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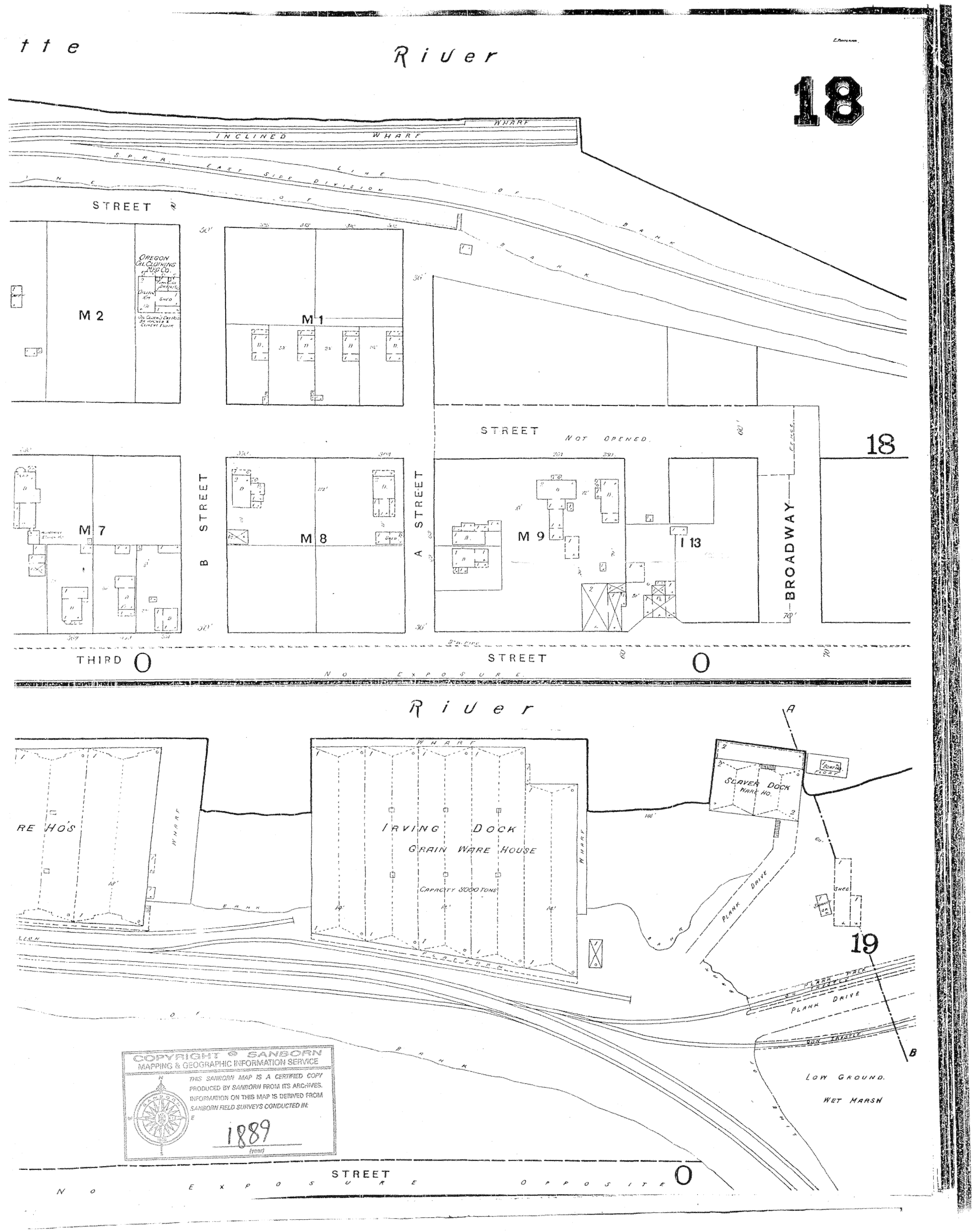


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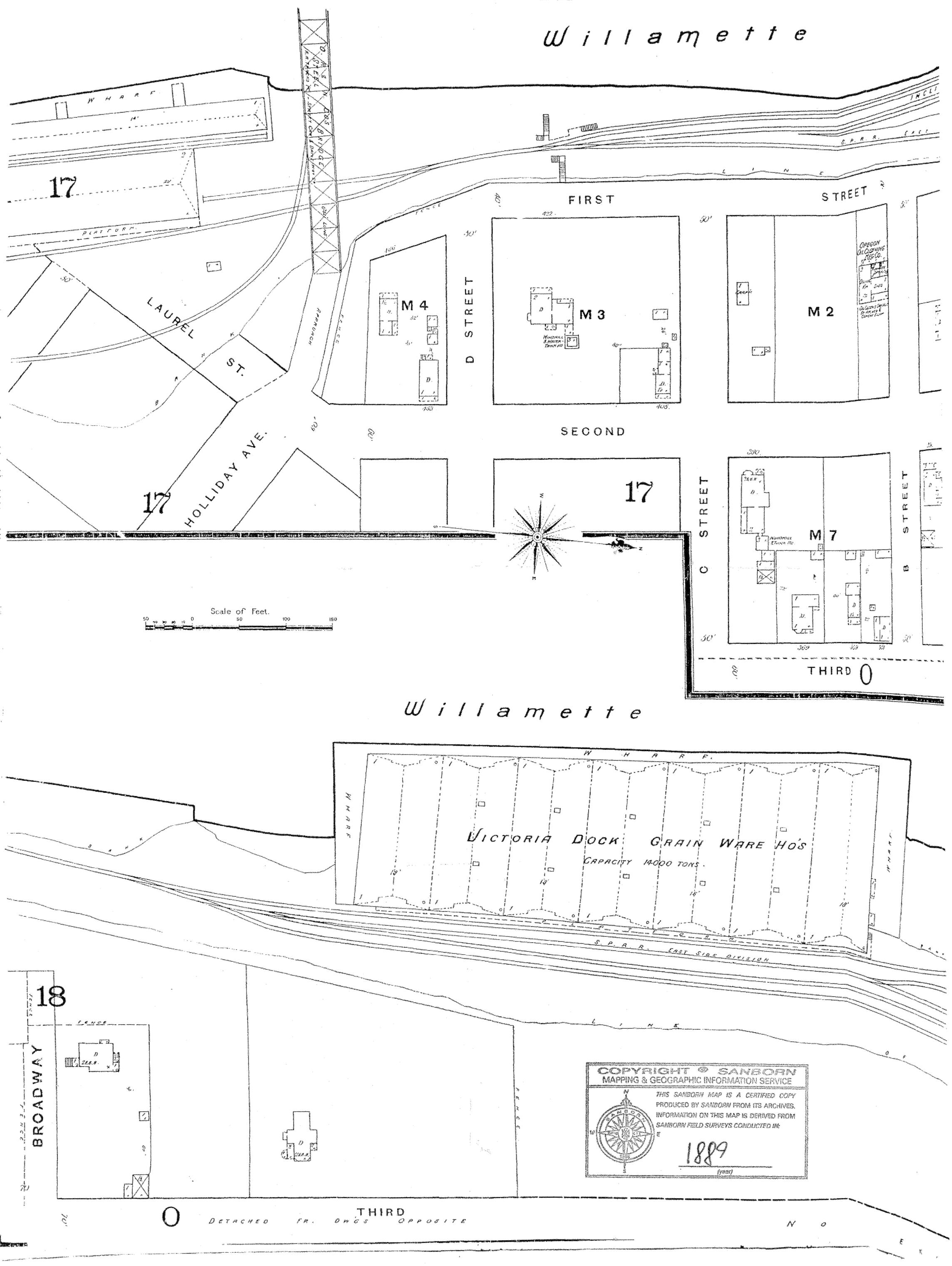
Willamette
WHARF
17
PLATFORM
LAUREL ST.
HOLLIDAY AVE.
17
M 4
D STREET
M 3
FIRST
STREET
M 2
OREGON OIL CLOTHING MFG CO.
SECOND
17
C STREET
M 7
B STREET
THIRD
Scale of Feet.
Willamette
WHARF
VICTORIA DOCK GRAIN WARE HO'S
CAPACITY 14000 TONS.
S.P.R.R. EAST SIDE DIVISION
18
BROADWAY
THIRD
DETACHED FR. DWGS OPPOSITE
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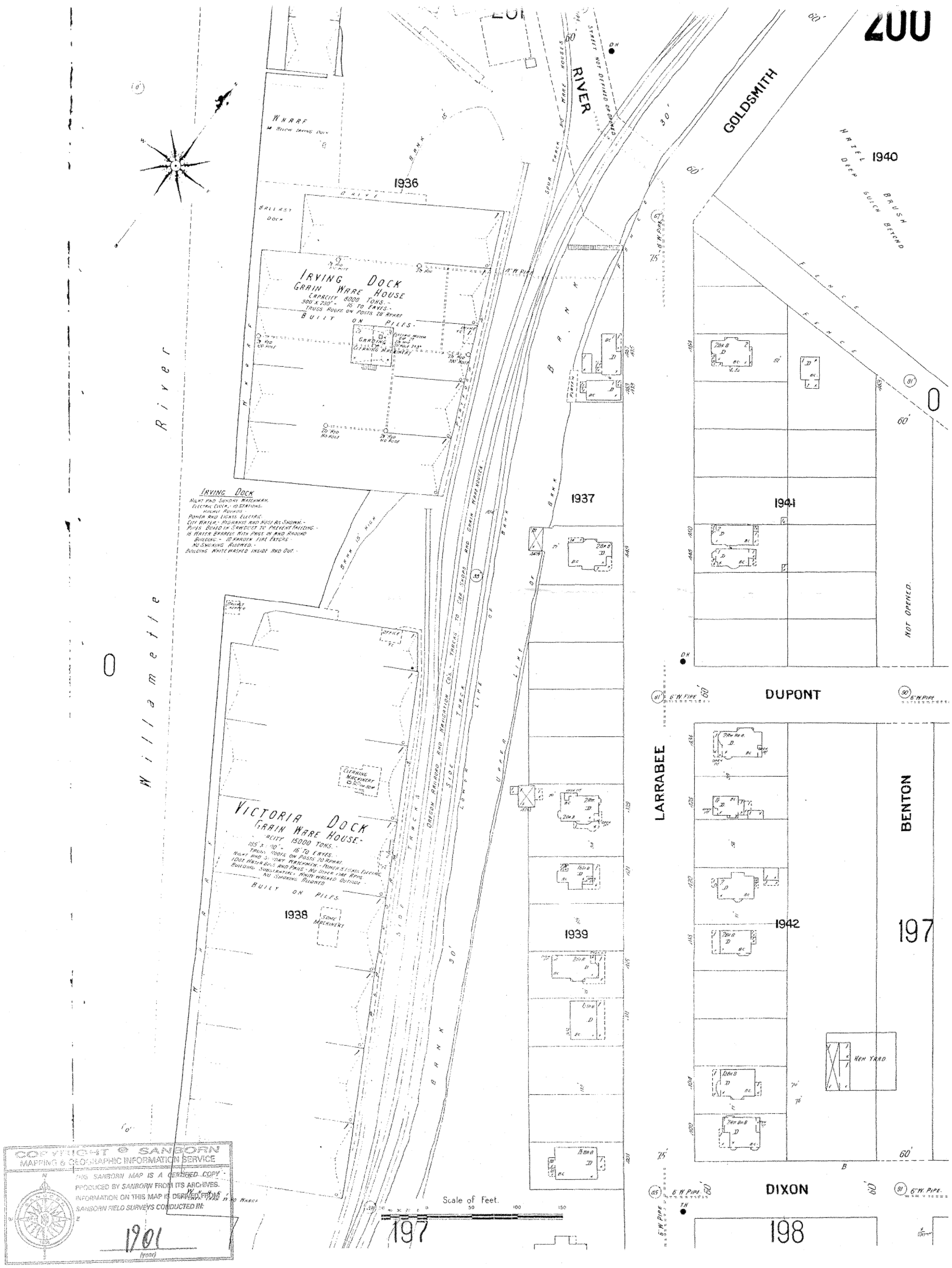
200
GOLDSMITH
1940
HAZEL DEEP GULCH BEYOND BRUSH
FENCE
FENCES
NOT OPENED.
DUPONT
LARRABEE
BENTON
197
HEN YARD
DIXON
198
1941
1942
1937
1939
1938
1936
RIVER
Willamette River
WHARF
BANK
IRVING DOCK
GRAIN WARE HOUSE
CAPACITY 8000 TONS.
BUILT ON PILES.
IRVING DOCK
VICTORIA DOCK
GRAIN WARE HOUSE
CAPACITY 15000 TONS.
BUILT ON PILES.
OREGON RAILROAD AND NAVIGATION CO.'S TRACKS TO THE SAWDUST
UPPER LINE
LOWER LINE
Scale of Feet.
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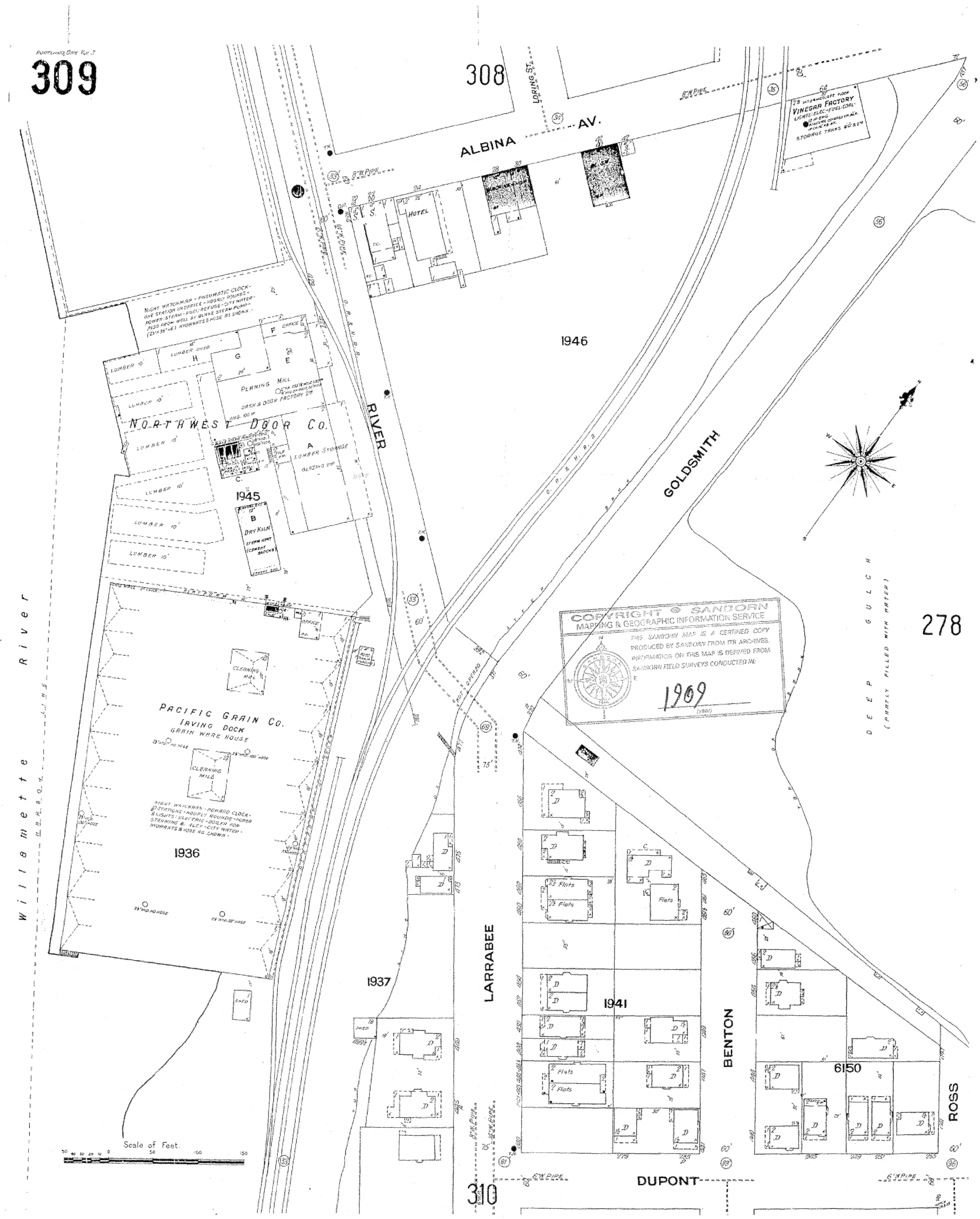
1901
(year)

CARG002001


PORTLAND, ORE. VOL. 3
309
308
ALBINA AV.
LORING ST.
HOTEL
VINEGAR FACTORY
STORAGE TANKS
1946
NORTHWEST DOOR CO.
PLANING MILL
SASH & DOOR FACTORY
LUMBER STORAGE
DRY KILN
1945
RIVER
GOLDSMITH
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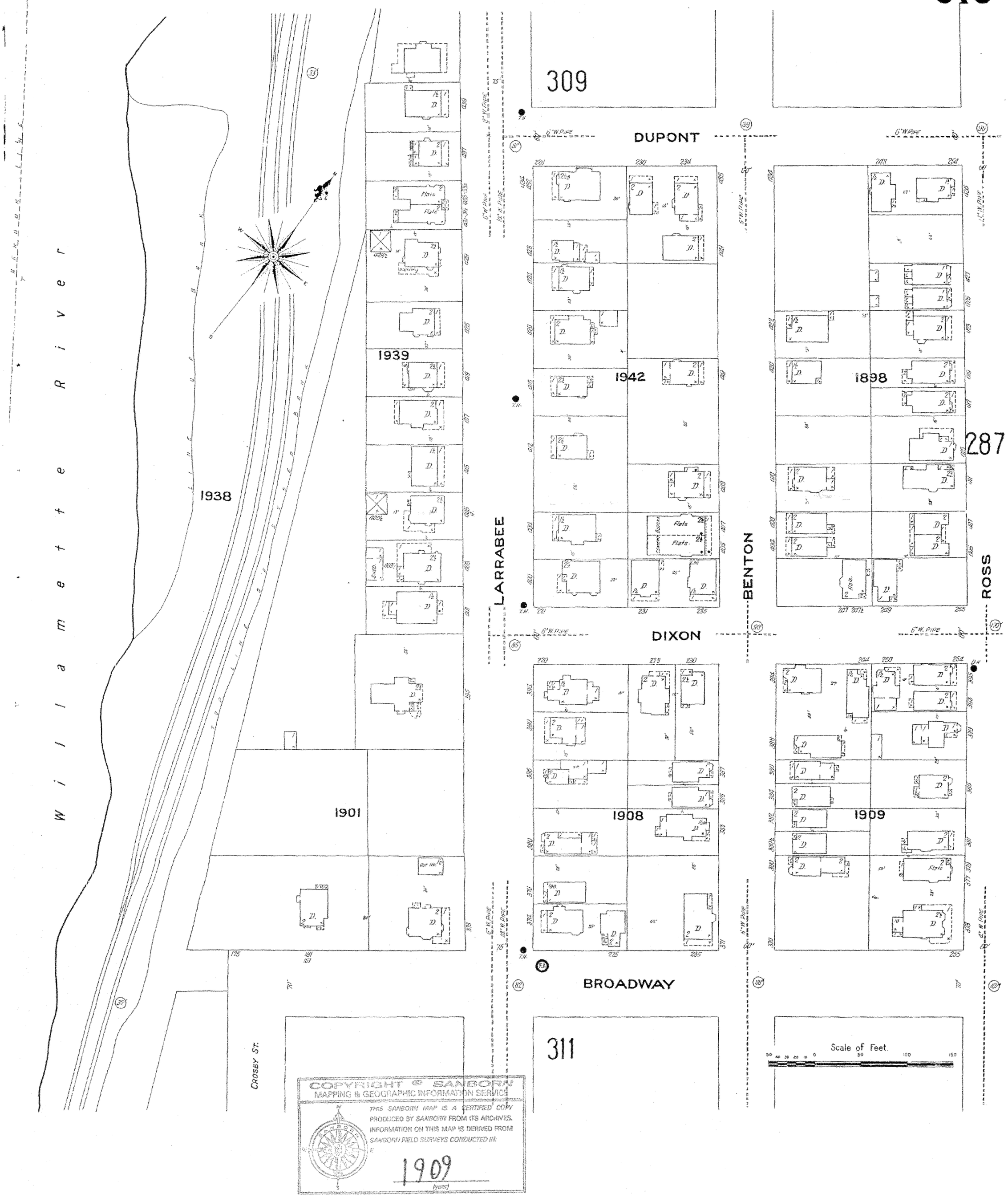
1909
(YEAR)
278
Willamette River
PACIFIC GRAIN CO.
IRVING DOCK
GRAIN WARE HOUSE
CLEANING MILL
1936
1937
LARRABEE
1941
BENTON
6150
ROSS
DUPONT
310
Scale of Feet.


309
DUPONT
1939
1938
1942
1898
287
LARRABEE
BENTON
ROSS
DIXON
1901
1908
1909
BROADWAY
311
CROSBY ST.
Willamette River
Scale of Feet.
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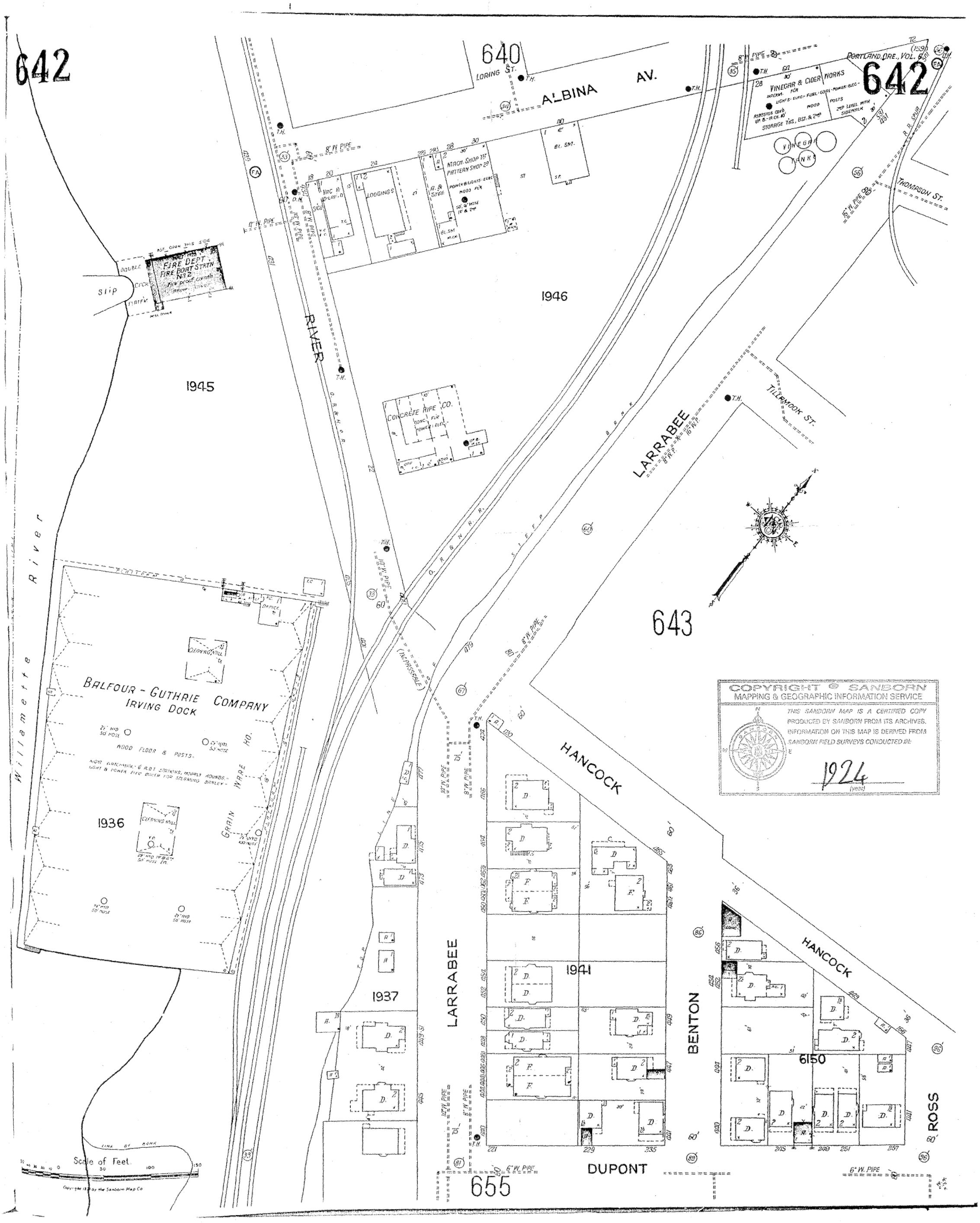
(year)

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(year)

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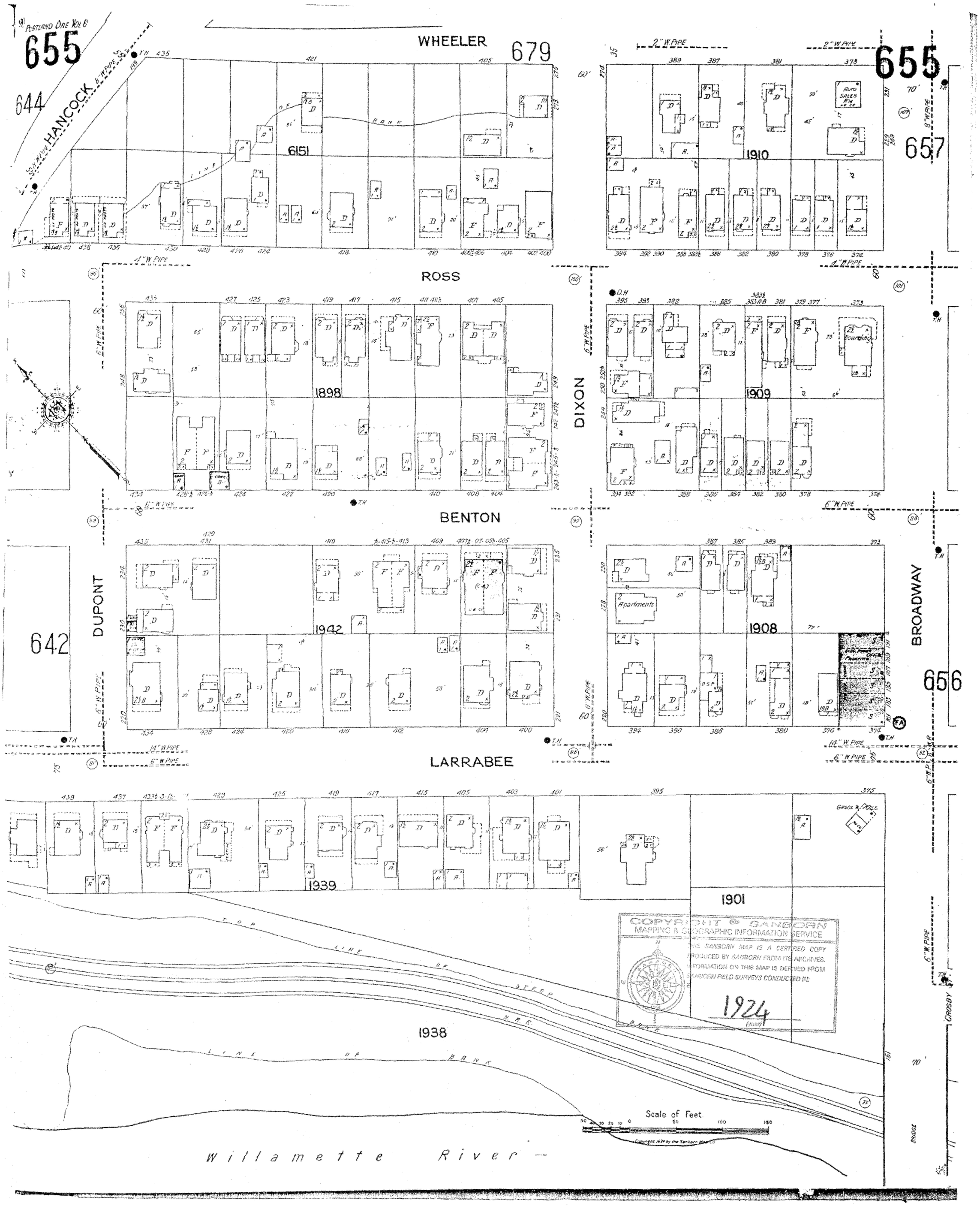
PORTLAND ORE VOL 6
655
644
HANCOCK
WHEELER
679
6151
BANK
LINE
ROSS
1898
DIXON
1910
655
657
2" W PIPE
4" W PIPE
6" W PIPE
8" W PIPE
AUTO SALES RM
BENTON
1942
1909
Boarding
642
DUPONT
BROADWAY
656
Apartments
LARRABEE
1939
1901
1938
TOP LINE OF STEEP BANK
LINE OF BANK
GASOL. & OILS
CROSBY
BRIDGE
14" W PIPE
Scale of Feet.
Willamette River
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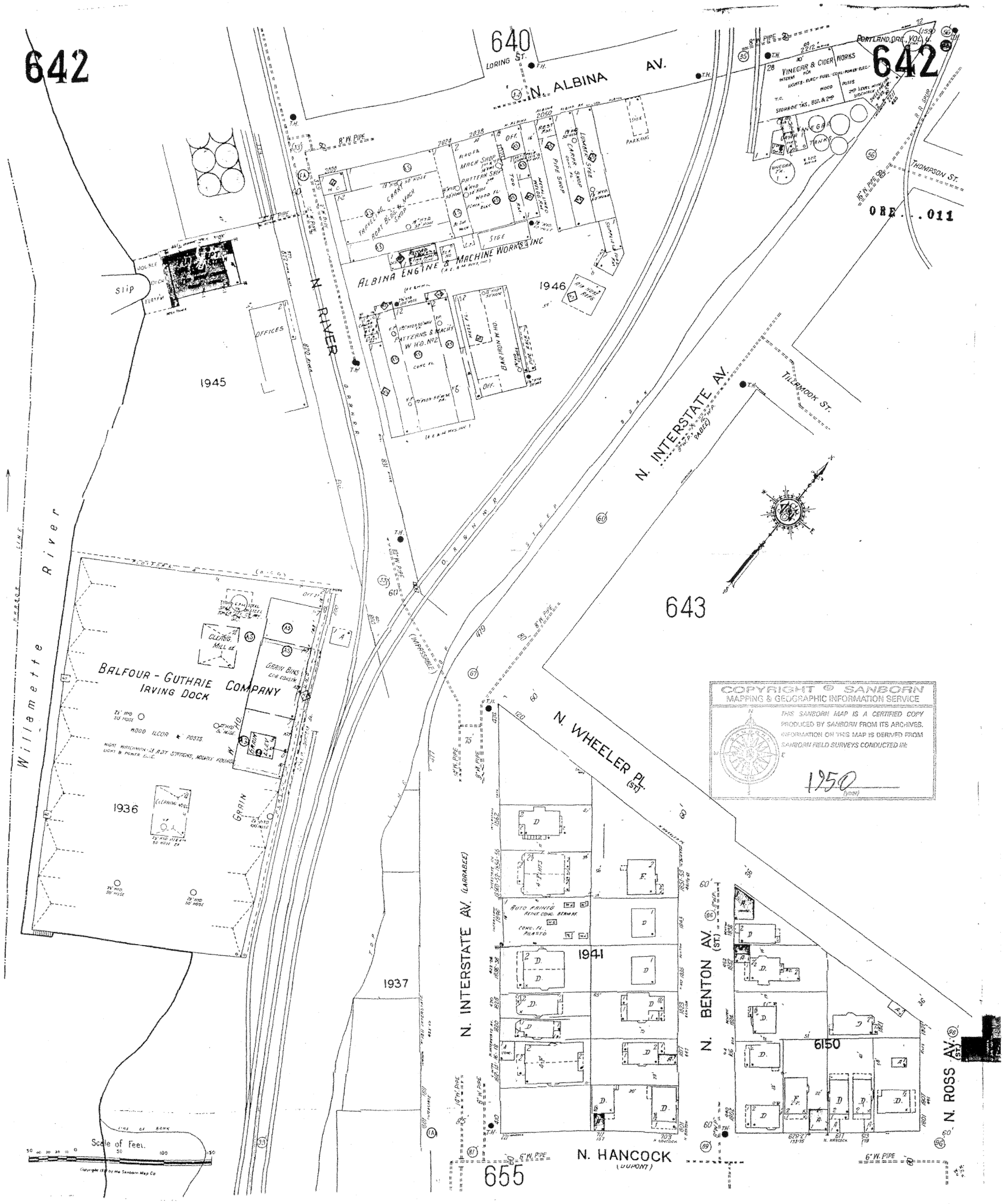
1924
(YEAR)

CARG002005


642
640
LORING ST.
N. ALBINA AV.
8" W. PIPE
VINEGAR & CIDER WORKS
642
PORTLAND, ORE., VOL. 1
THOMPSON ST.
ORE. . . 011
ALBINA ENGINE & MACHINE WORKS INC
PIPE SHOP
CARPR. SHOP
LUMBER STGE.
MACH. SHOP
PATTERN SHOP
TRAVELING CRANE
BOAT BLDG. & MACH. SHOP
STGE.
PARKING
1946
Slip
OFFICES
1945
N. RIVER
PATTERNS & MACHY. W. HO. No 2
BAR IRON W. HO.
N. INTERSTATE AV.
TILLAMOOK ST.
Willamette River
643
BALFOUR - GUTHRIE COMPANY
IRVING DOCK
CLEANING MILL
GRAIN BINS
1936
GRAIN
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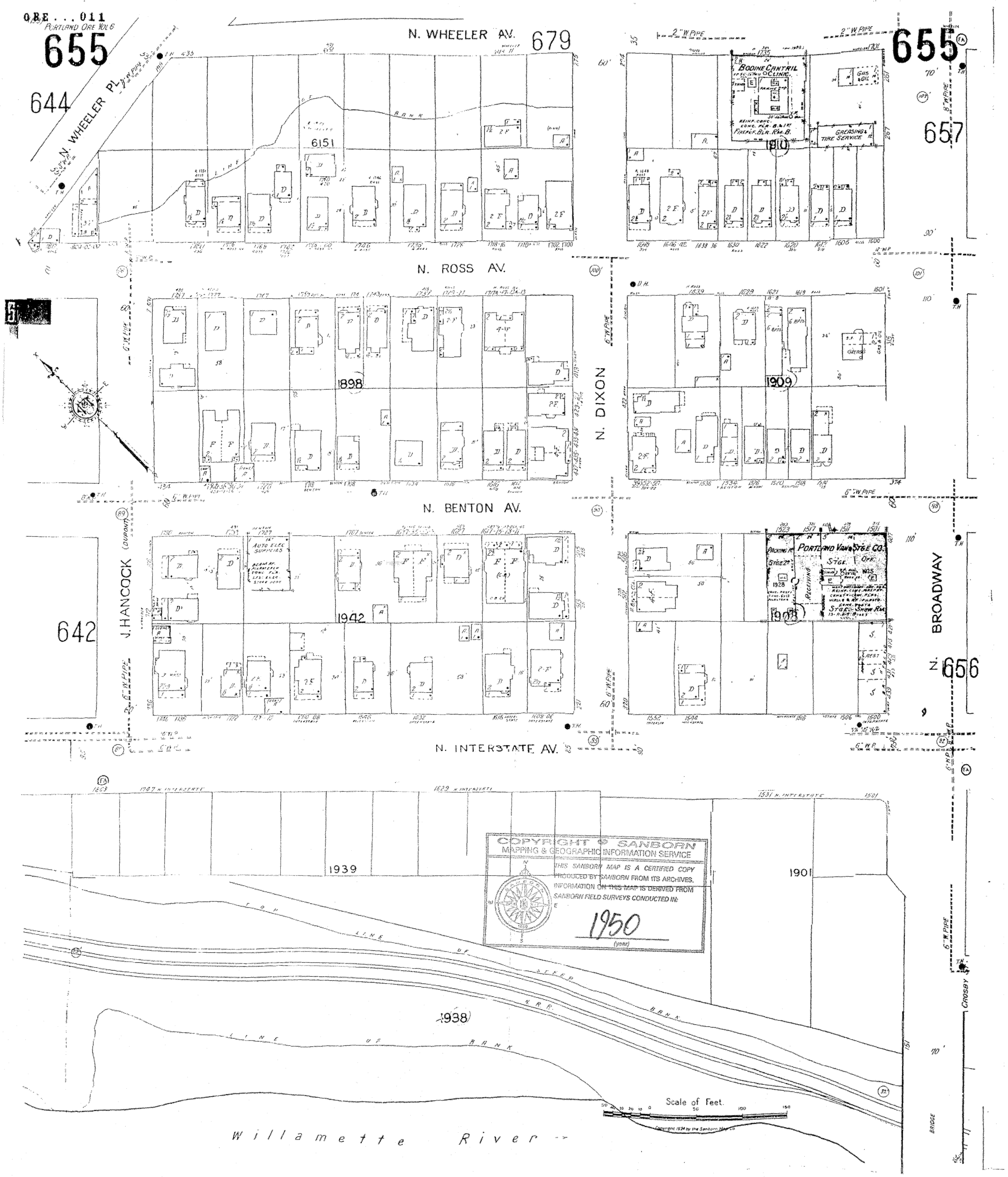
1950
(year)
N. WHEELER PL. (ST.)
N. INTERSTATE AV. (LARRABEE)
1941
1937
N. BENTON AV. (ST.)
6150
N. ROSS AV. (ST.)
N. HANCOCK (DUPONT)
655
Scale of Feet.

CARG002006


ORE...011
PORTLAND ORE VOL 6
655
644
N. WHEELER PL
N. WHEELER AV.
679
6151
N. ROSS AV.
1898
N. DIXON
1909
N. BENTON AV.
642
J. HANCOCK (DUPONT)
1942
BODINE CANTRIL & CO. LTD.
GREASING & TIRE SERVICE
GAS & OIL
PORTLAND VAN & STGE CO.
N. INTERSTATE AV.
N. BROADWAY
656
657
1939
1938
1901
TOP LINE OF STEEP BANK
N.R.R.
LINE OF BANK
Willamette River
CROSBY BRIDGE
Scale of Feet.
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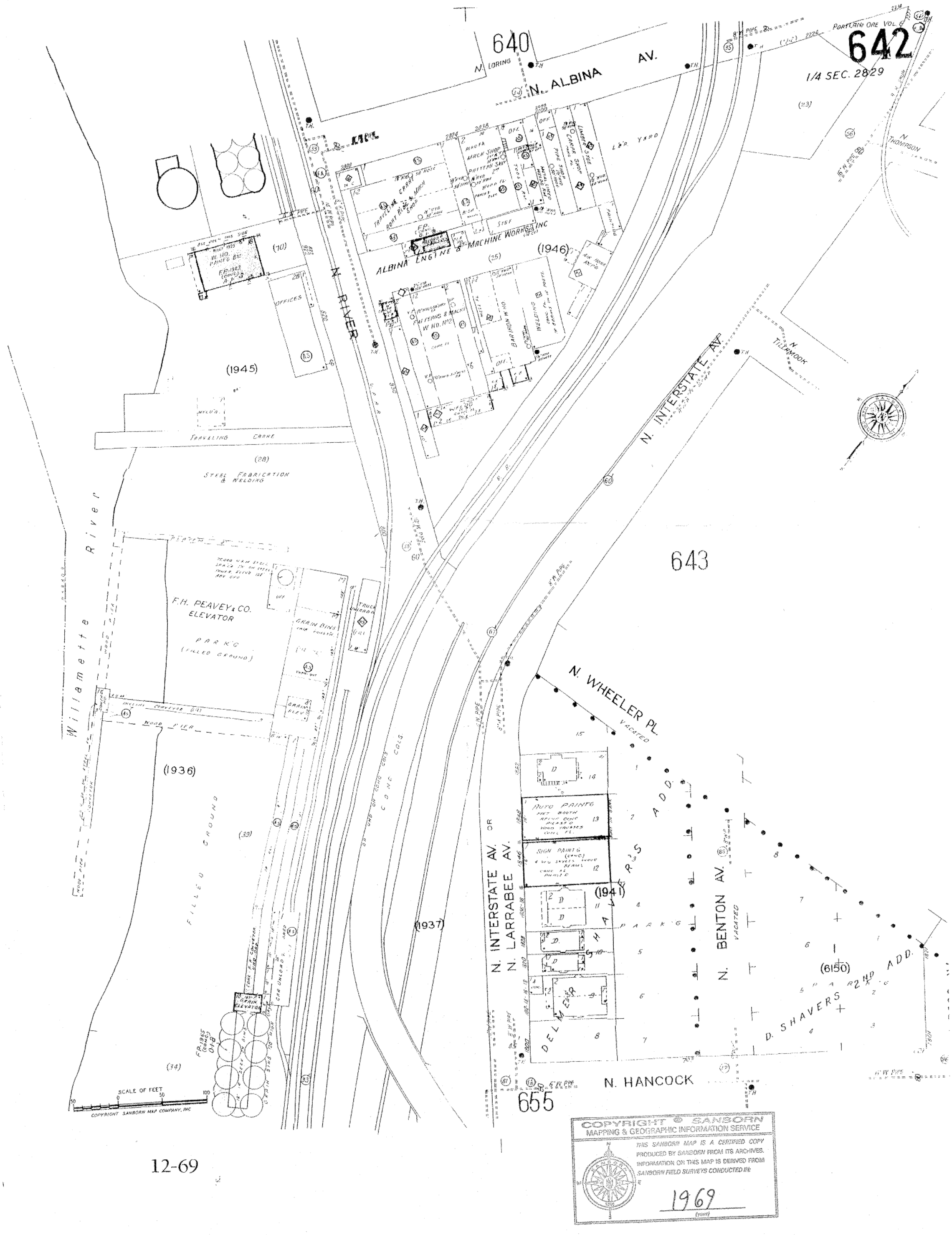
640
642
643
655
N. ALBINA AV.
N. LORING
1/4 SEC. 2829
PORTLAND ORE VOL.
N. THOMPSON
N. TILLAMOOK
N. INTERSTATE AV.
N. RIVER
ALBINA ENGINE & MACHINE WORKS INC
(1946)
(1945)
(1936)
(1937)
(1941)
(6150)
OFFICES
TRAVELING CRANE
STEEL FABRICATION & WELDING
Willamette River
F.H. PEAVEY & CO. ELEVATOR
PARKG (FILLED GROUND)
GRAIN BINS
WOOD PILER
FILLED GROUND
N. WHEELER PL.
VACATED
AUTO PAINTG
SIGN PAINTG
N. INTERSTATE AV. OR N. LARRABEE AV.
N. BENTON AV.
D. SHAVERS 2ND ADD.
N. HANCOCK
SCALE OF FEET
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1969
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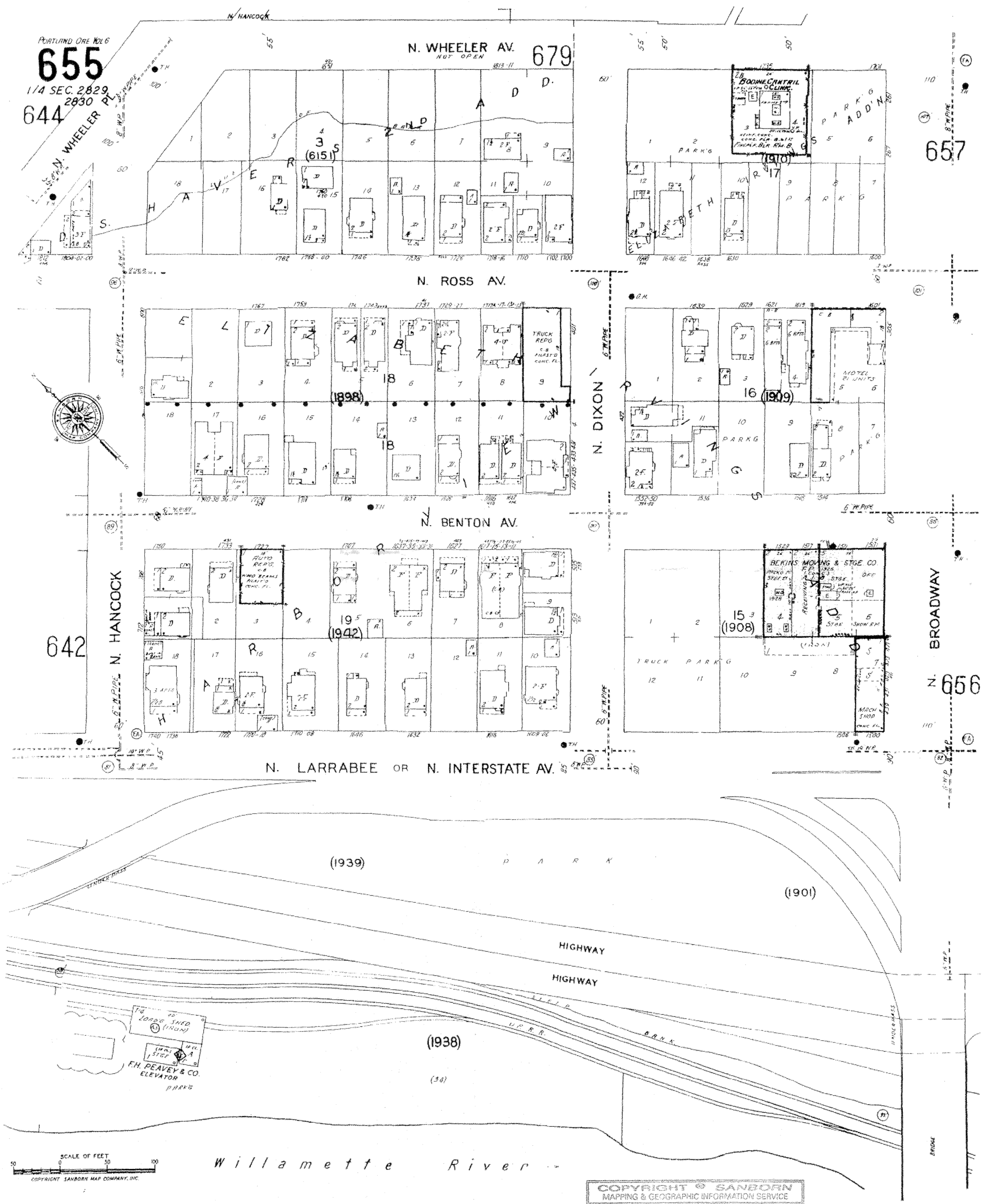
12-69




12-69

CARG002009

mail
Tom Marlead

Portland, OR
5013

CARG002010

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C) 8009-00501
0003

Harding ESE
A MACTEC COMPANY

Harding ESE, Inc.
90 Digital Drive
Novato, CA 94949

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Home Page: www.mactec.com

P&C

March 1, 2001

52852.001

Mr. Christopher Putnam
Cargill, Incorporated
P.O. Box 5624
Minneapolis, Minnesota 55440-5624

**SUBJECT: Draft Sampling and Analysis Plan**
**Dredge Material Disposal Planning, Irving Elevator Terminal**
**Portland, Oregon**

Dear Mr. Putnam:

Enclosed for your review, you will find the Draft Sampling and Analysis Plan for the Cargill Irving Elevator Terminal dredge material disposal planning. Upon receiving your comments I will incorporate them and send the document to the appropriate regulatory agencies for their approval. Please be advised that when the document is sent to the regulatory agencies it will be incorporated into the public record.

Please contact me immediately at (415) 884-3160 if you need any additional information. Thank you for your assistance.

Very Truly Yours,

**HARDING ESE**

Josh Gravenmier
Project Environmental Scientist

JG/ra/Cargill/CoverLetter

Enclosures

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Does this need to be copied?

# Draft Sampling and Analysis Plan
# Dredge Material Disposal Planning
# Cargill Irving Elevator Terminal, Portland, Oregon

## USACE Permit No. 95-1063
## Oregon Division of State Lands Permit No. RP 3158

Prepared for

**Cargill, Incorporated**
P.O. Box 5624
Minneapolis, Minnesota 55440-5624

Harding ESE Project No. 52852.001

Prepared by:


Josh Gravenmier
Project Environmental Scientist

Quality Control Reviewer

Bridgette DeShields
Associate Environmental Scientist


February 28, 2001


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**Harding ESE, Inc.**
Engineering and Environmental Services
90 Digital Drive
Novato, CA 94949 — (415) 883-0112


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**Draft Sampling and Analysis Plan**
**Dredge Material Disposal Planning**
**Cargill Irving Elevator Terminal, Portland, Oregon**

Harding ESE Project No. 52852.001

This document was prepared by Harding ESE, A MACTEC Company at the direction of Cargill, Incorporated for the sole use of the Cargill Irving Elevator Terminal and the appropriate regulatory agencies, the only intended beneficiaries of this work. No other party should rely on the information contained herein without the prior written consent of Cargill, Incorporated and Harding ESE. This report and the interpretations, conclusions, and recommendations contained within are based in part on information presented in other documents that are cited in the text and listed in the references. Therefore, this report is subject to the limitations and qualifications presented in the referenced documents.

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1 1998 Historical Samples
2 Data Quality Objectives
3 Analytical Methods and Target Detection Limits

## PLATES

1 Site Overview
2 Dredge Site

## DISTRIBUTION

# LIST OF ACRONYMS

| | |
|---|---|
| Cargill | Cargill, Incorporated |
| CAS | Columbia Analytical Services |
| COC | Chain of Custody |
| cys | Cubic Yards |
| DMEF | Dredged Material Evaluation Framework |
| DMMT | Dredged Material Management Team |
| DQO | Data Quality Objective |
| DSL | Oregon Division of State Lands |
| EPA | United States Environmental Protection Agency |
| GPS | Global Positioning System |
| ITM | Inland Testing Manual |
| LCRMA | Lower Columbia River Management Area |
| LCS | Laboratory Control Standard |
| ML | Maximum Level |
| MLLW | Mean Lower Low Water |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| NUAD | Not Suitable for Unconfined Aquatic Disposal |
| PAH | Polycyclic aromatic Hydrocarbons |
| PCB | Polychlorinated Biphenyls |
| QA | Quality Assurance |
| QC | Quality Control |
| SAP | Sampling and Analysis Plan |
| SL | Screening Level |
| SUAD | Suitable for Unconfined Aquatic Disposal |
| Terminal | Irving Elevator Terminal |
| USACE | United States Army Corps of Engineers |
| UWR | Upland/Wetland Reuse |

# 1.0 INTRODUCTION

Cargill, Incorporated (Cargill) is proposing to conduct maintenance dredging at its Irving Elevator Terminal (Terminal) in Portland, Oregon to facilitate year-round docking operations. Cargill intends to dredge approximately 3,000 cubic yards of sediment (to the permitted dredge depth of –40 feet mean lower low water water[MLLW]) from the adjacent Williamette River (Plate 1) in May 2001. Before sediments can be dredged and disposed of at a pre-selected disposal site, they must meet established chemical, physical, and biological standards. To evaluate whether the material proposed for dredging and disposal meets the standards, representative samples of the material must be sampled and tested. Following testing, the dredged material excavated from the Terminal must be disposed of at an appropriate site. The most appropriate disposal option for these sediments is undetermined, with disposal at Ross Island being the preferred disposal alternative. In order to dispose of dredged material at Ross Island, the material must be deemed suitable for unconfined aquatic disposal. If the material is not deemed suitable for unconfined aquatic disposal, alternate disposal options, including upland disposal at an approved upland disposal site, will be evaluated. This Sampling and Analysis Plan (SAP) establishes the general approach to sampling and testing sediments that are to be dredged from within the Terminal dredging area (Plate 2) and provides relevant background information.

Approval for sediment SAPs and evaluation of testing reports for disposal suitability of dredged material within the Lower Columbia River Management Area (LCRMA) must be obtained from the Dredged Material Management Team (DMMT), which coordinates such activities. The DMMT coordinates these activities with the Regional Management Team, a joint program of the U.S. Army Corps of Engineers (USACE), the U.S. Environmental Protection Agency (EPA), Washington Department of Ecology, Washington Department of Natural Resources, and Oregon Department of Environmental Quality. This SAP was developed in accordance with applicable USACE and EPA guidance, and follows the sampling and testing guidelines from the recently published *Inland Testing Manual* (ITM; *EPA/USACE, 1998*) and the Dredged Material Evaluation Framework (DMEF; *USACE, 1998*).

## 1.1 Background

The Williamette River is within the LCRMA and as such, dredged material management for the Terminal area falls within the guidance of the DMEF (*USACE, 1998*). Cargill has a permit from the USACE, Portland District (Permit No. 95-1063) and Oregon Division of State Lands (DSL; Permit No. RP 3158) to conduct maintenance dredging of up to 8,000 cubic yards (cys) from the Terminal area (Plate 2). The Terminal area dredge permits expire February 28, 2002. Before a dredging episode can commence, sediments from the area to be dredged must first be evaluated to determine what potential effects the disposal of the dredged material would have on the physical, chemical, and biological components of the aquatic environment to which it will be deposited. Sediment evaluation is accomplished by collecting and testing the material to be dredged, with the test results subsequently compared against established chemical, physical, and biological standards.

### 1.1.1 Suitability Determinations and Disposal Options

Disposal options include Ross Island or upland disposal and suitability determinations for these are made by the appropriate regulatory agencies. Sediments that are deemed suitable for unconfined aquatic disposal (SUAD) may be placed at the Ross Island disposal site. In order to be deemed SUAD, current and/or historical test results are evaluated against screening levels (*USACE, 1998*) and other available information. Other information includes sediment screening values, such as those compiled by the National Oceanographic and Atmoshperic Administration (*Long et al, 1995*) and Oak Ridge National Laboratory (*Jones et al., 1996*). Suitability determinations are made based on a weight-of-evidence approach. The agencies evaluate whether there is a "reason to believe" that sediments will have an adverse effect on the marine/estuarine environment if disposed at the designated disposal site.

If the material is deemed not suitable for unconfined aquatic disposal (NUAD), alternate disposal options are evaluated. Material deemed NUAD is not necessarily hazardous or harmful to humans or the environment in other than aquatic settings. In fact, NUAD material may be suitable for a variety of other purposes and beneficial uses such as upland/wetland reuse (UWR), use as construction fill or road base, placement on levees, or clean cover for landfills. If material is unsuitable for these purposes or a beneficial reuse project cannot be located within the time frame of the project, landfill disposal or stockpiling is an option.

Because Ross Island disposal is Cargill's preferred option, this SAP is intended to describe the requirements for unconfined aquatic disposal. Therefore, a full discussion of the options for other disposal options, the feasibility of such options, and their testing requirements are not presented herein. If upland disposal is deemed more appropriate by either Cargill or by the agencies (e.g., material is found to be NUAD) than aquatic disposal, additional documentation will be prepared. Additional testing (which depends upon the specific requirements of the final destination of the material) may be required; this could be fulfilled using archived sediment samples (at the discretion of the regulating agencies) or additional sampling and testing may be conducted.

### 1.1.2 Site Description

Plate 2 shows the area covered by Cargill's maintenance dredging permits. The permitted dredge depth for the facility is –38 feet MLLW with a 2 foot overdredge allowance. The Terminal is an isolated dredge area that is subject to a high current from the Williamette River. The current produces an eddy near the South end of the Terminal and is the location of the majority of the accumulated sediment above dredge depth. Nearby land use is surrounded by the City of Portland, with a varied urban usage. Just to the North of the Terminal site are a few offices and the Glazer Concrete Plant, while to the immediate South are railroad tracks. The Terminal receives variable, moderate vessel traffic in support of Cargill's grain transfer operations. There is a potential for hydraulic fluid releases and oily bilge water discharges associated with these activities. However, no significant spills have occurred at the facility since Cargill has purchased the property. At the North end of the Terminal exists a large (eight foot diameter) City of Portland Storm drain.

