	ACCURACY (% Recovery)
<b>Total Recoverable Metals</b>		$\mu\text{g/l}$	$\mu\text{g/l}$		
Antimony	200.8	0.8	2.5	<20%	85 - 115 %
Arsenic	200.8	0.8	2.5	<20%	85 - 115 %
Beryllium	200.8	0.5	1.5	<20%	85 - 115 %
Cadmium	200.8	0.65	2	<20%	85 - 115 %
Chromium	200.8	0.8	2.5	<20%	85 - 115 %
Copper	200.8	0.4	1	<20%	85 - 115 %
Lead	200.8	0.3	1	<20%	85 - 115 %
Mercury (Total)	245.1	0.65	2	<20%	80 - 120 %
Nickel	200.8	0.5	1.5	<20%	85 - 115 %
Selenium	200.8	1.5	5	<20%	85 - 115 %
Silver	200.8	0.3	1	<20%	85 - 115 %
Thallium	200.8	0.3	1	<20%	85 - 115 %
Zinc	200.8	0.9	2.5	<20%	85 - 115 %
<b>Dissolved Metals</b>		$\mu\text{g/l}$	$\mu\text{g/l}$		
Antimony	200.8	0.8	2.5	<20%	85 - 115 %
Arsenic	200.8	0.8	2.5	<20%	85 - 115 %
Beryllium	200.8	0.5	1.5	<20%	85 - 115 %
Cadmium	200.8	0.65	2	<20%	85 - 115 %
Chromium	200.8	0.8	2.5	<20%	85 - 115 %
Copper	200.8	0.4	1	<20%	85 - 115 %
Lead	200.8	0.3	1	<20%	85 - 115 %
Nickel	200.8	0.5	1.5	<20%	85 - 115 %
Selenium	200.8	1.5	5	<20%	85 - 115 %
Silver	200.8	0.3	1	<20%	85 - 115 %
Thallium	200.8	0.3	1	<20%	85 - 115 %
Zinc	200.8	0.9	2.5	<20%	85 - 115 %
<b>VOCs</b>					
1,1,1,2-Tetrachloroethane	624	0.5	2	<20%	75-125%

PARAMETER	METHOD*	MDL (µg/l)	Reporting Level (Minimum Level) (µg/l)	PRECISION (RPD)	ACCURACY (% Recovery)
1,1,1-Trichloroethane	624	0.5	2	<20%	75-125%
1,1,2,2-Tetrachloroethane	624	0.5	2	<20%	75-130%
1,1,2-Trichloroethane	624	0.5	2	<20%	80-120%
1,1-Dichloroethane	624	0.5	2	<20%	75-130%
1,1-Dichloroethene	624	0.5	2	<20%	70-140%
1,1-Dichloropropene	624	1	3	<20%	75-125%
1,2,3-Trichlorobenzene	624	1	3	<20%	75-125%
1,2,3-Trichloropropane	624	1	3	<20%	80-120%
1,2,4-Trichlorobenzene	624	1	3	<20%	75-125%
1,2,4-Trimethylbenzene	624	1	3	<20%	75-125%
1,2-Dibromo-3- Chloropropane	624	2	10	<20%	70-130%
1,2-Dichlorobenzene	624	0.75	2	<20%	75-125%
1,2-Dichloroethane	624	0.5	2	<20%	80-130%
1,2-Dichloropropane	624	0.5	2	<20%	70-140%
1,3,5-Trimethylbenzene	624	0.5	2	<20%	70-130%
1,3-Dichlorobenzene	624	0.75	2	<20%	75-125%
1,3-Dichloropropane	624	0.5	2	<20%	75-130%
1,4-Dichlorobenzene	624	0.75	2	<20%	75-120%
2,2-Dichloropropane	624	0.5	2	<20%	60-130%
2-Butanone	624	1.5	50	<20%	60-140%
2-Chloroethyl Vinyl Ether	624	2	10	<20%	60-140%
2-Chlorotoluene	624	1	3	<20%	75-135%
2-Hexanone	624	4	20	<20%	60-140%
4-Chlorotoluene	624	1	2	<20%	75-130%
4-Isopropyltoluene	624	1	3	<20%	75-125%
4-Methyl-2-Pentanone	624	4	20	<20%	60-140%
Acetone	624	5	50	<20%	40-160%
Acrolein	624	5	100	<20%	40-160%
Acrylonitrile	624	2	10	<20%	65-130%
Benzene	624	0.5	2	<20%	80-120%
Bromobenzene	624	0.5	2	<20%	75-130%
Bromochloromethane	624	1	3	<20%	75-140%

PARAMETER	METHOD*	MDL (µg/l)	Reporting Level (Minimum Level) (µg/l)	PRECISION (RPD)	ACCURACY (% Recovery)
Bromodichloromethane	624	0.5	2	<20%	80-130%
Bromoform	624	0.5	2	<20%	70-135%
Bromomethane	624	1	5	<20%	60-140%
Carbon Disulfide	624	0.5	2	<20%	60-130%
Carbon Tetrachloride	624	0.5	2	<20%	75-125%
Chlorobenzene	624	0.5	2	<20%	80-120%
Chloroethane	624	0.75	5	<20%	65-135%
Chloroform	624	0.5	2	<20%	80-130%
Chloromethane	624	1	5	<20%	60-130%
Cis-1,2-Dichloroethene	624	0.5	2	<20%	80-130%
Cis-1,3-Dichloropropene	624	1	3	<20%	80-130%
Dibromochloromethane	624	0.5	2	<20%	75-130%
Dibromomethane	624	1	3	<20%	80-130%
Dichlorodifluoromethane	624	1.5	5	<20%	60-140%
Ethylbenzene	624	0.5	2	<20%	75-130%
Hexachlorobutadiene	624	0.5	2	<20%	50-130%
Iodomethane	624	1.5	5	<20%	50-150%
Isopropylbenzene	624	0.49	3	<20%	70-130%
m&p Xylenes	624	0.5	2	<20%	75-120%
Methylene Chloride	624	1	5	<20%	60-140%
n-Butylbenzene	624	1	3	<20%	70-130%
n-Propylbenzene	624	1	3	<20%	70-130%
O-Xylene	624	1	3	<20%	80-125%
sec-Butylbenzene	624	1	3	<20%	70-130%
Styrene	624	1	3	<20%	85-125%
tert-Butyl Methyl Ether	624	0.5	2	<20%	70-130%
tert-Butylbenzene	624	1	3	<20%	70-125%
Tetrachloroethene	624	0.5	2.5	<20%	75-125%
Toluene	624	0.5	2	<20%	80-120%
Trans 1,2-Dichloroethene	624	0.5	2	<20%	75-125%
trans-1,3-Dichloropropene	624	1	3	<20%	80-130%
trans-1,4-Dichloro-2 Buten	624	2	10	<20%	70-130%
Trichloroethene	624	0.5	2	<20%	70-130%

PARAMETER	METHOD*	MDL (µg/l)	Reporting Level (Minimum Level) (µg/l)	PRECISION (RPD)	ACCURACY (% Recovery)
Trichlorofluoromethane	624	1	3	<20%	50-120%
Trichlorotrifluoroethane	624	1	3	<20%	60-140%
Vinyl Acetate	624	1.5	5	<20%	60-140%
Vinyl Chloride	624	0.5	2	<20%	60-130%
<b>BNA</b>					
1,2-Diphenylhydrazine	625	1	5	<40%	60-140%
2,4,5-Trichlorophenol	625	1	5	<40%	60-140%
2,4,6-Trichlorophenol	625	1	5	<40%	55-130%
2,4-Dichlorophenol	625	1	5	<40%	55-130%
2,4-Dimethylphenol	625	5	25	<40%	15-130%
2,4-Dinitrophenol	625	30	100	<40%	50-110%
2,4-Dinitrotoluene	625	1	5	<40%	50-140%
2,6-Dinitrotoluene	625	1	5	<40%	30-150%
2-Chloronaphthalene	625	2	10	<40%	30-170%
2-Chlorophenol	625	1	5	<40%	35-125%
2-Methylnaphthalene	625	1	5	<40%	40-140%
2-Methylphenol	625	1	5	<40%	50-115%
2-Nitroaniline	625	5	100	<40%	50-115%
2-Nitrophenol	625	1	5	<40%	50-115%
3&4-Methylphenol	625	1	5	<40%	30-125%
3,3'-Dichlorobenzidine	625	5	20	<40%	30-170%
3-Nitroaniline	625	2	50	<40%	30-170%
4,6-Dinitro-2-methylphenol	625	5	25	<40%	40-130%
4-Bromophenyl Phenyl ether	625	1	5	<40%	50-140%
4-chloro-3-methylphenol	625	1	5	<40%	45-120%
4-Chloroaniline	625	1	5	<40%	30-170%
4-Chlorophenyl methylsulfone	625	2	20	<40%	30-170%
4-Chlorophenyl Phenyl ether	625	1	5	<40%	50-150%
4-Nitroaniline	625	2	50	<40%	40-110%
4-Nitrophenol	625	25	100	<40%	10-125%
Acenaphthene	625	1	5	<40%	40-130%

PARAMETER	METHOD*	MDL (µg/l)	Reporting Level (Minimum Level) (µg/l)	PRECISION (RPD)	ACCURACY (% Recovery)
Acenaphthylene	625	1	5	<40%	45-135%
Anthracene	625	1	5	<40%	55-135%
Benzidine	625	50	200	<40%	30-170%
Benzo (A) Anthracene	625	1	5	<40%	55-120%
Benzo (A) Pyrene	625	1	5	<40%	40-140%
Benzo (B) Fluoranthene	625	1	5	<40%	40-135%
Benzo (g,h,i) Perylene	625	1	5	<40%	50-125%
Benzo (K) Fluoranthene	625	1	5	<40%	60-160%
Benzoic Acid	625	25	130	<40%	5-110%
Benzyl Alcohol	625	2	10	<40%	60-140%
Bis (2-Chloroethoxy) methane	625	1	5	<40%	40-130%
Bis (2-chloroethyl) ether	625	1	5	<40%	35-125%
Bis (2-Chloroisopropyl) ether	625	1	5	<40%	60-140%
Bis (2-Ethylhexyl) Phthalate	625	1	2.5	<40%	55-125%
Butyl Benzyl Phthalate	625	1	5	<40%	55-125%
Chrysene	625	1	5	<40%	55-140%
Dibenzo (a,h) Anthracene	625	1	5	<40%	50-130%
Dibenzofuran	625	1	5	<40%	50-130%
Diethyl Phthalate	625	1	5	<40%	55-135%
Dimethyl Phthalate	625	1	5	<40%	60-125%
Di-N-Butyl Phthalate	625	1	5	<40%	60-160%
Di-N-Octyl Phthalate	625	1	5	<40%	60-140%
Fluoranthene	625	1	5	<40%	50-140%
Fluorene	625	1	5	<40%	55-130%
Hexachlorobenzene	625	1	5	<40%	50-150%
Hexachlorocyclopentadiene	625	2	10	<40%	30-170%
Hexachloroethane	625	1	5	<40%	60-140%
Indeno (1,2,3-CD) Pyrene	625	1	5	<40%	45-125%
Isophorone	625	1	5	<40%	40-120%
Napthalene	625	2	10	<40%	40-140%
Nitrobenzene	625	1	5	<40%	40-120%
N-Nitrosodimethylamine	625	1	5	<40%	30-170%

PARAMETER	METHOD*	MDL (µg/l)	Reporting Level (Minimum Level) (µg/l)	PRECISION (RPD)	ACCURACY (% Recovery)
N-Nitrosodi-N-Propylamine	625	1	5	<40%	35-130%
N-Nitrosodiphenylamine	625	2	10	<40%	60-140%
Pentachlorophenol	625	1	5	<40%	35-115%
Phenanthrene	625	1	5	<40%	50-140%
Phenol	625	1	5	<40%	60-140%
Pyrene	625	1	5	<40%	45-135%
*EPA methods in "Methods for Chemical Analysis of Water and Wastes," Environmental Protection Agency, Environmental Monitoring Systems Laboratory - Cincinnati (EMSL-CI), EPA-600/4-79-020, Revised March 1983 and 1979 where applicable. <a href="http://www.epa.gov/cgi-bin/claritgw?op=Display&amp;document=clserv:ORD:0167;&amp;rank=4&amp;template=epa">http://www.epa.gov/cgi-bin/claritgw?op=Display&amp;document=clserv:ORD:0167;&amp;rank=4&amp;template=epa</a>					
*SM methods in "Standard Methods for the Analysis of Water and Wastewater," 19 <sup>th</sup> or 20 <sup>th</sup> Edition, APHA/AWWA/WEF.					
*Four digit numeric methods are from <i>EPA Test Methods for Evaluating Solid Wastes. Physical/Chemical Methods (SW-846)</i> , 3 <sup>rd</sup> Edition Update 2B, January 1995.					