### 1.1.3 Summary of Recent Testing and Dredging History

Cargill purchased the Terminal area from Bunge in 1995 and has had only slight sediment accumulation to date. As a result, no maintenance dredging has occurred at the Terminal during the Cargill operations. The last known dredging episode at the site occurred 9-11 years ago, during the Bunge ownership. No data is available from that dredge episode. Recent testing for the adjacent Columbia River Navigation Channel in 1998 included one sample from the Terminal site area (*Hart Crowser, 1999*). Two sediment cores were collected at this location and were composited into two depth integrated (0 to 3 feet and 3 to 5 feet) samples (Table 1). The top sample yielded six polycyclic aromatic hydrocarbons (PAHs) that were



CARG002020

above LCRMA Maximum Levels (MLs) and seven PAHs that were detected above the LCRMA Screening Levels (SLs) but below the corresponding ML. The detected concentration of total polychlorinated biphenyls (PCBs) also exceeded the LCRMA ML. The lower sample results were all below the LCRMS SLs except for total PCBs.

## 1.2 Project Organization

The Terminal maintenance dredging testing program will be managed by both Cargill and Harding ESE. The following are the project contacts:

Dennis Klein Cgl Rep Legal

- Chris Putnam, Cargill Representative (952-742-4470)
- Gene Loffler, Terminal Manager/Superintendent (503-281-9177)
- Josh Gravenmier, Harding ESE Project Manager (415-884-3160)

The Cargill Representative will be the main point-of-contact for the maintenance dredging programs. Subcontractors will be used for various permitting and program coordination activities as well as sediment sampling and chemical, and physical testing. Harding ESE will direct all sampling and testing activities under the supervision of Cargill. Core sampling will be conducted by Harding ESE and Terra Hydr, Inc. of Portland, Oregon. Columbia Analytical Services (CAS) in Kelso, Washington will conduct the chemical and physical analyses.

## 1.3 Data Quality Objectives

Data quality objectives (DQOs; *EPA, 1994*) provide a qualitative and quantitative framework and series of planning steps based on the scientific method around which data collection programs can be designed. The use of DQOs ensures that:

- The objectives of the investigation are clearly defined
- The type, quantity, and quality of environmental data used in decision-making are appropriate for their intended application

- Acceptable levels of decision error and performance goals are specified such that the quantity and quality of data needed to support management decisions are provided.

Table 2 presents general DQOs for Cargill's Terminal sediment sampling and analysis program, including all 7 steps of the DQO process, as defined by EPA guidance. Section 2.0 and 3.0 further expand on aspects of steps 6 and 7 (Specify Limits on Decision Error and Optimize the Sampling Design).

## 2.0 PROPOSED STUDY DESIGN

The purpose of the testing proposed in this document is to evaluate the suitability of dredged sediment adjacent to the Terminal for disposal at Ross Island. Dredging of the proposed area is required to bring the area back to a navigable depth and allow vessels to utilize the facility. The sections below describe the general approach to the sampling design and methods for collecting sediment samples for evaluating aquatic disposal options. Additional sampling may be required to evaluate other disposal options.

### 2.1 Sampling Design

It is proposed that testing be conducted on whole core samples (from sediment surface to permitted depth of –38 feet MLLW, plus two feet overdredge). A total of four cores (Plate 2) will be collected to –40 feet MLLW each and composited into a single sample. Factors considered in selecting the locations and number of cores and samples include historical data, new point sources (e.g., spills, storm drains) in the vicinity of the dredge area, volume to be dredged, river flow patterns, and lateral and vertical extent of the dredge area.

If the results of the whole core testing find that sediments may be unsuitable for aquatic disposal, then "high resolution" testing could be conducted. Forms of high resolution testing include separate analysis of individual cores or core segments and/or collection of additional samples to further delineate aerial extent. All proposed higher resolution or re-testing of sediments will be presented to and approved by the agencies prior to sampling.

Chemical and physical analyses will be conducted on the core samples. The maximum holding time for sediment samples is eight weeks according to the ITM (*EPA/USACE, 1998*). It is feasible that chemical and physical test results on whole cores can be received and future analyses (i.e., biological tests) decided upon such that holding times are met. If deviations from holding time requirements are necessary, agency consultation will occur prior to testing. All testing will be initiated as soon as possible following sample collection. Conditions under which samples must be held as well as holding times are discussed in more detail in Section 3.2.

## 2.2 Suitability Determinations

Suitability determinations for disposal will be determined by the regulatory agencies. For Ross Island disposal determinations, results for test site sediments will be compared to screening levels (*USACE, 1998*). Because Ross Island is the preferred option, this SAP describes the requirements for aquatic disposal as outlined in DMEF (*USACE, 1998*). If upland disposal is deemed more appropriate than aquatic disposal, any additional testing (which depends upon the specific requirements of the final destination of the material) may be fulfilled using archived sediment samples at the discretion of the regulating agencies.

An effort will be made to present results to appropriate agencies as soon as possible after laboratory reports are received. Therefore, it will be possible to determine if repeat analyses, if necessary, can be conducted without re-sampling. If samples exceed holding times before these decisions are made and re-testing is required, re-sampling may be necessary.

## 3.0 PROPOSED SAMPLING AND ANALYSIS

Sediments will be collected from each of the four sample locations and tested as a single composite sample, as appropriate, to address the potential for Ross Island disposal. As shown on Plate 2 and discussed above, four stations will be sampled and composited for chemical and physical testing as well as archived for possible future analysis. Quality Assurance /Quality Control (QA/QC; Section 3.3) will be performed by subcontractors (field samplers and laboratories) for each method or analysis with specificity for every appropriate method or analyte requested and/or representative analytes listed in the test method's QA/QC. QA/QC data will be reported in summary form for all samples submitted.

### 3.1 Sediment Sampling and Preparation

Sample preparation and testing methods are outlined below. If the methods outlined below are modified, the regulatory agencies will be notified, where possible, prior to the change (i.e., if the change is made following sample receipt in the laboratory). This includes method modifications of chemical, physical, or biological protocols. Sufficient volume will be collected to conduct the tests described in Section 3.2 as well as archived for possible future additional analysis. Archived samples will be immediately analyzed for the all the remaining chemical and bioassay parameters if any of the initial analytical results indicate a potential for concern.

#### 3.1.1 Sampling Methods

Samples will be collected by both Terra Hydr, Inc. and Harding ESE staff. Plate 2 details the latest bathymetric survey (performed by Minister-Glaeser Surveying Inc.) and the proposed sample locations. Samples will be collected to the proposed dredge depth plus the permitted overdredge, -40 MLLW. It is proposed that a push-corer be used for sampling. If proposed dredge depths are not achieved, the dredge depth may need to be modified to reflect the depth achieved during sampling. If refusal is encountered during sampling, the sample will be relocated, if possible. If refusal is still encountered, a subsample of the refusal tip material (e.g. that material representing the deepest penetration of the sampler) will be archived for analysis, if required. Following regulatory consultation, refusal tip material may be analyzed as a representative sample of the deepest sediment. Only material that has been appropriately sampled,

tested, and approved will be dredged. Any sediment collected below the proposed core depth will be discarded.

In general, sampling will consist of several stages. First the sampling station is located using either visual landmarks or a Global Positioning System (GPS) system. The station may be marked with a buoy or the boat fixed over the position. The sampler is cleaned or loaded with a clean liner, if required, and deployed over the side of the boat. When the sampler makes contact with the sediment the final sample location is recorded through the GPS system. The sampler is recovered to the boat, and the sediment carefully removed and processed.

Actual sampling locations will be as close as possible to the proposed locations presented in Plate 2. If any scour, holes, obstacles, or refusal (as described above) are encountered at the location proposed for sampling or other problems are encountered in the field, the sampling location may be moved to a new position (as close as possible to the original location, at the discretion of the sampling crew). The target and final location of each sample will be plotted graphically in the final report, and rationale will be provided in cases where the sample locations deviated from those shown in the SAP.

Each core sample, or section of core, will be homogenized separately and a subsample archived at 4°C for up to eight weeks (and/or frozen at -20°C for up to a year for chemical analysis) for possible future testing, should that become necessary. The composite sample will be made by subsampling the homogenized individual core samples proportionally according to the length of each core section and mixing the subsamples together to create the composite. The composite sample will then be placed into a deionized water-rinsed, food-grade plastic bag or glass container and shipped for physical testing, chemical testing, and/or stored for possible future testing.

Samples will be handled using approved methods and materials. EPA standard cleaning procedures will be adhered to; utensils and mixing containers will be stainless steel or Teflon; pre-cleaned glass jars will be used for chemistry samples; and clean polyethylene bags will be used for bioassay sediment storage. Standard cleaning techniques include rinsing equipment with deionized water, washing with laboratory soap (e.g. Alconox), and when appropriate, rinsing with solvents.

### 3.1.2 Sample Handling and Chain-of-Custody

Proper chain of custody (COC) procedures will be followed at all times and at all stages of any sample collection and analysis process. If core samples are composited in the field, the COC will list each individual core sample and indicate which cores were composited. If composited in the laboratory, a separate COC will be prepared for composite samples and will indicate which cores were composited. The following information will be recorded on core log sheets and/or COC records for each core taken (copies of core logs and COC forms will be provided in the testing report):

- Date and time of collection
- Sample identification
- Sample location (latitude and longitude) (coring log only)
- Water depth, tide height (coring log only)
- Core penetration and core retrieval amount, portion of core used (feet) (coring log only)
- Description of core (color, odor, stratification, particle type/size) (coring log only)
- Identification of sampler and recorder
- Number and size of sample containers
- Type of samples (e.g. composite)
- Analyses to be performed (COC record only).

Samples will be labeled and placed in coolers on ice following collection and will be shipped to the laboratory for storage and analysis. Samples shipped through subcontractor, courier, or overnight service, will be secured to avoid sample breakage, placed on ice, and sealed in an ice chest with appropriate COC forms. A trip/temperature blank will be included in each ice chest to record arrival temperature with a target of 4°C as soon after collection as possible. Once received at the laboratory, the samples will be maintained at 4 ± 2 °C (or lower; see below) at all times.

The holding time begins at the time the sample is collected (i.e., taken out of the water) until the sample is analyzed (or extracted). Samples may be held up to 8 weeks for bioassays. Holding times for analytical tests range from 7 days for total solids to 6 months for metals (except mercury) and grain size. Every effort will be made to analyze samples as soon as possible. Samples for organic analyses (butyltins,



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pesticides, PCBs, PAHs) can be held up to 40 days after extraction. An archive of all samples (individual cores and composite sample) will be frozen (-20 ± 2 °C) in case reanalysis of samples or individual core analyses (as part of higher resolution testing) are necessary. Samples can be frozen for some analytes to extend the holding time (*EPA/USACE, 1998*). Samples for bioassay testing may not be frozen.

An effort will be made to present results to the appropriate agencies as soon as possible, after the laboratory reports are received. Therefore it will be possible to determine if repeat analyses and/or additional tests, if necessary, can be conducted without re-sampling. If samples exceed holding times before these decisions are made and re-testing is required, re-sampling may be necessary.

## 3.2 Sediment Testing

Testing methods are outlined below. If test methods outlined here are changed, agencies will be notified in writing prior to the change. This includes method modifications of chemical, physical, or biological protocols.

### 3.2.1 Chemical and Physical Analyses

The composite sample sediment will be tested for the list of chemicals shown in Table 3. The detection limits specified for the analyses correspond to those specified in DMEF (*USACE, 1998*). Analytical methods are also listed in Table 3. Note that the reporting limits listed are "target detection limits" and may not be able to be met in all samples because of matrix interferences. Any deviations from the listed detection limits will be discussed in the testing report. All sediment chemistry results will be reported on a dry weight basis.

### 3.2.2 Bioassay Analyses

Testing methods are not part of the initial testing, however, sufficient sample will be collected and archived during the field work should bioassay analysis be deemed necessary. Any bioassay methods will follow, the Green Book (*EPA/USACE, 1991*), the ITM (*EPA/USACE, 1998*), and the DMEF (*USACE, 1998*). The ITM and the Green Book require tests to cover different phyla/trophic levels as well as bioaccumulation testing. If bioassay testing is proposed, an addendum to this SAP will discuss the tests required in more detail.

## 3.3 Quality Assurance / Quality Control

Quality Control (QC) is performed throughout sampling and analysis and is the overall system of technical activities that measures attributes and performance to verify that they meet stated requirements. Quality Assurance (QA) is an ongoing process and is an integrated system that insures that the process is of the quality needed. QA/QC measures and performance goals are necessary to ensure that the data collected are of the quantity and quality necessary to facilitate decision-making, as discussed in Section 1.4 (DQOs). Field and laboratory QA/QC measures and goals and the consequences related to compliance with these measures and goals are discussed below.

### *Field Sampling*

Field QC measures include ensuring that sampling equipment is rinsed between stations and washed and rinsed thoroughly between sites to prevent cross-contamination of samples. Field sampling personnel maintain a log of sampling activities that includes general weather conditions, date and specific time of sampling, tide at the specific time of sampling, GPS or other accurate information on the location of sample, written description of sample location, hand-drawn map of sample location, depth of sample, achieved length of sample, and any characteristics of the sample (e.g. odor, color), and any deviations from the sampling plan. Photodocumentation of sampling events or specific samples occurs frequently. As samples are collected, a COC record is initiated. Field personnel maintain custody of the samples until they are submitted to the laboratory. If sediment samples are composited, a new chain of custody record is initiated for the transfer of sediments for biological, chemical, and/or physical analysis.

Additionally, field personnel ensure that the samples are shipped to the laboratories under appropriate conditions (on ice in sealed ice chests) and the laboratories record the arrival temperature using trip/temperature blanks included in each ice chest.

### *Chemical Analyses*

QA/QC for chemical analyses consists of analyzing one laboratory control standard (LCS), one matrix spike (MS), one matrix spike duplicate (MSD), and one method blank per analytical batch analyzed. A batch consists of up to 20 samples. Surrogate spikes are reported for every sample analyzed for organic chemicals. All procedural blanks, reagent blanks, and standard reference materials are analyzed, and

results are considered into final calculations of contaminant levels in sediments. Analytical results are reported in dry weight and wet weight, as applicable. The final report from the laboratory will include a QA/QC report, which will present the results of the laboratory QA/QC (blank results, relative percent difference for duplicates, surrogate recoveries for organic analyses, and MS/MSD/LCS results) and compare the results to the laboratory acceptance range. Any "difficulties" with the analyses, detects in blanks, elevated reporting limits, or results outside of laboratory acceptance ranges will be reported in the Case Narrative.

### *Reporting and Data Acceptability*

The final report will include the results and a discussion of the QA/QC program. Any deviations from protocols or exceedances of QA/QC limits or acceptability requirements will be presented. Not all deviations or exceedances of QA/QC limits are considered significant or critical to the quality and acceptability of the analysis. The report will include a discussion of any deviations and/or exceedances and their effect on the overall data acceptability.

## 4.0 REPORTING

Upon completion of the sampling and testing for each project, reports containing a brief description of the sampling and analysis program (including any deviations from this SAP), findings, conclusions, and recommendations, where appropriate, will be prepared in accordance with USACE and EPA/USACE guidelines *(USACE, 1998,; EPA/USACE, 1991; EPA/USACE, 1998)*. Maps showing the actual sampling locations, copies of core logs, data tables, and copies of original laboratory reports (including case narratives, QA/QC information, and completed COC records) will be attached to the final report.

Upon completion of the sampling and testing for each project, reports containing findings, conclusions, and recommendations, where appropriate, will be prepared in accordance with the appropriate guidelines.

## 5.0 PROJECT SCHEDULE

Cargill would like to begin sampling and testing of the Terminal area in mid March, 2001. Test results will be submitted within 4 weeks of the sampling date. Dredging is planned to commence in May, 2001. No areas will be dredged without prior agency approval.

## 6.0 REFERENCES


Hart Crowser, 1999. Report #J-5760.

Jones, D.S., R.N. Hull, and G.W. Suter II, 1996. *Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Sediment-Associated Biota*. Prepared by Oak Ridge National Laboratory. June.

Long, E.R., D.D. MacDonald, S.L. Smith, and F.D. Calder, 1995. Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments. *Environmental Management*. 19(1): 81-97.

U.S. Army Corps of Engineers (USACE), 1998. *Dredged Material Evaluation Framework: Lower Columbia River Management Area*. November.

U.S. Environmental Protection Agency (EPA) and USACE, 1991. *Evaluation of Dredged Material Proposed for Ocean Disposal, Testing Manual*. (Green Book). EPA-503/8-91/001. February 1.

_____, 1998. *Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. - Testing Manual*. EPA-823-B-98-004.

EPA, 1994. *Guidance for Data Quality Objectives Process*. EPA QA/G-4. September.

# TABLES

# TABLES

what happens if a hit?

**Table 1. 1998 Historical Samples [a]**
**Sampling and Analysis Plan**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| | LCRMA Criteria | | Terminal Sample Result | |
|---|---|---|---|---|
| **Constituent (Units)** | SL | ML | Top (0 to 3 feet) | Bottom (3 to 5 feet) |
| Conventionals | | | | |
| Total Solids (%) | NA | NA | -- | -- |
| Total Volatile Solids (%) | NA | NA | -- | -- |
| TOC (%) | NA | NA | 1.03 | 0.91 |
| Total Sulfides | NA | NA | 58 | 2 |
| Ammonia | NA | NA | 65 | 100 |
| Grain Size | NA | NA | -- | -- |
| Metals (mg/kg) | | | | |
| Antimony (Sb) | 150 | 200 | 0.19 | 0.26 |
| Arsenic (As) | 57 | 700 | 1.9 | 2.1 |
| Cadmium (Cd) | 5.1 | 14 | 0.26 | 0.26 |
| Chromium (Cr) | NA | NA | 19.1 | 47.8 |
| Copper (Cu) | 390 | 1,300 | 26.6 | 25.6 |
| Lead (Pb) | 450 | 1,200 | 29 | 367 |
| Mercury (Hg) | 0.41 | 2.3 | 0.07 | 0.08 |
| Nickel (Ni) | 140 | 370 | 20.1 | 25.5 |
| Silver (Ag) | 6.1 | 8.4 | 0.18 | 0.2 |
| Zinc (Zn) | 410 | 3,800 | 90.1 | 115 |
| Organotin (µg/kg) | | | | |
| Tributyltin (interstitial water) | 0.15 | NA | 0.05 | -- |
| PAHs (µg/kg) | | | | |
| Naphthalene | 2,100 | 2,400 | 190 | <20 |
| Acenaphthylene | 560 | 1,300 | 240 | <20 |
| Acenaphthene | 500 | 2,000 | 34 | <20 |
| Fluorene | 540 | 3,600 | 190 | <20 |
| Phenanthrene | 1,500 | 21,000 | 6,800 | 45 |
| Anthracene | 960 | 13,000 | 2,200 | <20 |
| 2-Methylnaphthalene | 670 | 1,900 | -- | -- |
| Total LPAHs | 5,200 | 29,000 | 9,654 | 45 |
| Fluoranthene | 1,700 | 30,000 | 16,000 | 98 |
| Pyrene | 2,600 | 16,000 | 19,000 | 110 |
| Benzo(a)anthracene | 1,300 | 5,100 | 6,400 | 37 |
| Chrysene | 1,400 | 21,000 | 8,100 | 40 |
| Benzo(k)fluoranthene | NA | NA | 5,100 | 26 |
| Benzo(b)fluoranthene | NA | NA | 2,900 | 31 |
| Benzo(b+k)fluoranthene | 3,200 | 9,900 | 8,000 | 57 |
| Benzo(a)pyrene | 1,600 | 3,600 | 7,300 | 61 |
| Indeno(1,2,3-cd)pyrene | 600 | 16,000 | 4,600 | 360 |
| Dibenzo(a,h)anthracene | 230 | 1,900 | 660 | 53 |
| Benzo(g,h,i)perylene | 670 | 3,200 | 4,400 | 270 |
| Total HPAHs | 12,000 | 69,000 | 74,460 | 1,086 |

**Table 1. 1998 Historical Samples [a]**
**Sampling and Analysis Plan**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| | LCRMA Criteria | | Terminal Sample Result | |
|---|---|---|---|---|
| **Constituent (Units)** | SL | ML | Top (0 to 3 feet) | Bottom (3 to 5 feet) |
| Chlorinated Hydrocarbons (µg/kg) | | | | |
| 1,3-Dichlorobenzene | 170 | NA | <1 | <1 |
| 1,4-Dichlorobenzene | 110 | 120 | <1 | <1 |
| 1,2-Dichlorobenzene | 35 | 110 | <1 | <1 |
| 1,2,4-Trichlorobenzene | 31 | 64 | -- | -- |
| Hexachlorobenzene (HCB) | 22 | 230 | <20 | <20 |
| Phthalates (µg/kg) | | | | |
| Dimethyl phthalate | 1,400 | NA | <20 | <20 |
| Diethyl phthalate | 1,200 | NA | <20 | <20 |
| Di-n-butyl phthalate | 5,100 | NA | <20 | <20 |
| Butyl benzyl phthalate | 970 | NA | 28 | <20 |
| Bis(2-ethylhexyl)phthalate | 8,300 | NA | 220 | 160 |
| Di-n-octyl phthalate | 6,200 | NA | <20 | <20 |
| Phenols (µg/kg) | | | | |
| Phenol | 420 | 1,200 | <20 | <20 |
| 2-Methylphenol | 63 | 77 | <6 | <6 |
| 4-Methylphenol | 670 | 3,600 | 44 | 52 |
| 2,4-Dimethylphenol | 29 | 210 | <6 | <6 |
| Pentachlorophenol | 400 | 690 | <61 | <61 |
| Miscellaneous Extractables (µg/kg) | | | | |
| Benzyl alcohol | 57 | 870 | <6 | <6 |
| Benzoic acid | 650 | 760 | <100 | <100 |
| Dibenzofuran | 540 | 1,700 | 27 | <20 |
| Hexachloroethane | 1,400 | 14,000 | -- | -- |
| Hexachlorobutadiene | 29 | 290 | <20 | <20 |
| N-Nitrosodiphenylamine | 28 | 130 | <12 | <12 |
| Pesticides/PCBs (µg/kg) | | | | |
| 4,4'-DDD | NA | NA | <20 | <2 |
| 4,4'-DDE | NA | NA | <20 | <2 |
| 4,4'-DDT | NA | NA | <20 | <2 |
| Total DDT | 6.9 | 69 | <20 | <2 |
| Aldrin | 10 | NA | <2 | <2 |
| Chlordane | 10 | NA | -- | -- |
| Dieldrin | 10 | NA | <65 | <2 |
| Heptachlor | 10 | NA | <2 | <2 |
| Gamma-BHC (Lindane) | 10 | NA | <2 | <2 |
| Total PCBs | 130 | 3,100 | 7,100 | 710 |

| | |
|---|---|
| LCRMA | Lower Columbia River Management Area. |
| SL | Screening Level. |
| ML | Maximum Level. |
| NA | Not Available. |
| -- | Not Tested. |
| <20 | Not Detected at the detection limit. |

**Table 1. 1998 Historical Samples [a]**
**Sampling and Analysis Plan**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| | LCRMA Criteria | | Terminal Sample Result | |
|---|---|---|---|---|
| **Constituent (Units)** | SL | ML | Top (0 to 3 feet) | Bottom (3 to 5 feet) |

Detection limit value above criteria level.

Value above SL criteria level.

Value above ML criteria level.

[a] From Hart Crowser report #J-5760, 1999.

**Table 2. Data Quality Objectives**
**Sampling and Analysis Plan**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| State the Problem | Identify the Decision | Identify Inputs to the Decision | Define the Study Boundaries | Develop Decision Rules | Specify Limits on Decision Errors | Optimize the Sampling Design |
|---|---|---|---|---|---|---|
| (1) Sediments proposed for dredging from within the Cargill Terminal jurisdiction could contain levels of chemical contaminants that may pose a threat to human or ecological receptors is disposed of at an unconfined aquatic disposal site.<br>(2) Levels of chemical contaminants in marine sediments may vary and previous tests results may not accurately reflect level the levels of contaminants present for subsequent dredging events.<br>(3) Historical testing is not readily available. | (1) Do concentrations of chemical contaminants in sediments proposed for dredging from the Terminal and disposal at Ross Island indicate the potential for:<br>• significant toxicity to water column marine aquatic organisms?<br>• exceedance of water quality objectives?<br>• significant toxicity to benthic marine aquatic organisms?<br>• significant bioaccumulation and trophic transfer (e.g., effects on higher trophic level ecological receptors and/or humans)?<br>(2) Are concentrations of chemical contaminants present above ambient/reference levels? | (1) Lack of data from previous dredged material testing events.<br>(2) Information on potential sources of chemical contaminants.<br>(3) Volume of dredged material and dredging depths.<br>(3) Additional data to be collected as proposed in this SAP (as appropriate):<br>• Sediment chemical and physical tests<br>• Toxicity test potential/testing<br>(4) Relevant screening values/procedures:<br>• NOAA ER-Ls and ER-Ms and other relevant sediment screening levels<br>• Toxicity thresholds<br>• Water column mixing models<br>• Water quality objectives<br>• Theoretical bioaccumulation/food chain modeling, literature data on no-effect tissue levels, and/or human health consumption values (i.e., FDA action levels)<br>• Other benchmarks, as applicable. | (1) Geographic boundaries of the dredging site:<br>• samples should be collected from locations representative of the dredge area and potential contaminant source areas present<br>• samples should be taken to the dredge depth plus overdepth.<br>Constraints include:<br>• the potential to encounter refusal during sampling<br>• the potential for obstructions (ships in berth, underwater objects, etc.).<br>(2) Temporal boundaries include:<br>• tidal and weather related influences<br>• samples should be collected as close as possible to the proposed dredging date (preferably within 90-120 days). | (1) If sediment chemical concentrations (current or historical) are within screening levels and/or are below levels that may indicate a potential for significant bioaccumulation, then material will be considered SUAD.<br>(2) If chemical concentrations are above screening levels and levels that may indicate a potential for significant bioaccumulation, then further testing (bioassay or higher resolution) and/or UWR disposal will be pursued.<br>(3) If further testing indicates that adverse effects on ecological receptors and/or humans are unlikely, then the material will be considered SUAD.<br>(4) If further testing indicates that adverse effects on ecological receptors and/or humans are likely, then the material will be considered NUAD. | The two main decision errors are:<br>• To find material NUAD and implement upland disposal at significant cost when the material is actually SUAD<br>• To find material SUAD and expose ecological and/or human populations to detrimental chemical contamination when the material is actually NUAD.<br>Decision errors can be controlled by:<br>• Developing an appropriate sampling strategy<br>• Using reasonable approaches to evaluating the data<br>• Collecting data of appropriate quality. | (1) An authoritative sampling design will be used, as discussed in Section 2.0 of the SAP. Samples will be collected near shallow areas (where the core lengths will be longest), and in representative "quadrants" of the dredge area.<br>(2) Analyses will include: TOC, grain size, metals, organotins, PAHs, pesticides, and PCBs, water column and benthic bioassays (including ammonia and sulfide measurements), and bioaccumulation tests, as needed. |



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**Table 3. Analytical Methods and Target Detection Limits[a] for Bulk Sediment**
**Sampling and Analysis Plan**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| Constituent (Units) | Method | Detection Limit (dry weight) |
|---|---|---|
| Conventionals | | |
| Total Solids (%) | Pg. 17 (1) | 0.1 |
| Total Volatile Solids (%) | Pg. 20 (1) | 0.1 |
| TOC (%) | Pg. 23 (1, 2) | 0.1 |
| Total Sulfides | Pg. 32 (1) | 1 |
| Ammonia | Plumb, 1981 (3) | 1 |
| Grain Size | Modified ASTM D422 with Hydrometer | NA |
| Metals (mg/kg) | EPA 6010 | |
| Antimony (Sb) | | 2.5 |
| Arsenic (As) | | 2.5 |
| Cadmium (Cd) | | 0.3 |
| Chromium (Cr) | | 0.3 |
| Copper (Cu) | | 15.0 |
| Lead (Pb) | | 0.5 |
| Nickel (Ni) | | 2.5 |
| Silver (Ag) | | 0.2 |
| Zinc (Zn) | | 15.0 |
| Mercury (Hg) | EPA 7471 | 0.02 |
| Organotin (µg/kg) | GC-FPD (Krone) | |
| Tributyltin (interstitial water) | | 0.01 |
| PAHs (µg/kg) | EPA 8270SIM | |
| Naphthalene | | 20 |
| Acenaphthylene | | 20 |
| Acenaphthene | | 20 |
| Fluorene | | 20 |
| Phenanthrene | | 20 |
| Anthracene | | 20 |
| 2-Methylnaphthalene | | 20 |
| Fluoranthene | | 20 |
| Pyrene | | 20 |
| Benzo(a)anthracene | | 20 |
| Chrysene | | 20 |
| Benzo(k)fluoranthene | | 20 |
| Benzo(b)fluoranthene | | 20 |
| Benzo(a)pyrene | | 20 |
| Indeno(1,2,3-cd)pyrene | | 20 |
| Dibenzo(a,h)anthracene | | 20 |
| Benzo(g,h,i)perylene | | 20 |

**Table 3. Analytical Methods and Target Detection Limits[a] for Bulk Sediment**
**Sampling and Analysis Plan**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| Constituent (Units) | Method | Detection Limit (dry weight) |
|---|---|---|
| Chlorinated Hydrocarbons | 8260 | |
| 1,3-Dichlorobenzene | | 3.2 |
| 1,4-Dichlorobenzene | | 3.2 |
| 1,2-Dichlorobenzene | | 3.2 |
| 1,2,4-Trichlorobenzene | | 6 |
| Hexachlorobenzene (HCB) | | 12 |
| Phthalates | 8270SIM | |
| Dimethyl phthalate | | 20 |
| Diethyl phthalate | | 20 |
| Di-n-butyl phthalate | | 20 |
| Butyl benzyl phthalate | | 20 |
| Bis(2-ethylhexyl)phthalate | | 20 |
| Di-n-octyl phthalate | | 20 |
| Phenols | 8270SIM | |
| Phenol | | 20 |
| 2-Methylphenol | | 6 |
| 4-Methylphenol | | 20 |
| 2,4-Dimethylphenol | | 6 |
| Pentachlorophenol | | 61 |
| Miscellaneous Extractables | 8270SIM | |
| Benzyl alcohol | | 6 |
| Benzoic acid | | 100 |
| Dibenzofuran | | 20 |
| Hexachloroethane | | 20 |
| Hexachlorobutadiene | | 20 |
| N-Nitrosodiphenylamine | | 12 |
| Pesticides/PCBs (µg/kg) | 8081 | |
| 4,4'-DDD | | 2 |
| 4,4'-DDE | | 2 |
| 4,4'-DDT | | 2 |
| Aldrin | | 1.7 |
| Chlordane | | 1.7 |
| Dieldrin | | 2.3 |
| Heptachlor | | 1.7 |
| Gamma-BHC (Lindane) | | 1.7 |
| Total PCBs | 8082 | 67 |

| | |
|---|---|
| mg/kg | Milligrams per kilogram. |
| µg/kg | Micrograms per kilogram. |
| PCBs | Polychlorinated biphenyls. |
| PAHs | Polycyclic aromatic hydrocarbons. |
| NA | Not Applicable. |



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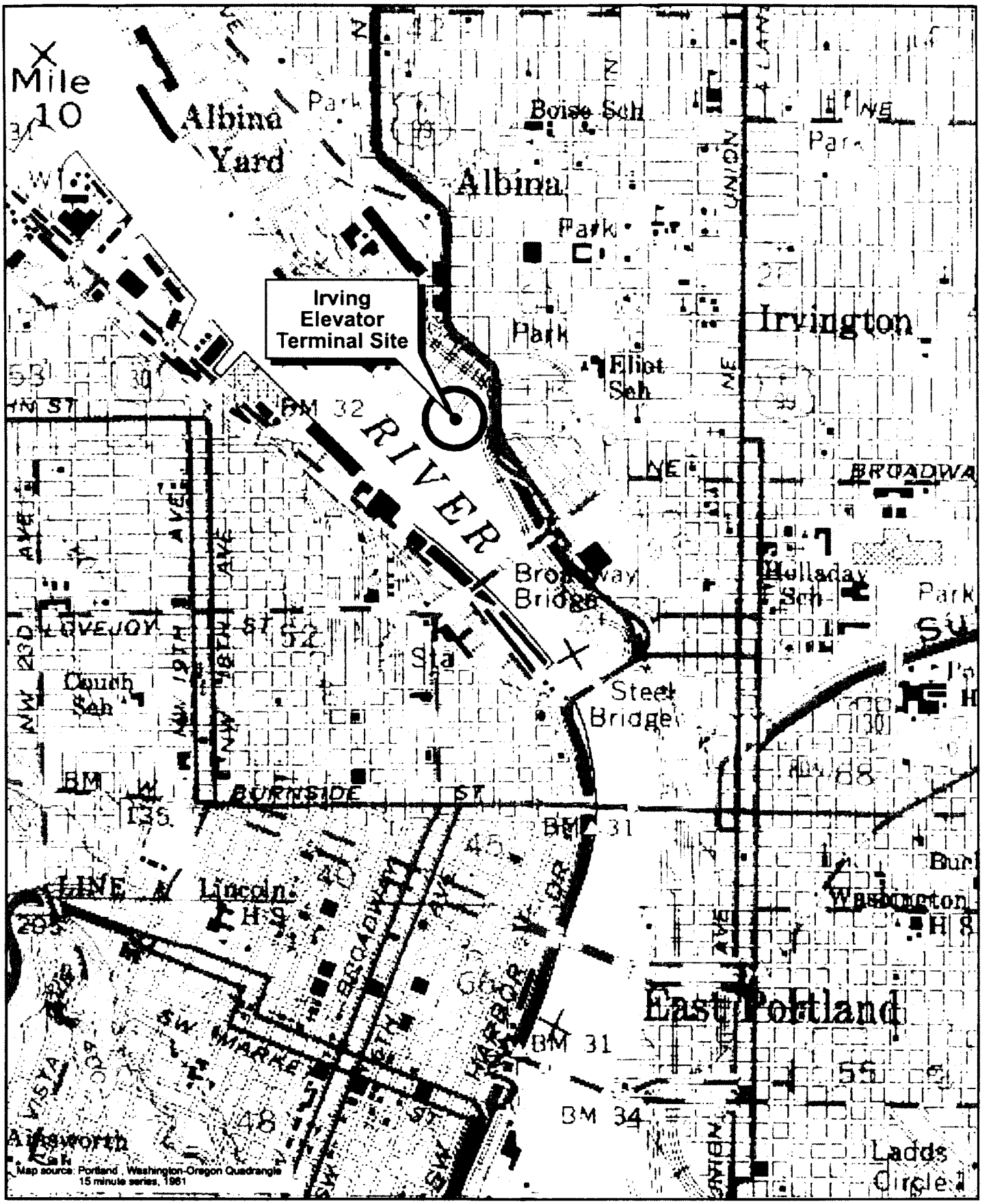
**Table 3. Analytical Methods and Target Detection Limits[a] for Bulk Sediment**
**Sampling and Analysis Plan**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| Constituent (Units) | Method | Detection Limit (dry weight) |
|---|---|---|

| | |
|---|---|
| GC | Gas chromatography. |
| SIM | Selective ion monitoring. |
| FPD | Flame photometric detector. |
| ASTM | American Society for Testing and Materials |
| % | Percent. |
| TOC | Total organic carbon. |
| [a] | Target detection limits may not be met for some analytes in samples with extensive matrix interferences. |
| (1) | Recommended Protocols for Measuring Conventional Sediment Variables in Puget Sound, Puget Sound Estuary Program, 1997. |
| (2) | Recommended Methods for Measuring TOC in Sediments, Kathryn Bragdon-Cook, Clarification Paper, Puget Sound Dredged Disposal Analysis Annual Review, May, 1993. |
| (3) | Procedures For Handling and Chemical Analysis of Sediment and Water Samples, Russell H. Plumb, Jr., EPA/Corps of Engineers, May, 1981. |

# PLATES

**PLATES**




**Harding ESE**
A MACTEC COMPANY
Engineering and Environmental Services

**Site Overview**
Sampling and Analysis Plan
Cargill Irving Elevator Terminal
Portland, Oregon

PLATE **1**

| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED |
|---|---|---|---|---|
| DjP | 52852 001 | | 02/01 | |

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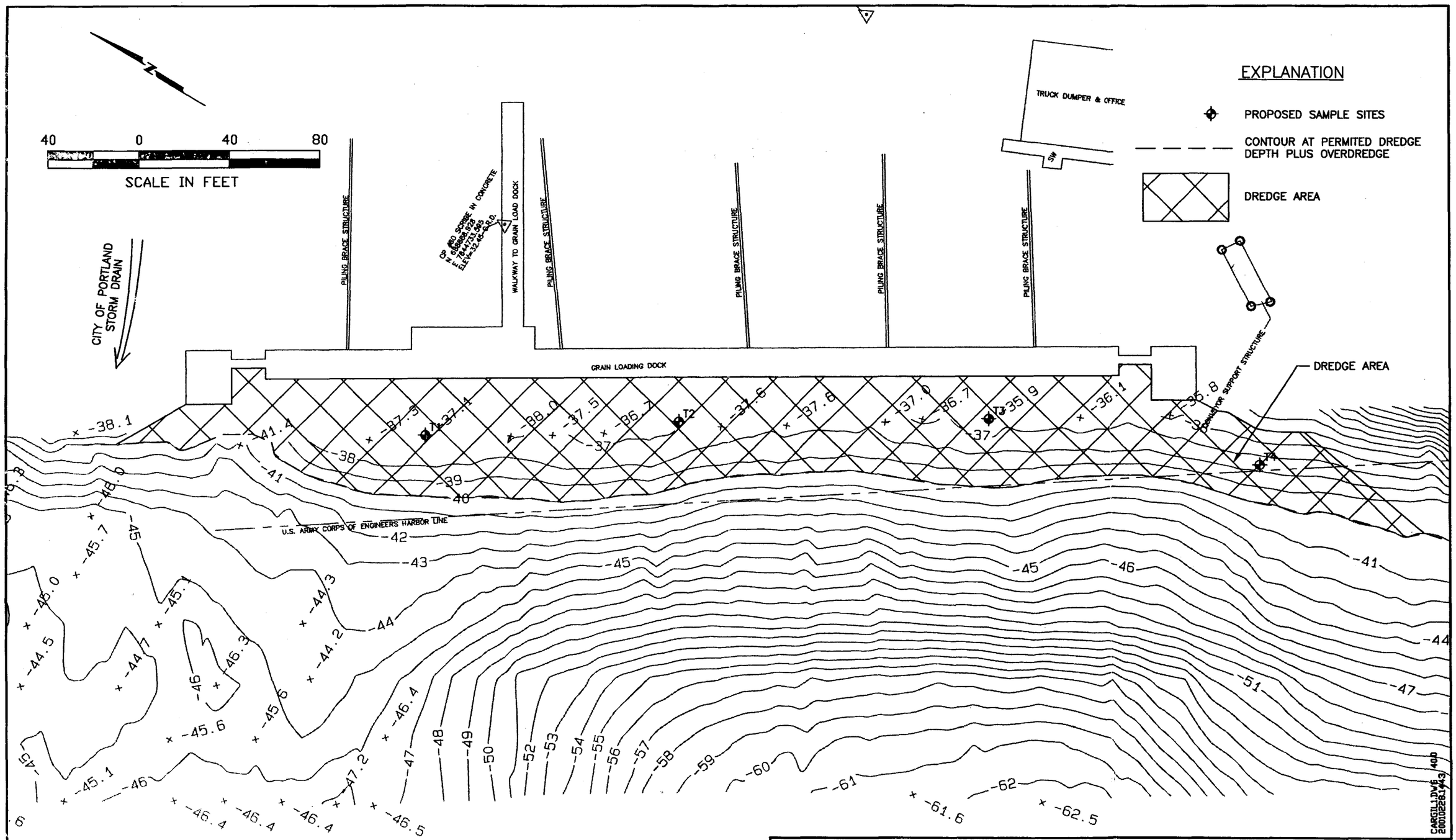


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**Dredge Site**
Sampling and Analysis Plan
Irving Elevator Terminal
Portland, Oregon

PLATE **2**

| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED DATE |
|---|---|---|---|---|
| PH | 52852 001 | | 02/01 | |

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**Draft Sampling and Analysis Plan**
**Dredge Material Disposal Planning**
**Cargill Irving Elevator Terminal, Portland, Oregon**

February 28, 2001

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| Copies 1-8: | These will be sent to the appropriate regulatory agencies when Draft SAP is approved. |
| Copy 9: | Mr. Christopher Putnam<br>Cargill, Incorporated<br>P.O. Box 5624<br>Minneapolis, Minnesota 55440-5624<br>cc Memo to D. Klein |
| Copy 10: | Mr. Gene Loffler<br>Cargill, Incorporated<br>800 River Street<br>Portland, Oregon 97227-1715 |
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# Sampling and Analysis Plan
# Dredge Material Disposal Planning
# Cargill Irving Elevator Terminal, Portland, Oregon

**USACE Permit No. 95-1063**
**Oregon Division of State Lands Permit No. RP 3158**

Prepared for

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**Draft Sampling and Analysis Plan**
**Dredge Material Disposal Planning**
**Cargill Irving Elevator Terminal, Portland, Oregon**

Harding ESE Project No. 52852.001

This document was prepared by Harding ESE, A MACTEC Company at the direction of Cargill, Incorporated for the sole use of the Cargill Irving Elevator Terminal and the appropriate regulatory agencies, the only intended beneficiaries of this work. No other party should rely on the information contained herein without the prior written consent of Cargill, Incorporated and Harding ESE. This report and the interpretations, conclusions, and recommendations contained within are based in part on information presented in other documents that are cited in the text and listed in the references. Therefore, this report is subject to the limitations and qualifications presented in the referenced documents.

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## PLATES

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2 Dredge Site

## DISTRIBUTION

# LIST OF ACRONYMS

| | |
|---|---|
| Cargill | Cargill, Incorporated |
| CAS | Columbia Analytical Services |
| COC | Chain of Custody |
| cys | Cubic Yards |
| DMEF | Dredged Material Evaluation Framework |
| DMMT | Dredged Material Management Team |
| DQO | Data Quality Objective |
| DSL | Oregon Division of State Lands |
| EPA | United States Environmental Protection Agency |
| GPS | Global Positioning System |
| ITM | Inland Testing Manual |
| LCRMA | Lower Columbia River Management Area |
| LCS | Laboratory Control Standard |
| ML | Maximum Level |
| MLLW | Mean Lower Low Water |
| MS | Matrix Spike |
| MSD | Matrix Spike Duplicate |
| NUAD | Not Suitable for Unconfined Aquatic Disposal |
| PAH | Polycyclic aromatic Hydrocarbons |
| PCB | Polychlorinated Biphenyls |
| QA | Quality Assurance |
| QC | Quality Control |
| SAP | Sampling and Analysis Plan |
| SL | Screening Level |
| SUAD | Suitable for Unconfined Aquatic Disposal |
| Terminal | Irving Elevator Terminal |
| USACE | United States Army Corps of Engineers |
| UWR | Upland/Wetland Reuse |

# 1.0 INTRODUCTION

Cargill, Incorporated (Cargill) is proposing to conduct maintenance dredging at its Irving Elevator Terminal (Terminal) in Portland, Oregon to facilitate year-round docking operations. Cargill intends to dredge approximately 3,000 cubic yards of sediment (to the permitted dredge depth of –40 feet mean lower low water water[MLLW]) from the adjacent Williamette River (Plate 1) in May 2001. Before sediments can be dredged and disposed of at a pre-selected disposal site, they must meet established chemical, physical, and biological standards. To evaluate whether the material proposed for dredging and disposal meets the standards, representative samples of the material must be sampled and tested. Following testing, the dredged material excavated from the Terminal must be disposed of at an appropriate site. The most appropriate disposal option for these sediments is undetermined, with disposal at Ross Island being the preferred disposal alternative. In order to dispose of dredged material at Ross Island, the material must be deemed suitable for unconfined aquatic disposal. If the material is not deemed suitable for unconfined aquatic disposal, alternate disposal options, including upland disposal at an approved upland disposal site, will be evaluated. This Sampling and Analysis Plan (SAP) establishes the general approach to sampling and testing sediments that are to be dredged from within the Terminal dredging area (Plate 2) and provides relevant background information.

Approval for sediment SAPs and evaluation of testing reports for disposal suitability of dredged material within the Lower Columbia River Management Area (LCRMA) must be obtained from the Dredged Material Management Team (DMMT), which coordinates such activities. The DMMT coordinates these activities with the Regional Management Team, a joint program of the U.S. Army Corps of Engineers (USACE), the U.S. Environmental Protection Agency (EPA), Washington Department of Ecology, Washington Department of Natural Resources, and Oregon Department of Environmental Quality. This SAP was developed in accordance with applicable USACE and EPA guidance, and follows the sampling and testing guidelines from the recently published *Inland Testing Manual* (ITM; *EPA/USACE, 1998*) and the Dredged Material Evaluation Framework (DMEF; *USACE, 1998*).

## 1.1 Background

The Williamette River is within the LCRMA and as such, dredged material management for the Terminal area falls within the guidance of the DMEF (*USACE, 1998*). Cargill has a permit from the USACE, Portland District (Permit No. 95-1063) and Oregon Division of State Lands (DSL; Permit No. RP 3158) to conduct maintenance dredging of up to 8,000 cubic yards (cys) from the Terminal area (Plate 2). The Terminal area dredge permits expire February 28, 2002. Before a dredging episode can commence, sediments from the area to be dredged must first be evaluated to determine what potential effects the disposal of the dredged material would have on the physical, chemical, and biological components of the aquatic environment to which it will be deposited. Sediment evaluation is accomplished by collecting and testing the material to be dredged, with the test results subsequently compared against established chemical, physical, and biological standards.

### 1.1.1 Suitability Determinations and Disposal Options

Disposal options include Ross Island or upland disposal and suitability determinations for these are made by the appropriate regulatory agencies. Sediments that are deemed suitable for unconfined aquatic disposal (SUAD) may be placed at the Ross Island disposal site. In order to be deemed SUAD, current and/or historical test results are evaluated against screening levels (*USACE, 1998*) and other available information. Other information includes sediment screening values, such as those compiled by the National Oceanographic and Atmoshperic Administration (*Long et al, 1995*) and Oak Ridge National Laboratory (*Jones et al., 1996*). Suitability determinations are made based on a weight-of-evidence approach. The agencies evaluate whether there is a "reason to believe" that sediments will have an adverse effect on the marine/estuarine environment if disposed at the designated disposal site.

If the material is deemed not suitable for unconfined aquatic disposal (NUAD), alternate disposal options are evaluated. Material deemed NUAD is not necessarily hazardous or harmful to humans or the environment in other than aquatic settings. In fact, NUAD material may be suitable for a variety of other purposes and beneficial uses such as upland/wetland reuse (UWR), use as construction fill or road base, placement on levees, or clean cover for landfills. If material is unsuitable for these purposes or a beneficial reuse project cannot be located within the time frame of the project, landfill disposal or stockpiling is an option.

Because Ross Island disposal is Cargill's preferred option, this SAP is intended to describe the requirements for unconfined aquatic disposal. Therefore, a full discussion of the options for other disposal options, the feasibility of such options, and their testing requirements are not presented herein. If upland disposal is deemed more appropriate by either Cargill or by the agencies (e.g., material is found to be NUAD) than aquatic disposal, additional documentation will be prepared. Additional testing (which depends upon the specific requirements of the final destination of the material) may be required; this could be fulfilled using archived sediment samples (at the discretion of the regulating agencies) or additional sampling and testing may be conducted.

### 1.1.2 Site Description

Plate 2 shows the area covered by Cargill's maintenance dredging permits. The permitted dredge depth for the facility is –38 feet MLLW with a 2 foot overdredge allowance. The Terminal is an isolated dredge area that is subject to a high current from the Williamette River. The current produces an eddy near the South end of the Terminal and is the location of the majority of the accumulated sediment above dredge depth. Nearby land use is surrounded by the City of Portland, with a varied urban usage. Just to the North of the Terminal site are a few offices and the Glazer Concrete Plant, while to the immediate South are railroad tracks. The Terminal receives variable, moderate vessel traffic in support of Cargill's grain transfer operations. There is a potential for hydraulic fluid releases and oily bilge water discharges associated with these activities. However, no significant spills have occurred at the facility since Cargill has purchased the property. At the North end of the Terminal exists a large (eight foot diameter) City of Portland Storm drain.

### 1.1.3 Summary of Recent Testing and Dredging History

Cargill purchased the Terminal area from Bunge in 1995 and has had only slight sediment accumulation to date. As a result, no maintenance dredging has occurred at the Terminal during the Cargill operations. The last known dredging episode at the site occurred 9-11 years ago, during the Bunge ownership. No data is available from that dredge episode. Recent testing for the adjacent Columbia River Navigation Channel in 1998 included one sample from the Terminal site area (*Hart Crowser, 1999*). Two sediment cores were collected at this location and were composited into two depth integrated (0 to 3 feet and 3 to 5 feet) samples (Table 1). The top sample yielded six polycyclic aromatic hydrocarbons (PAHs) that were



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above LCRMA Maximum Levels (MLs) and seven PAHs that were detected above the LCRMA Screening Levels (SLs) but below the corresponding ML. The detected concentration of total polychlorinated biphenyls (PCBs) also exceeded the LCRMA ML. The lower sample results were all below the LCRMS SLs except for total PCBs.

## 1.2 Project Organization

The Terminal maintenance dredging testing program will be managed by both Cargill and Harding ESE. The following are the project contacts:

- Dennis Klein, Cargill Representative (952-742-5622)
- Chris Putnam, Cargill Legal Representative (952-742-4470)
- Gene Loffler, Terminal Manager/Superintendent (503-281-9177)
- Josh Gravenmier, Harding ESE Project Manager (415-884-3160)

The Cargill Representative will be the main point-of-contact for the maintenance dredging programs. Subcontractors will be used for various permitting and program coordination activities as well as sediment sampling and chemical, and physical testing. Harding ESE will direct all sampling and testing activities under the supervision of Cargill. Core sampling will be conducted by Harding ESE and Terra Hydr, Inc. of Portland, Oregon. Columbia Analytical Services (CAS) in Kelso, Washington will conduct the chemical and physical analyses.

## 1.3 Data Quality Objectives

Data quality objectives (DQOs; *EPA, 1994*) provide a qualitative and quantitative framework and series of planning steps based on the scientific method around which data collection programs can be designed. The use of DQOs ensures that:

- The objectives of the investigation are clearly defined
- The type, quantity, and quality of environmental data used in decision-making are appropriate for their intended application

- Acceptable levels of decision error and performance goals are specified such that the quantity and quality of data needed to support management decisions are provided.

Table 2 presents general DQOs for Cargill's Terminal sediment sampling and analysis program, including all 7 steps of the DQO process, as defined by EPA guidance. Section 2.0 and 3.0 further expand on aspects of steps 6 and 7 (Specify Limits on Decision Error and Optimize the Sampling Design).

## 2.0 PROPOSED STUDY DESIGN

The purpose of the testing proposed in this document is to evaluate the suitability of dredged sediment adjacent to the Terminal for disposal at Ross Island. Dredging of the proposed area is required to bring the area back to a navigable depth and allow vessels to utilize the facility. The sections below describe the general approach to the sampling design and methods for collecting sediment samples for evaluating aquatic disposal options. Additional sampling may be required to evaluate other disposal options.

### 2.1 Sampling Design

It is proposed that testing be conducted on whole core samples (from sediment surface to permitted depth of –38 feet MLLW, plus two feet overdredge). A total of four cores (Plate 2) will be collected to –40 feet MLLW each and composited into a single sample. Factors considered in selecting the locations and number of cores and samples include historical data, new point sources (e.g., spills, storm drains) in the vicinity of the dredge area, volume to be dredged, river flow patterns, and lateral and vertical extent of the dredge area.

If the results of the whole core testing find that sediments may be unsuitable for aquatic disposal, then "high resolution" testing could be conducted. Forms of high resolution testing include separate analysis of individual cores or core segments and/or collection of additional samples to further delineate aerial extent. All proposed higher resolution or re-testing of sediments will be presented to and approved by the agencies prior to sampling.

Chemical and physical analyses will be conducted on the core samples. The maximum holding time for sediment samples is eight weeks according to the ITM (*EPA/USACE, 1998*). It is feasible that chemical and physical test results on whole cores can be received and future analyses (i.e., biological tests) decided upon such that holding times are met. If deviations from holding time requirements are necessary, agency consultation will occur prior to testing. All testing will be initiated as soon as possible following sample collection. Conditions under which samples must be held as well as holding times are discussed in more detail in Section 3.2.

## 2.2 Suitability Determinations

Suitability determinations for disposal will be determined by the regulatory agencies. For Ross Island disposal determinations, results for test site sediments will be compared to screening levels (*USACE, 1998*). Because Ross Island is the preferred option, this SAP describes the requirements for aquatic disposal as outlined in DMEF (*USACE, 1998*). If upland disposal is deemed more appropriate than aquatic disposal, any additional testing (which depends upon the specific requirements of the final destination of the material) may be fulfilled using archived sediment samples at the discretion of the regulating agencies.

An effort will be made to present results to appropriate agencies as soon as possible after laboratory reports are received. Therefore, it will be possible to determine if repeat analyses, if necessary, can be conducted without re-sampling. If samples exceed holding times before these decisions are made and re-testing is required, re-sampling may be necessary.

## 3.0 PROPOSED SAMPLING AND ANALYSIS

Sediments will be collected from each of the four sample locations and tested as a single composite sample, as appropriate, to address the potential for Ross Island disposal. As shown on Plate 2 and discussed above, four stations will be sampled and composited for chemical and physical testing as well as archived for possible future analysis. Quality Assurance /Quality Control (QA/QC; Section 3.3) will be performed by subcontractors (field samplers and laboratories) for each method or analysis with specificity for every appropriate method or analyte requested and/or representative analytes listed in the test method's QA/QC. QA/QC data will be reported in summary form for all samples submitted.

### 3.1 Sediment Sampling and Preparation

Sample preparation and testing methods are outlined below. If the methods outlined below are modified, the regulatory agencies will be notified, where possible, prior to the change (i.e., if the change is made following sample receipt in the laboratory). This includes method modifications of chemical, physical, or biological protocols. Sufficient volume will be collected to conduct the tests described in Section 3.2 as well as archived for possible future additional analysis. Archived samples will be immediately analyzed for the all the remaining chemical and bioassay parameters if any of the initial analytical results indicate a potential for concern.

#### 3.1.1 Sampling Methods

Samples will be collected by both Terra Hydr, Inc. and Harding ESE staff. Plate 2 details the latest bathymetric survey (performed by Minister-Glaeser Surveying Inc.) and the proposed sample locations. Samples will be collected to the proposed dredge depth plus the permitted overdredge, -40 MLLW. It is proposed that a push-corer be used for sampling. If proposed dredge depths are not achieved, the dredge depth may need to be modified to reflect the depth achieved during sampling. If refusal is encountered during sampling, the sample will be relocated, if possible. If refusal is still encountered, a subsample of the refusal tip material (e.g. that material representing the deepest penetration of the sampler) will be archived for analysis, if required. Following regulatory consultation, refusal tip material may be analyzed as a representative sample of the deepest sediment. Only material that has been appropriately sampled,



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tested, and approved will be dredged. Any sediment collected below the proposed core depth will be discarded.

In general, sampling will consist of several stages. First the sampling station is located using either visual landmarks or a Global Positioning System (GPS) system. The station may be marked with a buoy or the boat fixed over the position. The sampler is cleaned or loaded with a clean liner, if required, and deployed over the side of the boat. When the sampler makes contact with the sediment the final sample location is recorded through the GPS system. The sampler is recovered to the boat, and the sediment carefully removed and processed.

Actual sampling locations will be as close as possible to the proposed locations presented in Plate 2. If any scour, holes, obstacles, or refusal (as described above) are encountered at the location proposed for sampling or other problems are encountered in the field, the sampling location may be moved to a new position (as close as possible to the original location, at the discretion of the sampling crew). The target and final location of each sample will be plotted graphically in the final report, and rationale will be provided in cases where the sample locations deviated from those shown in the SAP.

Each core sample, or section of core, will be homogenized separately and a subsample archived at 4°C for up to eight weeks (and/or frozen at -20°C for up to a year for chemical analysis) for possible future testing, should that become necessary. The composite sample will be made by subsampling the homogenized individual core samples proportionally according to the length of each core section and mixing the subsamples together to create the composite. The composite sample will then be placed into a deionized water-rinsed, food-grade plastic bag or glass container and shipped for physical testing, chemical testing, and/or stored for possible future testing.

Samples will be handled using approved methods and materials. EPA standard cleaning procedures will be adhered to; utensils and mixing containers will be stainless steel or Teflon; pre-cleaned glass jars will be used for chemistry samples; and clean polyethylene bags will be used for bioassay sediment storage. Standard cleaning techniques include rinsing equipment with deionized water, washing with laboratory soap (e.g. Alconox), and when appropriate, rinsing with solvents.

### 3.1.2 Sample Handling and Chain-of-Custody

Proper chain of custody (COC) procedures will be followed at all times and at all stages of any sample collection and analysis process. If core samples are composited in the field, the COC will list each individual core sample and indicate which cores were composited. If composited in the laboratory, a separate COC will be prepared for composite samples and will indicate which cores were composited. The following information will be recorded on core log sheets and/or COC records for each core taken (copies of core logs and COC forms will be provided in the testing report):

- Date and time of collection
- Sample identification
- Sample location (latitude and longitude) (coring log only)
- Water depth, tide height (coring log only)
- Core penetration and core retrieval amount, portion of core used (feet) (coring log only)
- Description of core (color, odor, stratification, particle type/size) (coring log only)
- Identification of sampler and recorder
- Number and size of sample containers
- Type of samples (e.g. composite)
- Analyses to be performed (COC record only).

Samples will be labeled and placed in coolers on ice following collection and will be shipped to the laboratory for storage and analysis. Samples shipped through subcontractor, courier, or overnight service, will be secured to avoid sample breakage, placed on ice, and sealed in an ice chest with appropriate COC forms. A trip/temperature blank will be included in each ice chest to record arrival temperature with a target of 4°C as soon after collection as possible. Once received at the laboratory, the samples will be maintained at 4 ± 2 °C (or lower; see below) at all times.

The holding time begins at the time the sample is collected (i.e., taken out of the water) until the sample is analyzed (or extracted). Samples may be held up to 8 weeks for bioassays. Holding times for analytical tests range from 7 days for total solids to 6 months for metals (except mercury) and grain size. Every effort will be made to analyze samples as soon as possible. Samples for organic analyses (butyltins,



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pesticides, PCBs, PAHs) can be held up to 40 days after extraction. An archive of all samples (individual cores and composite sample) will be frozen (-20 ± 2 °C) in case reanalysis of samples or individual core analyses (as part of higher resolution testing) are necessary. Samples can be frozen for some analytes to extend the holding time (*EPA/USACE, 1998*). Samples for bioassay testing may not be frozen.

An effort will be made to present results to the appropriate agencies as soon as possible, after the laboratory reports are received. Therefore it will be possible to determine if repeat analyses and/or additional tests, if necessary, can be conducted without re-sampling. If samples exceed holding times before these decisions are made and re-testing is required, re-sampling may be necessary.

## 3.2 Sediment Testing

Testing methods are outlined below. If test methods outlined here are changed, agencies will be notified in writing prior to the change. This includes method modifications of chemical, physical, or biological protocols.

### 3.2.1 Chemical and Physical Analyses

The composite sample sediment will be tested for the list of chemicals shown in Table 3. The detection limits specified for the analyses correspond to those specified in DMEF (*USACE, 1998*). Analytical methods are also listed in Table 3. Note that the reporting limits listed are "target detection limits" and may not be able to be met in all samples because of matrix interferences. Any deviations from the listed detection limits will be discussed in the testing report. All sediment chemistry results will be reported on a dry weight basis.

### 3.2.2 Bioassay Analyses

Testing methods are not part of the initial testing, however, sufficient sample will be collected and archived during the field work should bioassay analysis be deemed necessary. Any bioassay methods will follow, the Green Book (*EPA/USACE, 1991*), the ITM (*EPA/USACE, 1998*), and the DMEF (*USACE, 1998*). The ITM and the Green Book require tests to cover different phyla/trophic levels as well as bioaccumulation testing. If bioassay testing is proposed, an addendum to this SAP will discuss the tests required in more detail.

## 3.3 Quality Assurance / Quality Control

Quality Control (QC) is performed throughout sampling and analysis and is the overall system of technical activities that measures attributes and performance to verify that they meet stated requirements. Quality Assurance (QA) is an ongoing process and is an integrated system that insures that the process is of the quality needed. QA/QC measures and performance goals are necessary to ensure that the data collected are of the quantity and quality necessary to facilitate decision-making, as discussed in Section 1.4 (DQOs). Field and laboratory QA/QC measures and goals and the consequences related to compliance with these measures and goals are discussed below.

### *Field Sampling*

Field QC measures include ensuring that sampling equipment is rinsed between stations and washed and rinsed thoroughly between sites to prevent cross-contamination of samples. Field sampling personnel maintain a log of sampling activities that includes general weather conditions, date and specific time of sampling, tide at the specific time of sampling, GPS or other accurate information on the location of sample, written description of sample location, hand-drawn map of sample location, depth of sample, achieved length of sample, and any characteristics of the sample (e.g. odor, color), and any deviations from the sampling plan. Photodocumentation of sampling events or specific samples occurs frequently. As samples are collected, a COC record is initiated. Field personnel maintain custody of the samples until they are submitted to the laboratory. If sediment samples are composited, a new chain of custody record is initiated for the transfer of sediments for biological, chemical, and/or physical analysis.

Additionally, field personnel ensure that the samples are shipped to the laboratories under appropriate conditions (on ice in sealed ice chests) and the laboratories record the arrival temperature using trip/temperature blanks included in each ice chest.

### *Chemical Analyses*

QA/QC for chemical analyses consists of analyzing one laboratory control standard (LCS), one matrix spike (MS), one matrix spike duplicate (MSD), and one method blank per analytical batch analyzed. A batch consists of up to 20 samples. Surrogate spikes are reported for every sample analyzed for organic chemicals. All procedural blanks, reagent blanks, and standard reference materials are analyzed, and

results are considered into final calculations of contaminant levels in sediments. Analytical results are reported in dry weight and wet weight, as applicable. The final report from the laboratory will include a QA/QC report, which will present the results of the laboratory QA/QC (blank results, relative percent difference for duplicates, surrogate recoveries for organic analyses, and MS/MSD/LCS results) and compare the results to the laboratory acceptance range. Any "difficulties" with the analyses, detects in blanks, elevated reporting limits, or results outside of laboratory acceptance ranges will be reported in the Case Narrative.

### *Reporting and Data Acceptability*

The final report will include the results and a discussion of the QA/QC program. Any deviations from protocols or exceedances of QA/QC limits or acceptability requirements will be presented. Not all deviations or exceedances of QA/QC limits are considered significant or critical to the quality and acceptability of the analysis. The report will include a discussion of any deviations and/or exceedances and their effect on the overall data acceptability.

## 4.0 REPORTING

Upon completion of the sampling and testing for each project, reports containing a brief description of the sampling and analysis program (including any deviations from this SAP), findings, conclusions, and recommendations, where appropriate, will be prepared in accordance with USACE and EPA/USACE guidelines *(USACE, 1998,; EPA/USACE, 1991; EPA/USACE, 1998)*. Maps showing the actual sampling locations, copies of core logs, data tables, and copies of original laboratory reports (including case narratives, QA/QC information, and completed COC records) will be attached to the final report.

Upon completion of the sampling and testing for each project, reports containing findings, conclusions, and recommendations, where appropriate, will be prepared in accordance with the appropriate guidelines.

## 5.0 PROJECT SCHEDULE

Cargill would like to begin sampling and testing of the Terminal area in mid March, 2001. Test results will be submitted within 4 weeks of the sampling date. Dredging is planned to commence in May, 2001. No areas will be dredged without prior agency approval.

## 6.0 REFERENCES


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EPA, 1994. *Guidance for Data Quality Objectives Process.* EPA QA/G-4. September.

# TABLES

# TABLES

**Table 1. 1998 Historical Samples ª**
**Sampling and Analysis Plan**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| | LCRMA Criteria | | Terminal Sample Result | |
|---|---|---|---|---|
| **Constituent (Units)** | SL | ML | Top (0 to 3 feet) | Bottom (3 to 5 feet) |
| Conventionals | | | | |
| Total Solids (%) | NA | NA | -- | -- |
| Total Volatile Solids (%) | NA | NA | -- | -- |
| TOC (%) | NA | NA | 1.03 | 0.91 |
| Total Sulfides | NA | NA | 58 | 2 |
| Ammonia | NA | NA | 65 | 100 |
| Grain Size | NA | NA | -- | -- |
| Metals (mg/kg) | | | | |
| Antimony (Sb) | 150 | 200 | 0.19 | 0.26 |
| Arsenic (As) | 57 | 700 | 1.9 | 2.1 |
| Cadmium (Cd) | 5.1 | 14 | 0.26 | 0.26 |
| Chromium (Cr) | NA | NA | 19.1 | 47.8 |
| Copper (Cu) | 390 | 1,300 | 26.6 | 25.6 |
| Lead (Pb) | 450 | 1,200 | 29 | 367 |
| Mercury (Hg) | 0.41 | 2.3 | 0.07 | 0.08 |
| Nickel (Ni) | 140 | 370 | 20.1 | 25.5 |
| Silver (Ag) | 6.1 | 8.4 | 0.18 | 0.2 |
| Zinc (Zn) | 410 | 3,800 | 90.1 | 115 |
| Organotin (µg/kg) | | | | |
| Tributyltin (interstitial water) | 0.15 | NA | 0.05 | -- |
| PAHs (µg/kg) | | | | |
| Naphthalene | 2,100 | 2,400 | 190 | <20 |
| Acenaphthylene | 560 | 1,300 | 240 | <20 |
| Acenaphthene | 500 | 2,000 | 34 | <20 |
| Fluorene | 540 | 3,600 | 190 | <20 |
| Phenanthrene | 1,500 | 21,000 | 6,800 | 45 |
| Anthracene | 960 | 13,000 | 2,200 | <20 |
| 2-Methylnaphthalene | 670 | 1,900 | -- | -- |
| Total LPAHs | 5,200 | 29,000 | 9,654 | 45 |
| Fluoranthene | 1,700 | 30,000 | 16,000 | 98 |
| Pyrene | 2,600 | 16,000 | 19,000 | 110 |
| Benzo(a)anthracene | 1,300 | 5,100 | 6,400 | 37 |
| Chrysene | 1,400 | 21,000 | 8,100 | 40 |
| Benzo(k)fluoranthene | NA | NA | 5,100 | 26 |
| Benzo(b)fluoranthene | NA | NA | 2,900 | 31 |
| Benzo(b+k)fluoranthene | 3,200 | 9,900 | 8,000 | 57 |
| Benzo(a)pyrene | 1,600 | 3,600 | 7,300 | 61 |
| Indeno(1,2,3-cd)pyrene | 600 | 16,000 | 4,600 | 360 |
| Dibenzo(a,h)anthracene | 230 | 1,900 | 660 | 53 |
| Benzo(g,h,i)perylene | 670 | 3,200 | 4,400 | 270 |
| Total HPAHs | 12,000 | 69,000 | 74,460 | 1,086 |

**Table 1. 1998 Historical Samples [a]**
**Sampling and Analysis Plan**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| | LCRMA Criteria | | Terminal Sample Result | |
|---|---|---|---|---|
| **Constituent (Units)** | SL | ML | Top (0 to 3 feet) | Bottom (3 to 5 feet) |
| Chlorinated Hydrocarbons (µg/kg) | | | | |
| 1,3-Dichlorobenzene | 170 | NA | <1 | <1 |
| 1,4-Dichlorobenzene | 110 | 120 | <1 | <1 |
| 1,2-Dichlorobenzene | 35 | 110 | <1 | <1 |
| 1,2,4-Trichlorobenzene | 31 | 64 | -- | -- |
| Hexachlorobenzene (HCB) | 22 | 230 | <20 | <20 |
| Phthalates (µg/kg) | | | | |
| Dimethyl phthalate | 1,400 | NA | <20 | <20 |
| Diethyl phthalate | 1,200 | NA | <20 | <20 |
| Di-n-butyl phthalate | 5,100 | NA | <20 | <20 |
| Butyl benzyl phthalate | 970 | NA | 28 | <20 |
| Bis(2-ethylhexyl)phthalate | 8,300 | NA | 220 | 160 |
| Di-n-octyl phthalate | 6,200 | NA | <20 | <20 |
| Phenols (µg/kg) | | | | |
| Phenol | 420 | 1,200 | <20 | <20 |
| 2-Methylphenol | 63 | 77 | <6 | <6 |
| 4-Methylphenol | 670 | 3,600 | 44 | 52 |
| 2,4-Dimethylphenol | 29 | 210 | <6 | <6 |
| Pentachlorophenol | 400 | 690 | <61 | <61 |
| Miscellaneous Extractables (µg/kg) | | | | |
| Benzyl alcohol | 57 | 870 | <6 | <6 |
| Benzoic acid | 650 | 760 | <100 | <100 |
| Dibenzofuran | 540 | 1,700 | 27 | <20 |
| Hexachloroethane | 1,400 | 14,000 | -- | -- |
| Hexachlorobutadiene | 29 | 290 | <20 | <20 |
| N-Nitrosodiphenylamine | 28 | 130 | <12 | <12 |
| Pesticides/PCBs (µg/kg) | | | | |
| 4,4'-DDD | NA | NA | <20 | <2 |
| 4,4'-DDE | NA | NA | <20 | <2 |
| 4,4'-DDT | NA | NA | <20 | <2 |
| Total DDT | 6.9 | 69 | <20 | <2 |
| Aldrin | 10 | NA | <2 | <2 |
| Chlordane | 10 | NA | -- | -- |
| Dieldrin | 10 | NA | <65 | <2 |
| Heptachlor | 10 | NA | <2 | <2 |
| Gamma-BHC (Lindane) | 10 | NA | <2 | <2 |
| Total PCBs | 130 | 3,100 | 7,100 | 710 |

| | |
|---|---|
| LCRMA | Lower Columbia River Management Area. |
| SL | Screening Level. |
| ML | Maximum Level. |
| NA | Not Available. |
| -- | Not Tested. |
| <20 | Not Detected at the detection limit. |

**Table 1. 1998 Historical Samples [a]**
**Sampling and Analysis Plan**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| | LCRMA Criteria | | Terminal Sample Result | |
|---|---|---|---|---|
| **Constituent (Units)** | SL | ML | Top (0 to 3 feet) | Bottom (3 to 5 feet) |

Detection limit value above criteria level.

Value above SL criteria level.

Value above ML criteria level.

[a] From Hart Crowser report #J-5760, 1999.

**Table 2. Data Quality Objectives**
**Sampling and Analysis Plan**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| State the Problem | Identify the Decision | Identify Inputs to the Decision | Define the Study Boundaries | Develop Decision Rules | Specify Limits on Decision Errors | Optimize the Sampling Design |
|---|---|---|---|---|---|---|
| (1) Sediments proposed for dredging from within the Cargill Terminal jurisdiction could contain levels of chemical contaminants that may pose a threat to human or ecological receptors is disposed of at an unconfined aquatic disposal site.<br>(2) Levels of chemical contaminants in marine sediments may vary and previous tests results may not accurately reflect level the levels of contaminants present for subsequent dredging events.<br>(3) Historical testing is not readily available. | (1) Do concentrations of chemical contaminants in sediments proposed for dredging from the Terminal and disposal at Ross Island indicate the potential for:<br>• significant toxicity to water column marine aquatic organisms?<br>• exceedance of water quality objectives?<br>• significant toxicity to benthic marine aquatic organisms?<br>• significant bioaccumulation and trophic transfer (e.g., effects on higher trophic level ecological receptors and/or humans)?<br>(2) Are concentrations of chemical contaminants present above ambient/reference levels? | (1) Lack of data from previous dredged material testing events.<br>(2) Information on potential sources of chemical contaminants.<br>(3) Volume of dredged material and dredging depths.<br>(3) Additional data to be collected as proposed in this SAP (as appropriate):<br>• Sediment chemical and physical tests<br>• Toxicity test potential/testing<br>(4) Relevant screening values/procedures:<br>• NOAA ER-Ls and ER-Ms and other relevant sediment screening levels<br>• Toxicity thresholds<br>• Water column mixing models<br>• Water quality objectives<br>• Theoretical bioaccumulation/food chain modeling, literature data on no-effect tissue levels, and/or human health consumption values (i.e., FDA action levels)<br>• Other benchmarks, as applicable. | (1) Geographic boundaries of the dredging site:<br>• samples should be collected from locations representative of the dredge area and potential contaminant source areas present<br>• samples should be taken to the dredge depth plus overdepth.<br>Constraints include:<br>• the potential to encounter refusal during sampling<br>• the potential for obstructions (ships in berth, underwater objects, etc.).<br>(2) Temporal boundaries include:<br>• tidal and weather related influences<br>• samples should be collected as close as possible to the proposed dredging date (preferably within 90-120 days). | (1) If sediment chemical concentrations (current or historical) are within screening levels and/or are below levels that may indicate a potential for significant bioaccumulation, then material will be considered SUAD.<br>(2) If chemical concentrations are above screening levels and levels that may indicate a potential for significant bioaccumulation, then further testing (bioassay or higher resolution) and/or UWR disposal will be pursued.<br>(3) If further testing indicates that adverse effects on ecological receptors and/or humans are unlikely, then the material will be considered SUAD.<br>(4) If further testing indicates that adverse effects on ecological receptors and/or humans are likely, then the material will be considered NUAD. | The two main decision errors are:<br>• To find material NUAD and implement upland disposal at significant cost when the material is actually SUAD<br>• To find material SUAD and expose ecological and/or human populations to detrimental chemical contamination when the material is actually NUAD.<br>Decision errors can be controlled by:<br>• Developing an appropriate sampling strategy<br>• Using reasonable approaches to evaluating the data<br>• Collecting data of appropriate quality. | (1) An authoritative sampling design will be used, as discussed in Section 2.0 of the SAP. Samples will be collected near shallow areas (where the core lengths will be longest), and in representative "quadrants" of the dredge area.<br>(2) Analyses will include: TOC, grain size, metals, organotins, PAHs, pesticides, and PCBs, water column and benthic bioassays (including ammonia and sulfide measurements), and bioaccumulation tests, as needed. |

**Table 3. Analytical Methods and Target Detection Limits[a] for Bulk Sediment**
**Sampling and Analysis Plan**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| Constituent (Units) | Method | Detection Limit (dry weight) |
|---|---|---|
| Conventionals | | |
| Total Solids (%) | Pg. 17 (1) | 0.1 |
| Total Volatile Solids (%) | Pg. 20 (1) | 0.1 |
| TOC (%) | Pg. 23 (1, 2) | 0.1 |
| Total Sulfides | Pg. 32 (1) | 1 |
| Ammonia | Plumb, 1981 (3) | 1 |
| Grain Size | Modified ASTM D422 with Hydrometer | NA |
| Metals (mg/kg) | EPA 6010 | |
| Antimony (Sb) | | 2.5 |
| Arsenic (As) | | 2.5 |
| Cadmium (Cd) | | 0.3 |
| Chromium (Cr) | | 0.3 |
| Copper (Cu) | | 15.0 |
| Lead (Pb) | | 0.5 |
| Nickel (Ni) | | 2.5 |
| Silver (Ag) | | 0.2 |
| Zinc (Zn) | | 15.0 |
| Mercury (Hg) | EPA 7471 | 0.02 |
| Organotin (µg/kg) | GC-FPD (Krone) | |
| Tributyltin (interstitial water) | | 0.01 |
| PAHs (µg/kg) | EPA 8270SIM | |
| Naphthalene | | 20 |
| Acenaphthylene | | 20 |
| Acenaphthene | | 20 |
| Fluorene | | 20 |
| Phenanthrene | | 20 |
| Anthracene | | 20 |
| 2-Methylnaphthalene | | 20 |
| Fluoranthene | | 20 |
| Pyrene | | 20 |
| Benzo(a)anthracene | | 20 |
| Chrysene | | 20 |
| Benzo(k)fluoranthene | | 20 |
| Benzo(b)fluoranthene | | 20 |
| Benzo(a)pyrene | | 20 |
| Indeno(1,2,3-cd)pyrene | | 20 |
| Dibenzo(a,h)anthracene | | 20 |
| Benzo(g,h,i)perylene | | 20 |

**Table 3. Analytical Methods and Target Detection Limits[a] for Bulk Sediment**
**Sampling and Analysis Plan**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| Constituent (Units) | Method | Detection Limit (dry weight) |
|---|---|---|
| Chlorinated Hydrocarbons | 8260 | |
| 1,3-Dichlorobenzene | | 3.2 |
| 1,4-Dichlorobenzene | | 3.2 |
| 1,2-Dichlorobenzene | | 3.2 |
| 1,2,4-Trichlorobenzene | | 6 |
| Hexachlorobenzene (HCB) | | 12 |
| Phthalates | 8270SIM | |
| Dimethyl phthalate | | 20 |
| Diethyl phthalate | | 20 |
| Di-n-butyl phthalate | | 20 |
| Butyl benzyl phthalate | | 20 |
| Bis(2-ethylhexyl)phthalate | | 20 |
| Di-n-octyl phthalate | | 20 |
| Phenols | 8270SIM | |
| Phenol | | 20 |
| 2-Methylphenol | | 6 |
| 4-Methylphenol | | 20 |
| 2,4-Dimethylphenol | | 6 |
| Pentachlorophenol | | 61 |
| Miscellaneous Extractables | 8270SIM | |
| Benzyl alcohol | | 6 |
| Benzoic acid | | 100 |
| Dibenzofuran | | 20 |
| Hexachloroethane | | 20 |
| Hexachlorobutadiene | | 20 |
| N-Nitrosodiphenylamine | | 12 |
| Pesticides/PCBs (µg/kg) | 8081 | |
| 4,4'-DDD | | 2 |
| 4,4'-DDE | | 2 |
| 4,4'-DDT | | 2 |
| Aldrin | | 1.7 |
| Chlordane | | 1.7 |
| Dieldrin | | 2.3 |
| Heptachlor | | 1.7 |
| Gamma-BHC (Lindane) | | 1.7 |
| Total PCBs | 8082 | 67 |

| | |
|---|---|
| mg/kg | Milligrams per kilogram. |
| µg/kg | Micrograms per kilogram. |
| PCBs | Polychlorinated biphenyls. |
| PAHs | Polycyclic aromatic hydrocarbons. |

**Table 3. Analytical Methods and Target Detection Limits[a] for Bulk Sediment**
**Sampling and Analysis Plan**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| Constituent (Units) | Method | Detection Limit (dry weight) |
|---|---|---|

NA Not Applicable.

GC Gas chromatography.
SIM Selective ion monitoring.
FPD Flame photometric detector.
ASTM American Society for Testing and Materials
% Percent.
TOC Total organic carbon.
[a] Target detection limits may not be met for some analytes in samples with extensive matrix interferences.

(1) Recommended Protocols for Measuring Conventional Sediment Variables in Puget Sound, Puget Sound Estuary Program, 1997.
(2) Recommended Methods for Measuring TOC in Sediments, Kathryn Bragdon-Cook, Clarification Paper, Puget Sound Dredged Disposal Analysis Annual Review, May, 1993.
(3) Procedures For Handling and Chemical Analysis of Sediment and Water Samples, Russell H. Plumb, Jr., EPA/Corps of Engineers, May, 1981.



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# PLATES

**PLATES**

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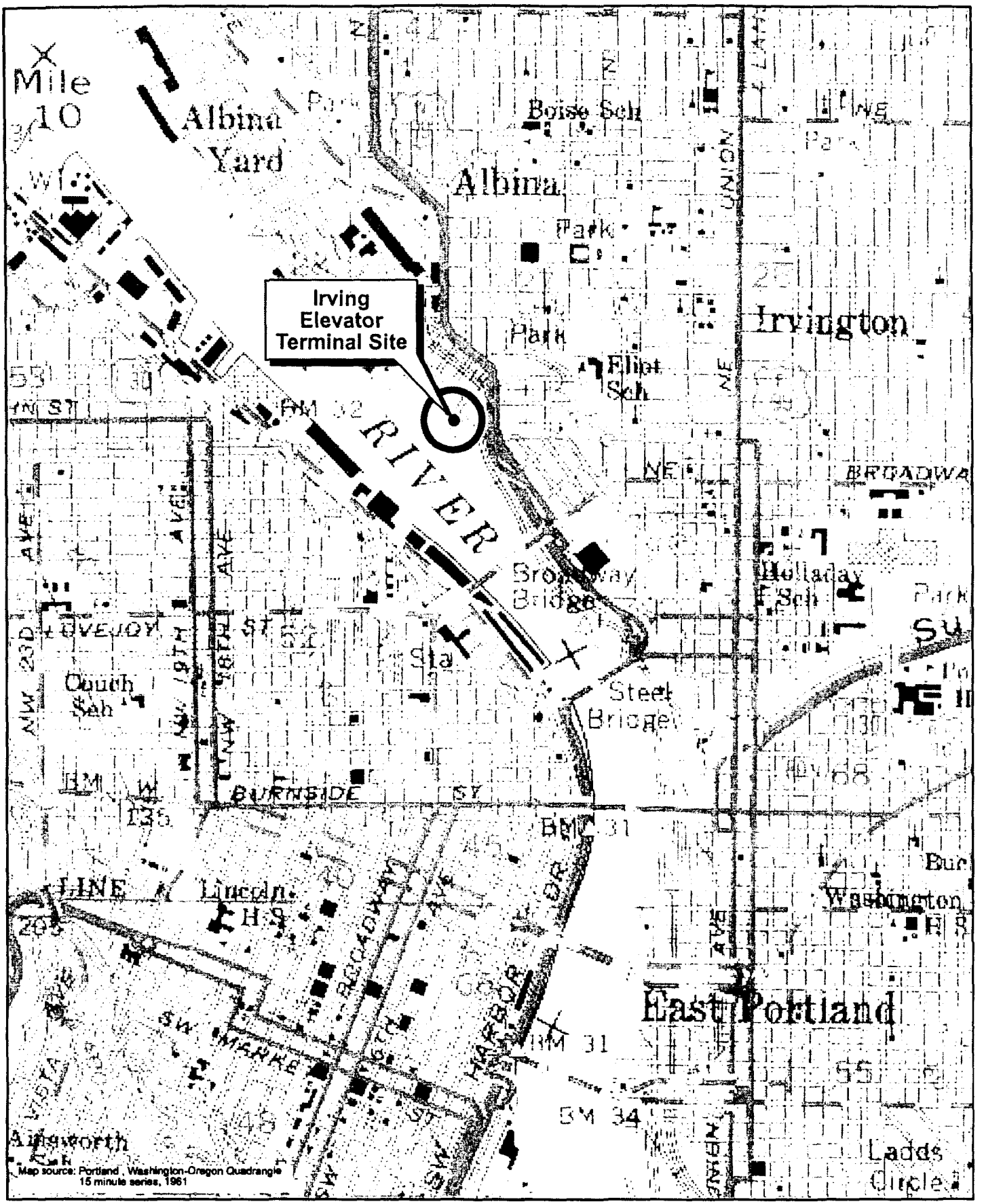


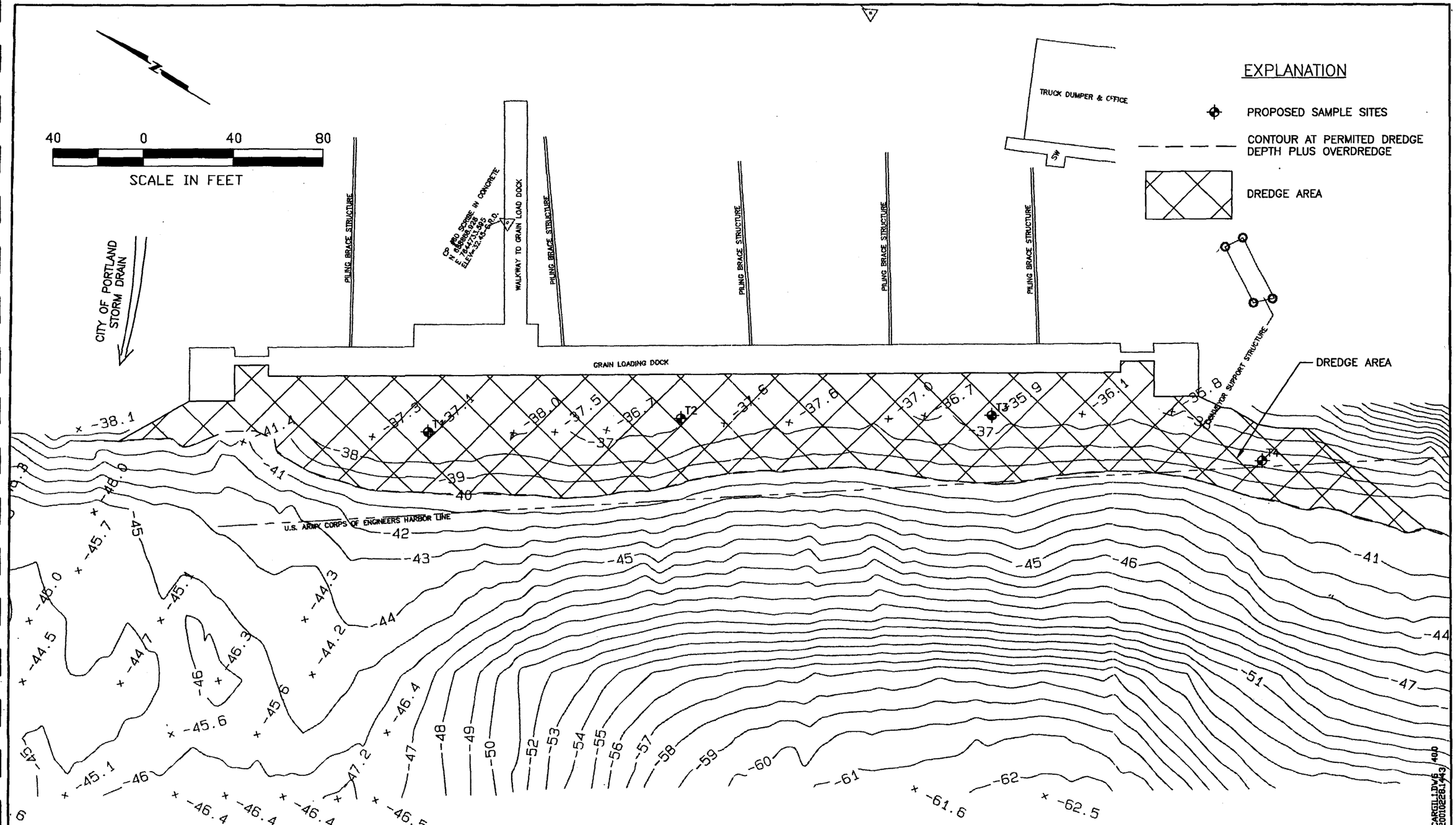

**Harding ESE**
A MACTEC COMPANY
Engineering and Environmental Services

**Site Overview**
Sampling and Analysis Plan
Cargill Irving Elevator Terminal
Portland, Oregon

PLATE
**1**

| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED |
|---|---|---|---|---|
| DjP | 52852 001 | | 02/01 | |

CARG002081




Harding ESE
A MACTEC Company

**Dredge Site**
Sampling and Analysis Plan
Irving Elevator Terminal
Portland, Oregon

PLATE **2**

| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED DATE |
|---|---|---|---|---|
| PH | 52852 001 | | 02/01 | |

CARGO02082

## DISTRIBUTION

**Sampling and Analysis Plan**
**Dredge Material Disposal Planning**
**Cargill Irving Elevator Terminal, Portland, Oregon**

March 19, 2001

Copy No. 6

| | |
|---|---|
| Copies 1-4: | Ms. Judy Litton<br>U.S. Army Corps of Engineers, Portland District<br>P.O. Box 2946<br>Portland, Oregon 97208-2946 |
| Copy 5: | Mr. Dennis Klein<br>Cargill, Incorporated<br>P.O. Box 5624<br>Minneapolis, Minnesota 55440-5624 |
| Copy 6: | Mr. Christopher Putnam<br>Cargill, Incorporated<br>P.O. Box 5624<br>Minneapolis, Minnesota 55440-5624 |
| Copy 7: | Mr. Gene Loffler<br>Cargill, Incorporated<br>800 River Street<br>Portland, Oregon 97227-1715 |
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August 3, 2001

52852.004

Ms. Judy Linton
U.S. Army Corps of Engineers, Portland District
P.O. Box 2946
Portland, Oregon 97208

**SUBJECT: Results of Sediment Sampling and Analysis – Cargill Irving Elevator Terminal USACE Permit 95-1063 and DSL Permit RP 3158**

Dear Ms. Linton:

Enclosed you will find the Results of Sediment Sampling and Analysis for Cargill Irving Elevator Terminal (Cargill) in Portland, Oregon. These results were generated following the approach outlines in the previously submitted and approved Sampling and Analysis Plan (*Harding ESE, 2001*) for the dredge material disposal planning at the site.

Cargill would like to begin dredging as soon as possible (prior to the permit stipulation of no dredging during September) to facilitate the safe passage of vessel traffic. This urgency is highlighted by a recent incident in which a vessel was temporarily grounded at the site. We appreciate your expedience in reviewing this plan. Please call either Josh (415-884-3160) or Bridgette (415-884-3130) if you have any questions or comments. Thank you for your assistance.

Very Truly Yours,

**HARDING ESE**

Josh Gravenmier
Project Environmental Scientist

Bridgette DeShields
Associate Environmental Scientist

JG/ra/Cargill/Admin/Results_CoverLetter

AUG 2001
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LAW DEPT.

Enclosure

cc: Gene Loffler, Cargill Irving Elevator Terminal
Dennis Klein, Cargill Corporate
Chris Putnam, Cargill Corporate
Kirk Sweetland, Harding ESE

**REFERENCES**

Harding ESE, 2001. *Sampling and Analysis Plan, Dredge Material Disposal Planning, Cargill Irving Elevator Terminal, Portland, Oregon.* March 16, 2001.

AUG 2001
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# Results of Sediment Sampling and Analysis
# Cargill Irving Elevator Terminal
# Portland, Oregon

Prepared for

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Harding ESE Project No. 52852.004


Josh Gravenmier
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Quality Control Reviewer

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August 3, 2001


Harding ESE
A MACTEC COMPANY

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**Results of Sediment Sampling and Analysis**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

Harding ESE Project No. 52852.004

This document was prepared by Harding ESE, A MACTEC Company (Harding ESE), at the direction of the Cargill, Incorporated for the sole use of the Cargill Irving Elevator Terminal and the appropriate regulatory agencies, the only intended beneficiaries of this work. No other party should rely on the information contained herein without the prior written consent of the Cargill, Incorporated and Harding ESE. This report and the interpretations, conclusions, and recommendations contained within are based in part on information presented in other documents that are cited in the text and listed in the references. Therefore, this report is subject to the limitations and qualifications presented in the referenced documents.

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## DISTRIBUTION

# 1.0 INTRODUCTION

Cargill, Incorporated (Cargill) is responsible for conducting maintenance dredging at its Irving Elevator Terminal (Terminal) in Portland, Oregon (Figure 1) to facilitate year-round docking operations. Cargill expects to dredge up to 5,000 cubic yards ($yd^3$) of sediment (to the permitted dredge depth of –40 feet mean lower low water [MLLW]) from the adjacent Williamette River in Fall 2001. This area is considered one dredged material management unit (DMMU) and as such can be characterized by a single sediment analysis. Before these sediments can be dredged and disposed of at a pre-selected disposal site, they must meet established standards. To evaluate whether the material proposed for dredging and disposal meets these standards, representative samples of the material must be sampled and tested.

Following testing, the dredged material excavated from Cargill must be disposed of at an appropriate site. A designated disposal area is located at Ross Island. In order to dispose of dredged material at Ross Island, the material must be deemed suitable for unconfined aquatic disposal (SUAD). If the material is not deemed suitable for unconfined aquatic disposal, alternate disposal options are evaluated.

This report presents methods and results of sampling and analysis of the sediments within the Terminal dredging area (Figure 2) as well as an evaluation of the suitability of the sediments for disposal.

## 1.1 Background

The Williamette River is within the Lower Columbia River Management Area (LCRMA) and as such, dredged material management for the Terminal area falls within the guidance of the Dredged Material Evaluation Framework (DMEF; *USACE, 1998*). Cargill has a permit from the USACE, Portland District (Permit No. 95-1063) and Oregon Division of State Lands (DSL; Permit No. RP 3158) to conduct maintenance dredging of up to 8,000 $yd^3$ from the Terminal area.

Plate 2 shows the area covered by Cargill's maintenance dredging permits. The permitted dredge depth for the facility is –38 feet MLLW with a 2 foot overdredge allowance. The Terminal is an isolated dredge

area that is subject to a high current from the Williamette River. The current produces an eddy near the South end of the Terminal and is the location of the majority of the accumulated sediment above dredge depth. Nearby land use is surrounded by the City of Portland, with a varied urban usage. Just to the North of the Terminal site are a few offices and the Glazer Concrete Plant, while to the immediate South are railroad tracks. The Terminal receives variable, moderate vessel traffic in support of Cargill's grain transfer operations. There is a potential for hydraulic fluid releases and oily bilge water discharges associated with these activities. However, no significant spills have occurred at the facility since Cargill has purchased the property. At the North end of the Terminal exists a large (eight foot diameter) City of Portland Storm drain.

Previous results for the Terminal dredge area are not directly available. Cargill purchased the Terminal area from Bunge in 1995 and has had only slight sediment accumulation to date. As a result, no maintenance dredging has occurred at the Terminal during the Cargill operations. The last known dredging episode at the site occurred 9-11 years ago, during the Bunge ownership. No data is available from that dredge episode. Recent testing for the adjacent Columbia River Navigation Channel in 1998 included one sample from the Terminal site area (*Hart Crowser, 1999*). Two sediment cores were collected at this location and were composited into two depth integrated (0 to 3 feet and 3 to 5 feet) samples. The top sample yielded six polycyclic aromatic hydrocarbons (PAHs) that were above LCRMA Maximum Levels (MLs) and seven PAHs that were detected above the LCRMA Screening Levels (SLs) but below the corresponding ML. The detected concentration of total polychlorinated biphenyls (PCBs) also exceeded the LCRMA ML. The lower sample results were all below the LCRMS SLs except for total PCBs. Significant scouring of the area occurred following this sampling event, so these previous test results may not be indicative of current conditions.

The Terminal area proposed for testing and dredging consists of one sample site, with a total of 4 sediment core samples collected and composited into one sample (Figure 2). As per the direction of the DMMT, each of the individual core samples was also analyzed for the full suite of tests. Square footage,



CARG002094

depths, and proposed dredging volumes associated with the Terminal dredge area are presented in Table 1. Sampling and testing methods followed those presented in the Sampling and Analysis Plan (SAP; *Harding ESE, 2001a*) and a letter dated June 21, 2001 (*Harding ESE, 2001b*). The sampling and testing methods were approved by the Dredged Material Management Team (DMMT).

## 1.2 Approach

The study was initiated by sampling the Terminal area (Plate 2) to the proposed dredge depth (including permitted overdredge) plus an additional 2 feet of material below the dredging prism (New Surface Material, NSM) for each sample location via a Vibracore device. The dredge prism material was isolated from the NSM for each of the four cores and a single composite (proportional to core length) was created for the area. A suite of chemical and physical tests were conducted on the whole core composite sample for the dredge prism, as specified in the Sampling and Analysis (*Harding ESE, 2001a*). The dredge prism material from each of the individual core samples was also analyzed for the same suite of chemical and physical tests as per the June 21, 2001 letter (*Harding ESE, 2001b*). This report presents a detailed description of the sampling and testing conducted for the Terminal sediments, including:

- A figure showing the proposed dredging site and the sample locations within the site (Figures 1 and 2)
- A narrative description of sampling procedures (Section 2.1)
- A coring log (Appendix A; Table 2)
- Chain-of-custody forms (Appendix B)
- Testing methods and protocols (Sections 2.2 through 2.3)
- A discussion of quality assurance/quality control (Section 2.3; Section 3.2)
- A summary of the test results (Section 3.0; Table 3; Appendix C)



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- Conclusions and recommendations regarding the suitability of dredged material for disposal (Section 4.0)
- References (Section 5.0).



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# 2.0 METHODS

The following sections summarize the methods used to conduct the sediment sampling, as well as the chemical and physical analyses. Sediment sampling and analysis methods followed guidelines set forth by the USACE and EPA (*USACE, 1998; EPA and USACE, 1998*) and those specified in the SAP (*Harding ESE, 2001a*) and June 21, 2001 letter (*Harding ESE, 2001b*), except where noted.

## 2.1 Sampling Methods

Sediment sampling at the Terminal was conducted by Harding ESE on June 29, 2001. Appendix A details the exact date and times each core sample was collected. One composite sample (composited from four individual cores) and each of the individual cores were tested. The Terminal samples were collected using a Vibracore.

Sample locations were determined in the field by line of sight determinations from those proposed in the SAP (*Harding ESE, 2001a*). The actual sample locations were recorded using a differential Global Positioning System (GPS) in the field and are detailed as part of the coring log (Table 2). The GPS unit (Furuno GPS Plotter GP-1810) antenna was secured to a fixed point on the crane of the sampling vessel for the Terminal samples, directly over the vibracore sampling device. The deviations observed between the T1 and T4 proposed and actual sample locations (Figure 2) are a result of finding a scoured area at the proposed location which was already below the permitted dredge depth. Each sample location was still within the dredge area and all the samples collected are considered representative. The Terminal proposed sampling depths were 42 feet below MLLW corresponding to the 38 feet proposed dredge depth plus a two-foot overdredge plus two additional feet of NSM. The proposed depth was only achieved at one (sample T2) of the four locations. However, three of the four locations did exceed the –40 feet MLLW that corresponds to the proposed dredge depth plus overdredge. One individual core sample failed to achieve the entire proposed dredge depth plus overdredge due to refusal (sample T4). All four

locations hit a sand refusal, which stopped the vibracore penetration. These deviations are not considered significant and the dredge area is determined to be adequately sampled.

The following information was recorded on core log sheets and/or chain-of-custody records for each core sample (copies of the original core logs and chain of custody forms are provided in Appendixes A and B, respectively):

- Date and time of collection
- Sample identification
- Sample location (latitude and longitude) (coring log only)
- Water depth, tide height (coring log only)
- Core penetration and core retrieval amount, portion of core used (feet) (coring log only)
- Description of core (color, odor, stratification, particle type/size) (coring log only)
- Identification of sampler and recorder
- Number and size of sample containers
- Type of samples (e.g. composite)
- Analyses to be performed (chain-of-custody record only).

Table 2 summarizes the sample locations and depths and provides relevant observations. All necessary precautions were taken to prevent contamination of the sediment core samples.

The 4 individual cores (designated T1, T2, T3, and T4) were separated into dredge prism material and NSM. The dredge prism material was subsequently composited (proportional to each cores length) into one sample, with the designation Composite, at a decontaminated location of the Terminal site in

Portland, Oregon. At the direction of the DMMT, each of the core sample dredge prism material was also sampled. Subsamples of each of the four core samples and the one composite sample were placed via decontaminated stainless steel spoons into pre-cleaned glass jars, sealed, placed in a cooler, and shipped (on ice) under chain-of-custody to Columbia Analytical Services (CAS) in Kelso, Washington for chemical and physical analysis. The volatiles and sulfides subsamples from each core were taken immediately upon extrusion from the core tubes to minimize any loss. The composite sample volatiles and sulfide subsamples were created by taking a second subsample from each freshly extruded core and subsequently mixing within a sealed sample container.

Archives for possible future chemical and/or bioassay analysis (stored at either 4 or -20°C) were taken from each individual core (both dredge prism material and NSM [except for T4]) and the composite sample. All samples were stored at 4°C (or -20°C) at all times until used or archived. Proper chain-of-custody procedures (Appendix B) were followed at all times and at all stages of the collection and analysis process. All the composite and individual core testing was initiated within two weeks of sample collection.

## 2.2 Chemical and Physical Analysis of Sediments

Each of the composite samples was tested for the list of chemicals shown in Table 3. The methods and detection limits specified for the analyses correspond to those specified in DMEF (*USACE, 1998*) and the SAP (*Harding ESE, 2001a*). The chemical and physical analyses of the composite and individual core samples were conducted by CAS. The analysis report is provided in Appendix C. CAS is an Environmental Laboratory Accreditation Program (ELAP) certified laboratory (ELAP Certificate #2286). All analytical results were reported in dry weight, except for total solids which was reported in wet weight.

The sediment samples were analyzed for total solids by EPA Test Method 160.3 and total volatile solids by EPA Test Method 160.4. The sulfide and total organic carbon (TOC) analysis were run by the Puget



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Sound Estuary Program method. Ammonia (as nitrogen) was measured following the Plumb methodology. Grain size determination of particle size was done following ASTM Test Method D422 (with hydrometer). The analysis for priority pollutant metals, except for mercury, utilized Inductively Couple Plasma/Mass Spectrometry (ICP/MS) techniques (EPA Test Method 200.8). The analysis of mercury was performed using an Atomic Absorption Spectrophotometric (AA) technique (EPA Test Method 7471). Organotin compounds were analyzed using GC-FPD (Krone Method). Due to a lack of sediment porewater, only the composite sample was analyzed for organotin compounds in the interstitial water. However, organotin analysis was performed on the whole sediment for the composite and individual core samples. PAHs, phthalates, phenols, and other miscellaneous semi-volatile compounds were analyzed for by GC using EPA Test Methods 8270C SIM. Chlorinated hydrocarbons were analyzed by EPA Test Method 8260B. Organochlorine pesticides were done by EPA Test Method 8081A. Polychlorinated Biphenyls (PCBs) were done by EPA Test Method 8082.

## 2.3 Quality Assurance Procedures

Quality Assurance/Quality Control (QA/QC) was performed by subcontractors (field samplers and laboratories) for each method or analysis with specificity for every method and analyte requested and/or representative analytes listed in the test method's QA/QC. QA/QC requirements listed in the SAP were followed. QA/QC data is reported for all samples submitted and all analyses as appropriate (Appendix C).

Harding ESE conducted a thorough data validation on all results received. Results of procedural blanks, reagent blanks, and standard reference materials were reviewed and used to validate contaminant concentrations observed in the sediments. The results of the data validation/review are presented in Section 3.2.

# 3.0 RESULTS AND DISCUSSION

The sections below present the results of the chemical and physical analyses.

## 3.1 Chemical Testing

The results of the chemical analyses for the Terminal samples are presented in Table 3. The original laboratory reports are included in Appendix C. The results of the chemical analyses are summarized below and, where applicable, compared to the DMEF (*USACE, 1998*) sediment screening values.

### *Conventionals*

The Terminal composite sample generated a total solids content of 72.0 percent; total volatile solids were 3.03 percent; total organic carbon content was 0.67 percent; total sulfide was 2.3 mg/kg; and the ammonia level was 108 mg/kg.

The Terminal individual core samples generated total solids contents ranging from 68.6 to 76.9 percent; total volatile solids ranged from 2.68 to 3.96 percent; total organic carbon content ranged from 0.40 to 0.82 percent; total sulfide ranged from 0.9 to 3.0 mg/kg; and the ammonia level ranged from 65 to 152 mg/kg.

### *Grain Size*

The Terminal composite sample contained 75.5 percent sand. The Terminal core samples contained 86.9, 69.0, 72.9, and 58.2 percent sand for samples T1, T2, T3, and T4, respectively.

### *Metals*

Metals were detected in the Terminal composite sample, but all concentrations were below the DMEF (*USACE, 1998*) screening levels. Metals were also detected in all of the core samples at the site, but all concentrations were below the DMEF screening levels.



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### *Organotins*

The composite sample interstitial water tributyltin (TBT) concentration was 0.058 µg/kg, which is below the DMEF (*USACE, 1998*) screening level. Total TBT was detected in the composite sample at a concentration of 210 µg/kg.

No interstitial water TBT values are available for the individual core samples because the samples had a high sand content making collection of porewater from the individual core sample available volume unfeasible. The individual core total TBT concentrations ranged from 12 to 220 µg/kg. Based on the similarities to the whole core composite (grain size, TOC, TBT), it is likely that the individual core samples would have porewater concentrations similar to that for the whole core composite.

### *Polycyclic Aromatic Hydrocarbons (PAH)*

The composite sample Low Molecular Weight (LMW) PAH concentration for the Terminal was 181 µg/kg, while the High Molecular Weight (HMW) PAH concentration was 612 µg/kg. All composite sample PAH concentrations were below the DMEF (*USACE, 1998*) screening levels.

The individual core sample LMW PAH concentrations ranged from 147 to 351 µg/kg, while the HMW PAH concentrations were between 441 and 3,457 µg/kg. All composite sample PAH concentrations were below the DMEF (*USACE, 1998*) screening levels.

### *Chlorinated Hydrocarbons*

No chlorinated hydrocarbons were detected in the Terminal composite sample or the individual core samples.

### *Phthalates*

Only dimethyl phthalate was detected in the Terminal composite sample (5.4 µg/kg), and this concentration was below the DMEF (*USACE, 1998*) screening level. Some phthalates (di-n-butyl phthalate, butyl benzyl phthalate, and bis(2-ethylhexyl)phthalate) were also detected in the core samples at the site, but all concentrations were below the DMEF (*USACE, 1998*) screening levels.

### *Phenols*

Only phenol and 4-methylphenol were detected in the Terminal composite sample (44 and 50 µg/kg respectively), and these concentrations were both below the DMEF (*USACE, 1998*) screening levels. Some phenols (phenol, 4-methylphenol, and pentachlorophenol) were also detected in the core samples at the site but all concentrations were below the DMEF (*USACE, 1998*) screening levels.

### *Miscellaneous Extractables*

Only benzyl alcohol, benzoic acid, and dibenzofuran were detected in the Terminal composite sample (5.7, 110, and 9.2 µg/kg respectively), and these concentrations were all below the DMEF (*USACE, 1998*) screening levels. Some miscellaneous extractables (benzyl alcohol, benzoic acid, and dibenzofuran) were also detected in the core samples at the site, but all concentrations were below the DMEF (*USACE, 1998*) screening levels.

### *Organochlorine Pesticides*

No organochlorine pesticides were detected in the Terminal composite sample. Some organochlorine pesticides, specifically DDT, were detected in the T3 core sample (2.42 µg/kg of total DDT), but these concentrations were below the DMEF (*USACE, 1998*) screening levels. No organochlorine pesticides were detected in other the Terminal core samples.

### *Polychlorinated Biphenyls (PCBs)*

PCBs were detected in the Terminal composite sample (48 µg/kg of total PCBs), and this concentration is below the DMEF (*USACE, 1998*) screening level. PCBs were also detected in the core samples at the site, ranging from 13 to 130 µg/kg, but no concentration exceeded the DMEF (*USACE, 1998*) screening level.

## 3.2 Results of QA/QC Review

The sections below provide a summary of the QA/QC information. The laboratory reports included in Appendix C provide more detailed QA/QC information.

A data review was performed on sediment samples from the Terminal samples from laboratory reports submitted by CAS. The data was evaluated using the criteria specified in the SAP (*Harding ESE, 2001a*) and CAS internal quality assurance program. All conventional parameters were analyzed using the test methods developed for sediment samples as cited in Table 3 of the SAP, but were evaluated using EPA guidelines for data validation. The data was evaluated to determine that analytical holding times were met, chain of custody forms were filled out properly, required reporting limits were achieved, and that method blank, surrogates, laboratory control sample (LCS), matrix spike/matrix spike duplicate (MS/MSD) and laboratory duplicate results were within laboratory established acceptance limits. Any parameters that were determined to be outside of acceptance criteria were further evaluated to assess the impact, if any, to the data presented.

All QC parameters were determined to be within acceptance criteria with the following exceptions:

- Grain Size by ASTM Test Method D422: The analysis was not run in triplicate for the batch of samples. The duplicate analysis of the composite sample however, was very similar (sand content between the two runs was 75.5 and 73.9% respectively), indicating that no qualification of the results is required.

- Metals by EPA Test Method 200.8: The method blank associated with all samples from the sampling event contained antimony at 0.04 mg/kg and chromium at 0.14 mg/kg. The reported values for antimony in all the samples (composite, T1, T2, T3, and T4) should be considered to likely have laboratory contamination and are non-detected with reporting limits raised to 0.11 mg/kg, 0.12 mg/kg, 0.09 mg/kg, 0.08 mg/kg, and 0.15 mg/kg respectively. The detected values reported for chromium in all five samples were greater than 5 times the amount detected in the method blank and, therefore, are not affected by the blank contamination. The values reported for chromium in these samples do not require qualification. The spike recovery for antimony in the LCS associated with all samples from the sampling event was high, outside of QC limits. As previously discussed, antimony will be

considered non-detect in all samples at raised reporting limits due to method blank contamination. As a result, the high recovery in the LCS has no effect on the sample results. Similarly, the MS performed on the composite sample, had a reported recovery for antimony below acceptance limits, but does not have a significant effect on the qualified, non-detect values reported in the samples. A duplicate analysis was performed by the laboratory on the composite sample. Although sample results are not qualified based on duplicate results, the relative percent difference (RPD) between the primary and duplicate analysis provides an indication of the precision of the analysis, or possible non-homogeneity of the sample provided. The RPD between the primary and duplicate analysis for all metals was within the <50% acceptance criteria, with the exception of silver, which had a reported RPD of 108%.

- Organotins by GC-FPD (Krone Test Method): Analysis for organotins was performed on both the porewater and sediment portions of the composite sample, and on the sediment portion only of all other samples. All QC parameters associated with the porewater analysis on the composite sample were within acceptance criteria. The reporting limit used by the laboratory for Tri-n-butyltin in all samples was significantly higher than the 0.01 µg/kg reporting limit required by the SAP. All samples had detected results for tri-n-butyltin. As a result, the elevated reporting limits used do not affect the usability of the data. The surrogate recovery for sample T3 was less than half the lower acceptance limit of 33%. This sample was re-analyzed with similar results, with 5% and 6% recoveries reported, respectively. Due to this severe QC exceedence, the results reported for all butyltins in this sample should be considered estimated, with a low bias, and possible false negatives reported. The composite sample was used for the MS and MSD analysis. Tri-n-butyltin was reported within acceptance limits in the MS, but was reported as very high, outside of acceptance limits in the MSD at 952%. Due to the relatively high amount of tri-n-butyltin present in the composite sample compared to the spike amount added, the recovery reported in both the MS and MSD is likely

inaccurate. Results reported for tri-n-butyltin in all samples from the sampling event should be considered estimated, with no directional bias.