### Instrument/Equipment Testing, Inspection, and Maintenance Requirements; Calibration and Frequency

Field instruments include a hand-held pH meter, chlorine residual colorimeter instrument, and a probe thermometer. These must be certified against a laboratory method for pH and chlorine and NIST certified thermometer. All field kits must have certified instruments. The temperature, pH, and chlorine certification and calibration must be submitted to ADEC Project Manager by May 31st and again by July 31<sup>st</sup> of each year that the QA/QC plan is valid.

Maintenance of the chlorine residual test kit includes keeping the sample vial rinsed after sample measurement, keeping the vial clean and free of fingerprints and oils, and keeping the colorimeter itself clean. An extra sample vial will be kept with the test kit in case of breakage or scratches to the sample vial. The field kit should be checked against the lab kit twice per season.

The analysis of pH in the field will be used for reference purposes only and will be verified through laboratory analysis. A pH meter shall be used that ensures the most accurate reading possible in the expected range of pH values. The laboratory will supply reference buffers to the sampling team for field verification.

Temperature at or shortly after sample collection will be measured using either a temperature probe or with an independent thermometer. The validity of the temperature probe will be checked early and late in the season against a NIST certified thermometer at a certified laboratory; differences between the

temperature probe and the certified thermometer will be documented in the final quality assurance review of the data.

Laboratory instrument and calibration procedures are detailed in the QA Plans and SOPs from the certified laboratories. Copies of these plans are available upon request from the lab managers or from the Project QA Officer.

### **Inspection/Acceptance Requirements for Supplies and Consumables**

Sample bottles will be visually inspected prior to sampling. If problems with bottles are noted, such as a cap that has fallen off an empty bottle, note of the problem will be made on the chain of custody form.

### **Inspection/Acceptance Requirements (Non-Direct Measurements)**

Historical data for this project includes only 7 years of monitoring, so data acceptance criteria will not be required for historical data acceptance.

On-board ship data to be recorded includes tank volume and pumping rate data from ship tracking systems and any documented occurrence of seawater influx. The data will be recorded as reported by shipboard staff in the Graywater and Blackwater Discharge Record Book and through direct observation by the sampling team.

### **Data Management**

Data Management includes accurate field notebook entries, completed Chain-of-Custody forms and laboratory data management documents. Laboratory data management procedures and processes are described in the Laboratory's Quality Management Plan. (This document is kept on file by the ADEC WQA Officer.)

The Lab Project Manager will report data directly to the Coast Guard, the ADEC Project Manager and the individual cruise lines after thorough review by the laboratory QA Manager within the regulatory time limits.

The Lab Project Manager will not be placed in the position of determining whether an analytical result represents a violation of federal or state laws or regulations.

## **ASSESSMENT/OVERSIGHT**

### **Assessments and Response Actions**

#### Field Assessments

The **Project QA Officer** will perform a field sampling audit on a minimum of two **randomly selected sampling events** during the project in order to evaluate the performance of the sampling team. The Project QA Officer must notify ADEC 36 hours prior to the audit in order to observe if desired. Follow-up field audits may be necessary pending audit findings. The initial field sampling audit will be conducted within 30 days of project initiation, with the second audit occurring midway through the project. Each audit will concentrate on sampling technique, sample handling, field records, field testing

methods, and adherence to vessel specific sampling plans and the QA/QCP. These reports are due within 14 days of the audit. This report will be provided to the Lab Project Manager, ADEC Project Manager and the USCG for evaluation and corrective action, if necessary. The USCG and ADEC may also participate in random onboard field assessments of the sampling effort. The Project QA Officer and Lab Project Manager will be advised in a timely manner of the results of each USCG or ADEC onboard field assessment.

### Laboratory Assessments

Laboratories are subject to periodic and extensive audits by regulatory agency personnel as part of their certification. Reports of these audits will be made available to the DEC Project Manager, ADEC Water Quality Assurance Officer, and the Project QA Officer. The Project QA Officer will review any recent and pertinent technical systems audit reports of the analytical laboratories involved in this project.

The Project QA officer will use technical system audit report findings and recommendations to design an on-site technical systems audit of the project laboratories (in consultation with and support from technical experts at ADEC). The unannounced technical systems audit must be performed within the first 30 days of project initiation so any recommended enhancements to laboratory operations can be implemented early on in the project. The Project QA Officer must notify the ADEC Project manager within 36 hours of the audit date to give the ADEC the opportunity to observe if desired. The ADEC may perform additional lab audit of the commercial passenger vessel samples.

Based upon review of past lab audits, the Project QA Officer may recommend that a technical systems audit is not warranted. If the ADEC Project Manager disagrees, the technical audit must be performed.

The ADEC Project Manager and ADEC Water Quality Assurance Officer will be notified in advance and invited to participate in any audit, and a report of these findings will be presented to the ADEC Project Manager and the Lab Project Manager. Any deficiencies noted by the auditor will be corrected immediately, and the Lab Manager will note these changes in a corrective action report to the Project QA Officer and ADEC Project Manager. The Project QA Officer will also perform a technical systems audit on two sampling events in order to evaluate laboratory log-in, sample handling, preservation, and storage procedures.

### Duplicates

Blind sample duplicates will be collected on a minimum of 10% of the total number of samples or four samples total, whichever number is greater. All will be analyzed for conventional pollutants, but only half will be analyzed for priority pollutants. The purpose of the blind sample duplicates is to assess sampling and laboratory error and to assess overall method variability. Precision between the sample and its duplicate will be determined by calculating the relative percent difference between the two samples, in the same way that precision is measured between two laboratory-fortified blanks or a matrix spike/matrix spike duplicate. The use of duplicate samples extends the test of precision to the sampling method itself. The use of blind samples provides a test of the laboratory and is used to assess bias or analytical errors not detected by the laboratory (e.g., a false positive). Every effort will be made to ensure that the labeling of the samples does not disclose the duplicate nature of the samples to the laboratory. The samples will be analyzed by the same lab and for the same parameters. Results of the duplicate analysis will be monitored by the Project QA Officer and submitted to the ADEC Project Manager.

In addition, the ADEC QA Officer may conduct a laboratory performance audit. The ADEC may submit a sample that contains a known concentration of analytes prepared and certified by a different laboratory. The ADEC will compare the results from the lab from the certified sample results to determine the laboratory performance. ADEC funds pay for this performance audit.

The ADEC may also submit two trip blank samples over the course of the sampling season. The trip blanks check to see if any outside contamination occurs during the sampling and analyzing process.

#### Corrective Action

The laboratory or sampling manager will notify the Project QA Officer and ADEC project manager, if errors are noted by the laboratory or sampling personnel. The Project QA Officer will then notify the Lab Project Manager and the party responsible for the error of the deficiency, and will recommend methods of correcting the deficiency. The responsible party will then immediately correct the problem and will send those corrections via email to the Project QA Officer, the Lab Project Manager, and ADEC Project Manager. The Project QA Officer will conduct a follow-up assessment to ensure recommended corrective actions are routinely being followed.

#### **Reports to Management**

The Project QA Officer will issue audit reports in accordance with the following guidelines:

- Field sampling audits--Verbal on-site debriefing of audit findings to sampling personnel. Draft field audit report issued to sampling personnel and Lab Project Manager within one week of audit. Final audit report to Lab Project Manager and ADEC Project Manager within 2 weeks of end of audit. The Lab Project Manager will forward all corrective action reports to the ADEC Project Manager when completed.
- Technical laboratory audit—Verbal on-site debriefing of audit findings to laboratory personnel, and Lab Project Manager. Draft technical systems audit report to Lab Project Manager and ADEC Project Manager within 1-2 weeks of end audit (depending upon depth and extent of audit). Final technical systems audit report to Lab Project Manager and ADEC Project Manager within 2 – 4 weeks of end of audit (depending upon depth and extent of audit). Lab Project Manager will forward all corrective action reports to the ADEC Project Manager when completed.
- Blind duplicate samples—Draft report findings within one week of receiving/verifying results to Laboratory QA officer, Project Manager, and ADEC Project Manager.

At project conclusion, the Project QA Officer will issue an overall Quality Assurance Project Report to the USCG, ADEC Project Manager and ADEC Water Quality Assurance Officer, and vessel representatives detailing findings, problems and resolutions, data reliability and recommended enhancements for future monitoring projects, etc.

The ADEC Project Manager will submit the results of the any QA/QC audit reports to the Lab Project Manager and Laboratory Manager.

## **DATA VALIDATION AND USABILITY**

### **Data Review, Verification, and Validation**

During the project, the Project QA Officer will review at least 20% of field notes and laboratory data packages to detect correctable problems for the remainder of the study. The first data review must be submitted by June 15 of each year in order to correct any system problems early in the season. The other data reviews must be equally spaced throughout the season. Upon receipt of these completed data packages from the Project Manager, the Project Quality Assurance Officer will review data and field notes to verify that this QA/QCP was followed. Items reviewed will include:

- Comparison of dated vessel specific sampling plans with the QA/QCP to assure that the correct samples were taken.
- Comparison of dated sampling plans with field notes and custody forms to assure that planned samples were collected.
- Review of field notes and data to assure that information specified in the QA/QCP has been recorded.
- Review of laboratory data packets, particularly the QA/QC laboratory sheets.

Any problems noted will be immediately brought to the attention of the Lab Project Manager who will take appropriate corrective action as necessary. The ADEC Project Manager will also be notified. This data review must be completed and submitted to the ADEC within 40 days of the sampling event. Any review made outside the date will not be accepted.

### **Reconciliation with Data Quality Objectives**

The Project QA Officer will reconcile the data from this project with the requirements defined in this document following the validation and verification methods stated above. If an overall assessment of these elements cannot ensure that the data are of sufficient quality to meet objectives, then additional evaluation of raw data will be performed.

## LIBLIOGRAPHY

Documents referenced during the preparation of this document include:

1. April 13 *Alaska Cruise Ship Initiative Wastewater Work Group Protocol for Voluntary Wastewater Monitoring Program in 2001.*
2. July 27, 2000 *Cruise Ship Wastewater Monitoring Southeast Alaska 2000 Quality Assurance Project Plan*
3. *EPA Requirements for QA Project Plans (QA/R-5)*, EPA/240/B-01/003 March 2001.
4. US Code of Federal Regulations; including 33 CFR 159.
5. *Water Quality Standards Handbook, Second Edition*, EPA-823-B-94-005a, August 1994.
6. *Compilation of the U.S. Environmental Protection Agency's Water Quality Criteria for the Priority Toxic Pollutants*, ADEC, September 1997.