- Semi-volatile compounds by EPA Test Method 8270C using Selective Ion Monitoring (SIM): The extraction holding time of 14 days was exceeded in sample T4 by 8 days. All reported results for this sample should be considered estimated, with a low bias. Additionally, one out of six surrogate compounds was recovered low, outside of acceptance limits in this sample. Data is previously qualified based on holding time exceedence. The method blank associated with the composite, T1, T2, and T3 samples contained phenol at 17 µg/kg. The detected results for phenol reported in these samples were less than five times the amount detected in the method blank, and should be qualified as non-detect (ND) at the following elevated reporting limits: composite = ND at 44 µg/kg, T1 = ND at 43 µg/kg, T2 = ND at 46 µg/kg and T3 = ND at 38 µg/kg. The method blank associated with sample T4 also contained phenol at 5.9 µg/kg. The reported result for phenol in this sample should be considered non-detect at 27 µg/kg. These elevated detection limits are still below the SL for phenol and so will have no effect on the usability of the data. Low recovery was reported for 2,4-dimethylphenol in the LCS sample associated with the composite, T1, T2, and T3 samples. The inability of the laboratory to recover this compound within acceptance limits in the LCS, indicates a low bias to the analysis. The ND results reported for 2,4-dimethylphenol in these samples should be considered estimated with a potential for false negatives being reported. Bis(2-ethylhexyl)phthalate had an elevated detection limit (180 µg/kg) above the SAP target of 20 µg/kg. However, the 8,300 µg/kg SL for bis(2-ethylhexyl)phthalate indicates that this will have no effect on the usefulness of the data for evaluation. An elevated detection limit was also observed for 2,4-dimethylphenol (as high as 23 µg/kg) above the SAP target of 6 µg/kg. The 29 µg/kg SL for 2,4-dimethylphenol indicates that this will have no effect on the usefulness of the data for evaluation.

- Chlorinated Hydrocarbons by EPA Test Method 8260B: One out of three surrogates in samples T2 and T4 were reported high, outside of acceptance limits. The samples were non-detect for all compounds, and no qualification of the data is required.

- Organochlorine Pesticides by EPA Test Method 8081A: The MSD recovery for dieldrin in the composite sample, was outside of acceptance limits at 2%. The ND results reported for both the composite and discrete samples should be considered estimated, with the possibility that false negatives may have been reported. The RPD between the primary and confirmation analyses for 4,4-DDD in sample T3 was greater than the 40% acceptance limit. The value reported for 4,4-DDD in this sample should be considered an estimate, with no directional bias. The value reported for this compound was below the method reporting limit (MRL), but above the method detection limit (MDL) and was qualified as estimated by the laboratory.

- Polychlorinated Biphenyls by EPA Test Method 8082: The RPD between the primary and confirmation analyses for Aroclor 1260 in sample T3 was greater than the 40% acceptance limit. The value reported for Aroclor 1260 in this sample should be considered an estimate, with no directional bias. The value reported for this compound was below the MRL, but above the MDL and was qualified as estimated by the laboratory.

The overall assessment of the chemical and physical data reported for samples from the Terminal, with the few exceptions previously discussed, indicates that the data presented meet the project requirements and are considered useable for the intended purpose.

# 4.0 CONCLUSIONS

The findings of the sediment sampling and analyses are summarized and recommendations are presented below.

## 4.1 Summary of Findings

The results of the analyses for the Terminal can be summarized as follows:

- Sediment sampling and analyses were generally in accordance with appropriate regulatory guidelines, the approved SAP (*Harding ESE, 2001a*), and the June 21, 2001 letter (*Harding ESE, 2001b*).
- All chemical, and physical analyses met acceptable detection limits, test acceptability criteria, and quality assurance requirements.
- All composite sample chemical concentrations were below the DMEF (*USACE, 1998*) screening levels. The screening level for each chemical identifies chemical concentrations at or below which there is no reason-to-believe that dredged material disposal would result in unacceptable adverse effects due to toxicity measured by sediment bioassays. Sediments containing chemical concentrations at or below all SL values are judged to be suitable for aquatic disposal without the need for biological testing. Consequently, no biological testing was initiated for the Terminal samples.
- Based on the chemical and physical data from the dredging prism samples, it is unlikely that the proposed new surface material will have high concentrations of chemicals of concern.

## 4.2 Recommendations

Based on the results of the chemical and physical analyses, sediments from the Terminal area DMMU appear to be suitable for unconfined aquatic disposal. It is proposed that these sediments be disposed of at the Ross Island disposal site.

## 5.0 REFERENCES


Harding ESE, 2001a. *Sampling and Analysis Plan, Dredge Material Disposal Planning, Cargill Irving Elevator Terminal, Portland, Oregon.* March 16, 2001.

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Hart Crowser, 1999. Report #J-5760.

U.S. Army Corps of Engineers (USACE), 1998. *Dredged Material Evaluation Framework: Lower Columbia River Management Area.* November.

U.S. Environmental Protection Agency (EPA) and USACE, 1998. *Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual.* EPA-823-B-98-004.

# TABLES

# TABLES

**Table 1. Estimated Areas, Volumes, and Depths**
**Sediment Investigation**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| Site | Site Area ($ft^2$) | Range of Current Depths (feet below MLLW) [a] | Proposed Dredge Depth (+ overdredge) in feet below MLLW | Achieved Depth (feet below MLLW) [b] | Anticipated Dredging Volume ($yd^3$) |
|---|---|---|---|---|---|
| Terminal | 84,000 | 36-40 | 38 + 2 | 38-40 | 5,000 |
| TOTAL | 84,000 | | | | 5,000 |

| | |
|---|---|
| $ft^2$ | Square feet. |
| MLLW | Mean low lower water. |
| $yd^3$ | Cubic yards. |

[a] Based on a bathymetric survey conducted June 23, 2001.

[b] See Table 2. New Surface Material not included.

**Table 2. Coring Log [a]**
**Sediment Investigation**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| Core Sample | GPS Location [b] North Latitude | | GPS Location [b] West Longitude | | Water Depth (feet MLLW) | Target Core Depth (feet below MLLW) [c] | Achieved Core Depth (feet below MLLW) | Target Core Length (feet) | Achieved Core Length (feet) | Sampling Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| T1 | 45° | 32.140' | 122° | 40.552' | 38.3 | 42.0 | 40.1 | 3.7 | 1.8 | Station moved from original location due to dredge depth exceedance. New location hit refusal. Only NSM material is shorted. |
| T2 | 45° | 32.120' | 122° | 40.505' | 38.4 | 42.0 | 42.0 | 3.6 | 3.6 | |
| T3 | 45° | 32.112' | 122° | 40.495' | 37.8 | 42.0 | 41.3 | 4.2 | 3.5 | Hit refusal. Only NSM material is shorted. |
| T4 | 45° | 32.085' | 122° | 40.488' | 36.0 | 42.0 | 38.0 | 6.0 | 2.0 | Station moved from original location due to dredge depth exceedance. New location hit refusal |

GPS Global Positioning System.
MLLW Mean Lower Low Water.
NSM New Surface Material.
° Degree.
' Feet.

[a] Sampling occurred on June 29, 2001.
[b] GPS coordinates determined via a differential Furuno FPS Plotter (Model GP-1810).
[c] Target Core Depth = 40' of Proposed Dredge Depth + 2' of NSM.



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**Table 3. Summary of Testing Results [a]**
**Sediment Investigation**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| Analyte | DMEF SL | Sample Location | | | | |
|---|---|---|---|---|---|---|
| | | Composite | T1 | T2 | T3 | T4 |
| **Conventionals** | | | | | | |
| Total Solids (%) | NA | 72.0 | 76.9 | 68.6 | 70.6 | 71.7 |
| Total Volatile Solids (%) | NA | 3.03 | 2.68 | 3.96 | 3.10 | 3.52 |
| Total Organic Carbon (TOC) (%) | NA | 0.67 | 0.60 | 0.82 | 0.40 | 0.72 |
| Total Sulfide (mg/kg) | NA | 2.3 | 0.9 | 3.0 | 2.1 | 2.9 |
| Ammonia (mg/kg) | NA | 108 | 152 | 112 | 94 | 65 |
| **Grain Size (%)** | | | | | | |
| Gravel | NA | 2.8 | 0.4 | 0.0 | 6.0 | 18.0 |
| Sand | NA | 75.5 | 86.9 | 69.0 | 72.9 | 58.2 |
| Silt | NA | 21.7 | 12.7 | 26.9 | 21.1 | 22.8 |
| Clay | NA | 0.0 | 0.0 | 4.1 | 0.0 | 1.0 |
| **Metals (mg/kg)** | | | | | | |
| Antimony | 150 | <0.11 | <0.12 | <0.09 | <0.08 | <0.15 |
| Arsenic | 57 | 2.3 | 2.1 | 3.1 | 2.2 | 2.7 |
| Cadmium | 5.1 | 0.21 | 0.26 | 0.32 | 0.26 | 0.24 |
| Chromium | NA | 20.2 | 21.5 | 21.8 | 16.8 | 20.5 |
| Copper | 390 | 20.2 | 20.2 | 26.4 | 20.5 | 24.4 |
| Lead | 450 | 15.7 | 15.0 | 14.4 | 15.1 | 35.0 |
| Mercury | 0.41 | 0.04 | 0.03 | 0.05 | 0.03 | 0.04 |
| Nickel | 140 | 19.9 | 22.0 | 22.8 | 20.2 | 19.7 |
| Silver | 6.1 | 0.359 | 0.219 | 0.303 | 0.103 | 0.144 |
| Zinc | 410 | 71.6 | 72.7 | 72.4 | 68.3 | 79.3 |
| **Interstitial Water Organotins (µg/kg)** | | | | | | |
| Tetrabutyltin | NA | <0.04 | NA | NA | NA | NA |
| Tributyltin | 0.15 | 0.058 | NA | NA | NA | NA |
| Dibutyltin | NA | <0.016 | NA | NA | NA | NA |
| Monobutyltin | NA | <0.012 | NA | NA | NA | NA |



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**Table 3. Summary of Testing Results [a]**
**Sediment Investigation**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| Analyte | DMEF SL | Sample Location: Composite | T1 | T2 | T3 | T4 |
|---|---|---|---|---|---|---|
| **Total Organotins (µg/kg)** | | | | | | |
| Tetrabutyltin | NA | 2.2 | 1.4 | 0.58 J | <0.5 | 0.61 J |
| Tributyltin | NA | 210 J | 200 J | 160 J | 12 J | 220 J |
| Dibutyltin | NA | 7.6 | 12 | 6.3 | 0.94 J | 6.9 |
| Monobutyltin | NA | 1.3 | 1.0 J | 1.3 J | <0.4 | 1.7 |
| **Polycyclic Aromatic Hydrocarbons (PAHs) (µg/kg)** | | | | | | |
| Naphthalene | 2,100 | 10 J | 8.1 J | 21 | 5.8 J | 20 J |
| Acenaphthylene | 560 | 8.5 J | 2.5 J | 12 J | 25 | 13 J |
| Acenaphthene | 500 | 14 J | 20 | 10 J | 6.7 J | 6.1 J |
| Fluorene | 540 | 18 | 29 | 13 J | 11 J | 9.2 J |
| Phenanthrene | 1,500 | 97 | 240 | 120 | 120 | 65 J |
| Anthracene | 960 | 23 | 46 | 26 | 48 | 22 J |
| 2-Methylnaphthalene | 670 | 10 J | 5.1 J | 9.8 J | <4.3 | 12 J |
| Total LPAHs | 5,200 | 181 | 351 | 212 | 217 | 147 |
| Fluoranthene | 1,700 | 87 | 380 | 160 | 190 | 71 J |
| Pyrene | 2,600 | 83 | 350 | 170 | 160 | 99 J |
| Benzo(a)anthracene | 1,300 | 50 | 310 | 86 | 120 | 29 J |
| Chrysene | 1,400 | 71 | 400 | 120 | 130 | 50 J |
| Benzo(k)fluoranthene | NA | 26 | 190 | 51 | 52 | 18 J |
| Benzo(b)fluoranthene | NA | 90 | 580 | 150 | 170 | 61 J |
| Benzo(b+k)fluoranthene | 3,200 | 116 | 770 | 201 | 222 | 79 J |
| Benzo(a)pyrene | 1,600 | 66 | 430 | 110 | 120 | 40 J |
| Indeno(1,2,3-cd)pyrene | 600 | 60 | 370 | 100 | 82 | 29 J |
| Dibenzo(a,h)anthracene | 230 | 14 | 97 | 22 | 23 | 7.9 J |
| Benzo(g,h,i)perylene | 670 | 65 | 350 | 100 | 70 | 36 J |
| Total HPAHs | 12,000 | 612 | 3,457 | 1,069 | 1,117 | 441 |
| **Chlorinated Hydrocarbons (µg/kg)** | | | | | | |
| 1,3-Dichlorobenzene | 170 | <0.93 | <0.87 | <0.98 | <0.95 | <0.93 |



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**Table 3. Summary of Testing Results [a]**
**Sediment Investigation**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| Analyte | DMEF SL | Sample Location: Composite | T1 | T2 | T3 | T4 |
|---|---|---|---|---|---|---|
| 1,4-Dichlorobenzene | 110 | <1.1 | <0.96 | <1.1 | <1.1 | <1.1 |
| 1,2-Dichlorobenzene | 35 | <0.90 | <0.84 | <0.95 | <0.92 | <0.90 |
| 1,2,4-Trichlorobenzene | 31 | <0.86 | <0.80 | <0.90 | <0.87 | <0.86 |
| Hexachlorobenzene (HCB) | 22 | <4.2 | <4.0 | <4.4 | <4.3 | <4.2 J |
| **Phthalates (µg/kg)** | | | | | | |
| Dimethyl phthalate | 1,400 | 5.4 J | <3.4 | <3.8 | <3.7 | <3.6 J |
| Diethyl phthalate | 1,200 | <4.3 | <4.0 | <4.5 | <4.3 | <4.3 J |
| Di-n-butyl phthalate | 5,100 | <3.6 | <3.4 | 4.8 J | <3.7 | 8.1 J |
| Butyl benzyl phthalate | 970 | <2.0 | <1.8 | 14 J | <2.0 | <2.0 J |
| Bis(2-ethylhexyl)phthalate | 8,300 | <180 | 220 J | <180 | <180 | <180 J |
| Di-n-octyl phthalate | 6,200 | <2.3 | <2.2 | <2.4 | <2.3 | <2.3 J |
| **Phenols (µg/kg)** | | | | | | |
| Phenol | 420 | <44 | <43 | <46 | <38 J | <27 J |
| 2-Methylphenol | 63 | <3.4 | <3.1 | <3.5 | <3.4 | <3.4 J |
| 4-Methylphenol | 670 | 50 | 24 | 54 | 17 | 16 J |
| 2,4-Dimethylphenol | 29 | <21 J | <20 J | <23 J | <22 J | <22 J |
| Pentachlorophenol | 400 | <3.2 | <3.0 | 16 J | <3.3 | <3.2 J |
| **Miscellaneous Extractables (µg/kg)** | | | | | | |
| Benzyl alcohol | 57 | 5.7 J | <3.6 | 8.8 J | 5.6 J | 5.2 J |
| Benzoic acid | 650 | 110 J | 82 J | 130 J | 75 J | 73 J |
| Dibenzofuran | 540 | 9.2 J | 12 J | 8.3 J | 4.2 J | 9.4 J |
| Hexachloroethane | 1,400 | <3.2 | <3.0 | <3.4 | <3.3 | <3.3 J |
| Hexachlorobutadiene | 29 | <3.9 | <3.6 | <4.1 | <3.9 | <3.9 J |
| N-Nitrosodiphenylamine | 28 | <3.4 | <3.2 | <3.6 | <3.5 | <3.4 J |
| **Organochlorine Pesticides (µg/kg)** | | | | | | |
| 4,4'-DDE | NA | <0.35 | <0.32 | <0.36 | 0.81 J | <0.92 |

**Table 3. Summary of Testing Results [a]**
**Sediment Investigation**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| Analyte | DMEF SL | Sample Location: Composite | T1 | T2 | T3 | T4 |
|---|---|---|---|---|---|---|
| 4,4'-DDD | NA | <1.4 | <0.20 | <0.73 | **0.69** J | <0.22 |
| 4,4'-DDT | NA | <1.3 | <1.1 | <0.68 | **0.92** J | <2.2 |
| Total DDT | 6.9 | <3.05 | <1.62 | <1.77 | **2.42** | <3.34 |
| Aldrin | 10 | <0.66 | <0.31 | <0.34 | <0.34 | <0.33 |
| gamma-Chlordane | 10 | <0.56 | <1.3 | <0.22 | <0.21 | <0.21 |
| alpha-Chlordane | 10 | <0.15 | <0.41 | <0.16 | <0.16 | <0.15 |
| Dieldrin | 10 | <0.48 J | <0.40 J | <0.45 J | <0.44 J | <1.6 J |
| Heptachlor | 10 | <0.19 | <0.18 | <0.20 | <0.20 | <0.19 |
| gamma-BHC (Lindane) | 10 | <0.34 | <0.32 | <0.36 | <0.35 | <0.34 |
| **Polychlorinated Biphenyls (PCBs) (µg/kg)** | | | | | | |
| Aroclor 1016 | NA | <3.4 | <3.1 | <3.5 | <3.4 | <3.4 |
| Aroclor 1221 | NA | <3.4 | <3.1 | <3.5 | <3.4 | <3.4 |
| Aroclor 1232 | NA | <3.4 | <3.1 | <3.5 | <3.4 | <3.4 |
| Aroclor 1242 | NA | **24** | <19 | <3.5 | <3.4 | <3.4 |
| Aroclor 1248 | NA | <3.4 | <21 | <3.5 | <3.4 | <3.4 |
| Aroclor 1254 | NA | <3.4 | **35** | **15** J | **8.3** J | <3.4 |
| Aroclor 1260 | NA | **24** | **38** | **10** J | **5.1** J | **130** |
| Total PCBs | 130 | **48** | **73** | **25** | **13** | **130** |

| | |
|---|---|
| mg/kg | Milligrams per kilogram. |
| µg/kg | Micrograms per kilogram. |
| <100 | Not detected at the indicated reporting limit. |
| % | Percent. |
| J | Estimated value. |
| DMEF | Dredged material evaluation framework (*USACE, 1998*). |
| NA | Not available. |
| SL | Screening level. |
| [ ] | Detected values are boxed and in bold type. |

[a] All chemistry results are expressedin dry weight except for total solids (reported as received).

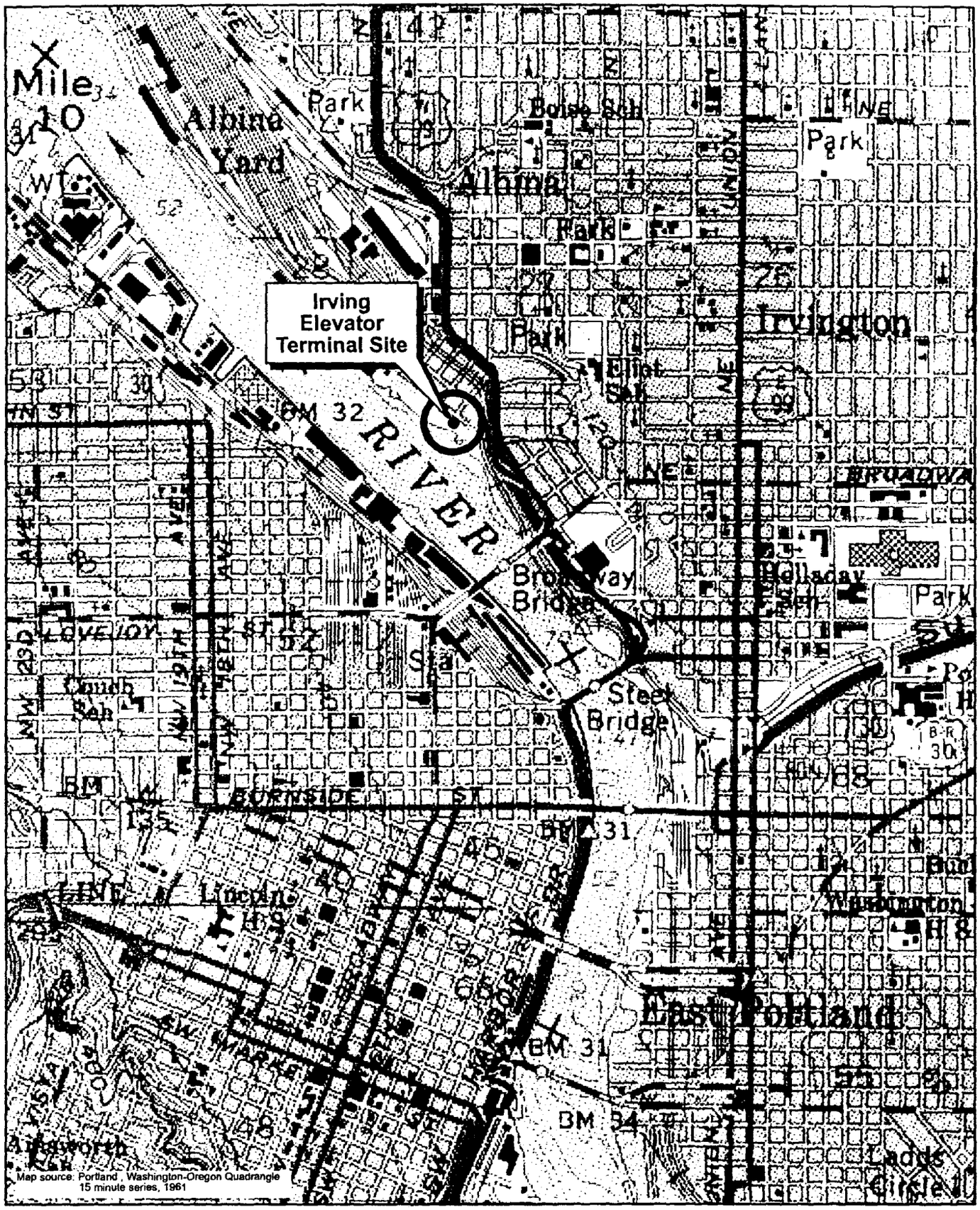


CARG002117

FIGURES

CARG002118

**FIGURES**



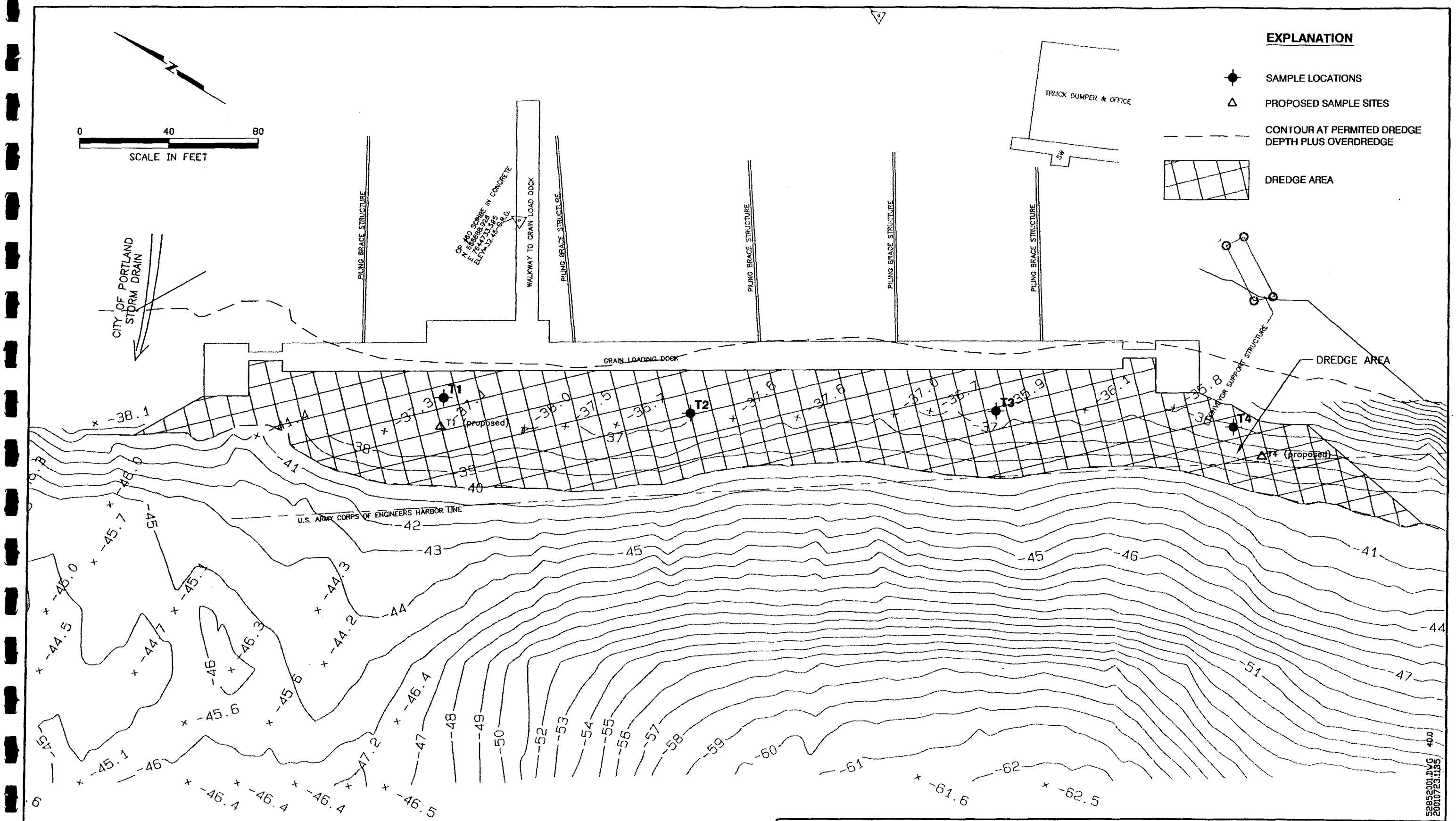

Harding ESE
A MACTEC COMPANY

**Site Overview**
Cargill Irving Elevator Terminal
Portland, Oregon

FIGURE
**1**

| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED |
|---|---|---|---|---|
| DjP | 52852 004 | | 07/01 | |

CARG002120




Harding ESE
A MACTEC COMPANY

**Dredging Area and Sampling Locations**
Irving Elevator Terminal
Portland, Oregon

FIGURE
**2**

| DRAWN | JOB NUMBER | APPROVED | DATE | REVISED DATE |
|---|---|---|---|---|
| CN | 52852 004 | | 7/01 | |

CARG002121

**APPENDIX A**

CARG002122

# APPENDIX A

# CORE LOGS

CONTENTS


| PAGE | Phase I REFERENCE | DATE |
|---|---|---|
| 1-26 | OARB OU4 Sediment Sampling | 6/5-9/2000 |
| 28-56 | Port of S.F. Pier 94/95, 80, 35 Sediment Sampling | 7/5-[illegible] |
| 58-61 | OARB OU4 Phase II Sediment Sampling | [illegible] |
| 63-76 | East Fort Baker Horseshoe Bay Sampling | 11/[illegible]/00 - [illegible] |
| 77-95 | Port of S.F. Pier 35E Sediment Sampling | 6/5/01-6/6/01 |
| 96-116 | Chevron Long Wharf Berths 1,2,3,4 and Barquerry Sediment Sampling | 6/25-27/01 |
| 118-123 | Cargill Irving Elevator Terminal | 6/29/01 |

Cargill Irving Elevator Terminal
6/29/01

Samplers: Josh Gravenmier (JG) West Coast Seaworks (WCS) and Terra Hydro (TH)

On boat @ 0810
Safety Meeting @ 0820

Weather conditions: calm, clear, sunny

GPS make & model: Furuno GPS Plotter GP-1810

Sampling locations determined via line of sight

Dredge Depth: 38'
Overdredge: 2'
New Surface 2'

Total Core Depth needed: -42' MLLW

The NSM (-40-42' sediment) needs to be isolated from the sediment recovered from 40' and above.



Cargill Irving Elevator Terminal
6/29/01 JG, WCS, TH

Sample ID: T1

Latitude: 45° 32.140' N
Longitude: 122° 40.552' W
Time: 0900
Water Depth: 39.0'
Tide Height: +0.66'
MLLW: 38.34'

Target Core Length: 3.66' (1.66'+2')
Vibracore Penetration: 4.5'
Recovered Core Length: 1.8 hit refusal.

Notes: Initial location yielded a 45' MLLW which was too deep. Moved sample closer to pier to achieve proper depth. Sample is all sand. ~~WCS~~ Will try a second attempt. Second attempt only retrieved 1.5', will keep 1st attempt and indicate that refusal was hit for location

Cargill Irving Elevator Terminal
6/29/01 JG, WCS, TH

Sample ID: T2

Latitude: 45° 32.120 N
Longitude: 122° 40.505 W
Time: 1020
Water Depth: 38.8
Tide Height: +0.43
MLLW: 38.37

Target Core Length: 3.03 (1.03'+2')
Vibracore Penetration: 4'
Recovered Core Length: 3.03

Notes: sand plug on bottom, some mud on top, vibracore is driving into sediment deep enough

Cargill Irving Elevator Terminal
6/29/01 JG, WCS, TH

Sample ID: T3

Latitude: 45° 32.1[illegible] N
Longitude: 122° 40.495 W
Time: 1100
Water Depth: 38.2
Tide Height: +0.35
MLLW: 37.85

Target Core Length: 4.15' (2.15'+2')
Vibracore Penetration: ~4'
Recovered Core Length: 3.5'

Notes: hit sand plug on bottom, will try again. vibracore is driving into sediment deep enough but plugging in two on the way down 2nd attempt @ 1115

Cargill Irving Elevator Terminal
6/29/01 [signature] JG, WCS, TH

Sample ID T4

Latitude: 45° 32.085 N
Longitude: 122° 40.488 W
Time: 1148
Water Depth: 36.5
Tide Height: +0.49
MLLW: 36'

Target Core Length: 6'
Vibracore Penetration: 2'
Recovered Core Length: 2'

Notes: Original location was too deep. moved closer to get a shallower depth. Hit refusal, gravel tip. Will try again 2nd attempt @ 1210 pm, moved to another location, a little further out but also hit refusal; will keep less location material and indicate refusal. hitting gravel, unable to get NSM



Cargill Irving Elevator Terminal
6/29/01 [signature] JG, WCS, TH

End of sampling & disembark to shore @ 12:45.

Will process samples on shore

Composite completed @ 1435
T1 @ 1330
all sand, no odor, piece of plastic container top @ 0.5' depth.

T2 @ 1345
0-1' silty sand w/slight OM odor
1-3.5 sand

T3 @ 1400
0-2' sand w/slight OM odor
2-3.5 sand w/gravel

T4 @ 1420
0-1 sand w/shell hash & plant material
1-2 sand w gravel

**APPENDIX B**

CARG002128

# APPENDIX B

# CHAIN OF CUSTODY FORMS

Harding Lawson Associates
90 Digital Drive
Novato, CA 94949
(415) 883-0112

# CHAIN OF CUSTODY FORM
for Sample Collection

Seq. No.: № 1080

Lab:

Samplers: Josh Gravenmier

Job Number: 52852.002

Name/Location: Cargill Irving Elevator Terminal

Project Manager: Josh Gravenmier

Recorder: (Signature Required)

| MATRIX | | | #CONTAINERS & PRESERV. | | | | | SAMPLE NUMBER | | DATE | | | | STATION DESCRIPTION | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Water | Soil | Air | Unpres | $H_2SO_4$ | $HNO_3$ | HCL | | YR | SEQ | YR | MO | DAY | TIME | | DEPTH |
| | X | | X | | | | | 01 | T1 | 01 | 06 | 29 | 0900 | | |
| | X | | X | | | | | 01 | T2 | 01 | 06 | 29 | 1020 | | |
| | X | | X | | | | | 01 | T3 | 01 | 06 | 29 | 1100 | | |
| | X | | X | | | | | 01 | T4 | 01 | 06 | 29 | 1148 | | |

ANALYSIS REQUESTED

| Gasoline Range Organics 8015B | Diesel Range Organics 8015B | BTEX plus MTBE | CCR Title 22 Metals (17) | EPA 8021B | EPA 8260B | EPA 8270C |
|---|---|---|---|---|---|---|
| | | | | | | |

ADDITIONAL INFORMATION

| SAMPLE NUMBER YR | SAMPLE NUMBER SEQ | TURNAROUND TIME/REMARKS |
|---|---|---|
| | | |

CHAIN OF CUSTODY RECORD

| | | | |
|---|---|---|---|
| | | | Date/Time |
| Relinquished By (signature) | (Print Name) | (Company) | Date/Time |
| Received By (signature) | (Print Name) | (Company) | Date/Time |
| Relinquished By (signature) | (Print Name) | (Company) | Date/Time |
| Received By (signature) | (Print Name) | (Company) | Date/Time |
| Relinquished By (signature) | (Print Name) | (Company) | Date/Time |
| Received By (signature) | (Print Name) | (Company) | Date/Time |
| Received By (signature) | (Print Name) | (Company) | Date/Time |

Method of Shipment:

Laboratory Copy *White* | Project Office Copy *Yellow* | Field or Office Copy *Pink*

08/01/01 WED 18:14 FAX CAS KELSO

HLA
Harding Lawson Associates
90 Digital Drive
Novato, CA 94949
(415) 883-0112

# CHAIN OF CUSTODY FORM

K2104659

Seq. No.: № 1081 [Collection COC #1080]

Lab: CAS

Samplers: Josh Gravenmier

Job Number: 52852.002

Name/Location: Cargill Irving Elevator Terminal

Project Manager: Josh Gravenmier

Recorder: [signature] (Signature Required)

| | MATRIX: Water | Soil | Air | #CONTAINERS & PRESERV.: Unpres | $H_2SO_4$ | $HNO_3$ | HCL | SAMPLE NUMBER: YR | SEQ | DATE: YR | MO | DAY | TIME | STATION DESCRIPTION | DEPTH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | X | | X | | | | 01 | COMPOSITE | 01 | 06 | 29 | 1435 | 4x32oz | |
| 2 | | X | | X | | | | 01 | T1 | 01 | 06 | 29 | 0900 | 2x32oz | |
| 3 | | X | | X | | | | 01 | T2 | 01 | 06 | 29 | 1020 | 2x32oz | |
| 4 | | X | | X | | | | 01 | T3 | 01 | 06 | 29 | 1100 | 2x32oz | |
| 5 | | X | | X | | | | 01 | T4 | 01 | 06 | 29 | 1148 | 2x32oz | |

ANALYSIS REQUESTED

| Gasoline Range Organics 8015B | Diesel Range Organics 8015B | BTEX plus MTBE | ~~[illegible]~~ EPA 60.3/8260 | ~~[illegible]~~ ASTM D422 | EPA 8260B (Chlorinated Vol's) | EPA 8270 SIM (PSDDA list) | EPA 200.8 (Sb, As, Cd, Cr, Cu, Pb, Ni, Ag, Zn) | EPA 7471 (Hg) | Organotin Pow. Water Ext. (Acid) | Organotin (Krone) | EPA 8081A (Low Level) | EPA 8082 (PCBs) | ASTM D4129 M/PSEP (TOC) | EPA 160.4/PSEP (TVS) | EPA 350.1/Plumb (Ammonia) | PSEP 19030M (Sulfides) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

ADDITIONAL INFORMATION

| SAMPLE NUMBER: YR | SEQ | TURNAROUND TIME/REMARKS |
|---|---|---|
| | | Normal TAT |
| | | Level III Data Package Deliverable |
| | | Use composites for QA Sample |
| | | Report on a dry weight basis |

CHAIN OF CUSTODY RECORD

| Relinquished By: (signature) | (Print Name) | (Company) | Date/Time |
|---|---|---|---|
| [signature] | Josh Gravenmier | Harding ESE | 6/29/01 1510 |
| Received By: (signature) | (Print Name) | (Company) | Date/Time |
| [signature] | Frank Air | CAS | 6/30/01 0930 |
| Relinquished By: (signature) | (Print Name) | (Company) | Date/Time |
| Received By: (signature) | (Print Name) | (Company) | Date/Time |
| Relinquished By: (signature) | (Print Name) | (Company) | Date/Time |
| Received By: (signature) | (Print Name) | (Company) | Date/Time |
| Received By: (signature) | (Print Name) | (Company) | Date/Time |

Method of Shipment:

Laboratory Copy White | Project Office Copy Yellow | Field or Office Copy Pink

00291.1

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Form

Project/Client HLA Work Order K21 04659

Cooler received on 10/30/01 and opened on 10/30/01 by Ap

1. Were custody seals on outside of cooler? — COURIER YES NO
   If yes, how many and where? —
2. Were seals intact and signature & date correct? — YES NO
3. COC #
   Temperature of cooler(s) upon receipt: 4.4 0.0
   Temperature Blank: 3.8 5.5
4. Were custody papers properly filled out (ink, signed, etc.)? YES NO
5. Type of packing material present INSERT
6. Did all bottles arrive in good condition (unbroken)? YES NO
7. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
8. Did all bottle labels and tags agree with custody papers? YES NO
9. *Were the correct types of bottles used for the tests indicated?* YES NO
10. Were all of the preserved bottles received at the lab with the appropriate pH? ~~YES NO~~
11. Were VOA vials checked for absence of air bubbles, and if present, noted below? ~~YES NO~~
12. Did the bottles originate from CAS/K or a branch laboratory? YES NO

Explain any discrepancies

Samples that required preservation or received out of temperature:

| Sample ID | Reagent | Volume | Lot Number | Bottle Type | Rec'd out of Temperature | Initials |
|---|---|---|---|---|---|---|
| | | | | | | |
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CREREV.DOC1/2/01
08/01/01 WED 18:14 FAX CAS KELSO 003
CARG002132

Harding Lawson Associates
90 Digital Drive
Novato, CA 94949
(415) 883-0112

# CHAIN OF CUSTODY FORM

Seq. No.: Nº 1082

Collection COC #1030

Lab: Retain (4°C) & (-20°C)

Samplers: Josh Gravenmier

Job Number: 52852.002

Name/Location: Cargill Irving Elevator Terminal

Project Manager: Josh Gravenmier

Recorder: (Signature Required)

| MATRIX | | | #CONTAINERS & PRESERV. | | | | | SAMPLE NUMBER | | DATE | | | | STATION DESCRIPTION | | ANALYSIS REQUESTED | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Water | Soil | Air | Unpres | $H_2SO_4$ | $HNO_3$ | HCL | | YR | SEQ | YR | MO | DAY | TIME | | DEPTH | Gasoline Range Organics 8015B | Diesel Range Organics 8015B | BTEX plus MTBE | CCR Title 22 Metals (17) | EPA 8021B | EPA 8260B | EPA 8270C | Retain (4°C) | | Retain (-20°C) | | | | | | |
| | X | | X | | | | | 01 | COMPOSITE | 01 | 06 | 29 | 1435 | | | | | | | | | | X | | | | | | | | |
| | X | | X | | | | | 01 | T1 | 01 | 06 | 29 | 0900 | | | | | | | | | | X | | | | | | | | |
| | X | | X | | | | | 01 | T2 | 01 | 06 | 29 | 1020 | | | | | | | | | | X | | | | | | | | |
| | X | | X | | | | | 01 | T3 | 01 | 06 | 29 | 1100 | | | | | | | | | | X | | | | | | | | |
| | X | | X | | | | | 01 | T4 | 01 | 06 | 29 | 1148 | | | | | | | | | | X | | | | | | | | |
| | X | | X | | | | | 01 | T1-NSM | 01 | 06 | 29 | 0900 | | | | | | | | | | | | X | | | | | | |
| | X | | X | | | | | 01 | T2-NSM | 01 | 06 | 29 | 1020 | | | | | | | | | | | | X | | | | | | |
| | X | | X | | | | | 01 | T3-NSM | 01 | 06 | 29 | 1100 | | | | | | | | | | | | X | | | | | | |
| | X | | X | | | | | 01 | T4-NSM | 01 | 06 | 29 | 1148 | | | | | | | | | | | | X | | | | | | |

## ADDITIONAL INFORMATION

| SAMPLE NUMBER YR | SAMPLE NUMBER SEQ | TURNAROUND TIME/REMARKS |
|---|---|---|
| | | Hold Time Expiration Dates |
| | | 4°C → August 24, 2001 |
| | | -20°C → June 29, 2002 |

## CHAIN OF CUSTODY RECORD

| | | | |
|---|---|---|---|
| | | | Date/Time |
| Relinquished By (signature) | (Print Name) | (Company) | Date/Time |
| Received By: (signature) | (Print Name) | (Company) | Date/Time |
| Relinquished By (signature) | (Print Name) | (Company) | Date/Time |
| Received By: (signature) | (Print Name) | (Company) | Date/Time |
| Relinquished By (signature) | (Print Name) | (Company) | Date/Time |
| Received By: (signature) | (Print Name) | (Company) | Date/Time |
| Received By: (signature) | (Print Name) | (Company) | Date/Time |

Method of Shipment:

Laboratory Copy White | Project Office Copy Yellow | Field or Office Copy Pink

CARG002133

# APPENDIX C

CARG002134

# APPENDIX C

# CHEMICAL AND PHYSICAL ANALYSIS REPORT

## Inorganic Data Qualifiers

| | |
|---|---|
| * | The result is an outlier. See case narrative. |
| # | The control limit criteria is not applicable. See case narrative. |
| B | The analyte was found in the associated method blank at a level that is significant relative to the sample result. |
| E | The result is an estimate amount because the value exceeded the instrument calibration range. |
| J | The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL. |
| U | The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. |
| i | The MRL/MDL has been elevated due to a matrix interference. |
| X | See case narrative. |

## Metals Data Qualifiers

| | |
|---|---|
| # | The control limit criteria is not applicable. See case narrative. |
| B | The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL. |
| E | The reported value is estimated because of the presence of matrix interference. |
| M | The duplicate injection precision was not met. |
| N | The Matrix Spike sample recovery is not within control limits. See case narrative. |
| S | The reported value was determined by the Method of Standard Additions (MSA). |
| U | The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. |
| W | The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance. |
| i | The MRL/MDL has been elevated due to a matrix interference. |
| X | See case narrative. |
| * | The duplicate analysis not within control limits. See case narrative. |
| + | The correlation coefficient for the MSA is less than 0.995. |

## Organic Data Qualifiers

| | |
|---|---|
| * | The result is an outlier. See case narrative. |
| # | The control limit criteria is not applicable. See case narrative. |
| A | A tentatively identified compound, a suspected aldol-condensation product. |
| B | The analyte was found in the associated method blank at a level that is significant relative to the sample result. |
| C | The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data. |
| D | The reported result is from a dilution. |
| E | The result is an estimate amount because the value exceeded the instrument calibration range. |
| J | The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL. |
| N | The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed. |
| P | The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides). |
| U | The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. |
| i | The MRL/MDL has been elevated due to a chromatographic interference. |
| X | See case narrative. |

## Additional Petroleum Hydrocarbon Specific Qualifiers

| | |
|---|---|
| F | The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard. |
| L | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard. |
| H | The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard. |
| O | The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard. |
| Y | The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard. |
| Z | The chromatographic fingerprint does not resemble a petroleum product. |

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Eleva/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659

### Total Solids

**Prep Method:** NONE
**Analysis Method:** 160.3M
**Test Notes:**

**Units:** PERCENT
**Basis:** WET

| Sample Name | Lab Code | Date Collected | Date Received | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|
| 01-Composite | K2104659-001 | 06/29/2001 | 06/30/2001 | 07/03/2001 | 72.0 | |
| 01-T1 | K2104659-002 | 06/29/2001 | 06/30/2001 | 07/03/2001 | 76.9 | |
| 01-T2 | K2104659-003 | 06/29/2001 | 06/30/2001 | 07/03/2001 | 68.6 | |
| 01-T3 | K2104659-004 | 06/29/2001 | 06/30/2001 | 07/03/2001 | 70.6 | |
| 01-T4 | K2104659-005 | 06/29/2001 | 06/30/2001 | 07/03/2001 | 71.7 | |

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Eleva/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |
| | | **Date Analyzed:** | 07/03/2001 |

**Duplicate Sample Summary**
**Total Solids**

| | | | |
|---|---|---|---|
| **Prep Method:** | NONE | **Units:** | PERCENT |
| **Analysis Method:** | 160.3M | **Basis:** | WET |
| **Test Notes:** | | | |

| Sample Name | Lab Code | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|
| 01-Composite | K2104659-001 | 72.0 | 71.7 | 71.9 | <1 ✓ | |

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/01
**Date Received:** 6/30/01

### Solids, Total Volatile

Prep Method: NONE
Analysis Method: 160.4M
Test Notes:

Units: PERCENT
Basis: DRY

| Sample Name | Lab Code | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|
| 01-Composite | K2104659-001 | 7/3/01 | 3.03 | |
| 01-T1 | K2104659-002 | 7/3/01 | 2.68 | |
| 01-T2 | K2104659-003 | 7/3/01 | 3.96 | |
| 01-T3 | K2104659-004 | 7/3/01 | 3.10 | |
| 01-T4 | K2104659-005 | 7/3/01 | 3.52 | |

Approved By: _____ Date: 7/11/01

Total Solids/060595
Tvsoldod2 - TVS 7/11/01

Page No.:

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/01
**Date Received:** 6/30/01

Duplicate Summary
Solids, Total Volatile

Prep Method: NONE
Analysis Method: 160.4M
Test Notes:

Units: PERCENT
Basis: WET

| Sample Name | Lab Code | Date Analyzed | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|
| 01-Composite | K2104659-001 | 7/3/01 | 3.03 | 3.24 | 3.14 | 7 ✓ | |

Approved By: _____ Date: 7/11/01

Total Solids/060595
Tvsoldod2 - TVS DUP 7/11/01

Page No.:

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/01
**Date Received:** 6/30/01

Carbon, Total Organic

Prep Method: NONE
Analysis Method: PSEP
Test Notes:

Units: PERCENT
Basis: Dry

| Sample Name | Lab Code | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| 01-Composite | K2104659-001 | 0.05 | 0.02 | 1 | NA | 7/12/01 | 0.67 | |
| 01-T1 | K2104659-002 | 0.05 | 0.02 | 1 | NA | 7/12/01 | 0.60 | |
| 01-T2 | K2104659-003 | 0.05 | 0.02 | 1 | NA | 7/12/01 | 0.82 | |
| 01-T3 | K2104659-004 | 0.05 | 0.02 | 1 | NA | 7/12/01 | 0.40 | |
| 01-T4 | K2104659-005 | 0.05 | 0.02 | 1 | NA | 7/12/01 | 0.72 | |
| Method Blank | K2104659-MB | 0.05 | 0.02 | 1 | NA | 7/12/01 | ND | |

Approved By: _____ Date: 7/24/01

1A/020597p
04659WET.PW3 - Sample 7/18/01

Page No.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/01
**Date Received:** 6/30/01
**Date Extracted:** NA
**Date Analyzed:** 7/12/01

Duplicate Summary
Carbon, Total Organic

Sample Name: 01-Composite
Lab Code: K2104659-001DUP
Test Notes:

Units: PERCENT
Basis: Dry

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | NONE | PSEP | 0.05 | 0.67 | 0.66 | 0.66 | 2 | |

Approved By: _____ Date: 7/24/01

04659WET.PW3 - DUP 7/18/01

Page No.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/01
**Date Received:** 6/30/01
**Date Extracted:** NA
**Date Analyzed:** 7/12/01

Triplicate Summary
Carbon, Total Organic

Sample Name: 01-Composite
Lab Code: K2104659-001MS
Test Notes:

Units: PERCENT
Basis: Dry

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Triplicate Sample Result | Average | Relative Standard Deviation | Result Notes |
|---|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | NONE | PSEP | 0.05 | 0.67 | 0.66 | 0.65 | 0.66 | 2 | |

Approved By: _____ Date: 1/24/01

04659WET.PW3 - TRP 7/18/01

Page No..

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 6/29/01 |
| **Sample Matrix:** | Sediment | **Date Received:** | 6/30/01 |
| | | **Date Extracted:** | NA |
| | | **Date Analyzed:** | 7/12/01 |

Matrix Spike Summary
Carbon, Total Organic

| | | | |
|---|---|---|---|
| Sample Name: | 01-Composite | Units: | PERCENT |
| Lab Code: | K2104659-001MS | Basis: | Dry |
| Test Notes: | | | |

| Analyte | Prep Method | Analysis Method | MRL | Spike Level | Sample Result | Spiked Sample Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | NONE | PSEP | 0.05 | 2.79 | 0.67 | 3.69 | 108 ✓ | 75-125 | |

Approved By: _____ Date: 7/24/01

04659WET.PW3 - MS 7/18/01

Page No.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | NA |
| **LCS Matrix:** | Sediment | **Date Received:** | NA |
| | | **Date Extracted:** | NA |
| | | **Date Analyzed:** | 7/12/01 |

Laboratory Control Sample Summary
Carbon, Total Organic

| | | | |
|---|---|---|---|
| Sample Name: | Lab Control Sample | Units: | PERCENT |
| Lab Code: | K2104659-LCS | Basis: | Dry |
| Test Notes: | | | |

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Carbon, Total Organic | NONE | PSEP | 1.16 | 1.07 | 92 | 85-115 | |

Approved By: _____ Date: 7/24/01

LCS/020507 0659WET.PW3 - LCS 7/18/01

Page No.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** K2104659
**Date Collected:** NA
**Date Received:** NA
**Date Analyzed:** 7/12/01

Carbon, Total Organic
PSEP
Units: PERCENT
Dry Weight Basis

**CONTINUING CALIBRATION VERIFICATION (CCV)**

| | True Value | Measured Value | Percent Recovery |
|---|---|---|---|
| CCV 2 Result | 20.0 | 19.5 | 98 |
| CCV 3 Result | 20.0 | 19.4 | 97 |
| CCV 4 Result | 20.0 | 19.1 | 96 |

**CONTINUING CALIBRATION BLANK (CCB)**

| | MRL | Blank Value |
|---|---|---|
| CCB 1 Result | 0.05 | ND |
| CCB 2 Result | 0.05 | ND |
| CCB 3 Result | 0.05 | ND |

Approved By: _____ Date: 7/24/01

COMBOQCD/042695
Q-CCV.XLT

10/6/95

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/01
**Date Received:** 6/30/01

Sulfide

Prep Method: NONE
Analysis Method: PSEP
Test Notes:

Units: mg/Kg (ppm)
Basis: Dry

| Sample Name | Lab Code | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| 01-Composite | K2104659-001 | 1.0 | 1.0 | 1 | NA | 7/5/01 | 2.3 | |
| 01-T1 | K2104659-002 | 1.0 | 1.0 | 1 | NA | 7/5/01 | 0.9 | |
| 01-T2 | K2104659-003 | 1.0 | 1.0 | 1 | NA | 7/5/01 | 3.0 | |
| 01-T3 | K2104659-004 | 1.0 | 1.0 | 1 | NA | 7/5/01 | 2.1 | |
| 01-T4 | K2104659-005 | 1.0 | 1.0 | 1 | NA | 7/5/01 | 2.9 | |
| Method Blank | K2104659-MB | 1.0 | 1.0 | 1 | NA | 7/5/01 | ND | |

Approved By: _____ Date: 7/24/01

1A/020597p
04659WET.PW2 - Sample 7/18/01

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/01
**Date Received:** 6/30/01
**Date Extracted:** NA
**Date Analyzed:** 7/5/01

Duplicate Summary
Inorganic Parameters

Sample Name: 01-Composite
Lab Code: K2104659-001DUP
Test Notes:

Units: mg/Kg (ppm)
Basis: Dry

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Sulfide | NONE | PSEP | 1.0 | 2.3 | 2.4 | 2.4 | 4 | |

Approved By: _____ Date: 7/24/01

04659WET.PW2 - DUP 7/18/01

Page No.:

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 6/29/01 |
| **Sample Matrix:** | Sediment | **Date Received:** | 6/30/01 |
| | | **Date Extracted:** | NA |
| | | **Date Analyzed:** | 7/5/01 |

Triplicate Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name: | 01-Composite | Units: | mg/Kg (pp |
| Lab Code: | K2104659-001MS | Basis: | Dry |
| Test Notes: | | | |

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Triplicate Sample Result | Average | Relative Standard Deviation | Result Notes |
|---|---|---|---|---|---|---|---|---|---|
| Sulfide | NONE | PSEP | 1.0 | 2.3 | 2.4 | 2.4 | 2.4 | 2 | |

Approved By: _____ Date: 7/24/01

04659WET.PW2 - TRP 7/18/01

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 6/29/01 |
| **Sample Matrix:** | Sediment | **Date Received:** | 6/30/01 |
| | | **Date Extracted:** | NA |
| | | **Date Analyzed:** | 7/5/01 |

Matrix Spike Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name: | 01-Composite | Units: | mg/Kg (ppm) |
| Lab Code: | K2104659-001MS | Basis: | Dry |
| Test Notes: | | | |

| Analyte | Prep Method | Analysis Method | MRL | Spike Level | Sample Result | Spiked Sample Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|---|---|
| Sulfide | NONE | PSEP | 50 | 172 | 2.3 | 207 | 119 ✓ | 75-125 | |

Approved By: _____ Date: 7/24/01

04659WET.PW2 - MS 7/18/01

Page No.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | NA |
| **LCS Matrix:** | Water | **Date Received:** | NA |
| | | **Date Extracted:** | NA |
| | | **Date Analyzed:** | 7/5/01 |

Laboratory Control Sample Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name: | Lab Control Sample | Units: | mg/L (ppm) |
| Lab Code: | K2104659-LCS | Basis: | NA |
| Test Notes: | | | |

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Sulfide | NONE | PSEP | 0.49 | 0.56 | 114 | 85-115 | |

Approved By: _____ Date: 7/24/01

LCS/020[illegible]59WET.PW2 - LCS 7/18/01

Page No.

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** K2104659
**Date Collected:** NA
**Date Received:** NA
**Date Analyzed:** 7/5/01

Sulfide
PSEP
Units: mg/L (ppm)

### CONTINUING CALIBRATION VERIFICATION (CCV)

| | True Value | Measured Value | Percent Recovery |
|---|---|---|---|
| CCV 1 Result | 0.49 | 0.49 | 100 |
| CCV 2 Result | 0.49 | 0.48 | 96 |

### CONTINUING CALIBRATION BLANK (CCB)

| | MRL | Blank Value |
|---|---|---|
| CCB 1 Result | 0.05 | ND |
| CCB 2 Result | 0.05 | ND |

Approved By: _____ Date: 7/24/01

COMBOQCD/042695
Q-CCV.XLT

10/6/95

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/01
**Date Received:** 6/30/01

Ammonia as Nitrogen

Prep Method: NONE
Analysis Method: Plumb
Test Notes:

Units: mg/Kg (ppm)
Basis: Dry

| Sample Name | Lab Code | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| 01-Composite | K2104659-001 | 1 | 1 | 1 | NA | 7/6/01 | 108 | |
| 01-T1 | K2104659-002 | 1 | 1 | 1 | NA | 7/6/01 | 152 | |
| 01-T2 | K2104659-003 | 1 | 1 | 1 | NA | 7/6/01 | 112 | |
| 01-T3 | K2104659-004 | 1 | 1 | 1 | NA | 7/6/01 | 94 | |
| 01-T4 | K2104659-005 | 1 | 1 | 1 | NA | 7/6/01 | 65 | |
| Method Blank | K2104659-MB | 1 | 1 | 1 | NA | 7/6/01 | ND | |

Approved By: _____ Date: 7/24/01

1A/020597p
04659WET.PW1 - Sample 7/18/01

Page No.:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/01
**Date Received:** 6/30/01
**Date Extracted:** NA
**Date Analyzed:** 7/6/01

Duplicate Summary
Inorganic Parameters

Sample Name: 01-Composite
Lab Code: K2104659-001DUP
Test Notes:

Units: mg/Kg (ppm)
Basis: Dry

| Analyte | Prep Method | Analysis Method | MRL | Sample Result | Duplicate Sample Result | Average | Relative Percent Difference | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Ammonia as Nitrogen | NONE | Plumb | 1 | 108 | 111 | 110 | 3 | |

Approved By: _____ Date: 7/24/01

04659WET PW1 - DUP 7/12/01

Page No.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 6/29/01 |
| **Sample Matrix:** | Sediment | **Date Received:** | 6/30/01 |
| | | **Date Extracted:** | NA |
| | | **Date Analyzed:** | 7/6/01 |

Matrix Spike Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name: | 01-Composite | Units: | mg/Kg (ppm) |
| Lab Code: | K2104659-001MS | Basis: | Dry |
| Test Notes: | | | |

| Analyte | Prep Method | Analysis Method | MRL | Spike Level | Sample Result | Spiked Sample Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|---|---|
| Ammonia as Nitrogen | NONE | Plumb | 1 | 694 | 108 | 794 | 99 | 75-125 | |

Approved By: _____ Date: 7/24/01

04659WET.PW1 - MS 7/18/01

Page No.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | NA |
| **LCS Matrix:** | Water | **Date Received:** | NA |
| | | **Date Extracted:** | NA |
| | | **Date Analyzed:** | 7/6/01 |

Laboratory Control Sample Summary
Inorganic Parameters

| | | | |
|---|---|---|---|
| Sample Name: | Lab Control Sample | Units: | mg/L (ppm) |
| Lab Code: | K2104659-LCS | Basis: | NA |
| Test Notes: | | | |

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Ammonia as Nitrogen | NONE | Plumb | 3.48 | 3.44 | 99 | 85-115 | |

Approved By: _____ Date: 7/24/01

LCS/02359WET.PW1 - LCS 7/18/01

Page No :

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** K2104659
**Date Collected:** NA
**Date Received:** NA
**Date Analyzed:** 7/6/01

Ammonia as Nitrogen
Plumb
Units: mg/L (ppm)

**CONTINUING CALIBRATION VERIFICATION (CCV)**

| | True Value | Measured Value | Percent Recovery |
|---|---|---|---|
| CCV 3 Result | 2.00 | 2.03 | 102 |
| CCV 4 Result | 2.00 | 2.03 | 102 |

**CONTINUING CALIBRATION BLANK (CCB)**

| | MRL | Blank Value |
|---|---|---|
| CCB 3 Result | 0.05 | ND |
| CCB 4 Result | 0.05 | ND |

Approved By: _____ Date: 7/24/01

COMBOOCD/042695
Q-CCV.XLT

10/6/95

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/01
**Date Received:** 6/30/01
**Date Analyzed:** 7/13/01

**Particle Size Determination**
**ASTM Method D 422**

**Sample Name:** 01-Composite
**Lab Code:** K2104659-001

**Gravel and Sand**
**(Sieve Analysis)**

| Description | Sieve Size | Weight (g) | Percent Passing |
|---|---|---|---|
| Gravel | No.3/4"(19.0 mm) | 0.0000 | 100 |
| Gravel | No.3/8"(9.50 mm) | 0.0579 | 100 |
| Medium Gravel | No.4 (4.75 mm) | 0.7549 | 99.0 |
| Fine Gravel | No.10 (2.00 mm) | 1.1156 | 97.2 |
| Very Coarse Sand | No.20 (0.850 mm) | 1.2323 | 95.3 |
| Coarse Sand | No.40 (0.425 mm) | 3.9064 | 89.3 |
| Medium Sand | No.60 (0.250 mm) | 10.7190 | 72.7 |
| Fine Sand | No.140 (0.106 mm) | 28.4856 | 28.7 |
| Very Fine Sand | No.200 (0.0750 mm) | 4.4891 | 21.7 |

**Silt and Clay**
(Hydrometer Analysis)

| Particle Diameter | Percent Passing |
|---|---|
| 0.074 mm | 17.1 |
| 0.005 mm | 0.0 |
| 0.001 mm | 0.0 |

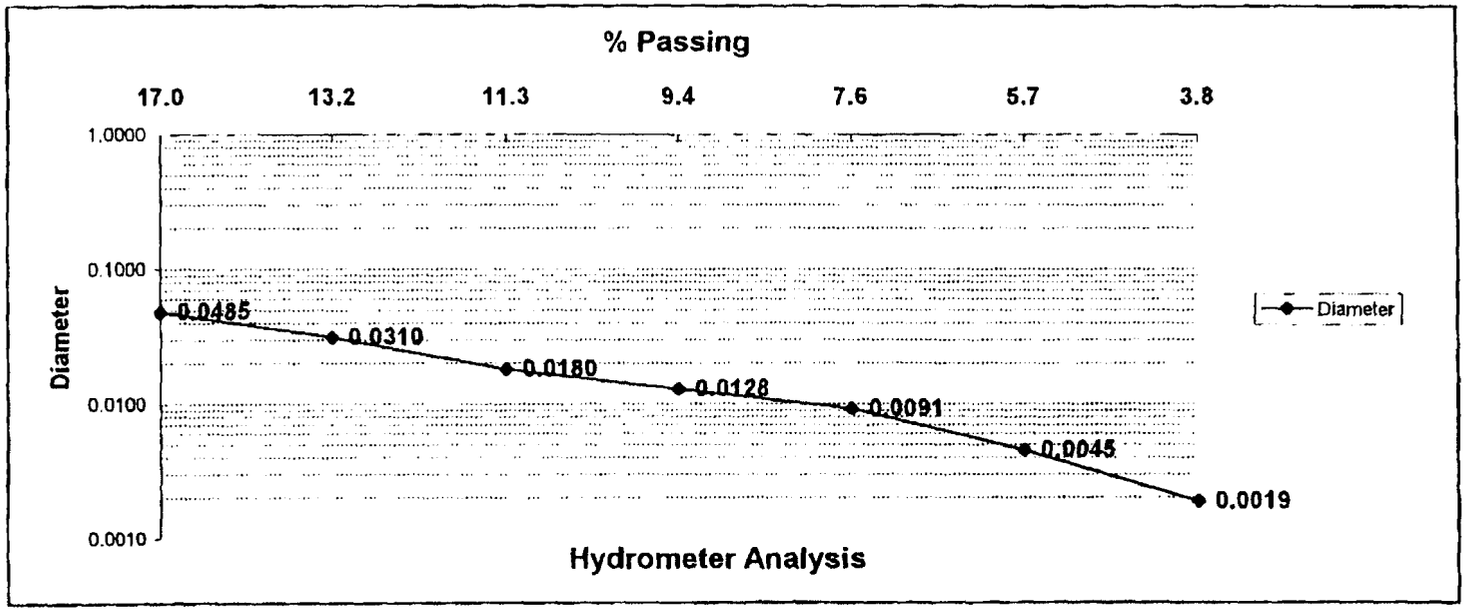
Approved By: _____ Date: 7/24/01
1A/102094

04659WET.DM1/7/24/01

Page No.:

Chart

**Sample Name:** 01-Composite
**Lab Code:** K2104659-001




CAS KELSO
07/24/01 TUE 11:09 FAX
CARG002159

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/01
**Date Received:** 6/30/01
**Date Analyzed:** 7/13/01

**Particle Size Determination**
**ASTM Method D 422**

**Sample Name:** 01-Composite
**Lab Code:** K2104659-001DUP

**Gravel and Sand**
**(Sieve Analysis)**

| Description | Sieve Size | Weight (g) | Percent Passing |
|---|---|---|---|
| Gravel | No.3/4"(19.0 mm) | 0.0000 | 100 |
| Gravel | No.3/8"(9.50 mm) | 0.0000 | 100 |
| Medium Gravel | No.4 (4.75 mm) | 1.7543 | 97.4 |
| Fine Gravel | No.10 (2.00 mm) | 1.9042 | 94.5 |
| Very Coarse Sand | No.20 (0.850 mm) | 1.1917 | 92.7 |
| Coarse Sand | No.40 (0.425 mm) | 4.0356 | 86.5 |
| Medium Sand | No.60 (0.250 mm) | 12.0597 | 68.0 |
| Fine Sand | No.140 (0.106 mm) | 26.2993 | 27.8 |
| Very Fine Sand | No.200 (0.0750 mm) | 4.6998 | 20.6 |

**Silt and Clay**
(Hydrometer Analysis)

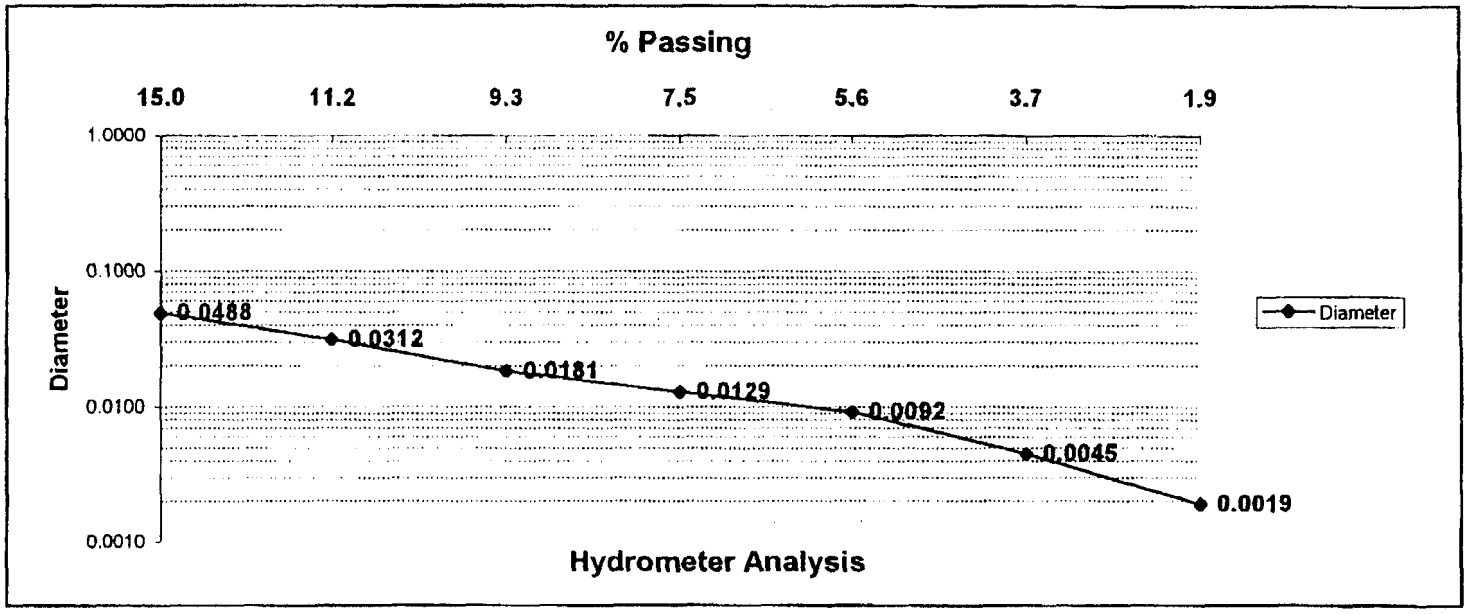
| Particle Diameter | Percent Passing |
|---|---|
| 0.074 mm | 15.0 |
| 0.005 mm | 0.0 |
| 0.001 mm | 0.0 |

Approved By: _____ Date: 7/24/01
1A/102094

04659WET.DM2/7/24/01

Page No.:

**Sample Name:** 01-Composite
**Lab Code:** K2104659-001DUP






07/24/01 TUE 11:09 FAX CAS KELSO 022
CARG002161

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/01
**Date Received:** 6/30/01
**Date Analyzed:** 7/13/01

**Particle Size Determination**
**ASTM Method D 422**

**Sample Name:** 01-T1
**Lab Code:** K2104659-002

**Gravel and Sand**
**(Sieve Analysis)**

| Description | Sieve Size | Weight (g) | Percent Passing |
|---|---|---|---|
| Gravel | No.3/4"(19.0 mm) | 0.0000 | 100 |
| Gravel | No.3/8"(9.50 mm) | 0.0000 | 100 |
| Medium Gravel | No.4 (4.75 mm) | 0.0000 | 100 |
| Fine Gravel | No.10 (2.00 mm) | 0.2507 | 99.6 |
| Very Coarse Sand | No.20 (0.850 mm) | 0.5455 | 98.8 |
| Coarse Sand | No.40 (0.425 mm) | 3.8959 | 92.8 |
| Medium Sand | No.60 (0.250 mm) | 21.5280 | 59.8 |
| Fine Sand | No.140 (0.106 mm) | 28.0144 | 16.8 |
| Very Fine Sand | No.200 (0.0750 mm) | 2.7147 | 12.7 |

**Silt and Clay**
(Hydrometer Analysis)

| Particle Diameter | Percent Passing |
|---|---|
| 0.074 mm | 9.2 |
| 0.005 mm | 0.0 |
| 0.001 mm | 0.0 |

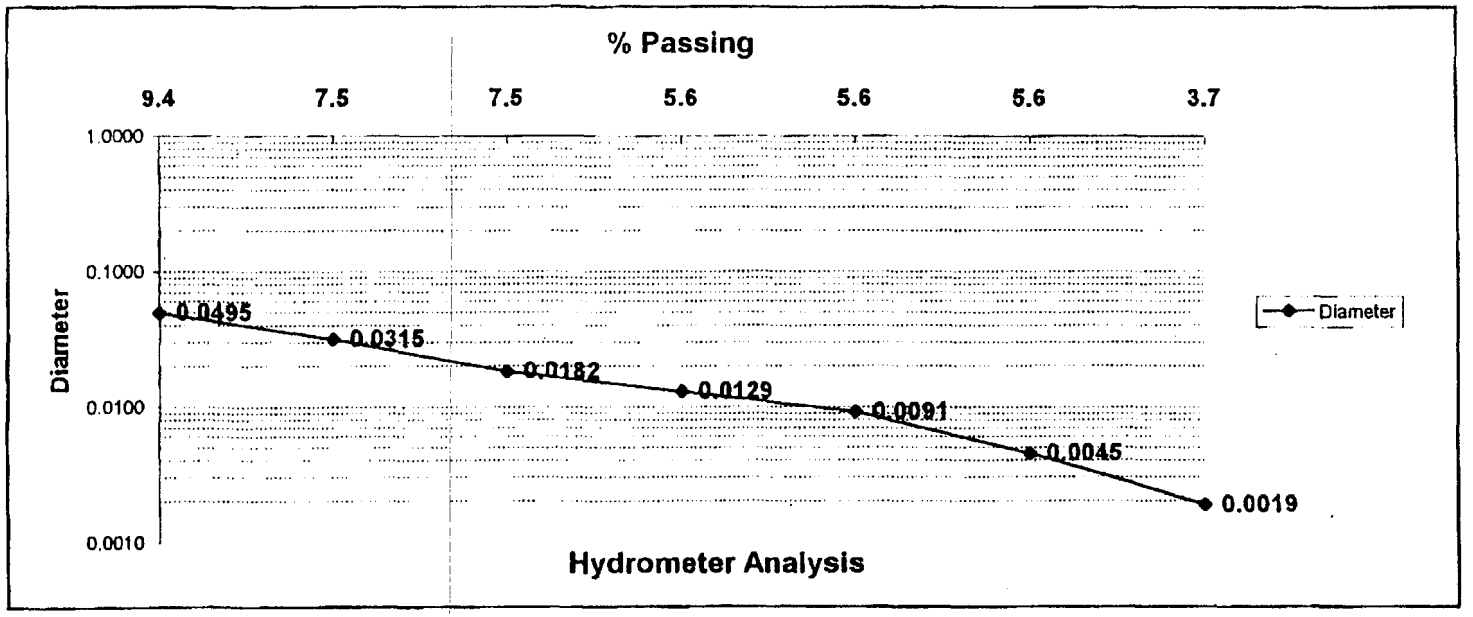
Approved By: _____ Date: 7/24/01
1A/102094

04659WET.DM3/7/24/01

Page No.:

Chart

**Sample Name:** 01-T1
**Lab Code:** K2104659-002






CAS KELSO
07/24/01 TUE 11:10 FAX
CARG002163

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/01
**Date Received:** 6/30/01
**Date Analyzed:** 7/13/01

**Particle Size Determination**
**ASTM Method D 422**

**Sample Name:** 01-T2
**Lab Code:** K2104659-003

**Gravel and Sand**
**(Sieve Analysis)**

| Description | Sieve Size | Weight (g) | Percent Passing |
|---|---|---|---|
| Gravel | No.3/4"(19.0 mm) | 0.0000 | 100 |
| Gravel | No.3/8"(9.50 mm) | 0.0000 | 100 |
| Medium Gravel | No.4 (4.75 mm) | 0.0000 | 100 |
| Fine Gravel | No.10 (2.00 mm) | 0.0194 | 100 |
| Very Coarse Sand | No.20 (0.850 mm) | 0.5783 | 99.1 |
| Coarse Sand | No.40 (0.425 mm) | 1.7375 | 96.4 |
| Medium Sand | No.60 (0.250 mm) | 8.0002 | 84.2 |
| Fine Sand | No.140 (0.106 mm) | 29.0770 | 39.7 |
| Very Fine Sand | No.200 (0.0750 mm) | 5.6749 | 31.0 |

**Silt and Clay**
(Hydrometer Analysis)

| Particle Diameter | Percent Passing |
|---|---|
| 0.074 mm | 24.4 |
| 0.005 mm | 4.1 |
| 0.001 mm | 0.0 |

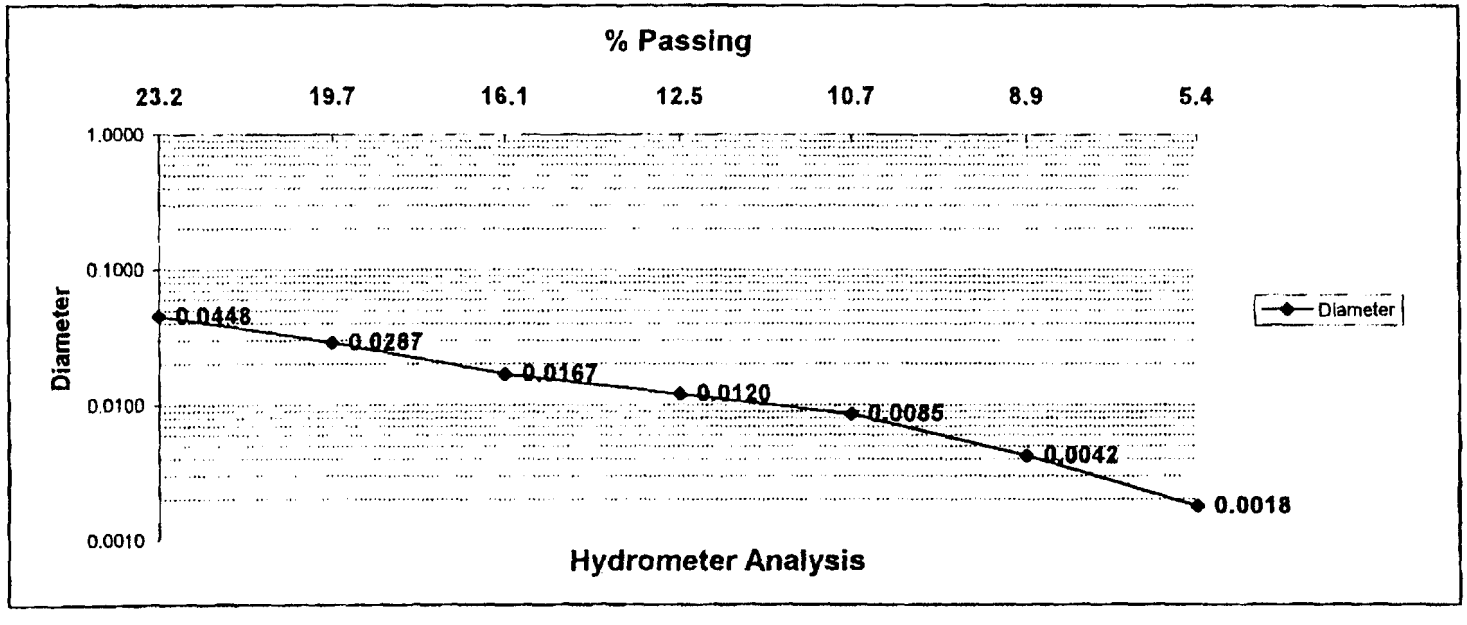
Approved By: _____ Date: 7/24/01
1A/102094

04659WET.DM4/7/24/01

Page No.:

Chart

**Sample Name:** 01-T2
**Lab Code:** K2104659-003



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 6/29/01 |
| **Sample Matrix:** | Sediment | **Date Received:** | 6/30/01 |
| | | **Date Analyzed:** | 7/13/01 |

**Particle Size Determination**
**ASTM Method D 422**

**Sample Name:** 01-T3
**Lab Code:** K2104659-004

**Gravel and Sand**
**(Sieve Analysis)**

| Description | Sieve Size | Weight (g) | Percent Passing |
|---|---|---|---|
| Gravel | No.3/4"(19.0 mm) | 0.0000 | 100 |
| Gravel | No.3/8"(9.50 mm) | 2.5751 | 96.6 |
| Medium Gravel | No.4 (4.75 mm) | 0.8976 | 95.2 |
| Fine Gravel | No.10 (2.00 mm) | 0.7809 | 94.0 |
| Very Coarse Sand | No.20 (0.850 mm) | 0.3376 | 93.5 |
| Coarse Sand | No.40 (0.425 mm) | 1.6010 | 91.1 |
| Medium Sand | No.60 (0.250 mm) | 7.7435 | 79.2 |
| Fine Sand | No.140 (0.106 mm) | 32.3309 | 29.9 |
| Very Fine Sand | No.200 (0.0750 mm) | 5.7606 | 21.1 |

**Silt and Clay**
(Hydrometer Analysis)

| Particle Diameter | Percent Passing |
|---|---|
| 0.074 mm | 15.7 |
| 0.005 mm | 0.0 |
| 0.001 mm | 0.0 |

Approved By: _____ Date: 7/24/01
1A/102094

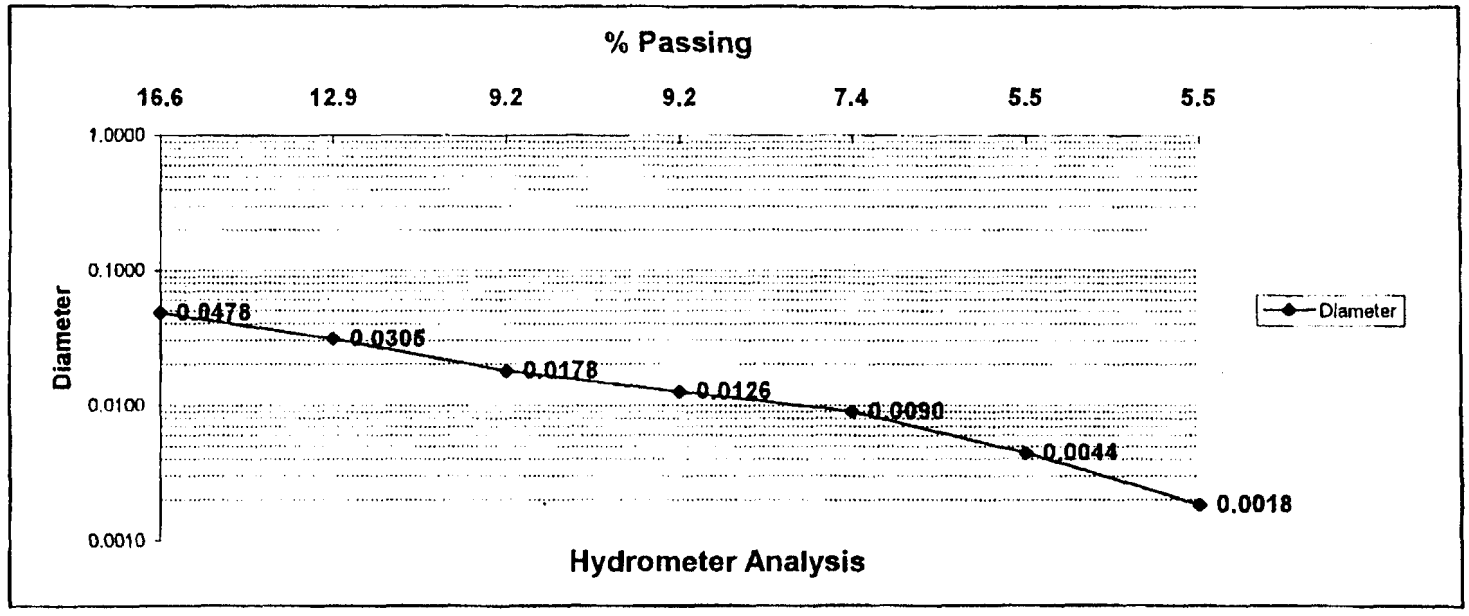
04659WET.DM5/7/24/01

Page No.:

07/24/01 TUE 11:11 FAX CAS KELSO 027

CARG002166

**Sample Name:** 01-T3
**Lab Code:** K2104659-004






07/24/01 TUE 11:11 FAX CAS KELSO 028
CARG002167

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/01
**Date Received:** 6/30/01
**Date Analyzed:** 7/13/01

**Particle Size Determination**
**ASTM Method D 422**

**Sample Name:** 01-T4
**Lab Code:** K2104659-005

**Gravel and Sand**
**(Sieve Analysis)**

| Description | Sieve Size | Weight (g) | Percent Passing |
|---|---|---|---|
| Gravel | No.3/4"(19.0 mm) | 0.0000 | 100 |
| Gravel | No.3/8"(9.50 mm) | 2.1021 | 97.0 |
| Medium Gravel | No.4 (4.75 mm) | 6.1779 | 88.8 |
| Fine Gravel | No.10 (2.00 mm) | 5.1389 | 82.0 |
| Very Coarse Sand | No.20 (0.850 mm) | 3.2552 | 77.7 |
| Coarse Sand | No.40 (0.425 mm) | 6.3480 | 69.2 |
| Medium Sand | No.60 (0.250 mm) | 9.4256 | 56.6 |
| Fine Sand | No.140 (0.106 mm) | 20.1869 | 29.7 |
| Very Fine Sand | No.200 (0.0750 mm) | 4.3984 | 23.8 |

**Silt and Clay**
(Hydrometer Analysis)

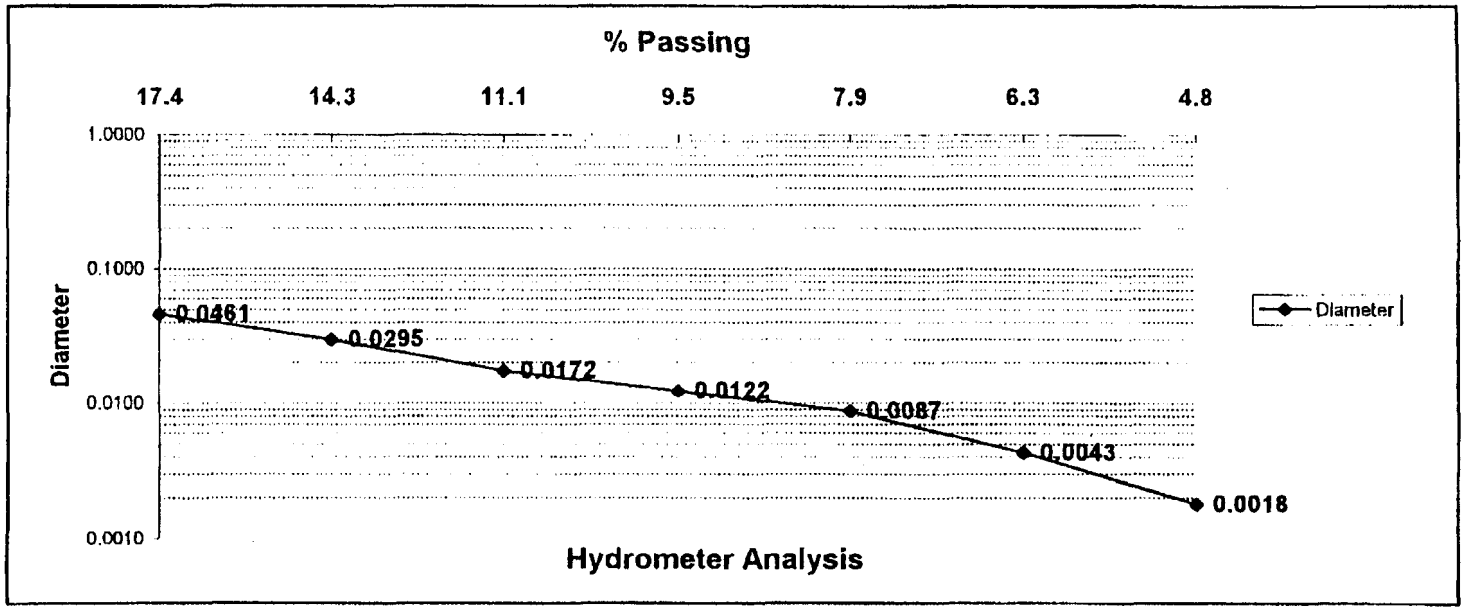
| Particle Diameter | Percent Passing |
|---|---|
| 0.074 mm | 17.5 |
| 0.005 mm | 1.0 |
| 0.001 mm | 0.0 |

Approved By: _____ Date: 7/24/01
1A/102094

04659WET.DM6/7/24/01

Page No.:

**Sample Name:** 01-T4
**Lab Code:** K2104659-005






07/24/01 TUE 11:12 FAX CAS KELSO 030
CARG002169

*Columbia Analytical Services*

# METALS

- Cover Page -

## INORGANIC ANALYSIS DATA PACKAGE

Client: Harding Lawson ESE

Service Request: K2104659

Project No.: 52852.002

Project Name: Cargill Irving Elevator Terminal

| Sample No. | Lab Sample ID. |
|---|---|
| 01-Composite | K2104659-001 |
| 01-CompositeD | K2104659-001D |
| 01-CompositeS | K2104659-001S |
| 01-T1 | K2104659-002 |
| 01-T2 | K2104659-003 |
| 01-T3 | K2104659-004 |
| 01-T4 | K2104659-005 |

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Date: 7/19/01

# METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| Client: | Harding Lawson ESE | Service Request: | K2104659 |
| Project No.: | 52852.002 | Date Collected: | 06/29/01 |
| Project Name: | Cargill Irving Elevator Terminal | Date Received: | 06/30/01 |
| Matrix: | SEDIMENT | Units: | MG/KG |
| | | Basis: | Dry |

Sample Name: 01-Composite  Lab Code: K2104659-001

| Analyte | Analysis Method | MRL | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 200.8 | 0.06 | 0.01 | 5 | 7/6/01 | 7/17/01 | 0.11 | | N |
| Arsenic | 200.8 | 0.6 | 0.2 | 5 | 7/6/01 | 7/13/01 | 2.3 | | |
| Cadmium | 200.8 | 0.06 | 0.03 | 5 | 7/6/01 | 7/13/01 | 0.21 | | |
| Chromium | 200.8 | 0.23 | 0.05 | 5 | 7/6/01 | 7/13/01 | 20.2 | | |
| Copper | 200.8 | 0.1 | 0.1 | 5 | 7/6/01 | 7/16/01 | 20.2 | | |
| Lead | 200.8 | 0.06 | 0.05 | 5 | 7/6/01 | 7/13/01 | 15.7 | | |
| Mercury | 7471A | 0.02 | 0.01 | 1 | 7/10/01 | 7/11/01 | 0.04 | | |
| Nickel | 200.8 | 0.3 | 0.3 | 5 | 7/6/01 | 7/13/01 | 19.9 | | |
| Silver | 200.8 | 0.023 | 0.005 | 5 | 7/6/01 | 7/17/01 | 0.359 | | |
| Zinc | 200.8 | 0.6 | 0.3 | 5 | 7/6/01 | 7/16/01 | 71.6 | | |

% Solids: 72.0

Comments:



07/19/01 THU 18:19 FAX  CAS KELSO  003

# METALS
-1-
## INORGANIC ANALYSIS DATA SHEET

Client: Harding Lawson ESE
Project No.: 52852.002
Project Name: Cargill Irving Elevator Terminal
Matrix: SEDIMENT

Service Request: K2104659
Date Collected: 06/29/01
Date Received: 06/30/01
Units: MG/KG
Basis: Dry

Sample Name: 01-T1
Lab Code: K2104659-002

| Analyte | Analysis Method | MRL | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 200.8 | 0.05 | 0.01 | 5 | 7/6/01 | 7/17/01 | 0.12 | | N |
| Arsenic | 200.8 | 0.5 | 0.2 | 5 | 7/6/01 | 7/13/01 | 2.1 | | |
| Cadmium | 200.8 | 0.05 | 0.03 | 5 | 7/6/01 | 7/13/01 | 0.26 | | |
| Chromium | 200.8 | 0.22 | 0.04 | 5 | 7/6/01 | 7/13/01 | 21.5 | | |
| Copper | 200.8 | 0.1 | 0.1 | 5 | 7/6/01 | 7/16/01 | 20.2 | | |
| Lead | 200.8 | 0.05 | 0.04 | 5 | 7/6/01 | 7/13/01 | 15.0 | | |
| Mercury | 7471A | 0.02 | 0.01 | 1 | 7/10/01 | 7/11/01 | 0.03 | | |
| Nickel | 200.8 | 0.3 | 0.3 | 5 | 7/6/01 | 7/13/01 | 22.0 | | |
| Silver | 200.8 | 0.022 | 0.004 | 5 | 7/6/01 | 7/17/01 | 0.219 | | |
| Zinc | 200.8 | 0.5 | 0.3 | 5 | 7/6/01 | 7/16/01 | 72.7 | | |

% Solids: 76.9

Comments:

Form I - IN

*Columbia Analytical Services*

# METALS
-1-
## INORGANIC ANALYSIS DATA SHEET

Client: Harding Lawson ESE
Project No.: 52852.002
Project Name: Cargill Irving Elevator Terminal
Matrix: SEDIMENT

Service Request: K2104659
Date Collected: 06/29/01
Date Received: 06/30/01
Units: MG/KG
Basis: Dry

Sample Name: 01-T2
Lab Code: K2104659-003

| Analyte | Analysis Method | MRL | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 200.8 | 0.05 | 0.01 | 5 | 7/6/01 | 7/17/01 | 0.09 | | N |
| Arsenic | 200.8 | 0.5 | 0.2 | 5 | 7/6/01 | 7/13/01 | 3.1 | | |
| Cadmium | 200.8 | 0.05 | 0.03 | 5 | 7/6/01 | 7/13/01 | 0.32 | | |
| Chromium | 200.8 | 0.21 | 0.04 | 5 | 7/6/01 | 7/13/01 | 21.8 | | |
| Copper | 200.8 | 0.1 | 0.1 | 5 | 7/6/01 | 7/16/01 | 26.4 | | |
| Lead | 200.8 | 0.05 | 0.04 | 5 | 7/6/01 | 7/13/01 | 14.4 | | |
| Mercury | 7471A | 0.02 | 0.01 | 1 | 7/10/01 | 7/11/01 | 0.05 | | |
| Nickel | 200.8 | 0.3 | 0.3 | 5 | 7/6/01 | 7/13/01 | 22.8 | | |
| Silver | 200.8 | 0.021 | 0.004 | 5 | 7/6/01 | 7/17/01 | 0.303 | | |
| Zinc | 200.8 | 0.5 | 0.3 | 5 | 7/6/01 | 7/16/01 | 72.4 | | |

% Solids: 68.6

Comments:



CAS KELSO
07/19/01 THU 18:19 FAX
005
CARG002173

# METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| Client: | Harding Lawson ESE | Service Request: | K2104659 |
| Project No.: | 52852.002 | Date Collected: | 06/29/01 |
| Project Name: | Cargill Irving Elevator Terminal | Date Received: | 06/30/01 |
| Matrix: | SEDIMENT | Units: | MG/KG |
| | | Basis: | Dry |

Sample Name: 01-T3 Lab Code: K2104659-004

| Analyte | Analysis Method | MRL | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 200.8 | 0.06 | 0.01 | 5 | 7/6/01 | 7/17/01 | 0.08 | | N |
| Arsenic | 200.8 | 0.6 | 0.2 | 5 | 7/6/01 | 7/13/01 | 2.2 | | |
| Cadmium | 200.8 | 0.06 | 0.04 | 5 | 7/6/01 | 7/13/01 | 0.26 | | |
| Chromium | 200.8 | 0.24 | 0.05 | 5 | 7/6/01 | 7/13/01 | 16.8 | | |
| Copper | 200.8 | 0.1 | 0.1 | 5 | 7/6/01 | 7/16/01 | 20.5 | | |
| Lead | 200.8 | 0.06 | 0.05 | 5 | 7/6/01 | 7/13/01 | 15.1 | | |
| Mercury | 7471A | 0.02 | 0.01 | 1 | 7/10/01 | 7/11/01 | 0.03 | | |
| Nickel | 200.8 | 0.4 | 0.4 | 5 | 7/6/01 | 7/13/01 | 20.2 | | |
| Silver | 200.8 | 0.024 | 0.005 | 5 | 7/6/01 | 7/17/01 | 0.103 | | |
| Zinc | 200.8 | 0.6 | 0.4 | 5 | 7/6/01 | 7/16/01 | 68.3 | | |

% Solids: 70.6

Comments:

Form I - IN

*Columbia Analytical Services*

# METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

| | | | |
|---|---|---|---|
| Client: | Harding Lawson ESE | Service Request: | K2104659 |
| Project No.: | 52852.002 | Date Collected: | 06/29/01 |
| Project Name: | Cargill Irving Elevator Terminal | Date Received: | 06/30/01 |
| Matrix: | SEDIMENT | Units: | MG/KG |
| | | Basis: | Dry |

Sample Name: 01-T4 Lab Code: K2104659-005

| Analyte | Analysis Method | MRL | MDL | Dil. | Date Extracted | Date Analyzed | Result | C | Q |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 200.8 | 0.06 | 0.01 | 5 | 7/6/01 | 7/17/01 | 0.15 | | N |
| Arsenic | 200.8 | 0.6 | 0.2 | 5 | 7/6/01 | 7/13/01 | 2.7 | | |
| Cadmium | 200.8 | 0.06 | 0.03 | 5 | 7/6/01 | 7/13/01 | 0.24 | | |
| Chromium | 200.8 | 0.23 | 0.05 | 5 | 7/6/01 | 7/13/01 | 20.5 | | |
| Copper | 200.8 | 0.1 | 0.1 | 5 | 7/6/01 | 7/16/01 | 24.4 | | |
| Lead | 200.8 | 0.06 | 0.05 | 5 | 7/6/01 | 7/13/01 | 35.0 | | |
| Mercury | 7471A | 0.02 | 0.01 | 1 | 7/10/01 | 7/11/01 | 0.04 | | |
| Nickel | 200.8 | 0.3 | 0.3 | 5 | 7/6/01 | 7/13/01 | 19.7 | | |
| Silver | 200.8 | 0.023 | 0.005 | 5 | 7/6/01 | 7/17/01 | 0.144 | | |
| Zinc | 200.8 | 0.6 | 0.3 | 5 | 7/6/01 | 7/16/01 | 79.3 | | |

% Solids: 71.7

Comments:

# METALS
## - 2a -
## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Harding Lawson ESE

Service Request: K2104659

Project No.: 52852.002

Project Name: Cargill Irving Elevator Termi

ICV Source: Inorganic Ventures

CCV Source: Various

Concentration Units: ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Antimony | 25.0 | 25.4 | 102 | 25.0 | 25.0 | 100 | 24.9 | 100 | 200.8 |
| Arsenic | 50.0 | 50.8 | 102 | 25.0 | 24.8 | 99 | 24.2 | 97 | 200.8 |
| Cadmium | 25.0 | 26.0 | 104 | 25.0 | 24.5 | 98 | 25.0 | 100 | 200.8 |
| Chromium | 20.0 | 21.2 | 106 | 25.0 | 25.2 | 101 | 24.1 | 96 | 200.8 |
| Copper | 25.0 | 25.4 | 102 | 25.0 | 24.7 | 99 | 23.6 | 94 | 200.8 |
| Lead | 50.0 | 51.0 | 102 | 25.0 | 24.7 | 99 | 25.5 | 102 | 200.8 |
| Mercury | 5.0 | 4.94 | 99 | 5.0 | 5.01 | 100 | 4.97 | 99 | 7471A |
| Nickel | 50.0 | 51.7 | 103 | 25.0 | 24.6 | 98 | 24.0 | 96 | 200.8 |
| Silver | 12.5 | 12.6 | 101 | 25.0 | 24.9 | 100 | 24.8 | 99 | 200.8 |
| Zinc | 50.0 | 51.7 | 103 | 25.0 | 23.6 | 94 | 23.3 | 93 | 200.8 |



07/19/01 THU 18:20 FAX CAS KELSO 008

CARG002176

# METALS
## - 2a -
## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Harding Lawson ESE

Service Request: K2104659

Project No.: 52852.002

Project Name: Cargill Irving Elevator Term

ICV Source:

CCV Source: Various

Concentration Units: ug/L

| Analyte | Initial Calibration True | Initial Calibration Found | Initial Calibration %R(1) | Continuing Calibration True | Continuing Calibration Found | Continuing Calibration %R(1) | Continuing Calibration Found | Continuing Calibration %R(1) | Method |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | | | | 25.0 | 24.7 | 99 | 24.9 | 100 | 200.8 |
| Arsenic | | | | 25.0 | 21.9 | 88 | | | 200.8 |
| Cadmium | | | | 25.0 | 24.7 | 99 | | | 200.8 |
| Chromium | | | | 25.0 | 21.8 | 87 | | | 200.8 |
| Lead | | | | 25.0 | 25.8 | 103 | | | 200.8 |
| Nickel | | | | 25.0 | 21.5 | 86 | | | 200.8 |
| Silver | | | | 25.0 | 24.9 | 100 | 24.7 | 99 | 200.8 |

Form II (Part 1) - IN

# METALS
## - 2a -
## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Harding Lawson ESE

Service Request: K2104659

Project No.: 52852.002

Project Name: Cargill Irving Elevator Term

ICV Source:

CCV Source: Various

Concentration Units: ug/L

| Analyte | Initial Calibration True | Initial Calibration Found | Initial Calibration %R(1) | Continuing Calibration True | Continuing Calibration Found | Continuing Calibration %R(1) | Continuing Calibration Found | Continuing Calibration %R(1) | Method |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | | | | 25.0 | 24.9 | 99 | | | 200.8 |
| Silver | | | | 25.0 | 24.9 | 100 | | | 200.8 |



07/19/01 THU 18:21 FAX CAS KELSO 010

CARG002178

# METALS
## - 2a -
## INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Harding Lawson ESE

Service Request: K2104659

Project No.: 52852.002

Project Name: Cargill Irving Elevator Terml

ICV Source: Inorganic Ventures

CCV Source: Various

Concentration Units: ug/L

| Analyte | Initial Calibration | | | Continuing Calibration | | | | | Method |
|---|---|---|---|---|---|---|---|---|---|
| | True | Found | %R(1) | True | Found | %R(1) | Found | %R(1) | |
| Copper | 25.0 | 25.4 | 102 | 25.0 | 25.1 | 100 | 23.9 | 96 | 200.8 |
| Zinc | 50.0 | 49.4 | 99 | 25.0 | 24.7 | 99 | 23.5 | 94 | 200.8 |



07/19/01 THU 18:21 FAX CAS KELSO 011

CARG002179

# METALS
## - 2b -
## CRDL STANDARD FOR AA AND ICP

Client: Harding Lawson ESE

Service Request: K2104659

Project No.: 52852.002

Project Name: Cargill Irving Elevator Term

Concentration Units: ug/L

| Analyte | CRDL Standard for AA | | | CRDL Standard for ICP | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Initial | | | Final | |
| | True | Found | %R | True | Found | %R | Found | %R |
| Antimony | | | | 0.10 | 0.10 | 104 | | |
| Arsenic | | | | 1.0 | 1.03 | 103 | | |
| Cadmium | | | | 0.10 | 0.10 | 95 | | |
| Chromium | | | | 0.40 | 0.39 | 98 | | |
| Copper | | | | 0.20 | 0.11 | 53 | | |
| Lead | | | | 0.10 | 0.05 | 51 | | |
| Mercury | 0.20 | 0.23 | 115 | | | | | |
| Nickel | | | | 0.60 | 0.36 | 60 | | |
| Silver | | | | 0.04 | 0.043 | 108 | | |
| Zinc | | | | 1.0 | 0.92 | 92 | | |



07/19/01 THU 18:21 FAX CAS KELSO 012

CARG002180

# METALS
## - 2b -
## CRDL STANDARD FOR AA AND ICP

Client: Harding Lawson ESE

Service Request: K2104659

Project No.: 52852.002

Project Name: Cargill Irving Elevator Terml

Concentration Units: ug/L

| Analyte | CRDL Standard for AA | | | CRDL Standard for ICP | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Initial | | | Final | |
| | True | Found | %R | True | Found | %R | Found | %R |
| Copper | | | | 0.20 | 0.12 | 60 | | |
| Zinc | | | | 1.0 | 0.46 | 46 | | |



07/19/01 THU 18:22 FAX CAS KELSO 013

CARG002181

*Columbia Analytical Services*

# METALS
## - 3 -
## BLANKS

Client: Harding Lawson ESE

Service Request: K2104659

Project No.: 52852.002

Project Name: Cargill Irving Elevator Terml

Preparation Blank Matrix (soil/water): SOIL

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

| Analyte | Initial Calib. Blank (ug/L) | C | Continuing Calibration Blank (ug/L) 1 | C | 2 | C | 3 | C | | Preparation Blank C | | | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 0.01 | B | 0.01 | U | 0.05 | B | 0.02 | B | | 0.04 | B | | 200.8 |
| Arsenic | 0.4 | U | 0.4 | U | 0.4 | U | 0.4 | U | | 0.2 | U | | 200.8 |
| Cadmium | 0.06 | U | 0.06 | B | 0.06 | U | 0.06 | U | | 0.03 | U | | 200.8 |
| Chromium | 0.08 | U | 0.08 | U | 0.08 | U | 0.08 | U | | 0.14 | B | | 200.8 |
| Copper | 0.1 | U | 0.1 | U | 0.1 | U | | | | 0.1 | U | | 200.8 |
| Lead | 0.08 | U | 0.08 | U | 0.08 | U | 0.08 | U | | 0.04 | U | | 200.8 |
| Mercury | 0.10 | U | 0.10 | U | 0.10 | U | | | | 0.01 | U | | 7471A |
| Nickel | 0.6 | U | 0.6 | U | 0.6 | U | 0.6 | U | | 0.3 | U | | 200.8 |
| Silver | 0.008 | U | 0.008 | U | 0.008 | U | 0.008 | U | | 0.004 | U | | 200.8 |
| Zinc | 0.6 | U | 0.6 | U | 0.6 | U | | | | 0.3 | U | | 200.8 |

# METALS
## - 3 -
## BLANKS

Client: Harding Lawson ESE

Service Request: K2104659

Project No.: 52852.002

Project Name: Cargill Irving Elevator Termi

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

| Analyte | Initial Calib. Blank (ug/L) | C | Continuing Calibration Blank (ug/L) 1 | C | 2 | C | 3 | C | | Preparation Blank | C | | | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | | | 0.01 | U | 0.01 | U | | | | | | | | 200.8 |
| Silver | | | 0.008 | U | 0.008 | U | | | | | | | | 200.8 |

# METALS
## - 3 -
## BLANKS

Client: Harding Lawson ESE

Service Request: K2104659

Project No.: 52852.002

Project Name: Cargill Irving Elevator Terml

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

| Analyte | Initial Calib. Blank (ug/L) | C | Continuing Calibration Blank (ug/L) 1 | C | 2 | C | 3 | C | | Preparation Blank | C | | | Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 0.1 | U | 0.1 | U | 0.1 | U | | | | | | | | 200.8 |
| Zinc | 0.6 | U | 0.6 | U | 0.6 | U | | | | | | | | 200.8 |



07/19/01 THU 18:22 FAX CAS KELSO 016

CARG002184

*Columbia Analytical Services*

# METALS
## - 5a -
## SPIKE SAMPLE RECOVERY

Client: Harding Lawson ESE
Service Request: K2104659
Project No.: 52852.002
Units: MG/KG
Project Name: Cargill Irving Elevator Terminal
Basis: Dry
Matrix: SEDIMENT
% Solids: 72.0

Sample Name: 01-CompositeS
Lab Code: K2104659-001S

| Analyte | Control Limit %R | Spike Result | C | Sample Result | C | Spike Added | %R | Q | Method |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 70 - 130 | 51.5 | | 0.11 | | 116 | 44 | N | 200.8 |
| Arsenic | 70 - 130 | 41.3 | | 2.3 | | 46.3 | 84 | | 200.8 |
| Cadmium | 70 - 130 | 10.8 | | 0.21 | | 11.6 | 91 | | 200.8 |
| Chromium | 70 - 130 | 56.6 | | 20.2 | | 46.3 | 79 | | 200.8 |
| Copper | 70 - 130 | 89.8 | | 20.2 | | 57.9 | 120 | | 200.8 |
| Lead | 70 - 130 | 144 | | 15.7 | | 116 | 111 | | 200.8 |
| Mercury | 60 - 130 | 0.54 | | 0.04 | | 0.50 | 99 | | 7471A |
| Nickel | 70 - 130 | 115 | | 19.9 | | 116 | 82 | | 200.8 |
| Silver | 70 - 130 | 11.2 | | 0.359 | | 11.6 | 93 | | 200.8 |
| Zinc | 70 - 130 | 181 | | 71.6 | | 116 | 94 | | 200.8 |

Comments:

Form V (PART 1) - IN

# METALS
## - 6 -
## DUPLICATES

Client: Harding Lawson ESE
Project No.: 52852.002
Project Name: Cargill Irving Elevator Terminal
Matrix: SEDIMENT

Service Request: K2104659
Units: MG/KG
Basis: Dry
% Solids: 72.0

Sample Name: 01-CompositeD
Lab Code: K2104659-001D

| Analyte | Control Limit | Sample (S) | C | Duplicate (D) | C | RPD | Q | Method |
|---|---|---|---|---|---|---|---|---|
| Antimony | 0.1 | 0.11 | | 0.10 | | 7 | | 200.8 |
| Arsenic | 0.6 | 2.3 | | 2.4 | | 3 | | 200.8 |
| Cadmium | 0.1 | 0.21 | | 0.18 | | 14 | | 200.8 |
| Chromium | | 20.2 | | 18.4 | | 9 | | 200.8 |
| Copper | | 20.2 | | 21.6 | | 7 | | 200.8 |
| Lead | | 15.7 | | 16.2 | | 3 | | 200.8 |
| Mercury | 0.0 | 0.04 | | 0.03 | | 20 | | 7471A |
| Nickel | | 19.9 | | 20.1 | | 1 | | 200.8 |
| Silver | 0.0 | 0.359 | | 0.107 | | 108 | | 200.8 |
| Zinc | | 71.6 | | 68.3 | | 5 | | 200.8 |



07/19/01 THU 18:23 FAX CAS KELSO 018

CARG002186

*Columbia Analytical Services*

# METALS

- 7 -

## LABORATORY CONTROL SAMPLE

Client: Harding Lawson ESE

Service Request: K2104659

Project No.: 52852.002

Project Name: Cargill Irving Elevator Terminal

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source: ERA Lot 246

| | Aqueous mg/L | | | Solid (mg/kg) | | | | |
|---|---|---|---|---|---|---|---|---|
| Analyte | True | Found | %R | True | Found | C Limits | | %R |
| Antimony | | | | 12.7 | 24.1 | 0.0500 | 39.5 | 190 |
| Arsenic | | | | 187 | 210 | 139 | 235 | 112 |
| Cadmium | | | | 67.9 | 72.2 | 52.0 | 83.6 | 106 |
| Chromium | | | | 144 | 155 | 115 | 173 | 108 |
| Copper | | | | 91.3 | 94.8 | 74.8 | 108 | 104 |
| Lead | | | | 125 | 129 | 95.2 | 155 | 103 |
| Mercury | | | | 1.49 | 1.41 | 0.852 | 2.12 | 95 |
| Nickel | | | | 78.0 | 82.0 | 61.1 | 94.9 | 105 |
| Silver | | | | 90.0 | 88.5 | 67.0 | 113 | 98 |
| Zinc | | | | 283 | 312 | 219 | 347 | 110 |



07/19/01 THU 18:23 FAX CAS KELSO 019

CARG002187

*Columbia Analytical Services*

# METALS
-10-
## METHOD DETECTION LIMITS

Client: Harding Lawson ESE

Service Request: K2104659

Project No.: 52852.002

Project Name: Cargill Irving Elevator Terml

ICP/ICP-MS ID #: Excell ICPMS

GFAA ID #:

AA ID #:

| Analyte | Mass | Back-ground | MRL (ug/L) | MDL (ug/L) | Method |
|---|---|---|---|---|---|
| Antimony | 123 | | 0.10 | 0.01 | 200.8 |
| Silver | 107 | | 0.040 | 0.008 | 200.8 |

Comments

Form X - IN

# METALS
## -10-
## METHOD DETECTION LIMITS

Client: Harding Lawson ESE

Service Request: K2104659

Project No.: 52852.002

Project Name: Cargill Irving Elevator Terml

ICP/ICP-MS ID #: PQ-S

GFAA ID #:

AA ID #:

| Analyte | Mass | Back-ground | MRL (ug/L) | MDL (ug/L) | Method |
|---|---|---|---|---|---|
| Arsenic | 75 | | 1.0 | 0.4 | 200.8 |
| Cadmium | 111 | | 0.10 | 0.06 | 200.8 |
| Chromium | 52 | | 0.40 | 0.08 | 200.8 |
| Copper | 65 | | 0.2 | 0.1 | 200.8 |
| Lead | 208 | | 0.10 | 0.08 | 200.8 |
| Nickel | 60 | | 0.6 | 0.6 | 200.8 |
| Zinc | 66 | | 1.0 | 0.6 | 200.8 |

Comments

Form X - IN

# METALS
## -10-
## METHOD DETECTION LIMITS

Client: Harding Lawson ESE

Service Request: K2104659

Project No.: 52852.002

Project Name: Cargill Irving Elevator Termi

ICP/ICP-MS ID #:

GFAA ID #:

AA ID #: Varian-3

| Analyte | Wave-length | Back-ground | MRL (ug/L) | MDL (ug/L) | Method |
|---|---|---|---|---|---|
| Mercury | 253.70 | BD | 0.20 | 0.10 | 7471A |

Comments

Form X - IN

## COLUMBIA ANALYTICAL SERVICES, INC.

### Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2[illegible] |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 6/25/[illegible] |
| **Sample Matrix:** | Sediment | **Date Received:** | [illegible] |
| | | **Date Porewater Extracted:** | [illegible] |

### Butyltins in Porewater

| | | | |
|---|---|---|---|
| Sample Name: | 01-Composite | Units: | ug/[illegible] |
| Lab Code: | K2104659-001 | Basis: | NA |
| Test Notes: | X | | |

| Analyte | Prep Method | Analysis Method | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Result | Notes |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | EPA 3520C | Krone | 0.1 | 0.04 | 1 | 7/18/01 | 7/26/01 | ND | |
| Tri-n-butyltin Cation | EPA 3520C | Krone | 0.04 | 0.02 | 1 | 7/18/01 | 7/26/01 | 0.058 | |
| Di-n-butyltin Cation | EPA 3520C | Krone | 0.1 | 0.016 | 1 | 7/18/01 | 7/26/01 | ND | |
| n-Butyltin Cation | EPA 3520C | Krone | 0.1 | 0.012 | 1 | 7/18/01 | 7/26/01 | ND | |

X Porewater generated in accordance with DDMP guidelines, ACOE Seattle District, August 1998; [illegible]

Approved By: Jay Date: 7-31-01

1S22/020597p

04659SVG.xy1 - 1 7/31/01

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** [illegible]
**Date Collected:** NA
**Date Received:** NA
**Date Porewater Extracted:** 7/18/01

Butyltins in Porewater

Sample Name: Method Blank
Lab Code: KWG0104502-4
Test Notes: X

Units: ug/L (ppb)
Basis: NA

| Analyte | Prep Method | Analysis Method | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | EPA 3520C | Krone | 0.05 | 0.01 | 1 | 7/18/01 | 7/26/01 | ND | |
| Tri-n-butyltin Cation | EPA 3520C | Krone | 0.02 | 0.005 | 1 | 7/18/01 | 7/26/01 | ND | |
| Di-n-butyltin Cation | EPA 3520C | Krone | 0.05 | 0.004 | 1 | 7/18/01 | 7/26/01 | ND | |
| n-Butyltin Cation | EPA 3520C | Krone | 0.05 | 0.003 | 1 | 7/18/01 | 7/26/01 | ND | |