## Appendix A

### 2007 Alaska Cruise Ship Sampling Checklist

Vessel Name \_\_\_\_\_  
Sampler Name \_\_\_\_\_  
Date \_\_\_\_\_

#### I. Notification

- ADEC project manager notified 36 hours prior to the sampling event

#### II. Type of Sampling

- Conventional pollutants only (unannounced)
- Conventional and priority pollutants. (unannounced)
  - If second unannounced sample, must be at least 21 days after the first sampling event.
- USCG Continuous Compliance Parameters
  - If second continuous compliance sample for month, must be at least 24 hours after first sample.
  - USCG Continuous Compliance Parameters
- Other (Example Re-sampling after exceedance of discharge limitations under 18 AAC 69.070)

#### III. Sampling Notes (to include:)

- Vessel name
- Names of sampling personnel
- Names of shipboard assistants
- Signature or initials by the vessel crew in the field notes indicating that the sample port is correct
- Sample ID clearly stating where the sample was taken
- Sample date and times recorded on COC
- Field measurements: pH, chlorine residual, and temp recorded on COC
- Records collected on discharge flow rates (always) and holding tank volumes (only for underway sampling)
- Sample ports within 50 feet of the point of overboard discharge
- Nature of sample recorded (composite or grab)
- Waste type recorded (blackwater, graywater, or mixed)
- If deviations from VSSP and/or QA/QCP noted, reported to ADEC/ CG
- If unannounced sampling, sampler verified that vessel is discharging
- Latitude/longitude and speed at time of discharge being sampled is recorded (only for underway sampling),
- Copy of the Discharge record for the sampled discharge included (unannounced only)
- Chain of custody properly completed
- Samples delivered to laboratory within holding times for analyses

## Appendix B

### 2007 Alaska Cruise Ship Data Review Checklist

Vessel Name \_\_\_\_\_

Date \_\_\_\_\_

Location \_\_\_\_\_

Sampling Team \_\_\_\_\_

Laboratory \_\_\_\_\_

#### Sample Type:

- Continued Compliance
- Random Unannounced

#### Final Report Package Includes:

- Sampling event summary sheet
- Analytical Report
  - Ship name
  - Sample ID's
  - Sample date and time collected
  - Parameter names and method references
  - Analytical results
  - Method Detection Limits (MDL's)
  - Practical Quantitation Limits (PQL's/reporting limits)
  - Date and time of sample preparation
  - Date and time of analysis
  - Verification that holding times were met
  - Quality control information: blank results, spiked blank of laboratory control standard recovery, matrix spike/spike duplicate recoveries, relative percent differences between duplicate spike analyses
  - Case narrative describing deviations from methods, procedural problems with sample analysis, explanation of data abnormalities, and any additional information that is necessary for describing the sample. This narrative should explain when results are outside the precision and accuracy limits and the corrective actions taken to rectify QC problems.
- Chain of custody form
- Cooler receipt forms with temperature indicated
- Discharge logs covering time of sampling. (For recirculated samples, provide discharge logs back to the time of last discharge)
- Field notes.
- Latitude and longitude information pertaining to each sample including which overboard port the waste was discharged through and the speed the vessel was traveling (*unannounced samples only*)
- Completed sampling checklist
- Completed data review checklist

**HB**

**168**



# Alaska State Legislature



## HOUSE TRANSPORTATION COMMITTEE

### House Bill 168: DOT and RR Land Swap

House Bill 168 would authorize the Alaska Railroad Corporation (ARRC) to exchange approximately ten acres of land with the Department of Transportation and Public Facilities (DOTPF) to accommodate two DOTPF projects. The Parks Highway Improvement project in Wasilla and the Heavy Aircraft Cargo Apron project at the Fairbanks International Airport both require an adjustment to the Alaska Railroad's track and right-of-way lands. This legislation ensures that all the appropriate titles to property can be in place for both of these important DOTPF projects.

The Alaska Railroad Corporation Act, Alaska Statute 42.40.285, requires Legislative approval for the ARRC to "exchange, donate, sell or otherwise convey its entire interest in land".

#### **Section 1: Parks Highway Improvement Project**

Section 1 conveys approximately 6.3 acres of ARRC property adjacent to the Parks Highway to DOTPF. The widening and lane improvements to the Parks Highway required relocation of a portion of the Alaska Railroad mainline in the vicinity of Wasilla Lake. DOTPF acquired the necessary property south of the existing 200-foot Alaska Railroad right-of-way. The ARRC was able to relocate its tracks to this property just south of its original alignment. Once the railroad was relocated, DOTPF was able to complete construction of the improvements to the Parks Highway. The project is complete.

#### **Section 2: Fairbanks International Airport Heavy Aircraft Cargo Apron**

Section 2 would convey approximately 3.3 acres of ARRC property to DOTPF to accommodate construction of the new Heavy Aircraft Cargo Apron. Fairbanks International Airport is 43<sup>rd</sup> in the nation for the amount of landed weight, serves nearly a million passengers and has 17 airlines operating at the facility. Replacing the currently inadequate heavy aircraft cargo apron located next to the airport terminal is part of the planned construction upgrade and expansion of the Fairbanks International Airport. Of the four current aircraft parking positions, two interfere with the taxiway and create a potential safety risk. Expansion of the terminal will create additional interference with the third parking position. To eliminate a potential safety hazard and accommodate the airport expansion, the DOTPF is planning to construct a new heavy aircraft cargo apron on ARRC property adjacent to the airport. This proposed land exchange of approximately 3.3 acres will allow for the construction of a heavy aircraft cargo apron that will provide parking for four large cargo planes and be designed to handle the weight and size of the largest cargo planes. DOTPF must have a legally sufficient title interest to property in order to comply with Federal Aviation Administration (FAA) grant assurances and funding participation requirements. Construction of this project will begin this summer.

# FISCAL NOTE

**STATE OF ALASKA**  
**2007 LEGISLATIVE SESSION**

Fiscal Note Number: \_\_\_\_\_  
 Bill Version: HB168-DOT-CO-03-02-07  
 ( ) Publish Date: \_\_\_\_\_

Revision Date/Time (Note if correction): \_\_\_\_\_ Dept. Affected: DOT&PF  
 Title Land Transfers Alaska RR & DOTPF RDU Admin and Support (3330)  
 Component Commissioner's Office  
 Sponsor House Transportation Committee  
 Requester H TRA Component No 530

**Expenditures/Revenues** (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
<b>TOTAL OPERATING</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

<b>CAPITAL EXPENDITURES</b>						
-----------------------------	--	--	--	--	--	--

<b>CHANGE IN REVENUES ( )</b>						
-------------------------------	--	--	--	--	--	--

**FUND SOURCE** (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Estimate of any current year (FY2007) cost: 0.0  
 Mark this box (X) if funding for this bill is included in the Governor's FY 2008 budget proposal.

**POSITIONS**

Full-time						
Part-time						
Temporary						

**ANALYSIS:** (Attach a separate page if necessary)

This bill has no financial impact on DOT&PF

Prepared by: Mary Siroky Phone 465-4772  
 Division Commissioner's Office Date/Time 3/02/07 3:50pm  
 Approved by: John MacKinnon Date 3/2/2007  
 Agency Department of Transportation and Public Facilities

# FISCAL NOTE

**STATE OF ALASKA**  
**2007 LEGISLATIVE SESSION**

Fiscal Note Number: HB168-COM-ARRC-03-01-07  
 Bill Version: HB 168  
 ( ) Publish Date: \_\_\_\_\_

Revision Date/Time (Note if correction): \_\_\_\_\_ Dept. Affected: Commerce  
 Title Land Transfers Alaska RR and DOTPF RDU \_\_\_\_\_  
 Component Alaska Railroad Corporation  
 Sponsor Transportation  
 Requester Transportation Component No. \_\_\_\_\_

**Expenditures/Revenues** (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
<b>TOTAL OPERATING</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

<b>CAPITAL EXPENDITURES</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
-----------------------------	------------	------------	------------	------------	------------	------------

<b>CHANGE IN REVENUES ( )</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
-------------------------------	------------	------------	------------	------------	------------	------------

**FUND SOURCE** (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Estimate of any current year (FY2007) cost: 0.0

Mark this box (X) if funding for this bill is included in the Governor's FY 2008 budget proposal:

**POSITIONS**

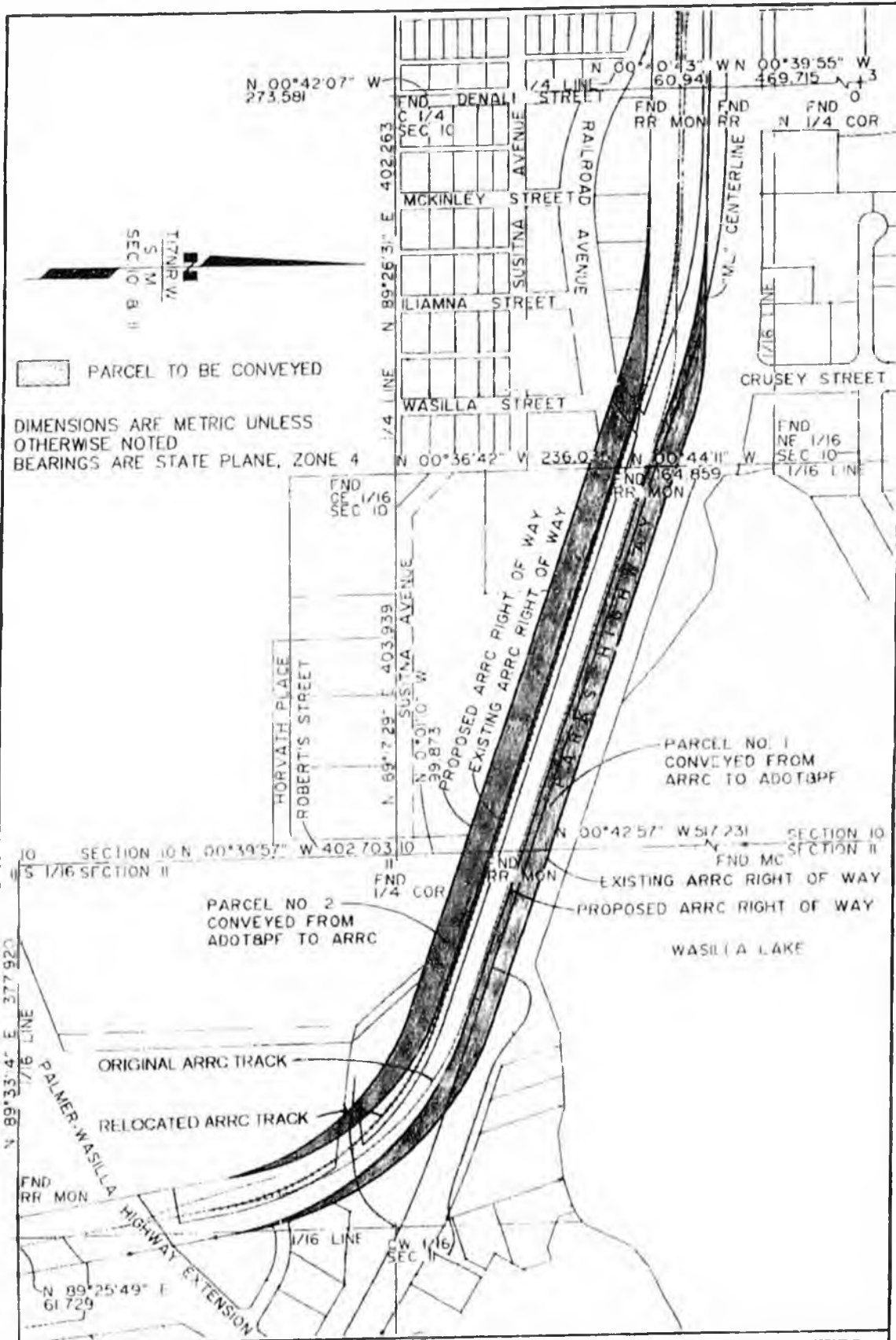
Full-time						
Part-time						
Temporary						

**ANALYSIS:** (Attach a separate page if necessary)

This legislation would authorize the Alaska Railroad Corporation (ARRC) to exchange approximately ten acres of land with the Department of Transportation and Public Facilities (DOTPF) to accommodate two DOTPF projects. The Alaska Railroad Corporation (ARRC) is a public corporation supported by revenues generated through its freight, passenger and real estate services. ARRC does not receive state funding for operations or capital improvements.

Prepared by: Wendy Lindskoog, Assistant Vice President, Corporate Affairs Phone 907.265.2498  
 Division Alaska Railroad Corporation Date/Time 3/1/07 2:54 PM  
 Approved by: Emil Notti, Commissioner Date 3/1/2007  
 Agency Commerce, Community, and Economic Development

# PRELIMINARY



**PARKS HIGHWAY - WASILLA**  
**PROJECT SUMMARY STATEMENT**

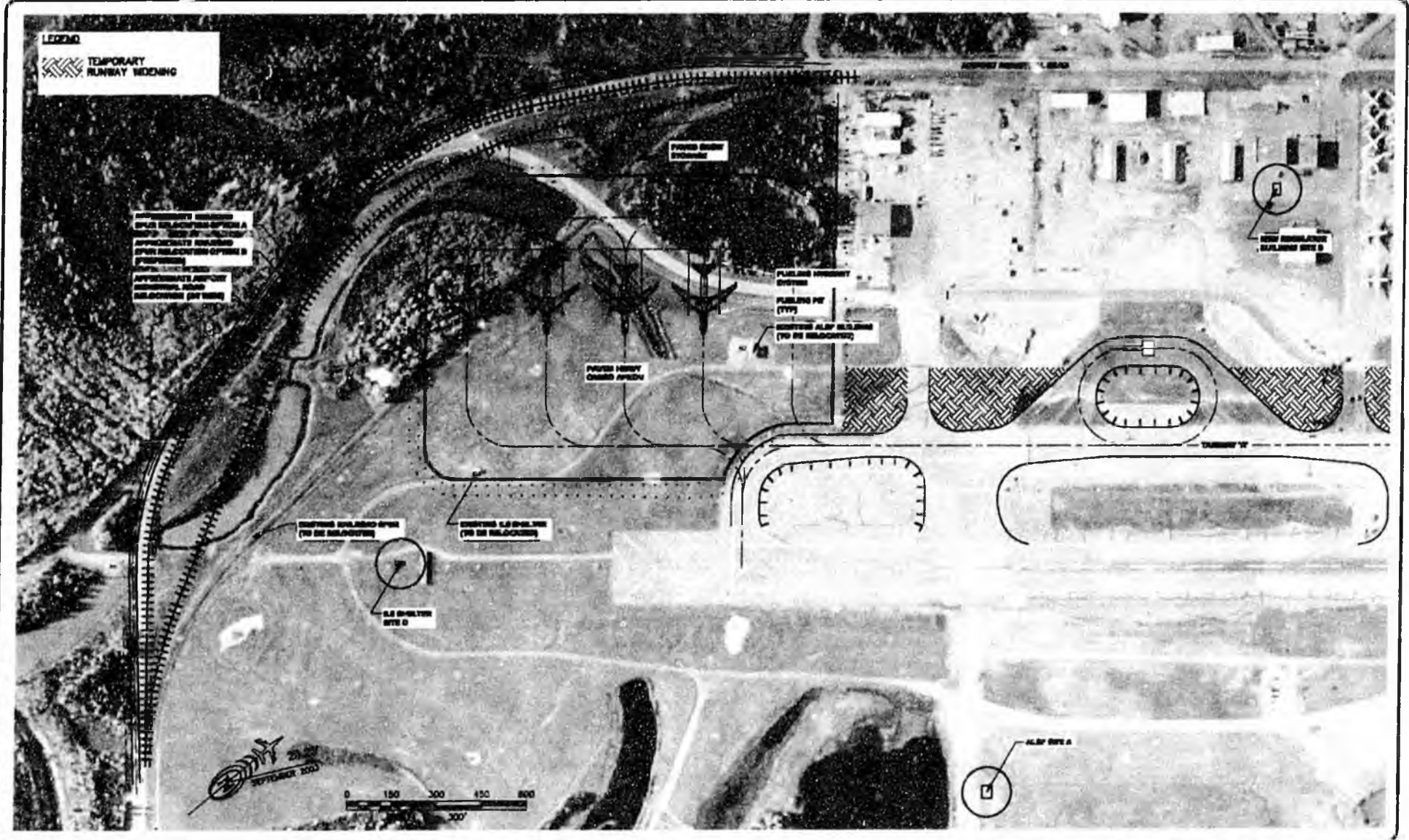
The Parks Highway is a rural interstate highway that provides a connection between the major cities of Anchorage, Wasilla and Fairbanks. This project, located between the intersection with the Glenn Highway and the City of Wasilla, is the primary highway between Anchorage and Wasilla. This portion of the Parks Highway was originally constructed in 1971 and 1972 as a two-lane rural highway. In 1996, the highway was widened between Palmer-Wasilla Highway and Crusey Street to four lanes. This project reconstructed the portion of the Parks Highway between Seward Meridian Parkway and Crusey Street.

The recent project is the third segment of the Parks Highway reconstruction from the Glenn Highway through the City of Wasilla's central business district. This project reconstructed the Parks Highway from Seward Meridian Parkway (Seward Meridian) to Crusey Street. This section of the Parks Highway is located within a commercial district of the City of Wasilla. To be consistent with the adjacent commercial development, the character of the highway changes at Seward Meridian from a high-speed (55 mph) rural highway to an intermediate speed (45 mph) urban highway providing access at specified locations. The project includes frontage roads improved or constructed adjacent to, and parallel with, the Parks Highway, as appropriate for access to adjoining properties.

The Department constructed a five-lane highway: two lanes northbound and two lanes southbound with a median two-way left turn lane. Additional improvements include: reconstructed or new two-lane, two-way, frontage roads; a grade-separated interchange at Seward Meridian Parkway; a continuous pathway on the highway's north side; relocation of approximately  $\frac{3}{4}$  of a mile of railroad track; and highway and intersection illumination. This 3.4 mile segment transitions from the four lane divided highway to the east to a lower-speed segment passing through the center of Wasilla. The Department completed construction of the project in 2006.

The total project cost is approximately \$55,697,000.

P:\BOOK\DATA\11\103-07\041122\DWG-3-2\_1-1\_478708.dwg 3-2\_1-1\_478708 at 9:20 AM on 8/18/2004  
 VEG: D Rowan DWG: N4112-0004



DATE: 08/18/04  
 SCALE: 1"=200'  
 APPROVED:

BY DATE REVIEWED

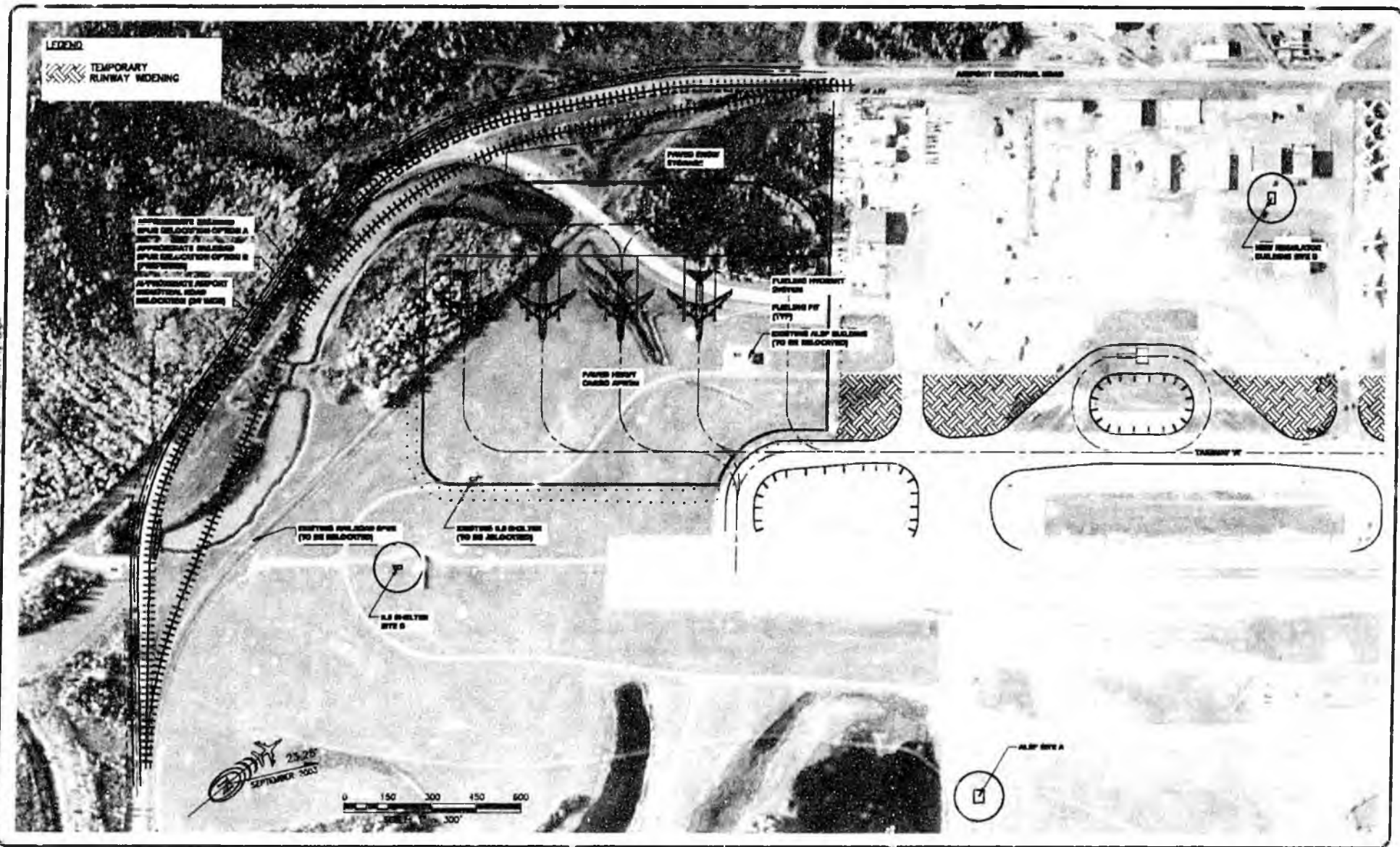
**STATE OF ALASKA**  
 DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 NORTHERN REGION-DESIGN AND CONSTRUCTION DIVISION  
 APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 PATRICK D. MILLER, P.E. DESIGN GROUP CHIEF

PLANS DEVELOPED BY:  
 PDC, INC.

FAIRBANKS INTERNATIONAL AIRPORT  
 NEAR TERM IMPROVEMENTS  
 ENVIRONMENTAL ASSESSMENT  
 A.I.P. NO. 3-03-0095-XX/82214 & 82466  
**LARGE AIRCRAFT  
 CARGO APRON**

DRAWING NO.  
**3-2**

3-2004\10412\10412.dwg - 07/10/03 10:21 AM BY SPAGE  
 3-2004\10412\10412.dwg - 07/10/03 10:21 AM BY SPAGE  
 3-2004\10412\10412.dwg - 07/10/03 10:21 AM BY SPAGE



DRAWN BY: [ ]  
 CHECKED BY: [ ]  
 DATE: [ ]

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 NORTHERN REGION-DESIGN AND CONSTRUCTION AVIATION  
 APPROVED: [ ] DATE: [ ]  
 PATRICIA S. MILLER, P.E. DESIGN GROUP CHIEF

PLANS DEVELOPED BY:  
 POC, INC.

FAIRBANKS INTERNATIONAL AIRPORT  
 NEAR TERM IMPROVEMENTS  
 ENVIRONMENTAL ASSESSMENT  
 A.L.P. NO. 3-02-0000-YX/02214 & 02400  
 LARGE AIRCRAFT  
 CARGO APRON

DRAWING NO.  
 3-2

## HEAVY AIRCRAFT CARGO APRON

### \*PROJECT DESCRIPTION\*:

Work under this project will include the design and construction of a new 26.5 acre cargo apron area at the south end of the west ramp and extension of Taxiway "A" approximately 1,000 feet to provide access. The apron will accommodate four B-747 on concrete hardstands. Ancillary work will include the construction of fencing, access roads, snow storage areas and subsurface drainage systems.

### \*PROJECT JUSTIFICATION\*:

Transient heavy aircraft parking is provided on the apron south of the terminal building. Recent inspections of the pavement in this area determined that the apron has reached the end of its design life and requires rehabilitation or total reconstruction. In addition, two of the existing four hardstands penetrate the FAR Part 77 transition surface.

Also, three of the four existing four hardstands will be rendered inoperable this summer due to the southern expansion and construction of the passenger terminal resulting from the Terminal Area Development Project. The remaining old hardstand will be operationally conflicted when during passenger operations on the south end of the passenger terminal.

The project site is in an un-developed area of the airport and it is anticipated that these improvements will permit the private development of underutilized land by providing access to the airside from these properties. This development will expand the potential revenue base for airport operations by opening additional lease acreage, affording warehousing opportunities, and assuring short and long-term heavy aircraft parking.



2006

Fairbanks North Star Borough  
Comprehensive Economic Development Strategy

The preparation of this strategy was financed in part by funds received from the State Department of Community and Economic Development, Division of Community and Business Development and the Alaska Industrial Development and Export Authority.