X Porewater generated in accordance with DDMP guidelines, ACOE Seattle District, August 1998; unfiltered

Approved By: Jay Date: 7-31-01

1S22/020597p

04659SVG.ay1 - MB 7/31/01

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 6/29/2001
**Date Received:** 6/30/2001
**Date Extracted:** 7/13/2001
**Date Analyzed:** 7/23/01

Surrogate Recovery Summary
Butyltins in Porewater

Prep Method: EPA 3520C
Analysis Method: Krone

Units: PERCENT
Basis: NA

| Sample Name | Lab Code | Test Notes | Percent Recovery Tri-n-propyltin Cation |
|---|---|---|---|
| 01-Composite | K2104659-001 | | 44 |
| Batch QC | K2105087-001 | | 49 |
| Batch QC | K2105087-001MS | | 53 |
| Batch QC | K2105087-001DMS | | 64 |
| Lab Control Sample | KWG0104502-3 | | 59 |
| Method Blank | KWG0104502-4 | | 74 |

CAS Acceptance Limits: 30-115

Approved By: Jes Date: 7-31-01

SUR1/110697p

04659SVG.xyl - SUR 7/31/2001

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2[illegible] |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | NA |
| **LCS Matrix:** | Sediment | **Date Received:** | NA |
| | | **Date Extracted:** | 7/18/0[illegible] |
| | | **Date Analyzed:** | 7/26/01 |

Laboratory Control Sample Summary
Butyltins in Porewater

| | | | |
|---|---|---|---|
| Sample Name: | Lab Control Sample | Units: | ug/L (ppb) |
| Lab Code: | KWG0104502-3 | Basis: | NA |
| Test Notes: | | | |

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | EPA 3520C | Krone | 0.48 | 0.35 | 73 | 31-116 ✓ | |
| Tri-n-butyltin Cation | EPA 3520C | Krone | 0.48 | 0.31 | 65 | 42-140 ✓ | |
| Di-n-butyltin Cation | EPA 3520C | Krone | 0.48 | 0.30 | 62 | 26-130 ✓ | |
| n-Butyltin Cation | EPA 3520C | Krone | 0.48 | 0.21 | 44 | 44-139 ✓ | |

Approved By: Jay Date: 7-31-01

LC8[illegible]ay1 - LCS 7/31/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K210[illegible]
**Date Collected:** NA
**Date Received:** NA
**Date Extracted:** 7/18/200[illegible]
**Date Analyzed:** 7/26/200[illegible]

Matrix Spike/Duplicate Matrix Spike Summary
Butyltins in Porewater

**Sample Name:** Batch QC
**Lab Code:** K2105087-001MS, K2105087-001DMS
**Test Notes:**

**Units:** ug/L (ppb)
**Basis:** Wet

| Analyte | Prep Method | Analysis Method | MRL | Spike Level MS | Spike Level DMS | Sample Result | Spike Result MS | Spike Result DMS | Percent Recovery MS | Percent Recovery DMS | CAS Acceptance Limits | Relative Percent Difference | [illegible] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | EPA 3520C | Krone | 0.05 | 0.96 | 0.96 | ND | 0.22 | 0.38 | 23 | 40 | 34-103 | 53 | |
| Tri-n-butyltin Cation | EPA 3520C | Krone | 0.02 | 0.96 | 0.96 | ND | 0.62 | 0.68 | 65 | 71 | 32-150 | 9 | |
| Di-n-butyltin Cation | EPA 3520C | Krone | 0.05 | 0.96 | 0.96 | ND | 0.61 | 0.68 | 64 | 71 | 30-132 | 11 | |
| n-Butyltin Cation | EPA 3520C | Krone | 0.05 | 0.96 | 0.96 | ND | 0.40 | 0.41 | 42 | 43 | 34-136 | 2 | |

Approved By: Jes Date: 7-31-01

[illegible]020597p

04659SVG.xyl - DMS 7/31/2001



CARG002195

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |
| | | **Date Extracted:** | 07/11/2001 |
| | | **Date Analyzed:** | 07/16/2001 |

**Butyltins**

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-Composite | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-001 | **Basis:** | Dry |
| **File ID:** | J:\GC11\DATA\071601\0716F005.D | **Level:** | Low |
| **Instrument ID:** | GC11 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG0104198 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL893 |
| | | **Column1:** | RTX-5 |
| **Sample Amount:** | 20.67 g | **Column2:** | RTX-OPP |
| **% Solids:** | 72.0 | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 2.2 | | 1.4 | 0.54 | |
| 688-73-3 | Tri-n-butyltin | 190 | E | 1.4 | 0.45 | |
| 1002-53-5 | Di-n-butyltin | 7.6 | | 1.4 | 0.43 | |
| 2406-65-7 | n-Butyltin | 1.3 | J | 1.4 | 0.42 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 45 | 31-111 | 07/16/01 | Acceptable |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |
| | | **Date Extracted:** | 07/11/2001 |
| | | **Date Analyzed:** | 07/17/2001 |

**Butyltins**

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-CompositeDL | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-001 | **Basis:** | Dry |
| **File ID:** | J:\GC11\DATA\071701OT\0717F004.D | **Level:** | Low |
| **Instrument ID:** | GC11 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG0104198 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL893 |
| | | **Column1:** | RTX-5 |
| **Sample Amount:** | 20.67 g | **Column2:** | RTX-OPP |
| **% Solids:** | 72.0 | | |
| **Dilution Factor:** | 5 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 2.7 | U | 6.8 | 2.7 | |
| 688-73-3 | Tri-n-butyltin | 210 | D | 6.8 | 2.3 | |
| 1002-53-5 | Di-n-butyltin | 9.2 | D | 6.8 | 2.2 | |
| 2406-65-7 | n-Butyltin | 2.1 | U | 6.8 | 2.1 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 49 | 31-111 | 07/17/01 | Acceptable |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |
| | | **Date Extracted:** | 07/11/2001 |
| | | **Date Analyzed:** | 07/16/2001 |

**Butyltins**

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T1 | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-002 | **Basis:** | Dry |
| **File ID:** | J:\GC11\DATA\071601\0716F008.D | **Level:** | Low |
| **Instrument ID:** | GC11 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG0104198 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL893 |
| | | **Column1:** | RTX-5 |
| **Sample Amount:** | 20.72 g | **Column2:** | RTX-OPP |
| **% Solids:** | 76.9 | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 1.4 | | 1.3 | 0.51 | |
| 688-73-3 | Tri-n-butyltin | 180 | E | 1.3 | 0.42 | |
| 1002-53-5 | Di-n-butyltin | 12 | | 1.3 | 0.40 | |
| 2406-65-7 | n-Butyltin | 1.0 | J | 1.3 | 0.40 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 43 | 31-111 | 07/16/01 | Acceptable |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |
| | | **Date Extracted:** | 07/11/2001 |
| | | **Date Analyzed:** | 07/17/2001 |

**Butyltins**

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T1DL | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-002 | **Basis:** | Dry |
| **File ID:** | J:\GC11\DATA\071701OT\0717F005.D | **Level:** | Low |
| **Instrument ID:** | GC11 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG0104198 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL893 |
| | | **Column1:** | RTX-5 |
| **Sample Amount:** | 20.72 g | **Column2:** | RTX-OPP |
| **% Solids:** | 76.9 | | |
| **Dilution Factor:** | 5 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 2.6 | U | 6.3 | 2.6 | |
| **688-73-3** | **Tri-n-butyltin** | **200** | D | 6.3 | 2.1 | |
| **1002-53-5** | **Di-n-butyltin** | **14** | D | 6.3 | 2.0 | |
| 2406-65-7 | n-Butyltin | 2.0 | U | 6.3 | 2.0 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 51 | 31-111 | 07/17/01 | Acceptable |

**Comments:**



07/23/01 MON 15:14 FAX CAS KELSO 005

CARG002199

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |
| | | **Date Extracted:** | 07/11/2001 |
| | | **Date Analyzed:** | 07/16/2001 |

**Butyltins**

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T2 | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-003 | **Basis:** | Dry |
| **File ID:** | J:\GC11\DATA\071601\0716F009.D | **Level:** | Low |
| **Instrument ID:** | GC11 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG0104198 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL893 |
| | | **Column1:** | RTX-5 |
| **Sample Amount:** | 20.35 g | **Column2:** | RTX-OPP |
| **% Solids:** | 68.6 | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 0.58 | J | 1.5 | 0.57 | |
| 688-73-3 | Tri-n-butyltin | 150 | E | 1.5 | 0.47 | |
| 1002-53-5 | Di-n-butyltin | 6.3 | | 1.5 | 0.45 | |
| 2406-65-7 | n-Butyltin | 1.3 | J | 1.5 | 0.44 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 55 | 31-111 | 07/16/01 | Acceptable |

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |
| | | **Date Extracted:** | 07/11/2001 |
| | | **Date Analyzed:** | 07/17/2001 |

### Butyltins

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T2DL | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-003 | **Basis:** | Dry |
| **File ID:** | J:\GC11\DATA\071701OT\0717F006.D | **Level:** | Low |
| **Instrument ID:** | GC11 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG0104198 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL893 |
| | | **Column1:** | RTX-5 |
| **Sample Amount:** | 20.35 g | **Column2:** | RTX-OPP |
| **% Solids:** | 68.6 | | |
| **Dilution Factor:** | 5 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 2.9 | U | 7.2 | 2.9 | |
| **688-73-3** | **Tri-n-butyltin** | **160** | **D** | 7.2 | 2.4 | |
| **1002-53-5** | **Di-n-butyltin** | **8.0** | **D** | 7.2 | 2.3 | |
| 2406-65-7 | n-Butyltin | 2.2 | U | 7.2 | 2.2 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 64 | 31-111 | 07/17/01 | Acceptable |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |
| | | **Date Extracted:** | 07/11/2001 |
| | | **Date Analyzed:** | 07/16/2001 |

**Butyltins**

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T3 | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-004 | **Basis:** | Dry |
| **File ID:** | J:\GC11\DATA\071601\0716F010.D | **Level:** | Low |
| **Instrument ID:** | GC11 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG0104198 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL893 |
| | | **Column1:** | RTX-5 |
| **Sample Amount:** | 20.29 g | **Column2:** | RTX-OPP |
| **% Solids:** | 70.6 | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 0.55 | U | 1.4 | 0.55 | |
| **688-73-3** | **Tri-n-butyltin** | **11** | | 1.4 | 0.46 | |
| **1002-53-5** | **Di-n-butyltin** | **0.73** | J | 1.4 | 0.44 | |
| 2406-65-7 | n-Butyltin | 0.43 | U | 1.4 | 0.43 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 5 | 31-111 | 07/16/01 | Outside Control Limits |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |
| | | **Date Extracted:** | 07/11/2001 |
| | | **Date Analyzed:** | 07/17/2001 |

**Butyltins**

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T3RE | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-004 | **Basis:** | Dry |
| **File ID:** | J:\GC11\DATA\071701OT\0717F007.D | **Level:** | Low |
| **Instrument ID:** | GC11 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG0104198 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL893 |
| | | **Column1:** | RTX-5 |
| **Sample Amount:** | 20.29 g | **Column2:** | RTX-OPP |
| **% Solids:** | 70.6 | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 0.55 | U | 1.4 | 0.55 | |
| **688-73-3** | **Tri-n-butyltin** | **13** | | 1.4 | 0.46 | * |
| **1002-53-5** | **Di-n-butyltin** | **0.94** | **J** | 1.4 | 0.44 | |
| 2406-65-7 | n-Butyltin | 0.43 | U | 1.4 | 0.43 | |

* See Case Narrative

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 6 | 31-111 | 07/17/01 | Outside Control Limits |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |
| | | **Date Extracted:** | 07/11/2001 |
| | | **Date Analyzed:** | 07/16/2001 |

**Butyltins**

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T4 | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-005 | **Basis:** | Dry |
| **File ID:** | J:\GC11\DATA\071601\0716F011.D | **Level:** | Low |
| **Instrument ID:** | GC11 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG0104198 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL893 |
| | | **Column1:** | RTX-5 |
| **Sample Amount:** | 20.92 g | **Column2:** | RTX-OPP |
| **% Solids:** | 71.7 | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 0.61 | J | 1.4 | 0.54 | |
| 688-73-3 | Tri-n-butyltin | 190 | E | 1.4 | 0.45 | |
| 1002-53-5 | Di-n-butyltin | 6.9 | | 1.4 | 0.43 | |
| 2406-65-7 | n-Butyltin | 1.7 | | 1.4 | 0.42 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 56 | 31-111 | 07/16/01 | Acceptable |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |
| | | **Date Extracted:** | 07/11/2001 |
| | | **Date Analyzed:** | 07/17/2001 |

**Butyltins**

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T4DL | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-005 | **Basis:** | Dry |
| **File ID:** | J:\GC11\DATA\071701OT\0717F008.D | **Level:** | Low |
| **Instrument ID:** | GC11 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG0104198 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL893 |
| | | **Column1:** | RTX-5 |
| **Sample Amount:** | 20.92 g | **Column2:** | RTX-OPP |
| **% Solids:** | 71.7 | | |
| **Dilution Factor:** | 5 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 2.7 | U | 6.7 | 2.7 | |
| 688-73-3 | Tri-n-butyltin | 220 | D | 6.7 | 2.3 | |
| 1002-53-5 | Di-n-butyltin | 8.5 | D | 6.7 | 2.2 | |
| 2406-65-7 | n-Butyltin | 2.2 | JD | 6.7 | 2.1 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 64 | 31-111 | 07/17/01 | Acceptable |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | NA |
| **Sample Matrix:** | Sediment | **Date Received:** | NA |
| | | **Date Extracted:** | 07/11/2001 |
| | | **Date Analyzed:** | 07/16/2001 |

**Butyltins**

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Units:** | ug/Kg |
| **Lab Code:** | KWG0104198-4 | **Basis:** | Dry |
| **File ID:** | J:\GC11\DATA\071601\0716F003.D | **Level:** | Low |
| **Instrument ID:** | GC11 | | |
| **Extraction Method:** | METHOD | **Extraction Lot:** | KWG0104198 |
| **Analysis Method:** | Krone | **Calibration ID:** | CAL893 |
| | | **Column1:** | RTX-5 |
| **Sample Amount:** | 20 g | **Column2:** | RTX-OPP |
| **% Solids:** | NA | | |
| **Dilution Factor:** | 1 | | |

| CAS No. | Analyte Name | Result | Q | MRL | MDL | Note |
|---|---|---|---|---|---|---|
| 1461-25-2 | Tetra-n-butyltin | 0.39 | U | 1.0 | 0.39 | |
| 688-73-3 | Tri-n-butyltin | 0.32 | U | 1.0 | 0.32 | |
| 1002-53-5 | Di-n-butyltin | 0.31 | U | 1.0 | 0.31 | |
| 2406-65-7 | n-Butyltin | 0.30 | U | 1.0 | 0.30 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tri-n-propyltin | 53 | 31-111 | 07/16/01 | Acceptable |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659

**Surrogate Recovery Summary**
**Butyltins**

**Extraction Method:** METHOD
**Analysis Method:** Krone

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 |
|---|---|---|
| 01-Composite | K2104659-001 | 45 |
| 01-CompositeDL | K2104659-001 | 49 D |
| 01-T1 | K2104659-002 | 43 |
| 01-T1DL | K2104659-002 | 51 D |
| 01-T2 | K2104659-003 | 55 |
| 01-T2DL | K2104659-003 | 64 D |
| 01-T3 | K2104659-004 | 5 * |
| 01-T3RE | K2104659-004 | 6 * |
| 01-T4 | K2104659-005 | 56 |
| 01-T4DL | K2104659-005 | 64 D |
| Method Blank | KWG0104198-4 | 53 |
| 01-CompositeMS | KWG0104198-1 | 54 |
| 01-CompositeDMS | KWG0104198-2 | 56 |
| Lab Control Sample | KWG0104198-3 | 52 |

**Surrogate Recovery Control Limits (%)**

Sur1 = Tri-n-propyltin 31-111

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/11/2001 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 07/16/2001 |

**Matrix Spike/Duplicate Matrix Spike Summary**
**Butyltins**

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-Composite | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-001 | **Basis:** | Dry |
| **Extraction Method:** | METHOD | **Level:** | Low |
| **Analysis Method:** | Krone | **Extraction Lot:** | KWG0104198 |

| | | 01-CompositeMS KWG0104198-1 Matrix Spike | | | 01-CompositeDMS KWG0104198-2 Duplicate Matrix Spike | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Sample Result** | **Result** | **Expected** | **%Rec** | **Result** | **Expected** | **%Rec** | **%Rec Limits** | **RPD** | **RPD Limit** |
| Tetra-n-butyltin | 2.2 | 53.1 | 66.1 | 77 | 60.3 | 66.1 | 88 | 15-122 | 13 | 50 |
| Tri-n-butyltin | 190 | 254E | 66.1 | 95 | 821E | 66.1 | 952 * | 23-118 | 105 * | 50 |
| Di-n-butyltin | 7.6 | 57.4 | 66.1 | 75 | 77.1 | 66.1 | 105 | 18-129 | 29 | 50 |
| n-Butyltin | 1.3 | 21.2 | 66.1 | 30 | 19.0 | 66.1 | 27 | 18-129 | 11 | 50 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** [illegible]
**Date Collected:** [illegible]
**Date Received:** [illegible]

## Butyltins

Sample Name: 01-Composite
Lab Code: K2104659-001
Test Notes:

Units: [illegible]
Basis: [illegible]

| Analyte | Prep Method | Analysis Method | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Result |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | Method | Krone | 1 | 0.5 | 1 | 7/11/01 | 7/16/01 | [illegible] |
| Tri-n-butyltin Cation | Method | Krone | 5 | 2.5 | 5 | 7/11/01 | 7/17/01 | [illegible] |
| Di-n-butyltin Cation | Method | Krone | 1 | 0.3 | 1 | 7/11/01 | 7/16/01 | [illegible] |
| n-Butyltin Cation | Method | Krone | 1 | 0.4 | 1 | 7/11/01 | 7/16/01 | [illegible] |

Approved By: Jas Date: 7-31-01

1S22/020597p

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Reque[illegible]**
**Date Collected:** [illegible]
**Date Received:** [illegible]

Butyltins

Sample Name: 01-T1
Lab Code: K2104659-002
Test Notes:

| Analyte | Prep Method | Analysis Method | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Result |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | Method | Krone | 1 | 0.5 | 1 | 7/11/01 | 7/16/01 | 1.4 |
| Tri-n-butyltin Cation | Method | Krone | 5 | 2.5 | 5 | 7/11/01 | 7/17/01 | 200 |
| Di-n-butyltin Cation | Method | Krone | 1 | 0.3 | 1 | 7/11/01 | 7/16/01 | 12 |
| n-Butyltin Cation | Method | Krone | 1 | 0.4 | 1 | 7/11/01 | 7/16/01 | 1.0 |

Approved By: _____ Date: 7-31-01

1S22/020597p

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# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** [illegible]
**Date Collected:** [illegible]
**Date Received:** [illegible]

### Butyltins

Sample Name: 01-T2
Lab Code: K2104659-003
Test Notes:

Units: [illegible]
Basis: [illegible]

| Analyte | Prep Method | Analysis Method | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Result |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | Method | Krone | 1 | 0.5 | 1 | 7/11/01 | 7/16/01 | 0.58 |
| Tri-n-butyltin Cation | Method | Krone | 5 | 2.5 | 5 | 7/11/01 | 7/17/01 | 160 |
| Di-n-butyltin Cation | Method | Krone | 1 | 0.3 | 1 | 7/11/01 | 7/16/01 | 6.3 |
| n-Butyltin Cation | Method | Krone | 1 | 0.4 | 1 | 7/11/01 | 7/16/01 | [illegible] |

Approved By: Jay Date: 7-31-01

1S22/020597p

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## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2[illegible]
**Date Collected:** [illegible]
**Date Received:** [illegible]

Butyltins

Sample Name: 01-T3
Lab Code: K2104659-004
Test Notes:

Units: [illegible]
Basis: [illegible]

| Analyte | Prep Method | Analysis Method | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Result |
|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | Method | Krone | 1 | 0.5 | 1 | 7/11/01 | 7/17/01 | ND |
| Tri-n-butyltin Cation | Method | Krone | 1 | 0.5 | 1 | 7/11/01 | 7/17/01 | [illegible] |
| Di-n-butyltin Cation | Method | Krone | 1 | 0.3 | 1 | 7/11/01 | 7/17/01 | 0.94 |
| n-Butyltin Cation | Method | Krone | 1 | 0.4 | 1 | 7/11/01 | 7/17/01 | ND |

Approved By: Jay Date: 7-31-01

1S22/020597p

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# COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2[illegible]
**Date Collected:** 6/29[illegible]
**Date Received:** [illegible]

## Butyltins

Sample Name: 01-T4
Lab Code: K2104659-005
Test Notes:

Units: [illegible]
Basis: [illegible]

| Analyte | Prep Method | Analysis Method | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Result | [illegible] |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | Method | Krone | 1 | 0.5 | 1 | 7/11/01 | 7/16/01 | 0.51 | [illegible] |
| Tri-n-butyltin Cation | Method | Krone | 5 | 2.5 | 5 | 7/11/01 | 7/17/01 | 220 | [illegible] |
| Di-n-butyltin Cation | Method | Krone | 1 | 0.3 | 1 | 7/11/01 | 7/16/01 | 6.9 | |
| n-Butyltin Cation | Method | Krone | 1 | 0.4 | 1 | 7/11/01 | 7/16/01 | 1.7 | |

Approved By: Jay Date: 7-31-01

1S22/020597p

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Page [illegible]

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | [illegible] |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | NA |
| **Sample Matrix:** | Sediment | **Date Received:** | NA |

### Butyltins

| | | | |
|---|---|---|---|
| Sample Name: | Method Blank | Units: | [illegible] |
| Lab Code: | KWG0104198-4 | Basis: | [illegible] |
| Test Notes: | | | |

| Analyte | Prep Method | Analysis Method | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Result | [illegible] |
|---|---|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | Method | Krone | 1 | 0.5 | 1 | 7/11/01 | 7/16/01 | ND | |
| Tri-n-butyltin Cation | Method | Krone | 1 | 0.5 | 1 | 7/11/01 | 7/16/01 | ND | |
| Di-n-butyltin Cation | Method | Krone | 1 | 0.3 | 1 | 7/11/01 | 7/16/01 | ND | |
| n-Butyltin Cation | Method | Krone | 1 | 0.4 | 1 | 7/11/01 | 7/16/01 | ND | |

Approved By: Jay Date: 7-31-01

1S22/020597p

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## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** [illegible]
**Date Collected:** [illegible]
**Date Received:** [illegible]
**Date Extracted:** [illegible]
**Date Analyzed:** [illegible]

Surrogate Recovery Summary
Butyltins

Prep Method: Method
Analysis Method: Krone

Units: PERCENT
Basis: NA

| Sample Name | Lab Code | Test Notes | Percent Recovery Tri-n-propyltin Cation |
|---|---|---|---|
| 01-Composite | K2104659-001 | | 45 |
| 01-T1 | K2104659-002 | | 43 |
| 01-T2 | K2104659-003 | | 55 |
| 01-T3 | K2104659-004 | | 5 * |
| 01-T4 | K2104659-005 | | 56 |
| 01-Composite | K2104659-001MS | | 54 |
| 01-Composite | K2104659-001DMS | | 56 |
| Lab Control Sample | KWG0104198-3 | | 52 |
| Method Blank | KWG0104198-4 | | 53 |

CAS Acceptance Limits: 31-111

Approved By: Jay Date: 7-31-01

SUR1/110697p

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**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K21[illegible] |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 6/29/01 |
| **Sample Matrix:** | Sediment | **Date Received:** | 6/30/01 |
| | | **Date Extracted:** | 7/11/01 |
| | | **Date Analyzed:** | 7/18/01 |

Matrix Spike/Duplicate Matrix Spike Summary
Butyltins

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-Composite | | Units: ug/Kg (ppb) |
| **Lab Code:** | K2104659-001MS, | K2104659-001DMS | Basis: Dry |
| **Test Notes:** | | | |

| | | | | Spike Level | | Sample | Spike Result | | Percent Recovery | | CAS Acceptance | Relative Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Prep Method** | **Analysis Method** | **MRL** | **MS** | **DMS** | **Result** | **MS** | **DMS** | **MS** | **DMS** | **Limits** | **Difference** |
| Tetra-n-butyltin | Method | Krone | 1 | 66 | 66 | 2.2 | 53 | 62 | 77 | 91 | 15-122 | 16 |
| Tri-n-butyltin Cation | Method | Krone | 1 | 66 | 66 | 210 | 254 | 821 | 67 | 926 | 23-118 | 105 |
| Di-n-butyltin Cation | Method | Krone | 1 | 66 | 66 | 7.6 | 57 | 77 | 75 | 105 | 18-129 | 30 |
| n-Butyltin Cation | Method | Krone | 1 | 66 | 66 | 1.3 | 21 | 19 | 30 | 27 | 18-129 | 10 |

Approved By: Jay Date: 7-31-01

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## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**LCS Matrix:** Sediment

**Service Request:** K2[illegible]
**Date Collected:** NA
**Date Received:** NA
**Date Extracted:** 7/1[illegible]
**Date Analyzed:** 7/16/01

Laboratory Control Sample Summary
Butyltins

Sample Name: Lab Control Sample
Lab Code: KWG0104198-3
Test Notes:

Units: ug/Kg [illegible]
Basis: Dry

| Analyte | Prep Method | Analysis Method | True Value | Result | Percent Recovery | CAS Percent Recovery Acceptance Limits | Result Notes |
|---|---|---|---|---|---|---|---|
| Tetra-n-butyltin | Method | Krone | 48 | 37 | 77 | 31-121 | |
| Tri-n-butyltin Cation | Method | Krone | 48 | 42 | 88 | 32-131 | |
| Di-n-butyltin Cation | Method | Krone | 48 | 32 | 67 | 19-136 | |
| n-Butyltin Cation | Method | Krone | 48 | 30.0 | 62 | 17-124 | |

Approved By: Jay Date: 7-31-01

LC[illegible]Jay2 - LCS 7/31/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Analyzed:** 7/16/2001

Continuing Calibration Verification (CCV) Summary
Butyltins

Sample Name: CCV1
Lab Code: 0716F002
Test Notes:

Units: ug/L (ppb)
Basis: NA

| Analyte | Analysis Method | True Value | Result | CAS Acceptance Limits | Percent Recovery | Result Notes |
|---|---|---|---|---|---|---|
| Tetra-n-butyltin | Krone | 472 | 480 | 354-590 | 102 | |
| Tri-n-butyltin Cation | Krone | 482 | 510 | 362-603 | 106 | |
| Di-n-butyltin Cation | Krone | 484 | 490 | 363-605 | 101 | |
| n-Butyltin Cation | Krone | 478 | 480 | 359-598 | 100 | |

Approved By: Jas Date: 7-31-01

CCV/021397p

04659SVG.AY2 - CCV1 7/31/2001

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Analyzed:** 7/16/2001

Continuing Calibration Verification (CCV) Summary
Butyltins

Sample Name: CCV2
Lab Code: 0716F013
Test Notes:

Units: ug/L (ppb)
Basis: NA

| Analyte | Analysis Method | True Value | Result | CAS Acceptance Limits | Percent Recovery | Result Note |
|---|---|---|---|---|---|---|
| Tetra-n-butyltin | Krone | 472 | 450 | 354-590 | 95 | |
| Tri-n-butyltin Cation | Krone | 482 | 490 | 362-603 | 102 | |
| Di-n-butyltin Cation | Krone | 484 | 490 | 363-605 | 101 | |
| n-Butyltin Cation | Krone | 478 | 480 | 359-598 | 100 | |

Approved By: Jay Date: 7-31-01

CCV/021397p

04659SVO.AY2 - CCV2 7/31/2001

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Analyzed:** 7/17/2001

Continuing Calibration Verification (CCV) Summary
Butyltins

Sample Name: CCV3
Lab Code: 0717F003
Test Notes:

Units: ug/L (ppb)
Basis: NA

| Analyte | Analysis Method | True Value | Result | CAS Acceptance Limits | Percent Recovery | Result Note |
|---|---|---|---|---|---|---|
| Tetra-n-butyltin | Krone | 472 | 500 | 354-590 | 106 | |
| Tri-n-butyltin Cation | Krone | 482 | 540 | 362-603 | 112 | |
| Di-n-butyltin Cation | Krone | 484 | 540 | 363-605 | 112 | |
| n-Butyltin Cation | Krone | 478 | 510 | 359-598 | 107 | |

Approved By: Jay Date: 7-31-01

CCV/021397p

04659SVG.AY2 - CCV3 7/31/2001

# COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Analyzed:** 7/17/2001

Continuing Calibration Verification (CCV) Summary
Butyltins

Sample Name: CCV4
Lab Code: 0717F011
Test Notes:

Units: ug/L (ppb)
Basis: NA

| Analyte | Analysis Method | True Value | Result | CAS Acceptance Limits | Percent Recovery | Note |
|---|---|---|---|---|---|---|
| Tetra-n-butyltin | Krone | 472 | 480 | 354-590 | 102 | |
| Tri-n-butyltin Cation | Krone | 482 | 510 | 362-603 | 106 | |
| Di-n-butyltin Cation | Krone | 484 | 500 | 363-605 | 103 | |
| n-Butyltin Cation | Krone | 478 | 480 | 359-598 | 100 | |

Approved By: _____ Date: 7-31-01

CCV/021397p

04659SVG.AY2 - CCV4 7/31/2001

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Analyzed:** 7/26/01

Continuing Calibration Verification (CCV) Summary
Butyltins

Sample Name: CCV1
Lab Code: 0725F016
Test Notes:

Units: ug/L (ppb)
Basis: NA

| Analyte | Analysis Method | True Value | Result | CAS Acceptance Limits | Percent Recovery |
|---|---|---|---|---|---|
| Tetra-n-butyltin | Krone | 472 | 530 | 354-590 | 112 |
| Tri-n-butyltin Cation | Krone | 482 | 560 | 362-603 | 116 |
| Di-n-butyltin Cation | Krone | 484 | 550 | 363-605 | 114 |
| n-Butyltin Cation | Krone | 478 | 550 | 359-598 | 115 |

Approved By: Jas Date: 7-31-01

CCV/021397p
04659SVG.xy1 - CCV1 7/31/01

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Analyzed:** 7/26/01

Continuing Calibration Verification (CCV) Summary
Butyltins

Sample Name: CCV2
Lab Code: 0725F028
Test Notes:

Units: ug/L (ppb)
Basis: NA

| Analyte | Analysis Method | True Value | Result | CAS Acceptance Limits | Percent Recovery |
|---|---|---|---|---|---|
| Tetra-n-butyltin | Krone | 472 | 500 | 354-590 | 106 |
| Tri-n-butyltin Cation | Krone | 482 | 520 | 362-603 | 108 |
| Di-n-butyltin Cation | Krone | 484 | 530 | 363-605 | 110 |
| n-Butyltin Cation | Krone | 478 | 540 | 359-598 | 113 |

Approved By: Jay Date: 7-31-01

CCV/021397p
046598VG.ayl - CCV2 7/31/01

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Analyzed:** 7/26/01

Continuing Calibration Verification (CCV) Summary
Butyltins

Sample Name: CCV3
Lab Code: 0725F034
Test Notes:

Units: ug/L (ppb)
Basis: NA

| Analyte | Analysis Method | True Value | Result | CAS Acceptance Limits | Percent Recovery | Note |
|---|---|---|---|---|---|---|
| Tetra-n-butyltin | Krone | 472 | 490 | 354-590 | 104 | |
| Tri-n-butyltin Cation | Krone | 482 | 510 | 362-603 | 106 | |
| Di-n-butyltin Cation | Krone | 484 | 520 | 363-605 | 107 | |
| n-Butyltin Cation | Krone | 478 | 530 | 359-598 | 111 | |

Approved By: Jay Date: 7-31-01

CCV/021397p
04659SVG.xyl - CCV3 7/31/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Analyzed:** 7/26/01

Continuing Calibration Verification (CCV) Summary
Butyltins

Sample Name: CCV4
Lab Code: 0726F003
Test Notes:

Units: ug/L (ppb)
Basis: NA

| Analyte | Analysis Method | True Value | Result | CAS Acceptance Limits | Percent Recovery |
|---|---|---|---|---|---|
| Tetra-n-butyltin | Krone | 472 | 460 | 354-590 | 97 |
| Tri-n-butyltin Cation | Krone | 482 | 490 | 362-603 | 102 |
| Di-n-butyltin Cation | Krone | 484 | 510 | 363-605 | 105 |
| n-Butyltin Cation | Krone | 478 | 490 | 359-598 | 103 |

Approved By: Jay Date: 7-31-01

CCV/021397p
04659SVG.ay1 - CCV4 7/31/01

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Analyzed:** 7/26/01

Continuing Calibration Verification (CCV) Summary
Butyltins

Sample Name: CCV5
Lab Code: 0726F016
Test Notes:

Units: ug/L (ppb)
Basis: NA

| Analyte | Analysis Method | True Value | Result | CAS Acceptance Limits | Percent Recovery | Note |
|---|---|---|---|---|---|---|
| Tetra-n-butyltin | Krone | 472 | 470 | 354-590 | 100 | |
| Tri-n-butyltin Cation | Krone | 482 | 490 | 362-603 | 102 | |
| Di-n-butyltin Cation | Krone | 484 | 500 | 363-605 | 103 | |
| n-Butyltin Cation | Krone | 478 | 510 | 359-598 | 107 | |

Approved By: Jay Date: 7-31-01

CCV/021397p
04659SVG.xyl - CCV5 7/31/01

**COLUMBIA ANALYTICAL SERVICES, INC.**

Harding Lawson ESE
Cargill Irving Elevator Terminal/52852.002

**Service Request:** K2104659

**Cover Page - Organic Analysis Data Package**
**Semi-Volatile Organic Compounds by GC/MS**

| Sample Name | Lab Code | Date Collected | Date Received |
|---|---|---|---|
| 01-Composite | K2104659-001 | 06/29/2001 | 06/30/2001 |
| 01-T1 | K2104659-002 | 06/29/2001 | 06/30/2001 |
| 01-T2 | K2104659-003 | 06/29/2001 | 06/30/2001 |
| 01-T3 | K2104659-004 | 06/29/2001 | 06/30/2001 |
| 01-T4 | K2104659-005 | 06/29/2001 | 06/30/2001 |
| 01-T4MS | KWG0104355-1 | 06/29/2001 | 06/30/2001 |
| 01-T4DMS | KWG0104355-2 | 06/29/2001 | 06/30/2001 |

fy that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the ions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on y diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

ure: Name: Jeff Grindstaff

: 8/2/01 Title: GC/MS Manager



CAS KELSO 15:13 FAX 005

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| [illegible]: | Harding Lawson ESE | Service Request: | K2104659 |
| [illegible]t: | Cargill Irving Elevator Terminal/52852.002 | Date Collected: | 06/29/2001 |
| [illegible] Matrix: | Sediment | Date Received: | [illegible] |

## Semi-Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| [illegible]le Name: | 01-Composite | Units: | ug/Kg |
| [illegible] Code: | K2104659-001 | Basis: | Dry |
| [illegible]ction Method: | EPA 3541 | Level: | Low |
| [illegible]ysis Method: | 8270C | | |

| [illegible]yte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot |
|---|---|---|---|---|---|---|---|---|
| [illegible] | 44 | | 42 | 3.9 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]l Alcohol | 5.7 | J | 14 | 3.9 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]hylphenol | ND | U | 14 | 3.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]chloroethane | ND | U | 14 | 3.2 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]Methylphenol† | 50 | | 14 | 3.3 | 1 | 07/03/01 | 07/10/01 | [illegible] |
| [illegible]-Dimethylphenol | ND | U | 70 | 21 | 1 | 07/03/01 | 07/10/01 | [illegible] |
| [illegible]ic Acid | 110 | J | 280 | 23 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]thalene | 10 | J | 14 | 2.1 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]chlorobutadiene | ND | U | 14 | 3.9 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]thylnaphthalene | 10 | J | 14 | 4.2 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]phthylene | 8.5 | J | 14 | 2.3 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]thyl Phthalate | 5.4 | J | 14 | 3.6 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]aphthene | 14 | J | 14 | 3.6 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]zofuran | 9.2 | J | 14 | 4.0 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]ene | 18 | | 14 | 3.3 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]yl Phthalate | ND | U | 14 | 4.3 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]trosodiphenylamine | ND | U | 14 | 3.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]chlorobenzene | ND | U | 14 | 4.2 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]chlorophenol | ND | U | 70 | 3.2 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]anthrene | 97 | | 14 | 2.9 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]racene | 23 | | 14 | 3.3 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]butyl Phthalate | ND | U | 14 | 3.6 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]ranthene | 87 | | 14 | 3.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]ne | 83 | | 14 | 3.6 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]tyl Benzyl Phthalate | ND | U | 14 | 2.0 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]enz(a)anthracene | 50 | | 14 | 1.5 | 1 | 07/03/01 | 07/10/01 | [illegible] |
| [illegible]rysene | 71 | | 14 | 1.6 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]ethylhexyl) Phthalate | ND | U | 280 | 180 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]ctyl Phthalate | ND | U | 14 | 2.3 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible](b)fluoranthene | 90 | | 14 | 1.3 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible](k)fluoranthene | 26 | | 14 | 2.3 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible](a)pyrene | 66 | | 14 | 1.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]no(1,2,3-cd)pyrene | 60 | | 14 | 0.66 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]nz(a,h)anthracene | 14 | | 14 | 1.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible](g,h,i)perylene | 65 | | 14 | 1.5 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |

[illegible]ments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

| | | | |
|---|---|---|---|
| **...t:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **...ct:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **...le Matrix:** | Sediment | **Date Received:** | 06/30/2001 |

**Semi-Volatile Organic Compounds by GC/MS**

| | | | |
|---|---|---|---|
| **...e Name:** | 01-Composite | **Units:** | ug/Kg |
| **...Code:** | K2104659-001 | **Basis:** | Dry |

* ...e Case Narrative

| ...ate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| ...ophenol | 57 | 25-121 | 07/10/01 | Acceptable |
| ...d6 | 73 | 24-113 | 07/10/01 | Acceptable |
| ...nzene-d5 | 60 | 23-120 | 07/10/01 | Acceptable |
| ...robiphenyl | 63 | 30-115 | 07/10/01 | Acceptable |
| ...Tribromophenol | 78 | 19-122 | 07/10/01 | Acceptable |
| ...enyl-d14 | 78 | 30-140 | 07/10/01 | Acceptable |

**...yte Comments**

| | |
|---|---|
| ...hylphenol | This analyte cannot be separated from 3-Methylphenol. |

...ents:

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| [illegible]: | Harding Lawson ESE | **Service Request:** | K2104659 |
| [illegible]ct: | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| [illegible] Matrix: | Sediment | **Date Received:** | 06/30/2001 |

### Semi-Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| [illegible]le Name: | 01-T1 | **Units:** | ug/Kg |
| [illegible]Code: | K2104659-002 | **Basis:** | Dry |
| [illegible]tion Method: | EPA 3541 | **Level:** | Low |
| [illegible]is Method: | 8270C | | |

| [illegible]yte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot |
|---|---|---|---|---|---|---|---|---|
| [illegible]nol | 43 | | 39 | 3.6 | 1 | 07/03/01 | 07/10/01 | [illegible] |
| [illegible]l Alcohol | ND | U | 13 | 3.6 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]hylphenol | ND | U | 13 | 3.1 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]hloroethane | ND | U | 13 | 3.0 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]ylphenol† | 24 | | 13 | 3.1 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]methylphenol | ND | U | 65 | 20 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]ic Acid | 82 | J | 260 | 22 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]thalene | 8.1 | J | 13 | 2.0 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]chlorobutadiene | ND | U | 13 | 3.6 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]thylnaphthalene | 5.1 | J | 13 | 3.9 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]aphthylene | 2.5 | J | 13 | 2.1 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]thyl Phthalate | ND | U | 13 | 3.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]phthene | 20 | | 13 | 3.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]zofuran | 12 | J | 13 | 3.8 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]ene | 29 | | 13 | 3.1 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible] Phthalate | ND | U | 13 | 4.0 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]osodiphenylamine | ND | U | 13 | 3.2 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]hlorobenzene | ND | U | 13 | 4.0 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]hlorophenol | ND | U | 65 | 3.0 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]anthrene | 240 | | 13 | 2.7 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]nthracene | 46 | | 13 | 3.1 | 1 | 07/03/01 | 07/10/01 | [illegible] |
| [illegible]-butyl Phthalate | ND | U | 13 | 3.4 | 1 | 07/03/01 | 07/10/01 | [illegible] |
| [illegible]anthene | 380 | | 13 | 3.2 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]ne | 350 | | 13 | 3.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]Benzyl Phthalate | ND | U | 13 | 1.8 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]a)anthracene | 310 | | 13 | 1.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]ene | 400 | | 13 | 1.5 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]thylhexyl) Phthalate | 220 | J | 260 | 160 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]octyl Phthalate | ND | U | 13 | 2.2 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]o(b)fluoranthene | 580 | | 13 | 1.2 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]o(k)fluoranthene | 190 | | 13 | 2.1 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]o(a)pyrene | 430 | | 13 | 1.3 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]o(1,2,3-cd)pyrene | 370 | | 13 | 0.62 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]z(a,h)anthracene | 97 | | 13 | 1.3 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| [illegible]o(g,h,i)perylene | 350 | | 13 | 1.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |

[illegible]ents:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Harding Lawson ESE
Cargill Irving Elevator Terminal/52852.002
Matrix: Sediment

Service Request: K2104659
Date Collected: 06/29/2001
Date Received: 06/30/2001

## Semi-Volatile Organic Compounds by GC/MS

Name: 01-T1
Code: K2104659-002

Units: ug/Kg
Basis: Dry

Case Narrative

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Phenol | 44 | 25-121 | 07/10/01 | Acceptable |
| -d6 | 60 | 24-113 | 07/10/01 | Acceptable |
| Benzene-d5 | 48 | 23-120 | 07/10/01 | Acceptable |
| Biphenyl | 51 | 30-115 | 07/10/01 | Acceptable |
| Tribromophenol | 65 | 19-122 | 07/10/01 | Acceptable |
| Phenyl-d14 | 75 | 30-140 | 07/10/01 | Acceptable |

Analyte Comments

| | |
|---|---|
| 3-Methylphenol | This analyte cannot be separated from 3-Methylphenol. |



CAS KELSO
08/02/01 THU 16:15 FAX
CARG002231

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**ent:** Harding Lawson ESE
**ject:** Cargill Irving Elevator Terminal/52852.002
**ple Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 06/29/2001
**Date Received:** 06/30/2001

## Semi-Volatile Organic Compounds by GC/MS

**ple Name:** 01-T2
**Code:** K2104659-003

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 3541
**lysis Method:** 8270C

| yte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot |
|---|---|---|---|---|---|---|---|---|
| l | 46 | | 44 | 4.1 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| yl Alcohol | 8.8 | J | 15 | 4.1 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| thylphenol | ND | U | 15 | 3.5 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| chloroethane | ND | U | 15 | 3.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| thylphenol† | 54 | | 15 | 3.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| Dimethylphenol | ND | U | 73 | 23 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| oic Acid | 130 | J | 300 | 24 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| thalene | 21 | | 15 | 2.2 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| chlorobutadiene | ND | U | 15 | 4.1 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| ethylnaphthalene | 9.8 | J | 15 | 4.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| aphthylene | 12 | J | 15 | 2.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| thyl Phthalate | ND | U | 15 | 3.8 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| aphthene | 10 | J | 15 | 3.8 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| zofuran | 8.3 | J | 15 | 4.2 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| ene | 13 | J | 15 | 3.5 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| yl Phthalate | ND | U | 15 | 4.5 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| -Nitrosodiphenylamine | ND | U | 15 | 3.6 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| chlorobenzene | ND | U | 15 | 4.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| chlorophenol | 16 | J | 73 | 3.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| anthrene | 120 | | 15 | 3.0 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| acene | 26 | | 15 | 3.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| butyl Phthalate | 4.8 | J | 15 | 3.8 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| anthene | 160 | | 15 | 3.5 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| ene | 170 | | 15 | 3.8 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| l Benzyl Phthalate | 14 | J | 15 | 2.0 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| (a)anthracene | 86 | | 15 | 1.6 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| sene | 120 | | 15 | 1.6 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| -ethylhexyl) Phthalate | ND | U | 300 | 180 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| -octyl Phthalate | ND | U | 15 | 2.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| o(b)fluoranthene | 150 | | 15 | 1.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| o(k)fluoranthene | 51 | | 15 | 2.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| (a)pyrene | 110 | | 15 | 1.4 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| o(1,2,3-cd)pyrene | 100 | | 15 | 0.69 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| z(a,h)anthracene | 22 | | 15 | 1.5 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |
| o(g,h,i)perylene | 100 | | 15 | 1.6 | 1 | 07/03/01 | 07/10/01 | KWG0103860 |

ments:

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** [illegible]
**Date Collected:** [illegible]
**Date Received:** [illegible]

**Semi-Volatile Organic Compounds by GC/MS**

**Sample Name:** 01-T2
**Lab Code:** K2104659-003

**Units:** ug/Kg
**Basis:** Dry

**See Case Narrative**

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| [illegible]orophenol | 62 | 25-121 | 07/10/01 | Acceptable |
| [illegible]l-d6 | 78 | 24-113 | 07/10/01 | Acceptable |
| [illegible]benzene-d5 | 67 | 23-120 | 07/10/01 | Acceptable |
| [illegible]obiphenyl | 67 | 30-115 | 07/10/01 | Acceptable |
| [illegible]Tribromophenol | 88 | 19-122 | 07/10/01 | Acceptable |
| [illegible]enyl-d14 | 83 | 30-140 | 07/10/01 | Acceptable |

**[illegible]te Comments**

| | |
|---|---|
| [illegible]hylphenol | This analyte cannot be separated from 3-Methylphenol. |

**[illegible]ents:**



CARG002233

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

| | | | |
|---|---|---|---|
| [illegible]: | Harding Lawson ESE | **Service Request:** | K2104659 |
| [illegible]ect: | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| [illegible]le Matrix: | Sediment | **Date Received:** | 06/30/2001 |

**Semi-Volatile Organic Compounds by GC/MS**

| | | | |
|---|---|---|---|
| [illegible]le Name: | 01-T3 | **Units:** | ug/Kg |
| [illegible]Code: | K2104659-004 | **Basis:** | Dry |
| [illegible]ction Method: | EPA 3541 | **Level:** | Low |
| [illegible]ysis Method: | 8270C | | |

| [illegible]lyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| [illegible]ol | 38 | J | 43 | 4.0 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]yl Alcohol | 5.6 | J | 15 | 3.9 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]ethylphenol | ND | U | 15 | 3.4 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]achloroethane | ND | U | 15 | 3.3 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]ethylphenol† | 17 | | 15 | 3.4 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]Dimethylphenol | ND | U | 71 | 22 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]ic Acid | 75 | J | 290 | 24 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]thalene | 5.8 | J | 15 | 2.1 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]chlorobutadiene | ND | U | 15 | 3.9 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]thylnaphthalene | ND | U | 15 | 4.3 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]enaphthylene | 25 | | 15 | 2.3 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| Dimethyl Phthalate | ND | U | 15 | 3.7 | 1 | 07/03/01 | [illegible] | [illegible] | |
| [illegible]naphthene | 6.7 | J | 15 | 3.7 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]nzofuran | 4.2 | J | 15 | 4.1 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]ene | 11 | J | 15 | 3.4 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]l Phthalate | ND | U | 15 | 4.3 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]osodiphenylamine | ND | U | 15 | 3.5 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]chlorobenzene | ND | U | 15 | 4.3 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]achlorophenol | ND | U | 71 | 3.3 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]anthrene | 120 | | 15 | 2.9 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]hracene | 48 | | 15 | 3.3 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]-butyl Phthalate | ND | U | 15 | 3.7 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]oranthene | 190 | | 15 | 3.4 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]ene | 160 | | 15 | 3.7 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]yl Benzyl Phthalate | ND | U | 15 | 2.0 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]z(a)anthracene | 120 | | 15 | 1.6 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]ysene | 130 | | 15 | 1.6 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]-ethylhexyl) Phthalate | ND | U | 290 | 180 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]-octyl Phthalate | ND | U | 15 | 2.3 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]zo(b)fluoranthene | 170 | | 15 | 1.4 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]zo(k)fluoranthene | 52 | | 15 | 2.3 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| Benzo(a)pyrene | 120 | | 15 | 1.4 | 1 | 07/03/01 | 07/16/01 | [illegible] | |
| [illegible]deno(1,2,3-cd)pyrene | 82 | | 15 | 0.67 | 1 | 07/03/01 | 07/16/01 | [illegible] | |
| [illegible]nz(a,h)anthracene | 23 | | 15 | 1.4 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |
| [illegible]e(g,h,i)perylene | 70 | | 15 | 1.5 | 1 | 07/03/01 | 07/16/01 | KWG0103860 | |

[illegible]ments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| [illegible]: | Harding Lawson ESE | **Service Request:** | K2[illegible] |
| [illegible]ct: | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/20[illegible] |
| [illegible]le Matrix: | Sediment | **Date Received:** | 06/30/20[illegible] |

**Semi-Volatile Organic Compounds by GC/MS**

| | | | |
|---|---|---|---|
| [illegible] Name: | 01-T3 | **Units:** | ug/Kg |
| [illegible] Code: | K2104659-004 | **Basis:** | Dry |

[illegible] Case Narrative

| [illegible]ate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| [illegible]ophenol | 58 | 25-121 | 07/16/01 | Acceptable |
| [illegible]-d6 | 75 | 24-113 | 07/16/01 | Acceptable |
| [illegible]enzene-d5 | 60 | 23-120 | 07/16/01 | Acceptable |
| [illegible]robiphenyl | 62 | 30-115 | 07/16/01 | Acceptable |
| [illegible]Tribromophenol | 74 | 19-122 | 07/16/01 | Acceptable |
| [illegible]enyl-d14 | 81 | 30-140 | 07/16/01 | Acceptable |

[illegible]yte Comments

| | |
|---|---|
| [illegible]thylphenol | This analyte cannot be separated from 3-Methylphenol. |

C[illegible]ments: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| [illegible]t: | Harding Lawson ESE | Service Request: | K2104659 |
| [illegible]ect: | Cargill Irving Elevator Terminal/52852.002 | Date Collected: | 06/29/2001 |
| [illegible]le Matrix: | Sediment | Date Received: | 06/30/2001 |

## Semi-Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| [illegible]ple Name: | 01-T4 | Units: | ug/Kg |
| [illegible] Code: | K2104659-005 | Basis: | Dry |
| [illegible]ction Method: | EPA 3541 | Level: | Low |
| [illegible]ysis Method: | 8270C | | |

| [illegible]alyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot |
|---|---|---|---|---|---|---|---|---|
| [illegible]henol | 27 | J | 42 | 3.9 | 1 | 07/21/01 | 07/30/01 | [illegible] |
| [illegible]yl Alcohol | 5.2 | J | 14 | 3.9 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]thylphenol | ND | U | 14 | 3.4 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]chloroethane | ND | U | 14 | 3.3 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]thylphenol† | 16 | | 14 | 3.3 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]imethylphenol | ND | U | 70 | 22 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]ic Acid | 73 | J | 280 | 23 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]thalene | 20 | | 14 | 2.1 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]achlorobutadiene | ND | U | 14 | 3.9 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]ethylnaphthalene | 12 | J | 14 | 4.2 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]aphthylene | 13 | J | 14 | 2.3 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]ethyl Phthalate | ND | U | 14 | 3.6 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]aphthene | 6.1 | J | 14 | 3.6 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]enzofuran | 9.4 | J | 14 | 4.0 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]rene | 9.2 | J | 14 | 3.3 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]yl Phthalate | ND | U | 14 | 4.3 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]rosodiphenylamine | ND | U | 14 | 3.4 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]hlorobenzene | ND | U | 14 | 4.2 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]achlorophenol | ND | U | 70 | 3.2 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]nanthrene | 65 | | 14 | 2.9 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]nthracene | 22 | | 14 | 3.3 | 1 | 07/21/01 | 07/30/01 | [illegible] |
| [illegible]-n-butyl Phthalate | 8.1 | J | 14 | 3.6 | 1 | 07/21/01 | 07/30/01 | [illegible] |
| [illegible]oranthene | 71 | | 14 | 3.4 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]ene | 99 | | 14 | 3.6 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]Benzyl Phthalate | ND | U | 14 | 2.0 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible](a)anthracene | 29 | | 14 | 1.5 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]ysene | 50 | | 14 | 1.6 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]2-ethylhexyl) Phthalate | ND | U | 280 | 180 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]-octyl Phthalate | ND | U | 14 | 2.3 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]zo(b)fluoranthene | 61 | | 14 | 1.3 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]zo(k)fluoranthene | 18 | | 14 | 2.3 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]zo(a)pyrene | 40 | | 14 | 1.4 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]eno(1,2,3-cd)pyrene | 29 | | 14 | 0.66 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]enz(a,h)anthracene | 7.9 | J | 14 | 1.4 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]zo(g,h,i)perylene | 36 | | 14 | 1.5 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |

[illegible]ments:

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **t:** | Harding Lawson ESE | **Service Request:** | K2[illegible] |
| **ct:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/200[illegible] |
| **le Matrix:** | Sediment | **Date Received:** | 06/30/200[illegible] |

### Semi-Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **le Name:** | 01-T4 | **Units:** | ug/Kg |
| **Code:** | K2104659-005 | **Basis:** | Dry |

**Case Narrative**

| **ogate Name** | **%Rec** | **Control Limits** | **Date Analyzed** | **Note** |
|---|---|---|---|---|
| orophenol | 18 | 25-121 | 07/30/01 | Outside Control Limits |
| ol-d6 | 41 | 24-113 | 07/30/01 | Acceptable |
| benzene-d5 | 30 | 23-120 | 07/30/01 | Acceptable |
| orobiphenyl | 50 | 30-115 | 07/30/01 | Acceptable |
| -Tribromophenol | 75 | 19-122 | 07/30/01 | Acceptable |
| henyl-d14 | 103 | 30-140 | 07/30/01 | Acceptable |

**Analyte Comments**

| | |
|---|---|
| 4-Methylphenol | This analyte cannot be separated from 3-Methylphenol. |

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | NA |
| **Sample Matrix:** | Sediment | **Date Received:** | NA |

### Semi-Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Units:** | ug/Kg |
| **Lab Code:** | KWG0103860-6 | **Basis:** | Dry |
| **Extraction Method:** | EPA 3541 | **Level:** | Low |
| **Analysis Method:** | 8270C | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot |
|---|---|---|---|---|---|---|---|---|
| Phenol | 17 | J | 30 | 2.8 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Benzyl Alcohol | ND | U | 10 | 2.8 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| 2-Methylphenol | ND | U | 10 | 2.4 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Hexachloroethane | ND | U | 10 | 2.3 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| 4-Methylphenol† | ND | U | 10 | 2.4 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| 2,4-Dimethylphenol | ND | U | 50 | 16 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Benzoic Acid | ND | U | 200 | 17 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Naphthalene | ND | U | 10 | 1.5 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Hexachlorobutadiene | ND | U | 10 | 2.8 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| 2-Methylnaphthalene | ND | U | 10 | 3.0 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Acenaphthylene | ND | U | 10 | 1.7 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Dimethyl Phthalate | ND | U | 10 | 2.6 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Acenaphthene | ND | U | 10 | 2.6 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Dibenzofuran | ND | U | 10 | 2.9 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Fluorene | ND | U | 10 | 2.4 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Diethyl Phthalate | ND | U | 10 | 3.1 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| N-Nitrosodiphenylamine | ND | U | 10 | 2.5 | 1 | 07/03/01 | 07/09/01 | KWG[illegible] |
| Hexachlorobenzene | ND | U | 10 | 3.1 | 1 | 07/03/01 | 07/09/01 | [illegible] |
| Pentachlorophenol | ND | U | 50 | 2.3 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Phenanthrene | ND | U | 10 | 2.1 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Anthracene | ND | U | 10 | 2.4 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Di-n-butyl Phthalate | ND | U | 10 | 2.6 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Fluoranthene | ND | U | 10 | 2.4 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Pyrene | ND | U | 10 | 2.6 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Butyl Benzyl Phthalate | ND | U | 10 | 1.4 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Benz(a)anthracene | ND | U | 10 | 1.1 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Chrysene | ND | U | 10 | 1.1 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Bis(2-ethylhexyl) Phthalate | ND | U | 200 | 130 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Di-n-octyl Phthalate | ND | U | 10 | 1.7 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Benzo(b)fluoranthene | ND | U | 10 | 0.92 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Benzo(k)fluoranthene | ND | U | 10 | 1.6 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Benzo(a)pyrene | ND | U | 10 | 0.96 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Indeno(1,2,3-cd)pyrene | ND | U | 10 | 0.48 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Dibenz(a,h)anthracene | ND | U | 10 | 0.97 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |
| Benzo(g,h,i)perylene | ND | U | 10 | 1.1 | 1 | 07/03/01 | 07/09/01 | KWG0103860 |

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| Client: | Harding Lawson ESE | Service Request: | K2[illegible] |
| Project: | Cargill Irving Elevator Terminal/52852.002 | Date Collected: | [illegible] |
| Sample Matrix: | Sediment | Date Received: | [illegible] |

### Semi-Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| Sample Name: | Method Blank | Units: | ug/Kg |
| Lab Code: | KWG0103860-6 | Basis: | Dry |

Extra Case Narrative

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| [illegible]rophenol | 58 | 25-121 | 07/09/01 | Acceptable |
| [illegible]l-d6 | 83 | 24-113 | 07/09/01 | Acceptable |
| [illegible]enzene-d5 | 86 | 23-120 | 07/09/01 | Acceptable |
| [illegible]robiphenyl | 83 | 30-115 | 07/09/01 | Acceptable |
| [illegible]ribromophenol | 62 | 19-122 | 07/09/01 | Acceptable |
| [illegible]nyl-d14 | 88 | 30-140 | 07/09/01 | Acceptable |

Analyte Comments

| | |
|---|---|
| [illegible]thylphenol | This analyte cannot be separated from 3-Methylphenol. |

Comments:



CAS KELSO THU 16:18 FAX

CARG002239

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

**[illegible]t:** Harding Lawson ESE
**[illegible]ct:** Cargill Irving Elevator Terminal/52852.002
**[illegible]le Matrix:** Sediment

**Service Request:** K[illegible]
**Date Collected:** NA
**Date Received:** NA

**Semi-Volatile Organic Compounds by GC/MS**

**Sample Name:** Method Blank
**[illegible] Code:** KWG0104355-6
**[illegible]raction Method:** EPA 3541
**[illegible]ysis Method:** 8270C

**Units:** [illegible]
**Basis:** Dry
**Level:** Low

| [illegible]lyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot |
|---|---|---|---|---|---|---|---|---|
| [illegible]ol | 5.9 | J | 30 | 2.8 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]yl Alcohol | ND | U | 10 | 2.8 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]ethylphenol | ND | U | 10 | 2.4 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]chloroethane | ND | U | 10 | 2.3 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]ethylphenol† | ND | U | 10 | 2.4 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]Dimethylphenol | ND | U | 50 | 16 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]zoic Acid | ND | U | 200 | 17 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]thalene | ND | U | 10 | 1.5 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]chlorobutadiene | ND | U | 10 | 2.8 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]thylnaphthalene | ND | U | 10 | 3.0 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]phthylene | ND | U | 10 | 1.7 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]thyl Phthalate | ND | U | 10 | 2.6 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]naphthene | ND | U | 10 | 2.6 | 1 | 07/21/01 | 07/30/01 | KWG[illegible] |
| Dibenzofuran | ND | U | 10 | 2.9 | 1 | 07/21/01 | 07/30/01 | [illegible] |
| [illegible]orene | ND | U | 10 | 2.4 | 1 | 07/21/01 | 07/30/01 | KWG[illegible] |
| [illegible]yl Phthalate | ND | U | 10 | 3.1 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]rosodiphenylamine | ND | U | 10 | 2.5 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]hlorobenzene | ND | U | 10 | 3.1 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]chlorophenol | ND | U | 50 | 2.3 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]nthrene | ND | U | 10 | 2.1 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]racene | ND | U | 10 | 2.4 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]-butyl Phthalate | ND | U | 10 | 2.6 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]ranthene | ND | U | 10 | 2.4 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]ene | ND | U | 10 | 2.6 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]yl Benzyl Phthalate | ND | U | 10 | 1.4 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]z(a)anthracene | ND | U | 10 | 1.1 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]rysene | ND | U | 10 | 1.1 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]-ethylhexyl) Phthalate | ND | U | 200 | 130 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]-octyl Phthalate | ND | U | 10 | 1.7 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible](b)fluoranthene | ND | U | 10 | 0.92 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible](k)fluoranthene | ND | U | 10 | 1.6 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible](a)pyrene | ND | U | 10 | 0.96 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]no(1,2,3-cd)pyrene | ND | U | 10 | 0.48 | 1 | 07/21/01 | 07/30/01 | KWG0104355 |
| [illegible]ibenz(a,h)anthracene | ND | U | 10 | 0.97 | 1 | 07/21/01 | 07/30/01 | [illegible] |
| [illegible]enzo(g,h,i)perylene | ND | U | 10 | 1.1 | 1 | 07/21/01 | 07/30/01 | KWG[illegible] |

[illegible]ments:



CARG002240

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **[redacted]nt:** | Harding Lawson ESE | **Service Request:** | K2[illegible] |
| **[redacted]ect:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | NA |
| **[redacted]le Matrix:** | Sediment | **Date Received:** | NA |

## Semi-Volatile Organic Compounds by GC/MS

| | | | |
|---|---|---|---|
| **[redacted]le Name:** | Method Blank | **Units:** | ug/Kg |
| **[redacted] Code:** | KWG0104355-6 | **Basis:** | Dry |

| [redacted]gate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| [redacted]ophenol | 41 | 25-121 | 07/30/01 | Acceptable |
| [redacted]l-d6 | 52 | 24-113 | 07/30/01 | Acceptable |
| [redacted]benzene-d5 | 47 | 23-120 | 07/30/01 | Acceptable |
| [redacted]orobiphenyl | 51 | 30-115 | 07/30/01 | Acceptable |
| 2,[redacted]6-Tribromophenol | 42 | 19-122 | 07/30/01 | Acceptable |
| Terphenyl-d14 | 54 | 30-140 | 07/30/01 | Acceptable |

**[redacted]yte Comments**

| | |
|---|---|
| [redacted]Methylphenol | This analyte cannot be separated from 3-Methylphenol. |

**[redacted]ents:**



08/02/01 THU 16:19 FAX CAS KELSO

CARG002241

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Harding Lawson ESE
Project: Cargill Irving Elevator Terminal/52852.002
Sample Matrix: Sediment

Service Request: K2104659

**Surrogate Recovery Summary**
**Semi-Volatile Organic Compounds by GC/MS**

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: PERCENT
Level: LOW

| Sample Name | Lab Code | Sur1 | Sur2 | Sur3 | Sur4 | Sur5 | Sur6 |
|---|---|---|---|---|---|---|---|
| Composite | K2104659-001 | 57 | 73 | 60 | 63 | 78 | 78 |
| [illegible]1 | K2104659-002 | 44 | 60 | 48 | 51 | 65 | 75 |
| [illegible]2 | K2104659-003 | 62 | 78 | 67 | 67 | 88 | 83 |
| [illegible]3 | K2104659-004 | 58 | 75 | 60 | 62 | 74 | 81 |
| [illegible]4 | K2104659-005 | 18 * | 41 | 30 | 50 | 75 | 103 |
| Method Blank | KWG0103860-6 | 58 | 83 | 86 | 83 | 62 | 88 |
| Method Blank | KWG0104355-6 | 41 | 52 | 47 | 51 | 42 | 54 |
| [illegible]T4MS | KWG0104355-1 | 71 | 96 | 83 | 81 | 96 | 100 |
| [illegible]T4DMS | KWG0104355-2 | 68 | 93 | 74 | 76 | 85 | 104 |
| [illegible]Control Sample | KWG0103860-5 | 55 | 71 | 71 | 66 | 63 | 75 |
| [illegible]Control Sample | KWG0104355-5 | 67 | 87 | 78 | 78 | 70 | 95 |

**Surrogate Recovery Control Limits (%)**

| | | | |
|---|---|---|---|
| Sur1 = 2-Fluorophenol | 25-121 | Sur5 = 2,4,6-Tribromophenol | 19-122 |
| Sur2 = Phenol-d6 | 24-113 | Sur6 = Terphenyl-d14 | 30-140 |
| Sur3 = Nitrobenzene-d5 | 23-120 | | |
| Sur4 = 2-Fluorobiphenyl | 30-115 | | |

Values flagged with an asterisk (*) indicate values outside control criteria.
Values flagged with a pound (#) indicate the control criteria is not applicable.



THU 16:20 FAX CAS KELSO 020

CARG002242

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/11/2001 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 07/16/2001 |

**Lab Control Spike Summary**
**Butyltins**

| | | | |
|---|---|---|---|
| **Extraction Method:** | METHOD | **Units:** | ug/Kg |
| **Analysis Method:** | Krone | **Basis:** | Dry |
| | | **Level:** | Low |
| | | **Extraction Lot:** | KWG0104198 |

| | Lab Control Sample KWG0104198-3 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Tetra-n-butyltin | 36.7 | 48.0 | 76 | 31-121 |
| Tri-n-butyltin | 41.8 | 48.0 | 87 | 32-131 |
| Di-n-butyltin | 32.0 | 48.0 | 67 | 19-136 |
| n-Butyltin | 30.0 | 48.0 | 62 | 17-124 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2[illegible] |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Analyzed:** | 07/09/20[illegible] |
| | | **Time Analyzed:** | 16:35 |

**Internal Standard Area and RT Summary**
**Semi-Volatile Organic Compounds by GC/MS**

| | | | |
|---|---|---|---|
| **File ID:** | J:\MS10\DATA\070901\0709F001.D | **Lab Code:** | KW[illegible] |
| **Instrument ID:** | MS10 | **Analysis Lot:** | KW[illegible] |
| **Analysis Method:** | 8270C | | |

| | | 1,4-Dichlorobenzene-d4 | | Naphthalene-d8 | | Acenaphthene-d[illegible] | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | **Area** | |
| | **Results ==>** | 275,800 | 11.73 | 970,780 | 14.08 | 508,309 | [illegible] |
| | **Upper Limit ==>** | 551,600 | 12.23 | 1,941,560 | 14.58 | 1,016,618 | [illegible] |
| | **Lower Limit ==>** | 137,900 | 11.23 | 485,390 | 13.58 | [illegible] | |
| | **ICAL Result ==>** | 253,748 | NA | 881,156 | NA | | |
| ***Associated Analyses*** | | | | | | | |
| **Method Blank** | KWG0103860-6 | 251,013 | 11.72 | 919,584 | 14.06 | 530,827 | [illegible] |
| **Control Sample** | KWG0103860-5 | 254,537 | 11.72 | 911,554 | 14.08 | 474,268 | [illegible] |
| **Composite** | K2104659-001 | 287,950 | 11.72 | 1,007,854 | 14.07 | 520,553 | [illegible] |
| [illegible] | K2104659-002 | 299,059 | 11.74 | 1,044,715 | 14.08 | 541,6[illegible] | [illegible] |
| [illegible] | K2104659-003 | 301,512 | 11.73 | 1,037,050 | 14.07 | 521,5[illegible] | [illegible] |

**[illegible] flagged with an asterisk (*) indicate values outside control criteria.**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** K210[illegible]
**Date Analyzed:** 07/09/2[illegible]
**Time Analyzed:** 16:[illegible]

**Internal Standard Area and RT Summary**
**Semi-Volatile Organic Compounds by GC/MS**

**File ID:** J:\MS10\DATA\070901\0709F001.D
**Instrument ID:** MS10
**Analysis Method:** 8270C

**Lab Code:** KWG0[illegible]
**Analysis Lot:** KWG0[illegible]

| | | Phenanthrene-d10 | | Chrysene-d12 | | Perylene-d12 | |
|---|---|---|---|---|---|---|---|
| | | **Area** | **RT** | **Area** | **RT** | Area | |
| | **Results ==>** | 629,073 | 21.25 | 320,453 | 27.43 | 236,80[illegible] | [illegible] |
| | **Upper Limit ==>** | 1,258,146 | 21.75 | 640,906 | 27.93 | 473,6[illegible] | [illegible] |
| | **Lower Limit ==>** | 314,537 | 20.75 | 160,227 | 26.93 | 118,40[illegible] | [illegible] |
| | **ICAL Result ==>** | 570,982 | NA | 279,566 | NA | 210,140 | NA |
| ***Associated Analyses*** | | | | | | | |
| Method Blank | KWG0103860-6 | 719,390 | 21.24 | 411,897 | 27.42 | 256,76[illegible] | [illegible] |
| Lab Control Sample | KWG0103860-5 | 617,043 | 21.25 | 306,818 | 27.43 | [illegible] | |
| 01-Composite | K2104659-001 | 562,852 | 21.25 | 278,075 | 27.4[illegible] | | |
| 01-T1 | K2104659-002 | 668,819 | 21.26 | 326,359 | 27.46 | 244,21[illegible] | [illegible] |
| 01-T2 | K2104659-003 | 567,713 | 21.25 | 273,498 | 27.46 | 194,883 | [illegible] |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Harding Lawson ESE
Project: Cargill Irving Elevator Terminal/52852.002

**Service Request:** K2104659
**Date Analyzed:** 07/16/2001
**Time Analyzed:** 11:01

**Internal Standard Area and RT Summary**
**Semi-Volatile Organic Compounds by GC/MS**

**File ID:** J:\MS10\DATA\071601\0716F001.D
**Instrument ID:** MS10
**Analysis Method:** 8270C

**Lab Code:** KWG0104225-1
**Analysis Lot:** KWG0104225

| | 1,4-Dichlorobenzene-d4 | | Naphthalene-d8 | | Acenaphthene-d10 | |
|---|---|---|---|---|---|---|
| | **Area** | **RT** | **Area** | **RT** | **Area** | **RT** |
| **Results ==>** | 277,120 | 11.74 | 987,622 | 14.10 | 520,855 | 17.82 |
| **Upper Limit ==>** | 554,240 | 12.24 | 1,975,244 | 14.60 | 1,041,710 | 18.32 |
| **Lower Limit ==>** | 138,560 | 11.24 | 493,811 | 13.60 | 260,428 | 17.32 |
| **ICAL Result ==>** | 253,748 | NA | 881,156 | NA | 437,281 | NA |
| ***Associated Analyses*** | | | | | | |
| MB3 K2104659-004 | 297,190 | 11.74 | 1,027,474 | 14.08 | 504,337 | 17.82 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**



THU 16:21 FAX CAS KELSO 023

CARG002246

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| Client: | Harding Lawson ESE | Service Request: | K2104659 |
| Project: | Cargill Irving Elevator Terminal/52852.002 | Date Analyzed: | 07/16/2001 |
| | | Time Analyzed: | 11:01 |

**Internal Standard Area and RT Summary**
**Semi-Volatile Organic Compounds by GC/MS**

| | | | |
|---|---|---|---|
| File ID: | J:\MS10\DATA\071601\0716F001.D | Lab Code: | KWG0104225 |
| Instrument ID: | MS10 | Analysis Lot: | KWG0104215 |
| Analysis Method: | 8270C | | |

| | | Phenanthrene-d10 | | Chrysene-d12 | | Perylene-d12 | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | Results ==> | 724,342 | 21.28 | 357,898 | 27.47 | 256,895 | [illegible] |
| | Upper Limit ==> | 1,448,684 | 21.78 | 715,796 | 27.97 | 513,790 | [illegible] |
| | Lower Limit ==> | 362,171 | 20.78 | 178,949 | 26.97 | [illegible] | [illegible] |
| | ICAL Result ==> | 570,982 | NA | 279,566 | NA | | |
| *Associated Analyses* | | | | | | | |
| [illegible]3 | K2104659-004 | 599,490 | 21.27 | 277,848 | 27.47 | 188,799 | [illegible] |

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** [illegible]
**Date Analyzed:** [illegible]
**Time Analyzed:** 17:03

**Internal Standard Area and RT Summary**
**Semi-Volatile Organic Compounds by GC/MS**

**File ID:** J:\MS10\DATA\073001\0730F002.D
**Instrument ID:** MS10
**Analysis Method:** 8270C

**Lab Code:** KWG[illegible]
**Analysis Lot:** KWG[illegible]

| | | 1,4-Dichlorobenzene-d4 | | Naphthalene-d8 | | Acenaphthene-[illegible] | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | |
| | Results ==> | 189,500 | 11.69 | 683,288 | 14.06 | 356,657 | [illegible] |
| | Upper Limit ==> | 379,000 | 12.19 | 1,366,576 | 14.56 | 713,314 | [illegible] |
| | Lower Limit ==> | 94,750 | 11.19 | 341,644 | 13.56 | 178,329 | [illegible] |
| | ICAL Result ==> | 215,055 | NA | 776,786 | NA | 395,431 | [illegible] |
| *Associated Analyses* | | | | | | | |
| Method Blank | KWG0104355-6 | 173,732 | 11.67 | 602,718 | 13.94 | 351,926 | [illegible] |
| LCS/Control Sample | KWG0104355-5 | 176,012 | 11.69 | 627,764 | 14.06 | 350,80[illegible] | [illegible] |
| 01-T4MS | KWG0104355-1 | 170,398 | 11.69 | 627,033 | 14.05 | 32[illegible] | [illegible] |
| 01-T4DMS | KWG0104355-2 | 177,857 | 11.70 | 652,261 | 14.06 | [illegible] | [illegible] |
| 01-T4 | K2104659-005 | 179,942 | 11.70 | 668,572 | 14.04 | 354,[illegible] | [illegible] |

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| Client: | Harding Lawson ESE | Service Request: | K2104659 |
| Project: | Cargill Irving Elevator Terminal/52852.002 | Date Analyzed: | 07/30/2001 |
| | | Time Analyzed: | 17:09 |

**Internal Standard Area and RT Summary**
**Semi-Volatile Organic Compounds by GC/MS**

File ID: J:\MS10\DATA\073001\0730F002.D
Instrument ID: MS10
Analysis Method: 8270C
Analysis Lot: [illegible]

| | | Phenanthrene-d10 | | Chrysene-d12 | | Perylene-d12 | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | |
| | Results ==> | 484,699 | 21.26 | 201,457 | 27.46 | 147,233 | [illegible] |
| | Upper Limit ==> | 969,398 | 21.76 | 402,914 | 27.96 | 294,466 | [illegible] |
| | Lower Limit ==> | 242,350 | 20.76 | 100,729 | 26.96 | 73,617 | [illegible] |
| | ICAL Result ==> | 525,770 | NA | 238,070 | NA | 179,546 | [illegible] |
| *Associated Analyses* | | | | | | | |
| Method Blank | KWG0104355-6 | 485,628 | 21.25 | 285,906 | 27.45 | 178,494 | [illegible] |
| LCS/Control Sample | KWG0104355-5 | 456,511 | 21.26 | 187,772 | 27.46 | 135,288 | [illegible] |
| 1-T4MS | KWG0104355-1 | 355,825 | 21.26 | 134,070 | 27.48 | 79,202 | [illegible] |
| 1-T4DMS | KWG0104355-2 | 334,903 | 21.27 | 121,610 | 27.50 | 67,237* | [illegible] |
| 1-T4 | K2104659-005 | 437,739 | 21.27 | 159,826 | 27.50 | 76,878 | [illegible] |

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K21[illegible]
**Date Extracted:** 07/2[illegible]
**Date Analyzed:** 07/30/20[illegible]

**Matrix Spike/Duplicate Matrix Spike Summary**
**Semi-Volatile Organic Compounds by GC/MS**

**Sample Name:** 01-T4
**Lab Code:** K2104659-005

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 3541
**Analysis Method:** 8270C

Extracted: [illegible]

| Analyte Name | Sample Result | 01-T4MS KWG0104355-1 Matrix Spike Result | Expected | %Rec | 01-T4DMS KWG0104355-2 Duplicate Matrix Spike Result | Expected | %Rec | %Rec Limits | RPD | [illegible] |
|---|---|---|---|---|---|---|---|---|---|---|
| Phenol | 27 | 346 | 348 | 92 ✓ | 335 | 348 | 88 ✓ | 20-99 | 3 | [illegible] |
| Acenaphthene | 6.1 | 295 | 348 | 83 ✓ | 282 | 348 | 79 ✓ | 26-104 | 5 | [illegible] |
| Pentachlorophenol | ND | 333 | 348 | 96 ✓ | 363 | 348 | 104 ✓ | 10-145 | 5 | [illegible] |
| Pyrene | 99 | 387 | 348 | 83 ✓ | 504 | 348 | 116 ✓ | 18-144 | 26 | [illegible] |

[illegible] flagged with an asterisk (*) indicate values outside control criteria.
[illegible] flagged with a pound (#) indicate the control criteria is not applicable.
[illegible] recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** [illegible]
**Date Extracted:** [illegible]
**Date Analyzed:** [illegible]

## Lab Control Spike Summary
## Semi-Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 3541
**Analysis Method:** 8270C

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low
**Extraction Lot:** KWG[illegible]

| | Lab Control Sample KWG0103860-5 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| 'henol | 206 | 249 | 83 | 21-110 |
| lenzyl Alcohol | 192 | 249 | 77 | 25-140 |
| -Methylphenol | 162 | 249 | 65 | 25-140 |
| lexachloroethane | 188 | 249 | 75 | 40-140 |
| -Methylphenol | 149 | 249 | 60 | 40-140 |
| 4-Dimethylphenol | 38.9 | 249 | 16 * | 25-140 |
| enzoic Acid | 293 | 997 | 29 | 10-140 |
| laphthalene | 192 | 249 | 77 | 40-140 |
| lexachlorobutadiene | 191 | 249 | 77 | 40-140 |
| -Methylnaphthalene | 183 | 249 | 74 | 40-140 |
| cenaphthylene | 179 | 249 | 72 | 40-140 |
| imethyl Phthalate | 183 | 249 | 73 | 40-140 |
| cenaphthene | 175 | 249 | 70 | 29-109 |
| ibenzofuran | 187 | 249 | 75 | 40-140 |
| luorene | 179 | 249 | 72 | 40-140 |
| iethyl Phthalate | 187 | 249 | 75 | 40-140 |
| Nitrosodiphenylamine | 184 | 249 | 74 | 40-140 |
| chlorobenzene | 185 | 249 | 74 | 40-140 |
| chlorophenol | 156 | 249 | 63 | 10-120 |
| anthrene | 177 | 249 | 71 | 40-140 |
| nthracene | 182 | 249 | 73 | 40-140 |
| -n-butyl Phthalate | 174 | 249 | 70 | 40-140 |
| uoranthene | 168 | 249 | 68 | 40-140 |
| rene | 165 | 249 | 66 | 39-149 |
| tyl Benzyl Phthalate | 186 | 249 | 75 | 40-140 |
| nz(a)anthracene | 192 | 249 | 77 | 40-140 |
| rysene | 203 | 249 | 82 | 40-140 |
| (2-ethylhexyl) Phthalate | 202 | 249 | 81 | 40-140 |
| -n-octyl Phthalate | 198 | 249 | 80 | 40-140 |
| nzo(b)fluoranthene | 196 | 249 | 79 | 40-140 |
| nzo(k)fluoranthene | 197 | 249 | 79 | 40-140 |
| nzo(a)pyrene | 193 | 249 | 77 | 40-140 |
| leno(1,2,3-cd)pyrene | 200 | 249 | 80 | 40-140 |
| benz(a,h)anthracene | 217 | 249 | 87 | 40-140 |
| nzo(g,h,i)perylene | 195 | 249 | 78 | 40-140 |

**ults flagged with an asterisk (*) indicate values outside control criteria.**
ent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:**
**Date Extracted:**
**Date Analyzed:**

## Lab Control Spike Summary
## Semi-Volatile Organic Compounds by GC/MS

**Extraction Method:** EPA 3541
**Analysis Method:** 8270C

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low
**Extraction Lot:** KWG0104355

| Analyte Name | Lab Control Sample KWG0104355-5 Lab Control Spike Result | Expected | %Rec | %Rec Limits |
|---|---|---|---|---|
| [illegible]l | 221 | 249 | 89 | 21-110 |
| [illegible]yl Alcohol | 197 | 249 | 79 | 25-140 |
| [illegible]Methylphenol | 209 | 249 | 84 | 25-140 |
| [illegible]chloroethane | 184 | 249 | 74 | 40-140 |
| -[illegible]thylphenol | 186 | 249 | 75 | 40-140 |
| ,4-Dimethylphenol | 142 | 249 | 57 | 25-140 |
| enzoic Acid | 616 | 997 | 62 | 10-140 |
| [illegible]thalene | 207 | 249 | 83 | 40-140 |
| [illegible]chlorobutadiene | 179 | 249 | 72 | 40-140 |
| [illegible]thylnaphthalene | 193 | 249 | 77 | 40-140 |
| [illegible]phthylene | 202 | 249 | 81 | 40-140 |
| [illegible]thyl Phthalate | 198 | 249 | 80 | 40-140 |
| cenaphthene | 194 | 249 | 78 | 29-109 |
| ibenzofuran | 190 | 249 | 76 | 40-140 |
| [illegible]ene | 194 | 249 | 78 | 40-140 |
| [illegible]yl Phthalate | 209 | 249 | 84 | 40-140 |
| -Nitrosodiphenylamine | 213 | 249 | 85 | 40-140 |
| [illegible]chlorobenzene | 171 | 249 | 69 | 40-140 |
| [illegible]chlorophenol | 186 | 249 | 75 | 10-120 |
| henanthrene | 185 | 249 | 74 | 40-140 |
| [illegible]racene | 193 | 249 | 77 | 40-140 |
| [illegible]butyl Phthalate | 191 | 249 | 77 | 40-140 |
| [illegible]anthene | 184 | 249 | 74 | 40-140 |
| [illegible]ene | 208 | 249 | 83 | 39-149 |
| [illegible] Benzyl Phthalate | 210 | 249 | 84 | 40-140 |
| [illegible]a)anthracene | 200 | 249 | 80 | 40-140 |
| hrysene | 202 | 249 | 81 | 40-140 |
| is(2-ethylhexyl) Phthalate | 218 | 249 | 87 | 40-140 |
| i-[illegible]octyl Phthalate | 243 | 249 | 98 | 40-140 |
| [illegible]o(b)fluoranthene | 213 | 249 | 86 | 40-140 |
| [illegible]o(k)fluoranthene | 206 | 249 | 83 | 40-140 |
| [illegible]o(a)pyrene | 205 | 249 | 82 | 40-140 |
| [illegible]o(1,2,3-cd)pyrene | 212 | 249 | 85 | 40-140 |
| ibenz(a,h)anthracene | 221 | 249 | 89 | 40-140 |
| [illegible]o(g,h,i)perylene | 151 | 249 | 61 | 40-140 |

**[illegible]ults flagged with an asterisk (*) indicate values outside control criteria.**
[illegible] recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2[illegible]
**Date Extracted:** 07/[illegible]
**Date Analyzed:** 07/09/[illegible]
**Time Analyzed:** 23:57

## Method Blank Summary
## Semi-Volatile Organic Compounds by GC/MS

**Sample Name:** Method Blank
**Lab Code:** KWG0103860-6
**Extraction Method:** EPA 3541
**Analysis Method:** 8270C

**File ID:** J:\MS10\DATA\070901\0709F011.D
**Instrument ID:** MS10
**Level:** Low
**Extraction Lot:** KWG0103860

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | KWG0103860-5 | J:\MS10\DATA\070901\0709F012.D | 07/10/01 | [illegible] |
| 1-Composite | K2104659-001 | J:\MS10\DATA\070901\0709F015.D | 07/10/01 | [illegible] |
| 1-T1 | K2104659-002 | J:\MS10\DATA\070901\0709F016.D | 07/10/01 | [illegible] |
| 1-T2 | K2104659-003 | J:\MS10\DATA\070901\0709F017.D | 07/10/01 | [illegible] |
| [illegible] | K2104659-004 | J:\MS10\DATA\071601\0716F010.D | 07/16/01 | [illegible] |

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| Client: | Harding Lawson ESE | Service Request: | K2[illegible] |
| Project: | Cargill Irving Elevator Terminal/52852.002 | Date Extracted: | 07/[illegible] |
| Sample Matrix: | Sediment | Date Analyzed: | 07/30/[illegible] |
| | | Time Analyzed: | 17:57 |

**Method Blank Summary**
**Semi-Volatile Organic Compounds by GC/MS**

| | | | |
|---|---|---|---|
| Sample Name: | Method Blank | File ID: | J:\MS10\DATA\073001\0730F003.D |
| Lab Code: | KWG0104355-6 | Instrument ID: | MS10 |
| Extraction Method: | EPA 3541 | Level: | Low |
| Analysis Method: | 8270C | Extraction Lot: | KWG0104355 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | KWG0104355-5 | J:\MS10\DATA\073001\0730F004.D | 07/30/01 | [illegible] |
| M-TMS | KWG0104355-1 | J:\MS10\DATA\073001\0730F006.D | 07/30/01 | 22:[illegible] |
| M-TMDMS | KWG0104355-2 | J:\MS10\DATA\073001\0730F007.D | 07/30/01 | 23:[illegible] |
| M-[illegible] | K2104659-005 | J:\MS10\DATA\073001\0730F008.D | 07/30/01 | 23:52 |

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **lient:** | Harding Lawson ESE | **Service Request:** | K2[illegible] |
| **roject:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/0[illegible] |
| **ample Matrix:** | Sediment | **Date Analyzed:** | 07/10/[illegible] |
| | | **Time Analyzed:** | 00:4[illegible] |

**Lab Control Sample Summary**
**Semi-Volatile Organic Compounds by GC/MS**

| | | | |
|---|---|---|---|
| **ample Name:** | Lab Control Sample | **File ID:** | J:\MS10\DATA\070901\0709F0[illegible] |
| **ab Code:** | KWG0103860-5 | **Instrument ID:** | MS10 |
| **xtraction Method:** | EPA 3541 | **Level:** | Low |
| **nalysis Method:** | 8270C | **Extraction Lot:** | KWG0103860 |

his Lab Control Sample applies to the following analyses:

| **ample Name** | **Lab Code** | **File ID** | **Date Analyzed** | **Time Analyzed** |
|---|---|---|---|---|
| **ethod Blank** | KWG0103860-6 | J:\MS10\DATA\070901\0709F011.D | 07/09/01 | 2[illegible] |
| **ample Composite** | K2104659-001 | J:\MS10\DATA\070901\0709F015.D | 07/10/01 | [illegible] |
| | K2104659-002 | J:\MS10\DATA\070901\0709F016.D | 07/10/01 | [illegible] |
| | K2104659-003 | J:\MS10\DATA\070901\0709F017.D | 07/10/01 | [illegible] |
| | K2104659-004 | J:\MS10\DATA\071601\0716F010.D | 07/16/01 | [illegible] |

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| Client: | Harding Lawson ESE | Service Request: | K210-[illegible] |
| Project: | Cargill Irving Elevator Terminal/52852.002 | Date Extracted: | 07/21/200[illegible] |
| Sample Matrix: | Sediment | Date Analyzed: | 07/30/200[illegible] |
| | | Time Analyzed: | 15:[illegible] |

**Lab Control Sample Summary**
***Semi-Volatile Organic Compounds by GC/MS***

| | | | |
|---|---|---|---|
| Sample Name: | Lab Control Sample | File ID: | J:\MS10\DATA\073001\0730F004.D |
| Lab Code: | KWG0104355-5 | Instrument ID: | MS10 |
| Extraction Method: | EPA 3541 | Level: | Low |
| Analysis Method: | 8270C | Extraction Lot: | KWG0104355 |

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | KWG0104355-6 | J:\MS10\DATA\073001\0730F003.D | 07/30/01 | 17:57 |
| 01-[illegible]MS | KWG0104355-1 | J:\MS10\DATA\073001\0730F006.D | 07/30/01 | 22:[illegible] |
| 01-[illegible]DMS | KWG0104355-2 | J:\MS10\DATA\073001\0730F007.D | 07/30/01 | 23:[illegible] |
| 01-[illegible] | K2104659-005 | J:\MS10\DATA\073001\0730F008.D | 07/30/01 | 23:52 |

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Harding Lawson ESE
Project: Cargill Irving Elevator Terminal/52852.002

Service Request: K2[illegible]
Date Analyzed: 07/[illegible]
Time Analyzed: 16:35

**Tune Summary**
**Semi-Volatile Organic Compounds by GC/MS**

File ID: J:\MS10\DATA\070901\0709E001.D
Instrument ID: MS10
Column:

Analysis Method: S270C
Analysis Lot: KWG[illegible]

| Target Mass | Relative to Mass | Lower Limit % | Upper Limit % | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 80 | 42.7 | 93638 | PASS |
| 68 | 69 | 0 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0 | 100 | 50.2 | 109946 | PASS |
| 70 | 69 | 0 | 2 | 0.0 | 0 | PASS |
| 127 | 198 | 25 | 75 | 49.2 | 107[illegible] | |
| 197 | 198 | 0 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 219136 | PASS |
| 199 | 198 | 5 | 9 | 7.0 | 15365 | PASS |
| 275 | 198 | 10 | 30 | 28.5 | 62432 | PASS |
| 365 | 198 | 1 | 100 | 4.2 | 9195 | PASS |
| 441 | 443 | 0 | 100 | 96.5 | 33712 | PASS |
| 442 | 198 | 40 | 110 | 88.6 | 194176 | PASS |
| 443 | 442 | 15 | 24 | 18.0 | 34944 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Continuing Calibration Verification | KWG0104064-2 | J:\MS10\DATA\070901\0709F001.D | 07/09/2001 | 16:35 |
| Method Blank | KWG0103860-6 | J:\MS10\DATA\070901\0709F011.D | 07/09/2001 | 23:57 |
| Control Sample | KWG0103860-5 | J:\MS10\DATA\070901\0709F012.D | 07/10/2001 | 00:41 |
| Composite | K2104659-001 | J:\MS10\DATA\070901\0709F015.D | 07/10/2001 | 02:53 |
| [illegible] | K2104659-002 | J:\MS10\DATA\070901\0709F016.D | 07/10/2001 | 03:37 |
| [illegible]2 | K2104659-003 | J:\MS10\DATA\070901\0709F017.D | 07/10/2001 | 04:21 |

Results flagged with an asterisk (*) indicate the analysis performed outside specified time window

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** [illegible]
**Date Analyzed:** [illegible]
**Time:** [illegible]

**Tune Summary**
**Semi-Volatile Organic Compounds by GC/MS**

**File ID:** J:\MS10\DATA\071601\0716E001.D
**Instrument ID:** MS10
**Column:**

**Analysis Method:** [illegible]
**Analysis Lot:** [illegible]

| Target Mass | Relative to Mass | Lower Limit % | Upper Limit % | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 80 | 61.9 | 166443 | PASS |
| 68 | 69 | 0 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0 | 100 | 65.4 | 175870 | PASS |
| 70 | 69 | 0 | 2 | 0.0 | 0 | PASS |
| 127 | 198 | 25 | 75 | 56.3 | 151360 | PASS |
| 197 | 198 | 0 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 268928 | PASS |
| 199 | 198 | 5 | 9 | 6.6 | 17641 | PASS |
| 275 | 198 | 10 | 30 | 25.6 | 68726 | PASS |
| 365 | 198 | 1 | 100 | 3.6 | 9612 | PASS |
| 441 | 443 | 0 | 100 | 91.6 | [illegible] | [illegible] |
| 442 | 198 | 40 | 110 | 65.7 | 176768 | PASS |
| 443 | 442 | 15 | 24 | 17.9 | 31632 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Continuing Calibration Verification | KWG0104225-2 | J:\MS10\DATA\071601\0716F001.D | 07/16/2001 | 11:0[illegible] |
| [illegible] | K2104659-004 | J:\MS10\DATA\071601\0716F010.D | 07/16/2001 | 22:38 |

**Flagged with an asterisk (*) indicate the analysis performed outside specified tune window**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Harding Lawson ESE
Project: Cargill Irving Elevator Terminal/52852.002

Service Request: K210[illegible]
Date Analyzed: 07/30/2001
Time Analyzed: 17:02

**Tune Summary**
**Semi-Volatile Organic Compounds by GC/MS**

File ID: J:\MS10\DATA\073001\0730E002.D
Instrument ID: MS10
Column:

Analysis Method: 8270

| Target Mass | Relative to Mass | Lower Limit % | Upper Limit % | Relative Abundance % | Raw Abundance | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 51 | 198 | 30 | 80 | 61.8 | 102110 | PASS |
| 68 | 69 | 0 | 2 | 0.0 | 0 | PASS |
| 69 | 198 | 0 | 100 | 64.9 | 107296 | PASS |
| 70 | 69 | 0 | 2 | 0.0 | 0 | PASS |
| 127 | 198 | 25 | 75 | 54.1 | 89480 | PASS |
| 197 | 198 | 0 | 1 | 0.0 | 0 | PASS |
| 198 | 198 | 100 | 100 | 100.0 | 165248 | PASS |
| 199 | 198 | 5 | 9 | 7.6 | 12515 | PASS |
| 275 | 198 | 10 | 30 | 25.1 | 41440 | PASS |
| 365 | 198 | 1 | 100 | 3.1 | 5180 | PASS |
| 441 | 443 | 0 | 100 | 83.6 | 15347 | PASS |
| 442 | 198 | 40 | 110 | 57.4 | 94896 | PASS |
| 443 | 442 | 15 | 24 | 19.3 | 18360 | PASS |

| Sample Name | Lab Code | File ID | Date Analyzed | |
|---|---|---|---|---|
| Continuing Calibration Verification | KWG0104595-2 | J:\MS10\DATA\073001\0730F002.D | 07/30/2001 | [illegible] |
| Method Blank | KWG0104355-6 | J:\MS10\DATA\073001\0730F003.D | 07/30/2001 | 17:57 |
| Control Sample | KWG0104355-5 | J:\MS10\DATA\073001\0730F004.D | 07/30/2001 | 18:46 |
| 1-T4MS | KWG0104355-1 | J:\MS10\DATA\073001\0730F006.D | 07/30/2001 | 22:2[illegible] |
| 1-T4DMS | KWG0104355-2 | J:\MS10\DATA\073001\0730F007.D | 07/30/2001 | 23:08 |
| 1-T4 | K2104659-005 | J:\MS10\DATA\073001\0730F008.D | 07/30/2001 | 23:52 |

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** [illegible]
**Calibration Date:** 06/25/[illegible]

**Initial Calibration Summary**
**Semi-Volatile Organic Compounds by GC/MS**

**Calibration ID:** CAL884
**Instrument ID:** MS10

**Column:** MS

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| [illegible] | J:\MS10\DATA\062501\0625F009.D | E | J:\MS10\DATA\062501\0625F013.D |
| [illegible] | J:\MS10\DATA\062501\0625F010.D | F | J:\MS10\DATA\062501\0625F014.D |
| [illegible] | J:\MS10\DATA\062501\0625F011.D | G | J:\MS10\DATA\062501\0625F015.D |
| [illegible] | J:\MS10\DATA\062501\0625F012.D | H | J:\MS10\DATA\062501\0625F[illegible] |

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible]henol | A | 100 | 1.52 | B | 500 | 1.51 | C | 1000 | 1.59 | D | 2000 | 1.58 | E | [illegible] | |
| | F | 5000 | 1.51 | G | 7000 | 1.30 | H | 10000 | 1.18 | | | | | | |
| [illegible]yl Alcohol | A | 100 | 0.681 | B | 200 | 0.777 | C | 500 | 0.763 | D | 1000 | 0.740 | E | 2000 | [illegible] |
| | F | 3000 | 0.774 | G | 4000 | 0.776 | H | 5000 | 0.752 | | | | | | |
| -M[illegible]hylphenol | A | 100 | 0.900 | B | 500 | 0.953 | C | 1000 | 0.952 | D | 2000 | 0.926 | E | 3000 | [illegible] |
| | F | 5000 | 0.815 | G | 7000 | 0.724 | H | 10000 | 0.656 | | | | | | |
| [illegible]exachloroethane | A | 100 | 0.623 | B | 200 | 0.621 | C | 500 | 0.626 | D | 1000 | 0.624 | E | 2000 | [illegible] |
| | F | 3000 | 0.583 | G | 4000 | 0.519 | H | 5000 | 0.479 | | | | | | |
| -Methylphenol | A | 100 | 1.22 | B | 500 | 1.33 | C | 1000 | 1.37 | D | 2000 | 1.37 | E | 3000 | [illegible] |
| | F | 5000 | 1.29 | G | 7000 | 1.18 | H | 10000 | 1.06 | | | | | | |
| [illegible]methylphenol | A | 100 | 0.301 | B | 500 | 0.301 | C | 1000 | 0.297 | D | 2000 | 0.291 | E | [illegible] | [illegible] |
| | F | 5000 | 0.238 | G | 7000 | 0.215 | H | 10000 | 0.195 | | | | | | |
| [illegible]ic Acid | | | | B | 500 | 0.111 | C | 1000 | 0.138 | D | 2000 | 0.172 | E | 3000 | [illegible] |
| | F | 5000 | 0.203 | G | 7000 | 0.205 | H | 10000 | 0.200 | | | | | | |
| aphthalene | A | 100 | 1.10 | B | 200 | 1.06 | C | 500 | 1.02 | D | 1000 | 1.02 | [illegible] | [illegible] | |
| | F | 3000 | 0.863 | G | 4000 | 0.794 | H | 5000 | 0.744 | | | | | | |
| exachlorobutadiene | A | 100 | 0.200 | B | 200 | 0.203 | C | 500 | 0.188 | D | 1000 | 0.185 | E | [illegible] | |
| | F | 3000 | 0.155 | G | 4000 | 0.146 | H | 5000 | 0.136 | | | | | | |
| M[illegible]hylnaphthalene | A | 100 | 0.705 | B | 200 | 0.691 | C | 500 | 0.661 | D | 1000 | 0.658 | E | 2000 | [illegible] |
| | F | 3000 | 0.540 | G | 4000 | 0.495 | H | 5000 | 0.472 | | | | | | |
| [illegible]phthylene | A | 100 | 1.86 | B | 200 | 1.83 | C | 500 | 1.77 | D | 1000 | 1.67 | E | 2000 | [illegible] |
| | F | 3000 | 1.46 | G | 4000 | 1.32 | H | 5000 | 1.27 | | | | | | |
| methyl Phthalate | A | 100 | 1.41 | B | 200 | 1.48 | C | 500 | 1.42 | D | 1000 | 1.37 | E | 2000 | [illegible] |
| | F | 3000 | 1.20 | G | 4000 | 1.11 | H | 5000 | 1.09 | | | | | | |
| [illegible]enaphthene | A | 100 | 1.13 | B | 200 | 1.14 | C | 500 | 1.09 | D | 1000 | 1.01 | E | [illegible] | [illegible] |
| | F | 3000 | 0.830 | G | 4000 | 0.733 | H | 5000 | 0.689 | | | | | | |
| b[illegible]zofuran | A | 100 | 1.59 | B | 200 | 1.68 | C | 500 | 1.62 | D | 1000 | 1.52 | E | 2000 | [illegible] |
| | F | 3000 | 1.18 | G | 4000 | 1.07 | H | 5000 | 1.04 | | | | | | |

[illegible]ults flagged with an asterisk (*) indicate values outside control criteria.
[illegible] Compound ‡ CCC Compound

[illegible]: 08/02/2001 15:51:47 Form 6A - Organic

SuperSet Reference: RR[illegible]

037 CAS KELSO THU 16:27 FAX

CARG002260

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** K2[illegible]
**Calibration Date:** [illegible]

**Initial Calibration Summary**
**Semi-Volatile Organic Compounds by GC/MS**

**Calibration ID:** CAL884
**Instrument ID:** MS10

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluorene | A | 100 | 1.25 | B | 200 | 1.36 | C | 500 | 1.29 | D | 1000 | 1.20 | E | [illegible] | |
| | F | 3000 | 1.02 | G | 4000 | 0.918 | H | 5000 | 0.873 | | | | | | |
| Diethyl Phthalate | A | 100 | 1.31 | B | 200 | 1.39 | C | 500 | 1.35 | D | 1000 | 1.29 | E | [illegible] | |
| | F | 3000 | 1.09 | G | 4000 | 0.988 | H | 5000 | 0.969 | | | | | | |
| N-Nitrosodiphenylamine | A | 100 | 0.766 | B | 200 | 0.805 | C | 500 | 0.828 | D | 1000 | 0.833 | E | [illegible] | |
| | F | 3000 | 0.701 | G | 4000 | 0.618 | H | 5000 | 0.593 | | | | | | |
| Hexachlorobenzene | A | 100 | 0.293 | B | 200 | 0.318 | C | 500 | 0.296 | D | 1000 | 0.283 | E | [illegible] | |
| | F | 3000 | 0.259 | G | 4000 | 0.240 | H | 5000 | 0.238 | | | | | | |
| Pentachlorophenol | | | | B | 500 | 0.173 | C | 1000 | 0.181 | D | 2000 | [illegible] | | | |
| | F | 5000 | 0.159 | G | 7000 | 0.144 | H | 10000 | 0.140 | | | | | | |
| Phenanthrene | A | 100 | 1.26 | B | 200 | 1.25 | C | 500 | 1.17 | D | 1000 | 1.10 | E | [illegible] | |
| | F | 3000 | 0.927 | G | 4000 | 0.841 | H | 5000 | 0.808 | | | | | | |
| Anthracene | A | 100 | 1.15 | B | 200 | 1.20 | C | 500 | 1.18 | D | 1000 | 1.09 | E | [illegible] | |
| | F | 3000 | 0.939 | G | 4000 | 0.840 | H | 5000 | 0.814 | | | | | | |
| Di-n-butyl Phthalate | A | 100 | 1.52 | B | 200 | 1.59 | C | 500 | 1.49 | D | 1000 | 1.30 | E | [illegible] | |
| | F | 3000 | 1.09 | G | 4000 | 0.971 | H | 5000 | 0.962 | | | | | | |
| Fluoranthene | A | 100 | 1.17 | B | 200 | 1.13 | C | 500 | 1.10 | D | 1000 | 0.947 | E | [illegible] | |
| | F | 3000 | 0.774 | G | 4000 | 0.687 | H | 5000 | 0.675 | | | | | | |
| Pyrene | A | 100 | 2.38 | B | 200 | 2.15 | C | 500 | 2.11 | D | 1000 | 1.86 | E | [illegible] | |
| | F | 3000 | 1.59 | G | 4000 | 1.45 | H | 5000 | 1.39 | | | | | | |
| Butyl Benzyl Phthalate | A | 100 | 0.846 | B | 200 | 0.850 | C | 500 | 0.906 | D | 1000 | 0.886 | E | [illegible] | |
| | F | 3000 | 0.834 | G | 4000 | 0.784 | H | 5000 | 0.801 | | | | | | |
| Benzo(a)anthracene | A | 100 | 1.43 | B | 200 | 1.33 | C | 500 | 1.29 | D | 1000 | 1.25 | E | [illegible] | |
| | F | 3000 | 1.17 | G | 4000 | 1.11 | H | 5000 | 1.10 | | | | | | |
| Chrysene | A | 100 | 1.31 | B | 200 | 1.30 | C | 500 | 1.20 | D | 1000 | 1.14 | | | |
| | F | 3000 | 0.993 | G | 4000 | 0.920 | H | 5000 | 0.882 | | | | | | |
| bis(2-ethylhexyl) Phthalate | A | 100 | 1.25 | B | 200 | 1.23 | C | 500 | 1.22 | D | 1000 | 1.22 | E | [illegible] | |
| | F | 3000 | 1.12 | G | 4000 | 1.05 | H | 5000 | 1.03 | | | | | | |
| Di-n-octyl Phthalate | A | 100 | 2.14 | B | 200 | 2.48 | C | 500 | 2.57 | D | 1000 | 2.64 | E | [illegible] | |
| | F | 3000 | 2.47 | G | 4000 | 2.25 | H | 5000 | 2.19 | | | | | | |
| Benzo(b)fluoranthene | A | 100 | 1.62 | B | 200 | 1.59 | C | 500 | 1.52 | D | 1000 | 1.51 | E | [illegible] | |
| | F | 3000 | 1.43 | G | 4000 | 1.37 | H | 5000 | 1.39 | | | | | | |
| Benzo(k)fluoranthene | A | 100 | 1.63 | B | 200 | 1.68 | C | 500 | 1.55 | D | 1000 | 1.53 | E | [illegible] | |
| | F | 3000 | 1.38 | G | 4000 | 1.26 | H | 5000 | 1.23 | | | | | | |

Results flagged with an asterisk (*) indicate values outside control criteria.
PCC Compound ‡ CCC Compound

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** [illegible]
**Calibration Date:** [illegible]

## Initial Calibration Summary
## Semi-Volatile Organic Compounds by GC/MS

**Calibration ID:** CAL884
**Instrument ID:** MS10

**Column:** [illegible]

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzo(a)pyrene | A | 100 | 1.37 | B | 200 | 1.46 | C | 500 | 1.45 | D | 1000 | 1.43 | E | [illegible] | [illegible] |
| | F | 3000 | 1.34 | G | 4000 | 1.24 | H | 5000 | 1.23 | | | | | | |
| Indeno(1,2,3-cd)pyrene | A | 100 | 1.22 | B | 200 | 1.15 | C | 500 | 1.22 | D | 1000 | 1.20 | E | 2000 | [illegible] |
| | F | 3000 | 1.14 | G | 4000 | 1.09 | H | 5000 | 1.02 | | | | | | |
| Dibenz(a,h)anthracene | A | 100 | 1.06 | B | 200 | 1.03 | C | 500 | 1.07 | D | 1000 | 1.07 | E | 2000 | [illegible] |
| | F | 3000 | 1.04 | G | 4000 | 1.04 | H | 5000 | 0.979 | | | | | | |
| Benzo(g,h,i)perylene | A | 100 | 1.31 | B | 200 | 1.27 | C | 500 | 1.25 | D | 1000 | 1.19 | E | [illegible] | [illegible] |
| | F | 3000 | 1.10 | G | 4000 | 1.05 | H | 5000 | 0.972 | | | | | | |
| 2-Fluorophenol | A | 100 | 1.14 | B | 200 | 1.12 | C | 500 | 1.15 | D | 1000 | 1.15 | E | 2000 | [illegible] |
| | F | 3000 | 1.25 | G | 4000 | 1.22 | H | 5000 | 1.24 | | | | | | |
| Phenol-d6 | A | 100 | 1.21 | B | 200 | 1.21 | C | 500 | 1.24 | D | 1000 | 1.32 | E | [illegible] | [illegible] |
| | F | 3000 | 1.34 | G | 4000 | 1.23 | H | 5000 | 1.16 | | | | | | |
| Nitrobenzene-d5 | A | 100 | 1.05 | B | 200 | 1.08 | C | 500 | 1.10 | D | 1000 | [illegible] | | | |
| | F | 3000 | 1.14 | G | 4000 | 1.13 | H | 5000 | 1.14 | | | | | | |
| 2-Fluorobiphenyl | A | 100 | 1.41 | B | 200 | 1.42 | C | 500 | 1.41 | D | 1000 | 1.29 | E | 2000 | [illegible] |
| | F | 3000 | 1.11 | G | 4000 | 0.992 | H | 5000 | 0.951 | | | | | | |
| 2,4,6-Tribromophenol | A | 100 | 0.129 | B | 200 | 0.146 | C | 500 | 0.148 | D | 1000 | 0.145 | E | [illegible] | [illegible] |
| | F | 3000 | 0.143 | G | 4000 | 0.135 | H | 5000 | 0.133 | | | | | | |
| Terphenyl-d14 | A | 100 | 1.39 | B | 200 | 1.30 | C | 500 | 1.30 | D | 1000 | 1.20 | E | 2000 | [illegible] |
| | F | 3000 | 1.04 | G | 4000 | 0.968 | H | 5000 | 0.990 | | | | | | |
| 4-Nitrophenol | | | | B | 500 | 0.106 | C | 1000 | 0.114 | D | 2000 | 0.128 | E | 3000 | [illegible] |
| | F | 5000 | 0.147 | G | 7000 | 0.140 | H | 10000 | 0.142 | | | | | | |
| 1,4-Dichlorobenzene | A | 100 | 1.51 | B | 200 | 1.49 | C | 500 | 1.48 | D | 1000 | 1.47 | E | 2000 | [illegible] |
| | F | 3000 | 1.36 | G | 4000 | 1.25 | H | 5000 | 1.21 | | | | | | |
| 2,4-Dichlorophenol | A | 100 | 0.306 | B | 500 | 0.306 | C | 1000 | 0.296 | D | 2000 | 0.292 | E | 3000 | [illegible] |
| | F | 5000 | 0.231 | G | 7000 | 0.208 | H | 10000 | 0.190 | | | | | | |
| 2,4-Dinitrophenol | | | | | | | | | | D | 2000 | 0.121 | E | 3000 | [illegible] |
| | F | 5000 | 0.163 | G | 7000 | 0.158 | H | 10000 | 0.166 | | | | | | |
| 4-Chloro-3-methylphenol | A | 100 | 0.263 | B | 500 | 0.263 | C | 1000 | 0.266 | D | 2000 | 0.263 | E | 3000 | [illegible] |
| | F | 5000 | 0.237 | G | 7000 | 0.220 | H | 10000 | 0.202 | | | | | | |
| N-Nitrosodi-n-propylamine | A | 100 | 0.713 | B | 200 | 0.747 | C | 500 | 0.727 | D | 1000 | [illegible] | | | |
| | F | 3000 | 0.729 | G | 4000 | 0.630 | H | 5000 | 0.586 | | | | | | |
| Hexachlorocyclopentadiene | | | | | | | C | 500 | 0.200 | D | 1000 | 0.242 | E | 2000 | [illegible] |
| | F | 3000 | 0.272 | G | 4000 | 0.250 | H | 5000 | 0.246 | | | | | | |

Values flagged with an asterisk (*) indicate values outside control criteria.
SPCC Compound ‡ CCC Compound

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** K[illegible]
**Calibration Date:** [illegible]

**Initial Calibration Summary**
**Semi-Volatile Organic Compounds by GC/MS**

**Calibration ID:** CAL884
**Instrument ID:** MS10

**Column:** MS

| Analyte Name | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF | Level ID | Amt | RRF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,4,6-Trichlorophenol | A | 100 | 0.422 | B | 500 | 0.428 | C | 1000 | 0.416 | D | 2000 | 0.384 | E | [illegible] | [illegible] |
| | F | 5000 | 0.333 | G | 7000 | 0.292 | H | 10000 | 0.283 | | | | | | |
| 2-Nitrophenol | A | 100 | 0.230 | B | 500 | 0.226 | C | 1000 | 0.222 | D | 2000 | 0.229 | E | [illegible] | [illegible] |
| | F | 5000 | 0.206 | G | 7000 | 0.194 | H | 10000 | 0.164 | | | | | | |

[illegible] flagged with an asterisk (*) indicate values outside control criteria.
[illegible] Compound ‡ CCC Compound



040 CAS KELSO

CARG002263

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** [illegible]
**Calibration Date:** [illegible]

**Initial Calibration Summary**
**Semi-Volatile Organic Compounds by GC/MS**

**Calibration ID:** CAL884
**Instrument ID:** MS10

**Column:** MS

| Analyte Name | Compound Type | Fit Type | Calibration Evaluation Eval. | Eval. Result | Q | Control Criteria | RRF Evaluation Average RRF | Q | [illegible] |
|---|---|---|---|---|---|---|---|---|---|
| ‡ Phenol | MS | AverageRF | % RSD | 11.1 | | ≤ 30 | 1.48 | | [illegible] |
| Benzyl Alcohol | TRG | AverageRF | % RSD | 4.2 | | ≤ 15 | 0.752 | | [illegible] |
| 2-Methylphenol | TRG | AverageRF | % RSD | 13.4 | | ≤ 15 | 0.859 | | [illegible] |
| Hexachloroethane | TRG | AverageRF | % RSD | 9.8 | | ≤ 15 | 0.588 | | [illegible] |
| 4-Methylphenol | TRG | AverageRF | % RSD | 9.4 | | ≤ 15 | 1.28 | | [illegible] |
| 2,4-Dimethylphenol | TRG | AverageRF | % RSD | 16.1 | * | ≤ 15 | 0.266 | | [illegible] |
| Benzoic Acid | TRG | AverageRF | % RSD | 21.1 | * | ≤ 15 | 0.174 | | [illegible] |
| Naphthalene | TRG | AverageRF | % RSD | 13.8 | | ≤ 15 | 0.946 | | [illegible] |
| ‡ Hexachlorobutadiene | TRG | AverageRF | % RSD | 14.5 | | ≤ 30 | 0.173 | | |
| 2-Methylnaphthalene | TRG | AverageRF | % RSD | 15.0 | * | ≤ 15 | [illegible] | | |
| Acenaphthylene | TRG | AverageRF | % RSD | 14.2 | | ≤ 15 | [illegible] | | |
| Dimethyl Phthalate | TRG | AverageRF | % RSD | 11.3 | | ≤ 15 | 1.50 | | [illegible] |
| ‡ Acenaphthene | MS | AverageRF | % RSD | 18.9 | | ≤ 30 | 0.941 | | [illegible] |
| Dibenzofuran | TRG | AverageRF | % RSD | 18.7 | * | ≤ 15 | 1.38 | | [illegible] |
| Fluorene | TRG | AverageRF | % RSD | 15.9 | * | ≤ 15 | 1.12 | | [illegible] |
| Diethyl Phthalate | TRG | AverageRF | % RSD | 13.8 | | ≤ 15 | 1.19 | | [illegible] |
| N-Nitrosodiphenylamine | TRG | AverageRF | % RSD | 12.5 | | ≤ 30 | 0.737 | | [illegible] |
| Hexachlorobenzene | TRG | AverageRF | % RSD | 10.2 | | ≤ 15 | 0.276 | | [illegible] |
| Pentachlorophenol | MS | AverageRF | % RSD | 9.6 | | ≤ 30 | 0.163 | | [illegible] |
| Phenanthrene | TRG | AverageRF | % RSD | 16.9 | * | ≤ 15 | 1.05 | | [illegible] |
| Anthracene | TRG | AverageRF | % RSD | 14.7 | | ≤ 15 | 1.03 | | [illegible] |
| Di-n-butyl Phthalate | TRG | AverageRF | % RSD | 19.6 | * | ≤ 15 | 1.27 | | [illegible] |
| Fluoranthene | TRG | AverageRF | % RSD | 21.6 | * | ≤ 15 | 0.923 | | [illegible] |
| Pyrene | MS | AverageRF | % RSD | 19.2 | * | ≤ 15 | 1.84 | | [illegible] |
| Butyl Benzyl Phthalate | TRG | AverageRF | % RSD | 4.8 | | ≤ 15 | 0.847 | | [illegible] |
| Benz(a)anthracene | TRG | AverageRF | % RSD | 9.1 | | ≤ 15 | 1.24 | | [illegible] |
| Chrysene | TRG | AverageRF | % RSD | 14.8 | | ≤ 15 | 1.11 | | [illegible] |
| Bis(2-ethylhexyl) Phthalate | TRG | AverageRF | % RSD | 7.5 | | ≤ 15 | 1.16 | | [illegible] |
| Di-n-octyl Phthalate | TRG | AverageRF | % RSD | 7.9 | | ≤ 30 | 2.41 | | [illegible] |
| Benzo(b)fluoranthene | TRG | AverageRF | % RSD | 6.1 | | ≤ 15 | 1.49 | | [illegible] |
| Benzo(k)fluoranthene | TRG | AverageRF | % RSD | 11.2 | | ≤ 15 | 1.47 | | [illegible] |
| Benzo(a)pyrene | TRG | AverageRF | % RSD | 6.6 | | ≤ 30 | [illegible] | | |
| Indeno(1,2,3-cd)pyrene | TRG | AverageRF | % RSD | 6.0 | | ≤ 15 | [illegible] | | |
| Dibenz(a,h)anthracene | TRG | AverageRF | % RSD | 2.8 | | ≤ 15 | 1.04 | | [illegible] |
| Benzo(g,h,i)perylene | TRG | AverageRF | % RSD | 10.3 | | ≤ 15 | 1.16 | | [illegible] |
| 2-Fluorophenol | SURR | AverageRF | % RSD | 5.0 | | ≤ 15 | 1.19 | | [illegible] |
| Phenol-d6 | SURR | AverageRF | % RSD | 7.4 | | ≤ 15 | 1.27 | | [illegible] |
| Nitrobenzene-d5 | SURR | AverageRF | % RSD | 4.3 | | ≤ 15 | 1.12 | | [illegible] |
| 2-Fluorobiphenyl | SURR | AverageRF | % RSD | 15.6 | * | ≤ 15 | 1.22 | | [illegible] |
| 2,4,6-Tribromophenol | SURR | AverageRF | % RSD | 5.7 | | ≤ 15 | 0.141 | | [illegible] |
| Terphenyl-d14 | SURR | AverageRF | % RSD | 13.5 | | ≤ 15 | 1.17 | | [illegible] |
| 4-Nitrophenol | MS | AverageRF | % RSD | 11.4 | | ≤ 15 | 0.130 | | [illegible] |

Results flagged with an asterisk (*) indicate values outside control criteria.