Adopted September 14, 2006

Come to **FAIRBANKS**   
*a great place in a big space*

[www.ComeToFairbanks.com](http://www.ComeToFairbanks.com)

Chapter One: Introduction ..... 4

The Fairbanks North Star Borough Economic Development Commission..... 4

CEDS Development Process..... 5

Integrating the CEDS into the Alaska State and other Economic Development programs.6

Chapter Two - Vision, Goals, Objectives and Strategies..... 7

    VISION -..... 7

    GOALS, OBJECTIVES AND STRATEGIES -..... 7

*GOAL I - Community Development - To support organizations, businesses, individuals and governing bodies that enhance the quality of life and sense of place* ..... 7

            Objective 1.1- Infrastructure Development - Support the development, maintenance and improvement of public and private infrastructure necessary for economic development and community development for the region. .... 7

            Objective 1.2 - Quality of Life Improvements - Support quality in health care, education, public safety, beautification, government and culture that would improve the individual and community quality of life in the FNSB. .... 9

            Objective 1.3 - Capacity Building - Assist local government and community organizations to develop leadership skills and the ability to successfully carry out economic and community development activities. .... 10

            Objective 1.4 - Recreation - Support the development, maintenance and improvement of public and private recreational facilities and programs. .... 11

        GOAL II - Environmental Enhancement - To sustain and improve the quality of the region's natural environment by being wise stewards of resources and habitat. .... 11

            Objective 2.1 - Sustainability - Support public and private efforts to foster a healthy and sustainable community. .... 11

        GOAL III - Economic Development - To support those organizations, businesses, individuals and governing bodies that promote development of Interior and Northern Alaska. .... 12

            Objective 3.1- Natural Resource Development - Support those organizations, businesses, individuals and governing bodies that promote development of Interior and Northern Alaska's natural resources. .... 12

Objective 3.2 - Military Development - Support and promote the growth of military installations in Interior Alaska. .... 13

Objective 3.3 - Technology and Research Development - Support organizations, businesses, individuals and governing bodies that promote the growth of technology and research in Interior Alaska. .... 13

Objective 3.4 - FNSB as a Regional Center - Continue to promote and improve the FNSB as the regional Strategic, Social, Educational, Economic, and Health hub..... 14

Objective 3.5 - Agriculture - Promote the growth of agricultural industry in Interior Alaska and identify domestic and foreign markets for raw and value-added products. .... 14

Objective 3.6 - Visitor Industry Development - Contribute to the economic well-being of the FNSB by developing and enhancing visitor attractions and marketing to potential visitors..... 15

Objective 3.7 - Business Development - Support and retain existing business and encourage the expansion and the development of new business. .... 15

End Notes..... 16

## Chapter One: Introduction

This Comprehensive Economic Development Strategy (CEDS) represents the community's economic development vision, and is adopted into the FNSB's long term Comprehensive Land Use Plan. The Goals, Objectives, Strategies, and Actions contained in the CEDS are the means to realizing this vision. From agriculture and mining to technology and cold climate research, these strategies reflect the diversity of the FNSB's economy.

### The Fairbanks North Star Borough Economic Development Commission

The FNSB Economic Development Commission is tasked with developing and maintaining the community's CEDS. The FNSB Mayor serves as the commission's chair and appoints six voting commission members, the FNSB Assembly Presiding Officer appoints the remaining two voting members.

#### Members of the 2005-06 FNSB Economic Development Commission:

##### Chair:

<u>Name:</u>	<u>Ethnicity</u>	<u>Sex</u>	<u>Representing</u>	<u>Term</u>
Mayor Jim Whitaker	White	M	FNSB Local Government	(12/06)

##### Appointed by the Mayor:

<u>Name:</u>	<u>Ethnicity</u>	<u>Sex</u>	<u>Representing</u>	<u>Term</u>
Mayor Steve Thompson	White	M	City of Fairbanks Local Government	(12/07)
Mayor Jeff Jacobson	White	M	City of North Pole Local Government	(12/07)
Harold N. Brown, Esq.	Alaska Native	M	Tanana Chiefs Conference Alaska Native Social Services	(12/06)
Daniel S. Osborn	Alaska Native	M	Doyon Ltd. Alaska Native for Profit	(12/06)
Jeffrey J. Cook	White	M	Flint Hills Resources Oil and Gas Industry	(12/08)
John C. Poole	White	M	University of Alaska Education	(12/07)

##### Appointed by the Presiding Officer:

<u>Name:</u>	<u>Ethnicity</u>	<u>Sex</u>	<u>Representing</u>	<u>Term</u>
Hank Bartos	White	M	FNSB Assembly/small business	(12/06)
Torie Foote	White	F	FNSB Assembly/Education Health Services	(12/06)

## **CEDS Development Process**

In June of 1999, over 300 Fairbanks North Star Borough (FNSB) residents attended an Economic Summit focused on developing an economic development vision for the FNSB; a vision that would serve as the foundation for the CEDS. Special care was taken to include all segments of the FNSB community.

The summit participants developed most of the Goals, Objectives, and Strategies contained in the current CEDS. The seventeen members of the FNSB Economic Development Commission (EDC) refined and expanded these Goals, Objectives, and Strategies, incorporating them into the current CEDS document. This document was considered and recommended by the FNSB Planning Commission and, in 2001, approved by the Fairbanks North Star Borough Assembly.

To ensure the CEDS's Goals, Objectives, and Strategies remained relevant, and to identify new opportunities for economic development, in 2004 the FNSB's Alaska Regional Development Organization (ARDOR) updated the 2001 CEDS. This process involved surveying local community and business leaders, community groups and economic development oriented organizations. This survey sought to capture the community's vision for its economic development future. This input has been incorporated into the 2005 CEDS.

In February 2005, the FNSB EDC reviewed and approved the proposed CEDS. This was followed by a public comment period. During this time, the FNSB ARDOR made a series of public presentations to FNSB community, economic development and business groups. In total, over 100 members of the FNSB community commented on the proposed CEDS.

Upon completion of the public comment process, the FNSB ARDOR incorporated the comments into the final draft of the CEDS, which was then presented to the FNSB Planning Commission at a public hearing. On May 3, 2005 the FNSB Planning Commission recommended that the FNSB Assembly adopt the proposed CEDS, as amended.

On June 16, 2005 the FNSB Assembly adopted the CEDS into Chapter Two of the FNSB Comprehensive Land Use Plan. Following adoption of the CEDS, the FNSB ARDOR provided the 2005 CEDS to the Federal Economic Development Administration (EDA) for their review. The EDA approved the CEDS November 29, 2005.

In 2006 the FNSB ARDOR conducted its annual review of the CEDS with the FNSB Economic Development Commission, Planning Commission, and Assembly. Minor changes were recommended by each body and have been incorporated into the present document.

**Integrating the CEDS into the Alaska State and other Economic Development programs.**

The CEDS is regularly referred to by the Fairbanks Economic Development Corporation (FEDC), the Fairbanks North Star Borough Economic Development Commission, and other local community and economic development organizations as they develop their work plans and consider development projects. The CEDS is incorporated into the Fairbanks North Star Borough Regional Comprehensive Plan as its economic development implementation strategy. The Planning Commission and Fairbanks North Star Borough Assembly refer to the CEDS for guidance in their respective community and economic development decision making processes. The state of Alaska considers the CEDS to be a statement of support for community and economic development projects being considered by community and economic development organizations within the Fairbanks North Star Borough.

## **Chapter Two - Vision, Goals, Objectives and Strategies**

### **VISION -**

To improve the quality of life and the standard of living of the residents of the Fairbanks North Star Borough (FNSB) by developing goals, establishing objectives and implementing strategies that sustain, enhance or increase economic and social opportunities for the individuals in the region.

### **GOALS, OBJECTIVES AND STRATEGIES -**

**GOAL 1 - Community Development - To support organizations, businesses, individuals and governing bodies that enhance the quality of life and sense of place.**

**Objective 1.1- Infrastructure Development - Support the development, maintenance and improvement of public and private infrastructure necessary for economic development and community development for the region.**

*Strategy 1.1.A - Support the design, construction and maintenance of trail, road, rail and air transportation systems that improves access to the region.*

Action 1.1.A.1 - Support the implementation of the Fairbanks International Airport Master Plan, including taxiway relocation, runway reconstruction, and cargo apron relocation.

Action 1.1.A.2 - Support construction of a new airport terminal that meets Fairbanks' future needs as a national and international airport, including customs and immigration.

Action 1.1.A.3 - Support the design, funding and construction of projects, such as track relocation and a new rail yard, that would improve functionality and enhance the role of FNSB as a hub for the Alaska Railroad. Specifically encourage routes between Fairbanks, Ft. Greely, and other economic locations.

Action 1.1.A.4 - Support the funding and completion of the Statewide Transportation Improvement Program (STIP) projects that improve transportation in and around the FNSB.

Action 1.1.A.5 - Support the Fairbanks Metropolitan Area Transportation System (FMATS) / Metropolitan Planning Organization (MPO) and the Transportation Improvement Program (TIP).

Action 1.1.A.6 - Support development and maintenance of interconnected, mass transit, para-transit, and coordinated transportation systems.

Action 1.1.A.7 - Support dedication, development, and maintenance of a borough-wide, interconnected, multiuse, trails system connecting to other areas in the Interior of Alaska.

*Strategy 1.1.B - Support the development of low cost, alternative, or renewable energy and power generation including the distribution of same to all areas of the FNSB.*

Action 1.1.B.1 - Support state grants that extend power throughout the FNSB.

Action 1.1.B.2 - Support geothermal energy production at Chena Hot Springs.

Action 1.1.B.3 - Support the operation of Healy Clean Coal at a cost that will allow it to be operated in a commercially and economically viable manner.

*Strategy 1.1.C - Support the development of transportation and communication systems that would strengthen the FNSB as Alaska's economic development hub.*

*Strategy 1.1.D - Market the Fairbanks International Airport to maximize its economic impact on the FNSB economy.*

*Strategy 1.1.E - Support development of commercialization infrastructure that facilitates technology transfer.*

*Strategy 1.1.F - Identify and reserve right-of-ways that provide access to natural and mineral resources in the Interior and Northern regions.*

*Strategy 1.1.G - Encourage the development of transportation routes and energy and communication systems that improve the ability of FNSB businesses to market and distribute goods, services and passengers to markets in Canada and the "Lower 48."*

Action 1.1.G.1 - Promote establishment of National Scenic Byways and All-American Roads in the Interior.

*Strategy 1.1.H - Support the borough wide expansion of safe water, sewer, power, communications and other utilities.*

*Strategy 1.1.I - Encourage the development of communications and energy infrastructure that would develop the FNSB as a communication and technology center.*

*Strategy 1.1.J - Prepare for anticipated population fluctuations due to military or industrial activity.*

Action 1.1.J.1 - Support development of quality affordable housing for permanent and transient workforce.

Action 1.1.J.2 - Expand and improve local road and street networks.

*Strategy 1.1.K - Support planning principles that minimize urban sprawl and revitalize urban areas.*

*Strategy 1.1.L - Support transportation infrastructure improvements that improve access to the Fairbanks City Center.*

*Strategy 1.1.M - Identify and promote commercial advantages of the established Foreign Trade Zones at the Fairbanks International Airport and its sub-zones.*

*Strategy 1.1.N - Encourage continued efforts to locate heavy industrial activities to the appropriately zoned areas.*

Action 1.1.N.1 - Target Van Horn and other designated Industrial areas for industrial development.

Action 1.1.N.2 - Promote relocation of the railroad industrial yard.

**Objective 1.2 - Quality of Life Improvements - Support quality in health care, education, public safety, beautification, government and culture that would improve the individual and community quality of life in the FNSB.**

*Strategy 1.2.A - Become recognized as the arts and culture center of Alaska by developing a healthy, diverse, multicultural, and economically successful arts community in which heritage is celebrated.*

*Strategy 1.2.B - Promote the development and maintenance of community and cultural centers and themes that enhance the FNSB's sense of place.*

Action 1.2.B.1 - Support Chena Riverbend development project.

Action 1.2.B.2 - Support theme city development in North Pole.

Action 1.2.B.3 - Support development and construction of a community center in North Pole.

Action 1.2.B.4 - Actively support construction of a Fish Hatchery in the FNSB.

Action 1.2.B.5 - Support renovation of the Alaska Centennial Center for the Arts.

Action 1.2.B.6 - Support construction of a downtown boat dock.

Action 1.2.B.7 - Develop a world-class river walk connecting the city center and Pioneer Park.

Action 1.2.B.8 - Support the South Davis Park Project.

Action 1.2.B.9 - Support design and construction of interpretive science centers.

Action 1.2.B.10 - Support the University of Alaska Museum of the North.

*Strategy 1.2.C - Promote winter accessibility and safety.*

Action 1.2.C.1 - Encourage building safe road crossings.

*Strategy 1.2.D - Support programs that will train educators, teachers and instructors to ensure the quality of the educational system and preserve all cultural heritages.*

*Strategy 1.2.E - Support the development, or renovation, of an indoor, outdoor and dual-season performance or event facility.*

*Strategy 1.2.F - Encourage physical and mental health care delivery that maintain and improve existing staff, facilities, and equipment, or add new facilities to provide quality care to residents of Interior and Northern Alaska.*

Action 1.2.F.1 - Support development of a cardiology center.

Action 1.2.F.2 - Advocate for consideration of constructing Tanana Chief Conference's regional hospital in the FNSB.

Action 1.2.F.3 - Support development of elder care facilities and senior campuses in the FNSB.

*Strategy 1.2.G - Encourage the streamlining of government functions.*

*Strategy 1.2.H - Encourage excellence in K-12 and post-secondary educational systems producing results that exceed state and national averages.*

Action 1.2.H.1 - Promote digital education in K-12 which provides, as per state initiative, computers and connectivity to every student in the FNSB.

*Strategy 1.2.I - Support the expansion and enhancement of the University of Alaska Fairbanks (UAF) and Tanana Valley Campus Center (TVCC), encouraging funding at levels that allow growth, promote excellence, increasing maintenance funding, the addition of new programs, and both programmatic and institutional accreditation.*

Action 1.2.I.1 - Support completion of TVCC building rehabilitation.

Action 1.2.I.2 - Support funding for adequate building construction at all University of Alaska Fairbanks campuses in the FNSB.

*Strategy 1.2.J - Promote vocational, technical, and career training opportunities within the FNSB that prepare residents for a global marketplace.*

*Strategy 1.2.K - Support development and ongoing maintenance of beautification efforts in the FNSB.*

Action 1.2.K.1 - Support a borough landscape ordinance.

*Strategy 1.2.L - Ensure education systems for children and adults include arts, physical fitness, and creativity as an essential component.*

Action 1.2.L.1 - Support the design and construction of a YMCA type facility.

**Objective 1.3 - Capacity Building - Assist local government and community organizations to develop leadership skills and the ability to successfully carry out economic and community development activities.**

*Strategy 1.3.A - Encourage the involvement of youth in all aspects of the community, including government, business, education, arts and cross-cultural exchanges.*

Action 1.3.A.1 - Support local sister city relationships.

*Strategy 1.3.B - Support life skills, work ethics, arts, business, entrepreneurial and motivation skills in school curricula.*

*Strategy 1.3.C - Promote School-to-Work and School-to-Apprenticeship programs, and support steps that strengthen apprenticeship programs that prepare our workforce for jobs of the future.*

*Action 1.3.C.1 - Train the next generation for construction and industrial trades.*

*Strategy 1.3.D - Encourage and promote the identification and development of potential leaders in the community.*

**Objective 1.4 - Recreation - Support the development, maintenance and improvement of public and private recreational facilities and programs.**

*Strategy 1.4.A - Support the development and construction of year-round recreational facilities and opportunities consistent with and to capitalize upon local climatic conditions.*

*Strategy 1.4.B - Continue to support development of recreational facilities used jointly by the military, other government agencies and private entities.*

*Strategy 1.4.C - Develop the FNSB as a year round sport and recreation destination center, including sled dog sports, alpine and cross country skiing, snow machining, ice carving, mountain biking, hiking, rock climbing and other recreational opportunities.*

*Strategy 1.4.D - Support the hosting of scholastic and athletic competition at all levels.*

**GOAL II - Environmental Enhancement - To sustain and improve the quality of the region's natural environment by being wise stewards of resources and habitat.**

**Objective 2.1 - Sustainability - Support public and private efforts to foster a healthy and sustainable community.**

*Strategy 2.1.A - Continue to support area wide waste management.*

*Action 2.1.A.1 - Support development of cost-effective recycling programs.*

*Action 2.1.A.2 - Support safe handling and disposal of waste and hazardous materials.*

*Strategy 2.1.B - Support public and private efforts to provide safe water to all residents of the FNSB.*

*Strategy 2.1.C - Improve both air and water quality in the borough by advancing and supporting development and implementation of all technologies that are beneficial for our climate and locale.*

*Strategy 2.1.D - Encourage the use of sustainable design and businesses practices.*

Action 2.1.D.1 - Promote education of business community on benefits of sustainable business practices.

**GOAL III - Economic Development - To support those organizations, businesses, individuals and governing bodies that promote development of Interior and Northern Alaska.**

**Objective 3.1- Natural Resource Development - Support those organizations, businesses, individuals and governing bodies that promote development of Interior and Northern Alaska's natural resources.**

*Strategy 3.1.A - Actively support oil and gas development in Interior and Northern Alaska.*

- Action 3.1.A.1 - Encourage increased production from the Alaska North Slope.
- Action 3.1.A.2 - Support opening the 1002 area of Alaska National Wildlife Reserve.
- Action 3.1.A.3 - Support development of Northern Petroleum Reserve Alaska.
- Action 3.1.A.4 - Support Nenana Basin gas development.

*Strategy 3.1.B - Actively support mineral development in Interior and Northern Alaska.*

- Action 3.1.B.1 - Support further expansion and development of coal and gold industries.
- Action 3.1.B.2 - Support continuing airborne and field geological and geophysical surveys by the State.
- Action 3.1.B.3 - Actively support development of the Pogo mine.

*Strategy 3.1.C - Actively support construction of a natural gas pipeline through the Interior, with particular emphasis on assuring maximum benefit to Alaska's communities and location of construction, operation, and regulatory headquarters in Fairbanks.*

- Action 3.1.C.1 - Identify and develop a natural gas business park.
- Action 3.1.C.2 - Advocate for consideration of take-off ports at the Yukon River, Fairbanks, Delta and other Interior and Northern locations that support economic development in the Interior and Northern regions.
- Action 3.1.C.3 - Advocate responsible development of petrochemical industry in the FNSB.

*Strategy 3.1.D - Encourage expansion and development of local refinery capabilities for clean fuels and value-added products from oil and gas resources.*

*Strategy 3.1.E - Support the accelerated transfer of Federal land to Native Corporations and the FNSB.*

**Objective 3.2 - Military Development - Support and promote the growth of military installations in Interior Alaska.**

*Strategy 3.2.A - Actively support needed infrastructure development at Ft. Wainwright and Eielson to meet training and personnel mission needs.*

*Strategy 3.2.B - Actively support military and civilian activities that would increase training exercises in the Interior.*

*Strategy 3.2.C - Actively support increased military cold weather and weapons research in the Interior.*

*Strategy 3.2.D - Actively support the missions of Fort Wainwright, Eielson Air Force Base, Fort Greely and Clear Air Force Station and retention of these military activities.*

Action 3.2.D.1 - Continue to support expeditious completion of the new Bassett Army Hospital on Fort Wainwright.

Action 3.2.D.2 - Continue to support deployment of the National Missile Defense System at Fort Greely with support facilities at Eielson Air Force Base, and Fort Wainwright.

Action 3.2.D.3 - Continue to work with military leadership in preparing civilian and military communities in preparation for, and during, deployment.

*Strategy 3.2.E - Encourage military population stability at Ft. Wainwright and Eielson.*

**Objective 3.3 - Technology and Research Development - Support organizations, businesses, individuals and governing bodies that promote the growth of technology and research in Interior Alaska.**

*Strategy 3.3.A - Actively support UAF efforts to increase their research contracts and grants.*

Action 3.3.A.1 - Support state and federal investment in UAF research and required facilities.

*Strategy 3.3.B - Promote FNSB as a desirable location for high technology operations that utilize FNSB's intellectual resources, skills and workforce.*

Action 3.3.B.1 - Continue to invest in reliable energy, and communications infrastructure.

*Strategy 3.3.C - Identify and promote logistical, environmental and other advantages of the FNSB to attract technology-related industries.*

*Strategy 3.3.D - Support public and private research organizations that utilize the Interior Alaska environment for research and product development.*

Action 3.3.D.1 - Support development of cold climate research & test facilities.

Action 3.3.D.2 - Promote establishment of a technology accelerator to aid and assist technology transfer.

Action 3.3.D.3 - Develop a research park and other commercialization infrastructure to attract private industry investors to the region.

Action 3.3.D.4 - Promote community access to venture capital.

Action 3.3.D.5 - Encourage the University of Alaska Fairbanks to become a national center of excellence in global change research, resulting in development of a National Institute of Global Change Studies.

*Strategy 3.3.E - Support research and development into renewable and new alternative energy technology.*

Action 3.3.E.1 - Support efforts to use waste as a resource.

**Objective 3.4 - FNSB as a Regional Center - Continue to promote and improve the FNSB as the regional Strategic, Social, Educational, Economic, and Health hub.**

*Strategy 3.4.A - Encourage air carriers to use airports located in the FNSB as hubs for cargo and passenger service to Interior, Northern and Western Alaska.*

Action 3.4.A.1 - Encourage intrastate, interstate and international air service and aviation operators to service the Fairbanks International Airport on a daily basis.

*Strategy 3.4.B - Develop the FNSB as the Northern and Interior marketplace.*

Action 3.4.B.1 - Attract regional conferences and workshops.

Action 3.4.B.2 - Develop social and business relationships with bush communities.

Action 3.4.B.3 - Educate local businesses about marketing and shipping to Interior and Northern region communities.

*Strategy 3.4.C - Develop FNSB as vocational and career center for Interior and Northern Communities.*

*Strategy 3.4.D - Develop Fairbanks as the Interior's health care hub.*

**Objective 3.5 - Agriculture - Promote the growth of agricultural industry in Interior Alaska and identify domestic and foreign markets for raw and value-added products.**

*Strategy 3.5.A - Support the development of a "Community Market" to enable local and rural producers and manufacturers to market their goods and services more effectively.*

*Strategy 3.5.B - Advocate and promote research to develop more profitable crops and manage invasive species for Interior Alaska.*

*Strategy 3.5.C - Encourage the development and expansion of commercial and truck farming by promoting an increase both in agricultural lands and in available experienced farmers.*

*Strategy 3.5.D - Encourage the involvement of the commercial farming community within all major infrastructure projects within the borough, to ensure that consideration is given to the needs of commercial agriculture infrastructure.*

*Strategy 3.5.E - Encourage adding value to all resource extraction activities.*

*Action 3.5.E.1 - Actively support expansion of the value-added, forest products industry in Interior Alaska.*

*Strategy 3.5.F - Support responsible forestry development in Interior and Northern Alaska.*

**Objective 3.6 - Visitor Industry Development - Contribute to the economic well-being of the FNSB by developing and enhancing visitor attractions and marketing to potential visitors.**

*Strategy 3.6.A - Support activities that enhance and increase the visitor industry in the FNSB.*

*Action 3.6.A.1 - Support the development of the Morris Thompson Center.*

*Action 3.6.A.2 - Support continued investment that promotes regional visitor industry.*

*Action 3.6.A.3 - Actively support increased access to Denali National Park.*

**Objective 3.7 - Business Development - Support and retain existing business and encourage the expansion and the development of new business.**

*Strategy 3.7.A - Encourage and support research to improve business opportunities in the FNSB.*

*Strategy 3.7.B - Encourage the privatization of appropriate government services.*

*Strategy 3.7.C - Identify and develop sources of public and private capital for the development and expansion of businesses in the FNSB.*

*Action 3.7.C.1 - Develop and utilize economic incentive tools.*

*Strategy 3.7.D - Develop community of entrepreneurs.*

*Action 3.7.D.1 - Educate local businesses about opportunities and how to develop them.*

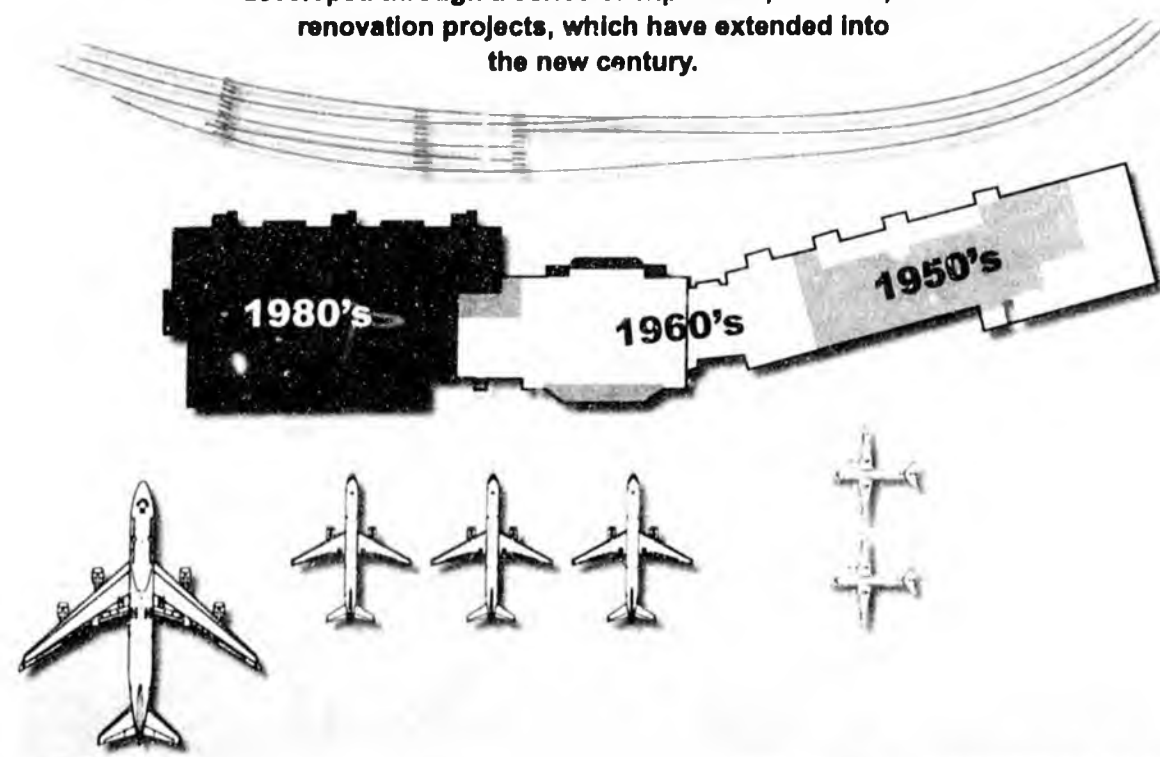
**End Notes**

# Terminal Construction HISTORY...



1950's	1960's	1970's	1980's	2006-2009
<p>Early construction of the original FAI terminal included a ticketing lobby and restaurant. Later construction included an FAA air traffic control tower.</p>	<p>Terminal Additions</p> <ul style="list-style-type: none"> <li>• Second level gates</li> <li>• Jet bridges</li> <li>• Baggage claim area</li> </ul>	<p>Expansion of the international arrivals processing hall.</p>	<p>Terminal Additions</p> <ul style="list-style-type: none"> <li>• New ticket lobby</li> <li>• Outbound baggage handling system</li> <li>• Three additional second level gates</li> <li>• New restaurant</li> </ul>	<p>The FAI Terminal Area Development Project will reconfigure and renovate airside and terminal facilities to meet the long-term needs of the traveling public.</p>

Since its original construction in the 1950's, the Fairbanks International Airport Terminal has been developed through a series of expansion, remodel, and renovation projects, which have extended into the new century.



FAIRBANKS INTERNATIONAL AIRPORT

**FAI** TERMINAL AREA  
DEVELOPMENT  
PROJECT

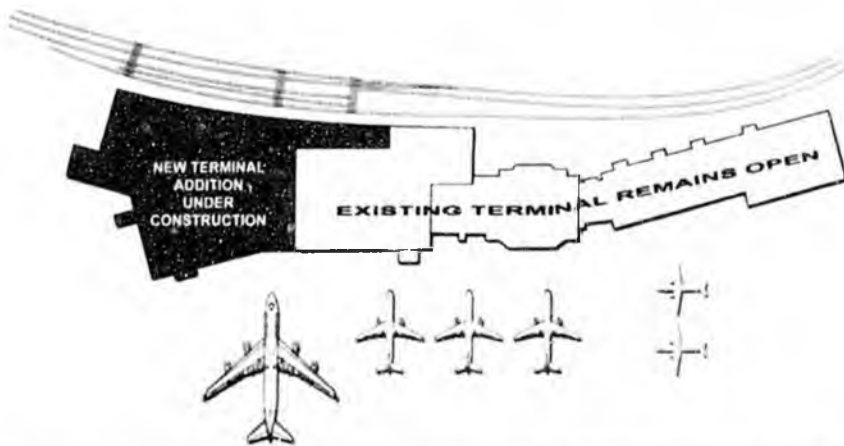


FAIRBANKS INTERNATIONAL AIRPORT

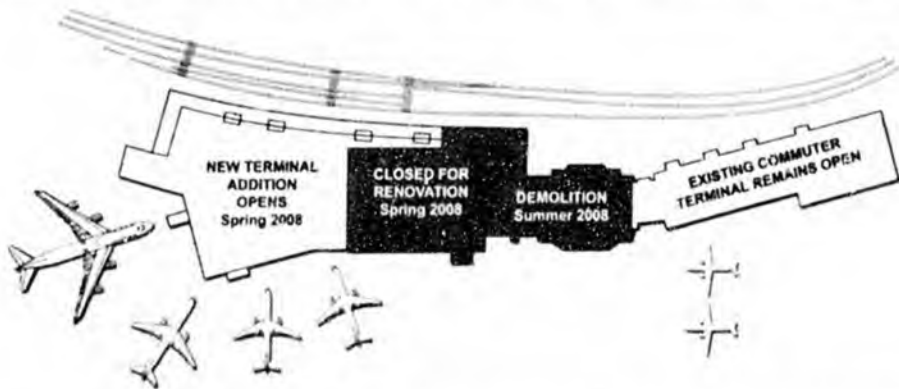
**FAI** TERMINAL AREA  
DEVELOPMENT  
PROJECT

# CONSTRUCTION Phases

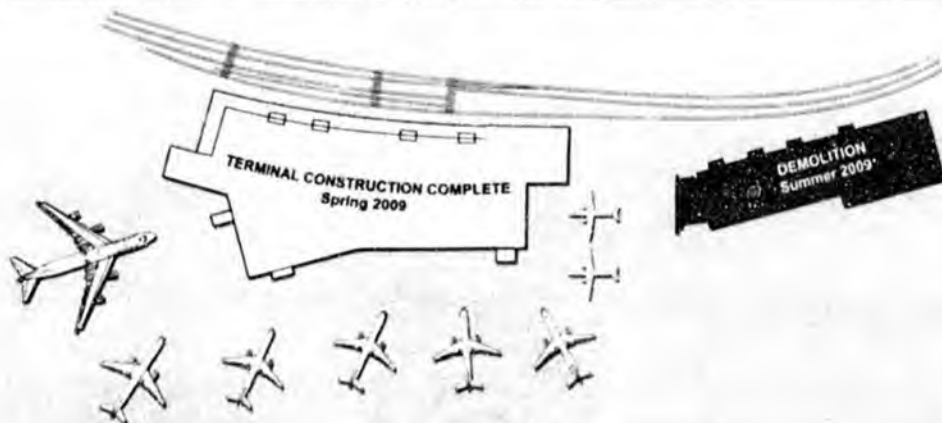
**2007**



**2008**



**2009**





# Construction Timeline

and

## Project Highlights

2007

### WINTER

DEMOLISH MEN'S RESTROOM  
ADJACENT TO ESCALATORS

### SPRING / SUMMER

ERECT STRUCTURAL STEEL FOR  
NEW TERMINAL ADDITION

WIDEN AIRPORT ACCESS ROAD ADJACENT  
TO EXISTING TERMINAL BUILDING

### FALL

RELOCATE BAGGAGE SCREENING  
OPERATION

MOVE JENNY AIRCRAFT TO  
TEMPORARY STORAGE

RELOCATE ESCALATORS

2008

### WINTER

INSTALL MECHANICAL, ELECTRICAL, AND  
INTERIOR FINISHES IN NEW TERMINAL ADDITION

BUILD OUT NEW GIFT SHOP AND  
RESTAURANT IN NEW TERMINAL ADDITION

### SPRING

RE-INSTALL JENNY AIRCRAFT IN NEW  
TERMINAL ADDITION

RELOCATE MAJOR AIR COMPANIES  
AND RENTAL CAR OPERATORS  
TO NEW TERMINAL ADDITION

### SUMMER / FALL

BEGIN RENOVATION OF  
1969 TERMINAL BUILDING

DEMOLISH PORTION OF  
1969 ADDITION

2009

### WINTER

ONGOING RENOVATION OF  
1969 ADDITION

### SPRING

RELOCATE COMMUTER AIRLINES  
TO NEW TERMINAL

### SUMMER

DEMOLISH 1959-1964 ADDITION

### FALL

COMPLETE REMAINING SITE WORK

Construction began on the FAI Terminal Area Development Project in spring 2006. The project includes:

- Upgrade structure to meet current seismic standards
- Replace outdated mechanical and electrical systems for operational efficiency
- Increase from 5 to 6 jet gates to meet air traffic demands
- Improve International Arrival area to enhance passenger convenience
- Enlarge terminal lobby areas to improve circulation
- Increase capacity of baggage handling system to address current and future needs
- Create bus staging area to eliminate curbside congestion
- Expand rental car and public parking lots for future demand
- Present architectural finishes and enhance natural lighting to create an attractive and pleasant airport experience

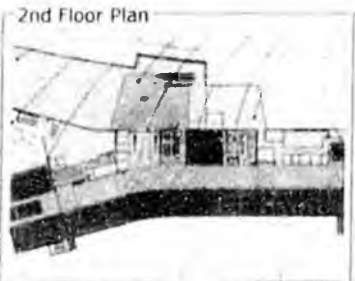
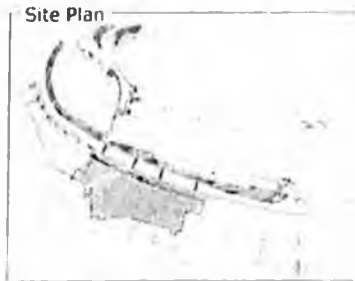


Fairbanks International Airport  
**FAI Terminal Area Development Project**  
*A Vision of Growth*

[about](#)   [goals](#)   [design](#)   [webcam](#)

thursday, april 12

**65% Design Drawings**



©2007 FAI Terminal Area Development Project, all rights reserved. Design Information Insights

Fairbanks International Airport  
FAI Terminal Area Development Project  
A Vision of Growth

[about](#) | [goals](#) | [design](#) | [webcam](#)  
[about the project](#) | [terminal history](#) | [project management](#) | [contacts](#)

thursday, april 12

About the Project

To address recent and ongoing functional and operational deficiencies associated with Fairbanks International Airport terminal building, the Alaska Department of Transportation and Public Facilities (ADOT&PF) and the Fairbanks International Airport (FAI) embarked on an ambitious Terminal Area Development Plan to assess and plan for the long-term needs of the traveling public.

The planning phase began in October 2003 and concluded in April, 2004 with the selection of a preferred approach which provided the design team with the following conceptual outline of how FAI can best accommodate domestic and international passenger service into the future:

- extend the southern end of the existing airport terminal, connecting with a portion of the existing structure built in 1965
- essentially upgrade, renovate and reconfigure the 1965 portion of the existing terminal
- demolish portions of the terminal constructed prior to the 1965 structure
- reconfigure and renovate the airside and landside terminal facilities (including) to provide enhanced safety, security, architectural, mechanical and electrical upgrades

Architectural drawings to the design phase are completed schematic design in February 2006. The Terminal Area Development Project is currently in the US design development phase with 100% design scheduled to be complete December 2006.

- Early building demolition and site work has in May 2006
- Construction of the new terminal addition to existing terminal for future additions are planned to begin spring 2007 and continue through the winter 2008
- Remaining building renovations are planned to begin spring 2006 with final site completion by summer 2009
- Final demolition of the old 1965 portion of the terminal after remaining site work is scheduled to be complete during the summer of 2009.



Project Highlights

- Improve international passenger processing
- Upgrade to six city, efficient passenger service and baggage screening
- Increase from 5 to 8 gates
- Increase baggage claim
- Relocate rental car parking and pick-up location

Information Posters

- Terminal History (3.1MB)
- Terminal Timeline (1.6MB)
- Construction Phases (3.4MB)
- Did You Know? (1.1MB)



DEMOLISHED

Information Insights

# Fairbanks International Airport

DOT&PF > Fairbanks International Airport > FAI News > Construction News

[Home](#) · [About FAI](#) · [Contact Information](#)

## FAI News Construction News

### ALSF Relocation

In order to tie-in the electrical needed for the ALSF facility, contractors will need to work near the south end of the runway, necessitating a closure of the south 750 feet of 01L/19R. The tentative closure is slated between May 22 and June 2. Approximate distance remaining 11,050 feet.

### General Aviation Runway (01R/19L)

FAI will be performing repairs to the south end of the general aviation runway (01R/19L) to repair frost heaves. There is a partial runway closure planned between June 11 and July 10, distance remaining will be approximately 3500 feet. In addition, a complete closure of 01R/19L is planned from June 14-19 to allow for excavation equipment. During these closures, the full length of runway 01L/19R will be available.

### South Cargo Apron Work

Contractors will tie in the new south cargo apron with taxiway alpha near the south end of 01L/19R the first week of September. Taxiway alpha is expected to be closed at the south end. No runway closures are expected at this time.

Additional details, including NOTAM's and safety plans will be issued closer to commencement of construction. For more information on the Terminal Area Development Project, please go to [www.fai-terminal-plan.com](http://www.fai-terminal-plan.com). If you have any questions, please contact our office at 474-2550.

## FAI News

- ▶ [Passenger Info](#)
- ▶ [Doing Business at FAI](#)
- ▼ [FAI News](#)
  - ▶ [Press Releases](#)
  - ▶ [FAI Newsletters](#)
  - ▶ [Construction News](#)
  - ▶ [Public Notices](#)
  - ▶ [Terminal Project Link](#)
  - ▶ [Operational Orders](#)

## Terminal upgrade

By Eric Lidji

Published April 12, 2007

Officials at Fairbanks International Airport are asking passengers to arrive two hours before their flight's scheduled departure time because of renovations. Waiting passengers will have something to watch, though, as construction crews recently began erecting the most visible sign of the upgrades to date: a steel framework that will eventually become a new \$99 million passenger terminal. "As the structure starts to take shape, there's going to be more curiosity in the community," said Bill O'Bar, program manager with RISE Alaska LLC, the consulting firm working on the project.

The project will dramatically alter the look of the airport in coming years as the existing terminal is slowly replaced by a new two-story building with a large glass front, glowing vestibules, tall steel columns and exposed wood, concrete and stone. The finished building won't resemble any other airport in the country, according to architect Charles Bettisworth. "Rather than being slick and polished, this will reflect Fairbanks as a frontier community," Bettisworth said. "There's sort of a rough-and-ready component to it."

Crews broke ground on the project last summer and used the winter months to tear out a men's bathroom inside the existing terminal, but warm weather has allowed the team to scale up its efforts. But since the building and summer tourist seasons overlap, construction will impact how travelers use the airport for the next two summers. Crews will reconfigure the main road leading into the airport in the coming weeks, constricting the parking lot in the process this summer. May through August are the busiest months at the airport, typically representing half of all passengers who arrive or depart in a given year.

According to the Alaska Department of Transportation, the airport handled 423,621 arriving and departing passengers during those four months last year, an increase from 2005 figures. Airport officials cite that increase as one reason for the renovations.

While the new terminal will ultimately be only 10,000 square feet larger than the existing terminal, Airport Manager Kevin VunderZanden said the new configuration allows for better use of the space. Major airport expansions in 1952, 1969 and 1985 created the current layout where baggage claim and ticketing are split between two locations. Consolidating those locations opens space for an additional gate and a plaza to separate tour buses from general traffic; it will also prevent future international passengers from having to go outside to reach customs. "To me, that's not really a space issue," VunderZanden said. "It's a utility issue."

The terminal is almost entirely funded by revenue generated from airlines. The federal government is providing \$5 million.

The new terminal is expected to open next spring, after which phased demolition will begin on the existing terminal. The entire project is set to be completed by the end of summer 2009.

The renovation will also make cargo operations nearly invisible to passengers by the end of the year. The Legislature is reviewing a bill that would transfer Alaska Railroad Corp. land to the airport to move heavy cargo operations a few hundred feet to the southwest of the main terminal.

# STATE OF ALASKA

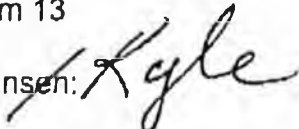
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
STATEWIDE AVIATION

SARAH PALIN, GOVERNOR

4111 AVIATION AVENUE  
P.O. BOX 196900  
ANCHORAGE, ALASKA 99519  
(907) 269-0730 Fax (907) 269-0489

The Honorable Kyle Johnsen  
Chair House Transportation Committee  
Alaska State Capitol, Room 13

Dear Representative Johnsen:

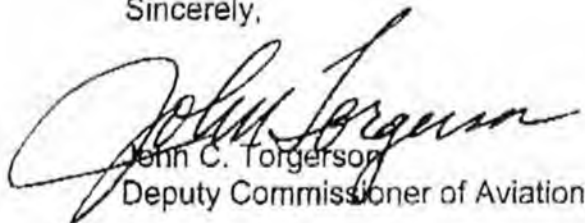


Thank you for sponsoring HB 168. The completion of the real estate transaction between DOT and the Railroad will allow for the relocation and replacement of Fairbanks International Airport's (FIA) cargo apron. DOT needs the title to the property in order to secure and use funding from the Federal Aviation Administration (FAA).

This \$21 million relocation and replacement project is needed for several reasons; the existing cargo apron is in disrepair (35+ years old) and must be relocated to accommodate federal safety standards, the existing location conflicts with passenger flights resulting from the \$100 million in improvements to the new passenger terminal currently under construction. Also, three of the four "old" parking hardstands will be rendered inoperative when the new terminal is constructed and it will assist FAI in accommodating current and future international and domestic cargo operations by offering more convenient access to road, rail, and essential fueling facilities.

Thank you in advance for your support and please do not hesitate to contact me if you have any questions.

Sincerely,



John C. Torgerson  
Deputy Commissioner of Aviation

Mary Siroky

---

**From:** John F. Bennett [johnf\_bennett@dot.state.ak.us]  
**Sent:** Wednesday, March 28, 2007 9:26 AM  
**To:** Siroky, Mary P (DOT)  
**Cc:** Zimmerman, Frances E (DOT)  
**Subject:** HB 168

Mary, this is in response to Rep. Thomas' question regarding why the area in the legal description is qualified as "more or less"

Using the "more or less" qualifier in a metes and bounds property description is a matter of style and practice. While it is not absolutely necessary, it is often used. AS 9.25.040 "Rules for Construing Real Estate Descriptions" acknowledges a common problem in M&B property descriptions. Unfortunately, it does so in virtually undecipherable legalese. The problem is that a M&B property description consists of several elements including bearings (direction), distances (lengths), calls to monuments or adjoining properties, and a summation of the area that is being described. There is a potential that these elements may conflict with each other due to a mathematical mis-closure of the property description or an imprecise survey among other reasons. When a conflict of elements exists, AS 9.25.040 sets out the order of priority in which the elements must be considered. Calls to monuments and adjoining properties are considered controlling over bearings, distance, and areas. Distances are considered to be a higher priority when conflicting with bearings or areas. Essentially, areas are given the lowest priority in event of a conflict of other elements within a description. So although the area is stated with a mathematical precision of 0.001 acre, the area may be "more or less" than that stated in the property description as it must give way to the other elements in event of a conflict. JohnB

---

John F. Bennett, PLS, SR/WA  
Chief, Right of Way, Northern Region, DOT&PF  
2301 Peger Road, Fairbanks, Alaska 99709-5399  
Phone: 907 451 5423, Fax: 907 451 5411  
Toll Free: 1 800 475 7464

---

3/28/2007

**David Scott**

---

**From:** Randall Ruaro  
**Sent:** Tuesday, April 10, 2007 8:50 AM  
**To:** David Scott  
**Subject:** FW: HB 168 - Fairbanks Airport project

---

**From:** Mary Siroky [mailto:Mary\_Siroky@dot.state.ak.us]  
**Sent:** Monday, April 09, 2007 4:33 PM  
**To:** Randall Ruaro  
**Subject:** RE: HB 168 - Fairbanks Airport project

Yes specifically FAA will only allow a lease with another governmental entity and with respect to our FIA project, ARRC is not considered a governmental entity but a for profit corporation. Do yes we need to have fee title in order to use FAA funding.

We also have the requirement that if we are acquiring land for an access controlled highway facility, we must acquire fee title and have full control.

Let me know what else you need.

-m-

---

**From:** Randall Ruaro [mailto:Randall\_Ruaro@legis.state.ak.us]  
**Sent:** Monday, April 09, 2007 4:05 PM  
**To:** Mary Siroky  
**Subject:** HB 168 - Fairbanks Airport project

Mary,

Do you know if one of the reasons we need to make the transfer for the Fairbanks airport is so the title to the property is vested in the DOT for purposes of DOT being able to obtain the FAA grant to construct the new Cargo apron?

Thanks

Randy

4/10/2007

**Randall Ruaro**

---

**From:** Wendy Lindskoog [mailto:WENDSKOOGW@akrr.com]  
**Sent:** Thursday, March 01, 2007 5:39 PM  
**To:** dave\_scott@legis.state.ak.us; Randall Ruaro  
**Subject:** HB 168 info

Hi Randy and Dave.

For Tuesday's hearing...I will be in Juneau and will plan on having two railroaders on teleconference from Anchorage. Phyllis Johnson is our VP and Chief Legal Counsel. Tom Brooks is our AVP Projects and Chief Engineer. We plan on letting DOT do most of the talking about the projects...we will all be available for questions.

The fiscal note was just provided to Christopher Clark by Sally in Commerce and should find its way to you by tomorrow. I can be reached at 265-2498 or 240-9571 if you have any questions. Thanks so much for helping us and DOT with this bill.

Wendy

**HB**

**185**

# ALASKA STATE HOUSE OF REPRESENTATIVES

**Contact:**

Interim Address:  
3340 Badger Road  
North Pole, AK 99705  
(907)-488-5725  
Fax# (907)-488-4271

**Session**

(907)-465-3719  
FAX# (907)-465-3258  
State Capitol  
Room 204

## REPRESENTATIVE JOHN COGHILL

### Sponsor Statement

House Bill 185 provides boroughs with a means of altering existing road service area boundaries to ensure taxpayer fairness among residents of service areas.

A service area is a taxing jurisdiction within a borough that has been established to provide special services such as road maintenance or fire protection. These services are requested and approved by voters residing within a specific area.

State law permits borough residents living outside a service area to use service area roads for their sole or legally required access. These residents derive a direct benefit equal to residents within the service area, yet they can refuse to contribute to the costs of construction or maintenance of these roads by voting down any annexation attempt. These state mandated annexation votes typically fail as individuals are reluctant to join a service area when they can instead use these maintained roads for free.

HB 185 amends state law by allowing a service area to annex property that uses its roads for their sole or legally required access without a separate vote of the property to be annexed.

A second issue arises where residents of a service area are required to pay into a service area even though they do not utilize the service area roads for access to their property. Service areas, however, are often reluctant to vote to remove property from the service area because it effectively raises taxes on the remaining property owners.

HB 185 amends state law by allowing a borough assembly to exercise its judgment to alter, by ordinance, a service area boundary to exclude a property that does not use service area roads as its sole or legally required access.



## Fairbanks North Star Borough

Department of Law

809 Pioneer Road • PO Box 71267 • Fairbanks, AK 99707 - (907) 459-1318 FAX 459-1155

March 23, 2007

**VIA FACSIMILE: 907-465-2819**

Representative Anna Fairclough  
State Capitol, Room 411  
Juneau, AK 99801-1182

Representative Fairclough:

Thank you for the opportunity to comment on the questions posed by the Municipality of Anchorage, through Mr. Johnson's e-mail. After receiving a copy of the e-mail, I contacted Rhonda Fehlen Westover, Deputy Municipal Attorney for the Municipality of Anchorage. We agreed, after an extensive discussion of HB 185, including its impacts on our respective municipalities, to provide you with a joint response, and we are authorized on behalf of our respective governmental entities, to support HB 185.

We are both confident the new clause 3, at line 19, page 2, is constitutional. Alaska's Constitution provides that service areas "may be established, altered, or abolished" by the **Assembly**, subject to the provisions of law or charter. Thus, while state law could certainly add additional requirements, our Constitution only requires assembly approval. HB 185 preserves this constitutional requirement.

With respect to charter provisions, Alaska Statute 29.35.450 is one of the limitations on home rule powers, and supersedes charter provisions. A charter amendment is not necessary to implement HB 185 if approved by the legislature.

If you have any further questions, please feel free to contact either or both of us.

Sincerely,

FAIRBANKS NORTH STAR BOROUGH

MUNICIPALITY OF ANCHORAGE

A. René Broker  
Borough Attorney

Rhonda Fehlen Westover  
Deputy Municipal Attorney