PCC Compound ‡ CCC Compound




041 CAS KELSO JUL 16:29 FAX

CARG002264

COLUMBIA ANALYTICAL SERVICES, INC.

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** K2104659

**Cover Page - Organic Analysis Data Package**
**Volatile Organic Compounds**

| Sample Name | Lab Code | Date Collected | Date Received |
|---|---|---|---|
| 01-Composite | K2104659-001 | 06/29/2001 | 06/30/2001 |
| 01-T1 | K2104659-002 | 06/29/2001 | 06/30/2001 |
| 01-T2 | K2104659-003 | 06/29/2001 | 06/30/2001 |
| 01-T3 | K2104659-004 | 06/29/2001 | 06/30/2001 |
| 01-T4 | K2104659-005 | 06/29/2001 | 06/30/2001 |
| 01-CompositeMS | KWG0104134-1 | 06/29/2001 | 06/30/2001 |
| 01-CompositeDMS | KWG0104134-2 | 06/29/2001 | 06/30/2001 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: MS  Name: Meena Shah

Date: 7/17/01  Title: Scientist

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 06/29/2001
**Date Received:** 06/30/2001

## Volatile Organic Compounds

**Sample Name:** 01-Composite
**Lab Code:** K2104659-001

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5030A
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | U | 27 | 0.86 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,3-Dichlorobenzene | ND | U | 6.7 | 0.93 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,4-Dichlorobenzene | ND | U | 6.7 | 1.1 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,2-Dichlorobenzene | ND | U | 6.7 | 0.90 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Dibromofluoromethane | 94 | 75-132 | 07/12/01 | Acceptable |
| Toluene-d8 | 105 | 85-109 | 07/12/01 | Acceptable |
| 4-Bromofluorobenzene | 95 | 49-131 | 07/12/01 | Acceptable |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 06/29/2001
**Date Received:** 06/30/2001

## Volatile Organic Compounds

**Sample Name:** 01-T1
**Lab Code:** K2104659-002

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 5030A
**Analysis Method:** 8260B

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | U | 26 | 0.80 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,3-Dichlorobenzene | ND | U | 6.5 | 0.87 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,4-Dichlorobenzene | ND | U | 6.5 | 0.96 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,2-Dichlorobenzene | ND | U | 6.5 | 0.84 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Dibromofluoromethane | 103 | 75-132 | 07/12/01 | Acceptable |
| Toluene-d8 | 103 | 85-109 | 07/12/01 | Acceptable |
| 4-Bromofluorobenzene | 95 | 49-131 | 07/12/01 | Acceptable |

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |

### Volatile Organic Compounds

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T2 | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-003 | **Basis:** | Dry |
| **Extraction Method:** | EPA 5030A | **Level:** | Low |
| **Analysis Method:** | 8260B | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | U | 28 | 0.90 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,3-Dichlorobenzene | ND | U | 6.9 | 0.98 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,4-Dichlorobenzene | ND | U | 6.9 | 1.1 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,2-Dichlorobenzene | ND | U | 6.9 | 0.95 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Dibromofluoromethane | 114 | 75-132 | 07/12/01 | Acceptable |
| Toluene-d8 | 114 | 85-109 | 07/12/01 | Outside Control Limits |
| 4-Bromofluorobenzene | 105 | 49-131 | 07/12/01 | Acceptable |

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |

### Volatile Organic Compounds

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T3 | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-004 | **Basis:** | Dry |
| **Extraction Method:** | EPA 5030A | **Level:** | Low |
| **Analysis Method:** | 8260B | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | U | 28 | 0.87 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,3-Dichlorobenzene | ND | U | 7.0 | 0.95 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,4-Dichlorobenzene | ND | U | 7.0 | 1.1 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,2-Dichlorobenzene | ND | U | 7.0 | 0.92 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Dibromofluoromethane | 100 | 75-132 | 07/12/01 | Acceptable |
| Toluene-d8 | 99 | 85-109 | 07/12/01 | Acceptable |
| 4-Bromofluorobenzene | 92 | 49-131 | 07/12/01 | Acceptable |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |

**Volatile Organic Compounds**

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T4 | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-005 | **Basis:** | Dry |
| **Extraction Method:** | EPA 5030A | **Level:** | Low |
| **Analysis Method:** | 8260B | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | U | 28 | 0.86 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,3-Dichlorobenzene | ND | U | 6.9 | 0.93 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,4-Dichlorobenzene | ND | U | 6.9 | 1.1 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |
| 1,2-Dichlorobenzene | ND | U | 6.9 | 0.90 | 1 | 07/11/01 | 07/12/01 | KWG0104134 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Dibromofluoromethane | 108 | 75-132 | 07/12/01 | Acceptable |
| Toluene-d8 | 110 | 85-109 | 07/12/01 | Outside Control Limits |
| 4-Bromofluorobenzene | 100 | 49-131 | 07/12/01 | Acceptable |

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | NA |
| **Sample Matrix:** | Sediment | **Date Received:** | NA |

### Volatile Organic Compounds

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Units:** | ug/Kg |
| **Lab Code:** | KWG0104134-4 | **Basis:** | Dry |
| **Extraction Method:** | EPA 5030A | **Level:** | Low |
| **Analysis Method:** | 8260B | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | U | 20 | 0.62 | 1 | 07/11/01 | 07/11/01 | KWG0104134 | |
| 1,3-Dichlorobenzene | ND | U | 5.0 | 0.67 | 1 | 07/11/01 | 07/11/01 | KWG0104134 | |
| 1,4-Dichlorobenzene | ND | U | 5.0 | 0.74 | 1 | 07/11/01 | 07/11/01 | KWG0104134 | |
| 1,2-Dichlorobenzene | ND | U | 5.0 | 0.65 | 1 | 07/11/01 | 07/11/01 | KWG0104134 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Dibromofluoromethane | 85 | 75-132 | 07/11/01 | Acceptable |
| Toluene-d8 | 95 | 85-109 | 07/11/01 | Acceptable |
| 4-Bromofluorobenzene | 88 | 49-131 | 07/11/01 | Acceptable |

Comments:



07/19/01 THU 13:23 FAX CAS KELSO 033
CARG002271

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659

**Surrogate Recovery Summary**
**Volatile Organic Compounds**

**Extraction Method:** EPA 5030A
**Analysis Method:** 8260B

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 | Sur2 | | Sur3 |
|---|---|---|---|---|---|
| 01-Composite | K2104659-001 | 94 | 105 | | 95 |
| 01-T1 | K2104659-002 | 103 | 103 | | 95 |
| 01-T2 | K2104659-003 | 114 | 114 | * | 105 |
| 01-T3 | K2104659-004 | 100 | 99 | | 92 |
| 01-T4 | K2104659-005 | 108 | 110 | * | 100 |
| Method Blank | KWG0104134-4 | 85 | 95 | | 88 |
| 01-CompositeMS | KWG0104134-1 | 102 | 115 | * | 109 |
| 01-CompositeDMS | KWG0104134-2 | 106 | 116 | * | 112 |
| Lab Control Sample | KWG0104134-3 | 94 | 106 | | 100 |

**Surrogate Recovery Control Limits (%)**

| | | |
|---|---|---|
| Sur1 = | Dibromofluoromethane | 75-132 |
| Sur2 = | Toluene-d8 | 85-109 |
| Sur3 = | 4-Bromofluorobenzene | 49-131 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** K2104659
**Date Analyzed:** 07/11/2001
**Time Analyzed:** 19:03

**Internal Standard Area and RT Summary**
**Volatile Organic Compounds**

**File ID:** J:\MS13\DATA\071101\0711F004.D
**Instrument ID:** MS13
**Analysis Method:** 8260B

**Lab Code:** KWG0104133-2
**Analysis Lot:** KWG0104133

| | | Fluorobenzene | | Chlorobenzene-d5 | | 1,4-Dichlorobenzene-d4 | |
|---|---|---|---|---|---|---|---|
| | | Area | RT | Area | RT | Area | RT |
| | **Results ==>** | 1,127,218 | 4.54 | 394,323 | 7.63 | 470,462 | 10.49 |
| | **Upper Limit ==>** | 2,254,436 | 5.04 | 788,646 | 8.13 | 940,924 | 10.99 |
| | **Lower Limit ==>** | 563,609 | 4.04 | 197,162 | 7.13 | 235,231 | 9.99 |
| | **ICAL Result ==>** | 1,018,290 | NA | 344,678 | NA | 430,421 | NA |
| ***Associated Analyses*** | | | | | | | |
| Lab Control Sample | KWG0104134-3 | 1,127,361 | 4.54 | 403,476 | 7.63 | 495,350 | 10.50 |
| Method Blank | KWG0104134-4 | 1,107,555 | 4.55 | 386,529 | 7.64 | 431,991 | 10.51 |
| 01-Composite | K2104659-001 | 944,392 | 4.54 | 317,266 | 7.64 | 326,997 | 10.50 |
| 01-T1 | K2104659-002 | 957,588 | 4.54 | 312,162 | 7.64 | 323,981 | 10.50 |
| 01-T2 | K2104659-003 | 805,728 | 4.54 | 250,202 | 7.64 | 248,661 | 10.50 |
| 01-T3 | K2104659-004 | 864,200 | 4.54 | 262,991 | 7.64 | 249,477 | 10.51 |
| 01-T4 | K2104659-005 | 887,096 | 4.54 | 274,782 | 7.64 | 272,543 | 10.51 |
| 01-CompositeMS | KWG0104134-1 | 967,217 | 4.54 | 318,712 | 7.64 | 370,655 | 10.50 |
| 01-CompositeDMS | KWG0104134-2 | 940,051 | 4.54 | 304,848 | 7.64 | 357,023 | 10.50 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/11/2001 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 07/12/2001 |

### Matrix Spike/Duplicate Matrix Spike Summary
### Volatile Organic Compounds

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-Composite | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-001 | **Basis:** | Dry |
| **Extraction Method:** | EPA 5030A | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | KWG0104134 |

| | | 01-CompositeMS KWG0104134-1 Matrix Spike | | | 01-CompositeDMS KWG0104134-2 Duplicate Matrix Spike | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Sample Result** | **Result** | **Expected** | **%Rec** | **Result** | **Expected** | **%Rec** | **%Rec Limits** | **RPD** | **RPD Limit** |
| 1,2,4-Trichlorobenzene | ND | 107 | 135 | 79 | 109 | 136 | 80 | 50-150 | 2 | 40 |
| 1,3-Dichlorobenzene | ND | 129 | 135 | 95 | 130 | 136 | 95 | 50-150 | 1 | 40 |
| 1,4-Dichlorobenzene | ND | 128 | 135 | 95 | 128 | 136 | 94 | 50-150 | 0 | 40 |
| 1,2-Dichlorobenzene | ND | 123 | 135 | 91 | 124 | 136 | 91 | 34-131 | 1 | 40 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

**Results flagged with a pound (#) indicate the control criteria is not applicable.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/11/2001 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 07/11/2001 |

**Lab Control Spike Summary**
**Volatile Organic Compounds**

| | | | |
|---|---|---|---|
| **Extraction Method:** | EPA 5030A | **Units:** | ug/Kg |
| **Analysis Method:** | 8260B | **Basis:** | Dry |
| | | **Level:** | Low |
| | | **Extraction Lot:** | KWG0104134 |

| | Lab Control Sample KWG0104134-3 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| 1,2,4-Trichlorobenzene | 107 | 100 | 107 | 50-150 |
| 1,3-Dichlorobenzene | 92.9 | 100 | 93 | 50-150 |
| 1,4-Dichlorobenzene | 93.1 | 100 | 93 | 50-150 |
| 1,2-Dichlorobenzene | 91.3 | 100 | 91 | 79-120 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/11/2001 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 07/11/2001 |
| | | **Time Analyzed:** | 20:29 |

**Method Blank Summary**
**Volatile Organic Compounds**

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **File ID:** | J:\MS13\DATA\071101\0711F007.D |
| **Lab Code:** | KWG0104134-4 | **Instrument ID:** | MS13 |
| **Extraction Method:** | EPA 5030A | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | KWG0104134 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | KWG0104134-3 | J:\MS13\DATA\071101\0711F005.D | 07/11/01 | 19:32 |
| 01-Composite | K2104659-001 | J:\MS13\DATA\071101\0711F015.D | 07/12/01 | 00:17 |
| 01-T1 | K2104659-002 | J:\MS13\DATA\071101\0711F016.D | 07/12/01 | 00:45 |
| 01-T2 | K2104659-003 | J:\MS13\DATA\071101\0711F017.D | 07/12/01 | 01:13 |
| 01-T3 | K2104659-004 | J:\MS13\DATA\071101\0711F018.D | 07/12/01 | 01:41 |
| 01-T4 | K2104659-005 | J:\MS13\DATA\071101\0711F019.D | 07/12/01 | 02:09 |
| 01-CompositeMS | KWG0104134-1 | J:\MS13\DATA\071101\0711F020.D | 07/12/01 | 02:37 |
| 01-CompositeDMS | KWG0104134-2 | J:\MS13\DATA\071101\0711F021.D | 07/12/01 | 03:05 |

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/11/2001 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 07/11/2001 |
| | | **Time Analyzed:** | 19:32 |

**Lab Control Sample Summary**
**Volatile Organic Compounds**

| | | | |
|---|---|---|---|
| **Sample Name:** | Lab Control Sample | **File ID:** | J:\MS13\DATA\071101\0711F005.D |
| **Lab Code:** | KWG0104134-3 | **Instrument ID:** | MS13 |
| **Extraction Method:** | EPA 5030A | **Level:** | Low |
| **Analysis Method:** | 8260B | **Extraction Lot:** | KWG0104134 |

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | KWG0104134-4 | J:\MS13\DATA\071101\0711F007.D | 07/11/01 | 20:29 |
| 01-Composite | K2104659-001 | J:\MS13\DATA\071101\0711F015.D | 07/12/01 | 00:17 |
| 01-T1 | K2104659-002 | J:\MS13\DATA\071101\0711F016.D | 07/12/01 | 00:45 |
| 01-T2 | K2104659-003 | J:\MS13\DATA\071101\0711F017.D | 07/12/01 | 01:13 |
| 01-T3 | K2104659-004 | J:\MS13\DATA\071101\0711F018.D | 07/12/01 | 01:41 |
| 01-T4 | K2104659-005 | J:\MS13\DATA\071101\0711F019.D | 07/12/01 | 02:09 |
| 01-CompositeMS | KWG0104134-1 | J:\MS13\DATA\071101\0711F020.D | 07/12/01 | 02:37 |
| 01-CompositeDMS | KWG0104134-2 | J:\MS13\DATA\071101\0711F021.D | 07/12/01 | 03:05 |

COLUMBIA ANALYTICAL SERVICES, INC.

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** K2104659

**Cover Page - Organic Analysis Data Package**
**Organochlorine Pesticides**

| Sample Name | Lab Code | Date Collected | Date Received |
|---|---|---|---|
| 01-Composite | K2104659-001 | 06/29/2001 | 06/30/2001 |
| 01-T1 | K2104659-002 | 06/29/2001 | 06/30/2001 |
| 01-T2 | K2104659-003 | 06/29/2001 | 06/30/2001 |
| 01-T3 | K2104659-004 | 06/29/2001 | 06/30/2001 |
| 01-T4 | K2104659-005 | 06/29/2001 | 06/30/2001 |
| 01-CompositeMS | KWG0104061-1 | 06/29/2001 | 06/30/2001 |
| 01-CompositeDMS | KWG0104061-2 | 06/29/2001 | 06/30/2001 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Vonda Neuneker  Name: Vonda Neuneker

Date: 7-17-01  Title: Senior Analyst

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |

## Organochlorine Pesticides

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-Composite | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-001 | **Basis:** | Dry |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8081A | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| gamma-BHC (Lindane) | ND | U | 1.4 | 0.34 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Heptachlor | ND | U | 1.4 | 0.19 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Aldrin | ND | Ui | 1.4 | 0.66 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| gamma-Chlordane | ND | Ui | 1.4 | 0.56 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| alpha-Chlordane | ND | U | 1.4 | 0.15 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Dieldrin | ND | Ui | 1.4 | 0.48 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDE | ND | U | 1.4 | 0.35 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDD | ND | Ui | 1.4 | 1.4 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDT | ND | Ui | 1.4 | 1.3 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tetrachloro-m-xylene | 82 | 48-119 | 07/12/01 | Acceptable |
| Decachlorobiphenyl | 77 | 48-136 | 07/12/01 | Acceptable |

Comments:

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |

### Organochlorine Pesticides

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T1 | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-002 | **Basis:** | Dry |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8081A | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| gamma-BHC (Lindane) | ND | U | 1.3 | 0.32 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Heptachlor | ND | U | 1.3 | 0.18 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Aldrin | ND | U | 1.3 | 0.31 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| gamma-Chlordane | ND | Ui | 1.3 | 1.3 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| alpha-Chlordane | ND | Ui | 1.3 | 0.41 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Dieldrin | ND | U | 1.3 | 0.40 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDE | ND | U | 1.3 | 0.32 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDD | ND | U | 1.3 | 0.20 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDT | ND | Ui | 1.3 | 1.1 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tetrachloro-m-xylene | 81 | 48-119 | 07/12/01 | Acceptable |
| Decachlorobiphenyl | 86 | 48-136 | 07/12/01 | Acceptable |

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |

### Organochlorine Pesticides

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T2 | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-003 | **Basis:** | Dry |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8081A | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| gamma-BHC (Lindane) | ND | U | 1.5 | 0.36 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Heptachlor | ND | U | 1.5 | 0.20 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Aldrin | ND | U | 1.5 | 0.34 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| gamma-Chlordane | ND | U | 1.5 | 0.22 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| alpha-Chlordane | ND | U | 1.5 | 0.16 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Dieldrin | ND | U | 1.5 | 0.45 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDE | ND | U | 1.5 | 0.36 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDD | ND | Ui | 1.5 | 0.73 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDT | ND | Ui | 1.5 | 0.68 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tetrachloro-m-xylene | 74 | 48-119 | 07/12/01 | Acceptable |
| Decachlorobiphenyl | 86 | 48-136 | 07/12/01 | Acceptable |

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |

### Organochlorine Pesticides

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T3 | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-004 | **Basis:** | Dry |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8081A | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| gamma-BHC (Lindane) | ND | U | 1.4 | 0.35 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Heptachlor | ND | U | 1.4 | 0.20 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Aldrin | ND | U | 1.4 | 0.34 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| gamma-Chlordane | ND | U | 1.4 | 0.21 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| alpha-Chlordane | ND | U | 1.4 | 0.16 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Dieldrin | ND | U | 1.4 | 0.44 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| **4,4'-DDE** | **0.81** | J | 1.4 | 0.35 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| **4,4'-DDD** | **0.69** | JP ? | 1.4 | 0.22 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| **4,4'-DDT** | **0.92** | J | 1.4 | 0.24 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tetrachloro-m-xylene | 82 | 48-119 | 07/12/01 | Acceptable |
| Decachlorobiphenyl | 79 | 48-136 | 07/12/01 | Acceptable |

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 06/29/2001
**Date Received:** 06/30/2001

### Organochlorine Pesticides

**Sample Name:** 01-T4
**Lab Code:** K2104659-005
**Extraction Method:** EPA 3540C
**Analysis Method:** 8081A

**Units:** ug/Kg
**Basis:** Dry
**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| gamma-BHC (Lindane) | ND | U | 1.4 | 0.34 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Heptachlor | ND | U | 1.4 | 0.19 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Aldrin | ND | U | 1.4 | 0.33 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| gamma-Chlordane | ND | U | 1.4 | 0.21 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| alpha-Chlordane | ND | U | 1.4 | 0.15 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Dieldrin | ND | Ui | 1.6 | 1.6 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDE | ND | Ui | 1.4 | 0.92 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDD | ND | U | 1.4 | 0.22 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDT | ND | Ui | 2.2 | 2.2 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tetrachloro-m-xylene | 70 | 48-119 | 07/12/01 | Acceptable |
| Decachlorobiphenyl | 69 | 48-136 | 07/12/01 | Acceptable |

**Comments:**

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | NA |
| **Sample Matrix:** | Sediment | **Date Received:** | NA |

**Organochlorine Pesticides**

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Units:** | ug/Kg |
| **Lab Code:** | KWG0104061-4 | **Basis:** | Dry |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8081A | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| gamma-BHC (Lindane) | ND | U | 1.0 | 0.25 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Heptachlor | ND | U | 1.0 | 0.14 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Aldrin | ND | U | 1.0 | 0.24 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| gamma-Chlordane | ND | U | 1.0 | 0.15 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| alpha-Chlordane | ND | U | 1.0 | 0.11 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| Dieldrin | ND | U | 1.0 | 0.31 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDE | ND | U | 1.0 | 0.25 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDD | ND | U | 1.0 | 0.16 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |
| 4,4'-DDT | ND | U | 1.0 | 0.17 | 1 | 07/05/01 | 07/12/01 | KWG0104061 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Tetrachloro-m-xylene | 84 | 48-119 | 07/12/01 | Acceptable |
| Decachlorobiphenyl | 95 | 48-136 | 07/12/01 | Acceptable |

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659

### Surrogate Recovery Summary
### Organochlorine Pesticides

**Extraction Method:** EPA 3540C
**Analysis Method:** 8081A

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 | Sur2 |
|---|---|---|---|
| 01-Composite | K2104659-001 | 82 | 77 |
| 01-T1 | K2104659-002 | 81 | 86 |
| 01-T2 | K2104659-003 | 74 | 86 |
| 01-T3 | K2104659-004 | 82 | 79 |
| 01-T4 | K2104659-005 | 70 | 69 |
| Method Blank | KWG0104061-4 | 84 | 95 |
| 01-CompositeMS | KWG0104061-1 | 79 | 62 |
| 01-CompositeDMS | KWG0104061-2 | 78 | 86 |
| Lab Control Sample | KWG0104061-3 | 84 | 95 |

**Surrogate Recovery Control Limits (%)**

| | | |
|---|---|---|
| Sur1 = | Tetrachloro-m-xylene | 48-119 |
| Sur2 = | Decachlorobiphenyl | 48-136 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/05/2001 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 07/12/2001 |

**Matrix Spike/Duplicate Matrix Spike Summary**
**Organochlorine Pesticides**

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-Composite | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-001 | **Basis:** | Dry |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8081A | **Extraction Lot:** | KWG0104061 |

| | | 01-CompositeMS KWG0104061-1 Matrix Spike | | | 01-CompositeDMS KWG0104061-2 Duplicate Matrix Spike | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Sample Result** | **Result** | **Expected** | **%Rec** | **Result** | **Expected** | **%Rec** | **%Rec Limits** | **RPD** | **RPD Limit** |
| gamma-BHC (Lindane) | ND | 15.5 | 13.6 | 114 | 15.6 | 13.6 | 114 | 56-137 | 1 | 50 |
| Heptachlor | ND | 14.6 | 13.6 | 107 | 14.0 | 13.6 | 102 | 51-132 | 4 | 50 |
| Aldrin | ND | 15.7 | 13.6 | 116 # | 11.6 | 13.6 | 85 # | 50-146 | 30 | 50 |
| gamma-Chlordane | ND | 15.5 | 13.6 | 114 # | 16.8 | 13.6 | 123 # | 48-143 | 8 | 50 |
| alpha-Chlordane | ND | 13.5 | 13.6 | 99 | 16.1 | 13.6 | 118 | 51-142 | 18 | 50 |
| Dieldrin | ND | 13.5 | 13.6 | 99 # | 0.258 | 13.6 | 2 # | 64-137 | 192 * | 50 |
| 4,4'-DDE | ND | 14.5 | 13.6 | 107 | 17.8 | 13.6 | 130 | 57-152 | 20 | 50 |
| 4,4'-DDD | ND | 15.1 | 13.6 | 111 # | 18.9 | 13.6 | 139 # | 58-154 | 22 | 50 |
| 4,4'-DDT | ND | 18.5 | 13.6 | 136 # | 16.4 | 13.6 | 120 # | 52-138 | 12 | 50 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/05/2001 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 07/12/2001 |

**Lab Control Spike Summary**
**Organochlorine Pesticides**

| | | | |
|---|---|---|---|
| **Extraction Method:** | EPA 3540C | **Units:** | ug/Kg |
| **Analysis Method:** | 8081A | **Basis:** | Dry |
| | | **Level:** | Low |
| | | **Extraction Lot:** | KWG0104061 |

| | Lab Control Sample KWG0104061-3 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| gamma-BHC (Lindane) | 10.8 | 10.0 | 108 | 55-146 |
| Heptachlor | 9.63 | 10.0 | 96 | 61-135 |
| Aldrin | 10.5 | 10.0 | 105 | 63-137 |
| gamma-Chlordane | 11.1 | 10.0 | 111 | 72-129 |
| alpha-Chlordane | 11.6 | 10.0 | 116 | 75-126 |
| Dieldrin | 11.5 | 10.0 | 115 | 80-132 ✓ |
| 4,4'-DDE | 12.0 | 10.0 | 120 | 81-135 |
| 4,4'-DDD | 13.1 | 10.0 | 131 | 78-143 |
| 4,4'-DDT | 13.4 | 10.0 | 134 | 75-139 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/05/2001 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 07/12/2001 |
| | | **Time Analyzed:** | 06:43 |

**Method Blank Summary**
**Organochlorine Pesticides**

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **File ID:** | J:\GC19\DATA\071101\0711F027.D |
| **Lab Code:** | KWG0104061-4 | **Instrument ID:** | gc19 |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8081A | **Extraction Lot:** | KWG0104061 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | KWG0104061-3 | J:\GC19\DATA\071101\0711F028.D | 07/12/01 | 07:19 |
| 01-Composite | K2104659-001 | J:\GC19\DATA\071101\0711F029.D | 07/12/01 | 07:56 |
| 01-CompositeMS | KWG0104061-1 | J:\GC19\DATA\071101\0711F030.D | 07/12/01 | 08:33 |
| 01-T1 | K2104659-002 | J:\GC19\DATA\071101\0711F038.D | 07/12/01 | 13:18 |
| 01-T2 | K2104659-003 | J:\GC19\DATA\071101\0711F039.D | 07/12/01 | 13:55 |
| 01-T3 | K2104659-004 | J:\GC19\DATA\071101\0711F040.D | 07/12/01 | 14:31 |
| 01-T4 | K2104659-005 | J:\GC19\DATA\071101\0711F041.D | 07/12/01 | 15:09 |
| 01-CompositeDMS | KWG0104061-2 | J:\GC19\DATA\071101\0711F049.D | 07/12/01 | 16:48 |

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/05/2001 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 07/12/2001 |
| | | **Time Analyzed:** | 07:19 |

**Lab Control Sample Summary**
**Organochlorine Pesticides**

| | | | |
|---|---|---|---|
| **Sample Name:** | Lab Control Sample | **File ID:** | J:\GC19\DATA\071101\0711F028.D |
| **Lab Code:** | KWG0104061-3 | **Instrument ID:** | gc19 |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8081A | **Extraction Lot:** | KWG0104061 |

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | KWG0104061-4 | J:\GC19\DATA\071101\0711F027.D | 07/12/01 | 06:43 |
| 01-Composite | K2104659-001 | J:\GC19\DATA\071101\0711F029.D | 07/12/01 | 07:56 |
| 01-CompositeMS | KWG0104061-1 | J:\GC19\DATA\071101\0711F030.D | 07/12/01 | 08:33 |
| 01-T1 | K2104659-002 | J:\GC19\DATA\071101\0711F038.D | 07/12/01 | 13:18 |
| 01-T2 | K2104659-003 | J:\GC19\DATA\071101\0711F039.D | 07/12/01 | 13:55 |
| 01-T3 | K2104659-004 | J:\GC19\DATA\071101\0711F040.D | 07/12/01 | 14:31 |
| 01-T4 | K2104659-005 | J:\GC19\DATA\071101\0711F041.D | 07/12/01 | 15:09 |
| 01-CompositeDMS | KWG0104061-2 | J:\GC19\DATA\071101\0711F049.D | 07/12/01 | 16:48 |

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** K2104659

**Cover Page - Organic Analysis Data Package**
**Polychlorinated Biphenyls (PCBs)**

| Sample Name | Lab Code | Date Collected | Date Received |
|---|---|---|---|
| 01-Composite | K2104659-001 | 06/29/2001 | 06/30/2001 |
| 01-T1 | K2104659-002 | 06/29/2001 | 06/30/2001 |
| 01-T2 | K2104659-003 | 06/29/2001 | 06/30/2001 |
| 01-T3 | K2104659-004 | 06/29/2001 | 06/30/2001 |
| 01-T4 | K2104659-005 | 06/29/2001 | 06/30/2001 |
| 01-CompositeMS | KWG0104062-1 | 06/29/2001 | 06/30/2001 |
| 01-CompositeDMS | KWG0104062-2 | 06/29/2001 | 06/30/2001 |

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature:_____ Name:_____

Date:_____ Title:_____

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |

### Polychlorinated Biphenyls (PCBs)

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-Composite | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-001 | **Basis:** | Dry |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8082 | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND | U | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1221 | ND | U | 28 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1232 | ND | U | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| **Aroclor 1242** | **24** | | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1248 | ND | U | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1254 | ND | U | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| **Aroclor 1260** | **24** | | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Decachlorobiphenyl | 78 | 57-136 | 07/12/01 | Acceptable |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |

## Polychlorinated Biphenyls (PCBs)

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T1 | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-002 | **Basis:** | Dry |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8082 | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND | U | 13 | 3.1 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1221 | ND | U | 26 | 3.1 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1232 | ND | U | 13 | 3.1 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1242 | ND | Ui | 19 | 19 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1248 | ND | Ui | 21 | 21 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| **Aroclor 1254** | **35** | | 13 | 3.1 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| **Aroclor 1260** | **38** | | 13 | 3.1 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Decachlorobiphenyl | 67 | 57-136 | 07/12/01 | Acceptable |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 06/29/2001
**Date Received:** 06/30/2001

## Polychlorinated Biphenyls (PCBs)

**Sample Name:** 01-T2
**Lab Code:** K2104659-003

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 3540C
**Analysis Method:** 8082

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND | U | 15 | 3.5 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1221 | ND | U | 29 | 3.5 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1232 | ND | U | 15 | 3.5 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1242 | ND | U | 15 | 3.5 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1248 | ND | U | 15 | 3.5 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| **Aroclor 1254** | **15** | **J** | 15 | 3.5 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| **Aroclor 1260** | **10** | **J** | 15 | 3.5 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Decachlorobiphenyl | 69 | 57-136 | 07/12/01 | Acceptable |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | 06/29/2001 |
| **Sample Matrix:** | Sediment | **Date Received:** | 06/30/2001 |

**Polychlorinated Biphenyls (PCBs)**

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-T3 | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-004 | **Basis:** | Dry |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8082 | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND | U | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1221 | ND | U | 28 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1232 | ND | U | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1242 | ND | U | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1248 | ND | U | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| **Aroclor 1254** | **8.3** | J | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| **Aroclor 1260** | **5.1** | JP | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Decachlorobiphenyl | 64 | 57-136 | 07/12/01 | Acceptable |

**Comments:**

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659
**Date Collected:** 06/29/2001
**Date Received:** 06/30/2001

### Polychlorinated Biphenyls (PCBs)

**Sample Name:** 01-T4
**Lab Code:** K2104659-005

**Units:** ug/Kg
**Basis:** Dry

**Extraction Method:** EPA 3540C
**Analysis Method:** 8082

**Level:** Low

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND | U | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1221 | ND | U | 28 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1232 | ND | U | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1242 | ND | U | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1248 | ND | U | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1254 | ND | U | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| **Aroclor 1260** | **130** | | 14 | 3.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Decachlorobiphenyl | 62 | 57-136 | 07/12/01 | Acceptable ✓ |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Collected:** | NA |
| **Sample Matrix:** | Sediment | **Date Received:** | NA |

## Polychlorinated Biphenyls (PCBs)

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **Units:** | ug/Kg |
| **Lab Code:** | KWG0104062-4 | **Basis:** | Dry |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8082 | | |

| Analyte Name | Result | Q | MRL | MDL | Dilution Factor | Date Extracted | Date Analyzed | Extraction Lot | Note |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor 1016 | ND | U | 10 | 2.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1221 | ND | U | 20 | 2.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1232 | ND | U | 10 | 2.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1242 | ND | U | 10 | 2.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1248 | ND | U | 10 | 2.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1254 | ND | U | 10 | 2.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |
| Aroclor 1260 | ND | U | 10 | 2.4 | 1 | 07/05/01 | 07/12/01 | KWG0104062 | |

| Surrogate Name | %Rec | Control Limits | Date Analyzed | Note |
|---|---|---|---|---|
| Decachlorobiphenyl | 70 | 57-136 | 07/12/01 | Acceptable |

**Comments:**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002
**Sample Matrix:** Sediment

**Service Request:** K2104659

**Surrogate Recovery Summary**
**Polychlorinated Biphenyls (PCBs)**

**Extraction Method:** EPA 3540C
**Analysis Method:** 8082

**Units:** PERCENT
**Level:** Low

| Sample Name | Lab Code | Sur1 |
|---|---|---|
| 01-Composite | K2104659-001 | 78 |
| 01-T1 | K2104659-002 | 67 |
| 01-T2 | K2104659-003 | 69 |
| 01-T3 | K2104659-004 | 64 |
| 01-T4 | K2104659-005 | 62 |
| Method Blank | KWG0104062-4 | 70 |
| 01-CompositeMS | KWG0104062-1 | 70 |
| 01-CompositeDMS | KWG0104062-2 | 66 |
| Lab Control Sample | KWG0104062-3 | 70 |

**Surrogate Recovery Control Limits (%)**

Sur1 = Decachlorobiphenyl 57-136

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/05/2001 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 07/12/2001 |

**Matrix Spike/Duplicate Matrix Spike Summary**
**Polychlorinated Biphenyls (PCBs)**

| | | | |
|---|---|---|---|
| **Sample Name:** | 01-Composite | **Units:** | ug/Kg |
| **Lab Code:** | K2104659-001 | **Basis:** | Dry |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8082 | **Extraction Lot:** | KWG0104062 |

| | | 01-CompositeMS KWG0104062-1 Matrix Spike | | | 01-CompositeDMS KWG0104062-2 Duplicate Matrix Spike | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte Name** | **Sample Result** | **Result** | **Expected** | **%Rec** | **Result** | **Expected** | **%Rec** | **%Rec Limits** | **RPD** | **RPD Limit** |
| Aroclor 1016 | ND | 114 | 136 | 84 | 104 | 136 | 76 | 51-145 | 9 | 50 |
| Aroclor 1260 | 24 | 133 | 136 | 80 | 118 | 136 | 69 | 58-147 | 12 | 40 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
**Results flagged with a pound (#) indicate the control criteria is not applicable.**
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



07/19/01 THU 13:20 FAX CAS KELSO 022

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/05/2001 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 07/12/2001 |

**Lab Control Spike Summary**
**Polychlorinated Biphenyls (PCBs)**

| | | | |
|---|---|---|---|
| **Extraction Method:** | EPA 3540C | **Units:** | ug/Kg |
| **Analysis Method:** | 8082 | **Basis:** | Dry |
| | | **Level:** | Low |
| | | **Extraction Lot:** | KWG0104062 |

| | Lab Control Sample KWG0104062-3 Lab Control Spike | | | |
|---|---|---|---|---|
| **Analyte Name** | **Result** | **Expected** | **%Rec** | **%Rec Limits** |
| Aroclor 1016 | 79.5 | 100 | 79 | 63-134 |
| Aroclor 1260 | 93.0 | 100 | 93 | 74-130 |

**Results flagged with an asterisk (*) indicate values outside control criteria.**
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/05/2001 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 07/12/2001 |
| | | **Time Analyzed:** | 07:48 |

**Method Blank Summary**
**Polychlorinated Biphenyls (PCBs)**

| | | | |
|---|---|---|---|
| **Sample Name:** | Method Blank | **File ID:** | K:\GC09.I\071101_F.B\0711F037.D |
| **Lab Code:** | KWG0104062-4 | **Instrument ID:** | GC09.i |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8082 | **Extraction Lot:** | KWG0104062 |

This Method Blank applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Lab Control Sample | KWG0104062-3 | K:\GC09.I\071101_F.B\0711F038.D | 07/12/01 | 08:17 |
| 01-Composite | K2104659-001 | K:\GC09.I\071101_F.B\0711F039.D | 07/12/01 | 08:46 |
| 01-CompositeDMS | KWG0104062-2 | K:\GC09.I\071101_F.B\0711F041.D | 07/12/01 | 09:44 |
| 01-T1 | K2104659-002 | K:\GC09.I\071101_F.B\0711F042.D | 07/12/01 | 10:14 |
| 01-T2 | K2104659-003 | K:\GC09.I\071101_F.B\0711F043.D | 07/12/01 | 10:43 |
| 01-T3 | K2104659-004 | K:\GC09.I\071101_F.B\0711F044.D | 07/12/01 | 11:12 |
| 01-T4 | K2104659-005 | K:\GC09.I\071101_F.B\0711F045.D | 07/12/01 | 11:41 |
| 01-CompositeMS | KWG0104062-1 | K:\GC09.I\071101_F.B\0711F046.D | 07/12/01 | 12:33 |

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

| | | | |
|---|---|---|---|
| **Client:** | Harding Lawson ESE | **Service Request:** | K2104659 |
| **Project:** | Cargill Irving Elevator Terminal/52852.002 | **Date Extracted:** | 07/05/2001 |
| **Sample Matrix:** | Sediment | **Date Analyzed:** | 07/12/2001 |
| | | **Time Analyzed:** | 08:17 |

**Lab Control Sample Summary**
**Polychlorinated Biphenyls (PCBs)**

| | | | |
|---|---|---|---|
| **Sample Name:** | Lab Control Sample | **File ID:** | K:\GC09.I\071101_F.B\0711F038.D |
| **Lab Code:** | KWG0104062-3 | **Instrument ID:** | GC09.i |
| **Extraction Method:** | EPA 3540C | **Level:** | Low |
| **Analysis Method:** | 8082 | **Extraction Lot:** | KWG0104062 |

This Lab Control Sample applies to the following analyses:

| Sample Name | Lab Code | File ID | Date Analyzed | Time Analyzed |
|---|---|---|---|---|
| Method Blank | KWG0104062-4 | K:\GC09.I\071101_F.B\0711F037.D | 07/12/01 | 07:48 |
| 01-Composite | K2104659-001 | K:\GC09.I\071101_F.B\0711F039.D | 07/12/01 | 08:46 |
| 01-CompositeDMS | KWG0104062-2 | K:\GC09.I\071101_F.B\0711F041.D | 07/12/01 | 09:44 |
| 01-T1 | K2104659-002 | K:\GC09.I\071101_F.B\0711F042.D | 07/12/01 | 10:14 |
| 01-T2 | K2104659-003 | K:\GC09.I\071101_F.B\0711F043.D | 07/12/01 | 10:43 |
| 01-T3 | K2104659-004 | K:\GC09.I\071101_F.B\0711F044.D | 07/12/01 | 11:12 |
| 01-T4 | K2104659-005 | K:\GC09.I\071101_F.B\0711F045.D | 07/12/01 | 11:41 |
| 01-CompositeMS | KWG0104062-1 | K:\GC09.I\071101_F.B\0711F046.D | 07/12/01 | 12:33 |

QA/QC Results

**Client:** Harding Lawson ESE
**Project:** Cargill Irving Elevator Terminal/52852.002

**Service Request:** K2104659
**Calibration Date:** 06/01/2001

**Initial Calibration Summary**
**Polychlorinated Biphenyls (PCBs)**

**Calibration ID:** CAL842
**Instrument ID:** GC09.i

**Column:** Rtx-5

| Level ID | File ID | Level ID | File ID |
|---|---|---|---|
| A | \\kelso3\trgtdata\GC09.I\060101_f.b\0601F003.D | H | \\kelso3\trgtdata\GC09.I\060101_f.b\0601F010.D |
| B | \\kelso3\trgtdata\GC09.I\060101_f.b\0601F004.D | I | \\kelso3\trgtdata\GC09.I\060101_f.b\0601F011.D |
| C | \\kelso3\trgtdata\GC09.I\060101_f.b\0601F005.D | J | \\kelso3\trgtdata\GC09.I\060101_f.b\0601F012.D |
| D | \\kelso3\trgtdata\GC09.I\060101_f.b\0601F006.D | K | \\kelso3\trgtdata\GC09.I\060101_f.b\0601F013.D |
| E | \\kelso3\trgtdata\GC09.I\060101_f.b\0601F007.D | L | \\kelso3\trgtdata\GC09.I\060101_f.b\0601F014.D |
| F | \\kelso3\trgtdata\GC09.I\060101_f.b\0601F008.D | M | \\kelso3\trgtdata\GC09.I\060101_f.b\0601F015.D |
| G | \\kelso3\trgtdata\GC09.I\060101_f.b\0601F009.D | | |

| Analyte Name | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF | Level ID | Amt | RF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Decachlorobiphenyl | | | | | | | | | | | | | | | |
| | | | | | | | H | 2.5 | 1150 | I | 5.0 | 1150 | J | 50 | 976 |
| | K | 100 | 936 | L | 200 | 870 | M | 500 | 785 | | | | | | |
| Aroclor 1016 {1} | | | | | | | | | | | | | | | |
| | | | | | | | H | 25 | 84.0 | I | 50 | 85.0 | J | 500 | 72.5 |
| | K | 1000 | 67.5 | L | 2000 | 61.9 | M | 5000 | 53.5 | | | | | | |
| Aroclor 1016 {2} | | | | | | | | | | | | | | | |
| | | | | | | | H | 25 | 40.9 | I | 50 | 39.6 | J | 500 | 35.3 |
| | K | 1000 | 37.1 | L | 2000 | 34.6 | M | 5000 | 31.4 | | | | | | |
| Aroclor 1016 {3} | | | | | | | | | | | | | | | |
| | | | | | | | H | 25 | 122 | I | 50 | 128 | J | 500 | 115 |
| | K | 1000 | 114 | L | 2000 | 107 | M | 5000 | 95.3 | | | | | | |
| Aroclor 1016 {4} | | | | | | | | | | | | | | | |
| | | | | | | | H | 25 | 50.7 | I | 50 | 55.3 | J | 500 | 48.8 |
| | K | 1000 | 47.9 | L | 2000 | 44.5 | M | 5000 | 39.6 | | | | | | |
| Aroclor 1016 {5} | | | | | | | | | | | | | | | |
| | | | | | | | H | 25 | 21.2 | I | 50 | 25.3 | J | 500 | 27.2 |
| | K | 1000 | 27.7 | L | 2000 | 26.6 | M | 5000 | 25.2 | | | | | | |
| Aroclor 1221 {1} | A | 1000 | 15.0 | | | | | | | | | | | | |
| Aroclor 1221 {2} | A | 1000 | 15.2 | | | | | | | | | | | | |

**Results flagged with an asterisk (*) indicate values outside control criteria.**



07/19/01 THU 13:21 FAX CAS KELSO 026
CARG002302

## DISTRIBUTION

**Results of Sediment Sampling and Analysis**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

August 3, 2001

Copy No. 6

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| Copy 6: | Mr. Christopher Putnam<br>Cargill, Incorporated<br>P.O. Box 5624<br>Minneapolis, Minnesota 55440-5624 |
| Copy 7: | Mr. Gene Loffler<br>Cargill, Incorporated<br>800 River Street<br>Portland, Oregon 97227-1715 |
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| Copy 12: | Corporate Records |

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Portland (Irving) elev. - dredge material (B)

Harding ESE
A MACTEC COMPANY

Harding ESE, Inc.
90 Digital Drive
Novato, CA 94949

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October 1, 2001

52852.005

Ms. Jennifer Sutter
Oregon Department of Environmental Quality
Northwest Region Office
2020 SW 4th Avenue, 4th Floor
Portland, Oregon 97201-4953

**SUBJECT: Results of Bioassay Analyses – Cargill Irving Elevator Terminal USACE Permit 95-1063 and DSL Permit RP 3158**

Dear Ms. Sutter:

Enclosed are the bioassay results for the composite, T1, and T4 samples from the Cargill Irving Elevator Terminal (Cargill) Portland, Oregon facility, as requested by Oregon Department of Environmental Quality (DEQ). These analyses were performed in response to DEQ comment (August 23, 2001 meeting) to assess the potential aquatic toxicity of the sediments proposed for disposal at the Ross Island facility from Cargill. The chemical analysis results presented in the August 3, 2001 results report submitted to the Dredge Material Management Team (*Harding ESE, 2001*) indicate that none of the sample chemistry values were above the Dredge Material Evaluation Framework (DMEF) Screening Values or Bioaccumulation Triggers. However, some additional criteria used by DEQ (Consensus-based and NOAA SQuiRT values) indicate that PAHs and PCBs in the sediments may be at levels of potential environmental concern. As a result, DEQ requested that Cargill perform these bioassay analyses.

The three tested samples were retained from the initial sampling event (June 23, 2001) and continuously stored at 4 °C. On August 20, 2001 the samples (designated Composite, T1, and T4) were removed from cold storage, placed in a cooler, and shipped (on ice) under chain-of-custody to Pacific EcoRisk (PER) in Martinez, California for analysis. The bioassay results were generated following the testing approach outlined in the DMEF (*USACE, 1998*). The specific tests conducted were the solid phase amphipod (*Hyalella azteca*) survival test and the solid phase midge (*Chironomus tentans*) survival and growth test. The bioassay survival results are reported in percent and the growth results are reported in milligrams. At the request of the DEQ, a determination of the grain size of the Home Control sediment was also completed to assist in this evaluation as a comparison to the test samples. A sample of the Home Control was placed in a cooler and shipped (on ice) under chain-of-custody to Columbia Analytical Services (CAS) in Kelso, Washington for analysis. The grain size results were generated following ASTM Test Method D422 (with hydrometer) and are reported in percent, on a wet weight basis. Appropriate Quality Assurance/Quality Control (QA/QC) measures were followed to ensure the generation of accurate bioassay and grain size data.

## Results

The bioassay and grain size results for each of the samples are presented in Table 1. The original laboratory reports for the testing are included in Appendix A.

- Grain Size: The grain size of the Home Control sediment was primarily sand (98.4 percent) and was elevated in sand content as compared to the Cargill sediments (58.2 to 86.9 percent).

- *Hyallela azteca* Survival Test: *Hyallela* survival was 97.5 (Home Control), 96.2 (Composite), 97.5 (T1), and 93.8 (T4) percent. None of the survival results were statistically reduced ($p < 0.05$) from the Home Control.

- *Chironomus tentans* Survival and Growth Test: *Chironomus* survival was 92.9 (Home Control), 76.2 (Composite), 70.0 (T1), and 96.2 (T4) percent. Both the composite and T1 sample had survival results that were statistically reduced ($p < 0.05$) from the Home Control. *Chironomus* growth was 0.41 (Home Control), 0.46 (Composite), 0.47 (T1), and 0.37 (T4) milligrams. None of the growth results that were statistically reduced ($p < 0.05$) from the Home Control.

It should be noted that the comparisons of the test sediments to the Home Control is a worst case scenario and have only been done due to a lack of an appropriate local reference sediment for the Ross Island area.

## Results of QA/QC Review

An independent data review was performed on the sediment sample laboratory reports submitted by PER and CAS. The data was evaluated to determine that the tests met the required QA/QC criteria for each analysis. Any parameters that were determined to be outside of acceptance criteria were further evaluated to assess the impact, if any, to the data presented.

- Grain Size Analysis: All parameters were within acceptance limits.

- Bioassay Analysis: The concurrent ammonia reference toxicant tests indicate that the ammonia levels found in the test sediments were well below the threshold for detrimental effects to the test organisms. The concurrent positive reference toxicant tests were within the laboratory historical database, indicating that the organisms were responding to toxic stress in a typical fashion. The Home Control survival met the absolute mean mortality standards for both species. The growth performance did not achieve the 0.6 milligram minimum mean weight per organism in the Home Control (0.41 milligrams). Since the growth of the Home Control is similar to the growth of the test sediments, this is not considered significant.

The overall assessment indicates that the data presented meet the project requirements and are considered useable for the intended purpose.

## *Conclusions*

The Bioassay Interpretive Criteria (Section 9.2.4 of the DMEF; *USACE, 1998*) indicate that there are two levels of response in interpreting the observed bioassay results. First, a one-hit failure would occur when one of the test sediment responses is statistically reduced from both the Home Control and reference sediment. Second, a two-hit failure would occur when any two tests are statistically reduced from the reference sediment. In addition, the term statistically reduced is defined as those test sediment responses that are both greater than 20 percent different from the Home Control response and statistically different from the reference sediment. Neither of these conditions can be adequately assessed due to the lack of an appropriate local reference sediment for the Ross Island area, but they can be used as a basis to establish relative environmental concern.

Only the T4 *Chironomus* survival test results had a 20 percent or more reduction (22.9 percent) in response as compared to the Home Control. This test response was also statistically different from the Home Control. However, since the response in a reference sediment is likely to be lower (conservative assessment) than that of the Home control and the reduction was just above 20 percent level, the T4 *Chironomus* survival test result is unlikely to be statistically reduced as defined by the DMEF.

In addition, based on the strong survival for the *Hyalella* tests and the relatively high *Chironomus* growth values in the Cargill samples, the sediments from the Cargill facility appear to be suitable for disposal as the Ross Island disposal site, contingent upon the favorable results from a subsequent bioaccumulation test of a composite sample to be taken from the area, if deemed necessary.

We appreciate your expedience in reviewing these results. Please call either Josh (415-884-3160) or Bridgette (415-884-3130) if you have any questions or comments. Thank you for your assistance.

Very Truly Yours,

**HARDING ESE**

Josh Gravenmier
Project Environmental Scientist

Bridgette DeShields
Associate Environmental Scientist

JG/ra/Cargill/Bioassay Results

Enclosure

Harding ESE
A MACTEC Company

cc: Judy Linton, USACE – Portland District
Gene Loffler, Cargill Irving Elevator Terminal
Dennis Klein, Cargill Corporate
Chris Putnam, Cargill Corporate
Kirk Sweetland, Harding ESE

**REFERENCES**

Harding ESE, 2001. *Results of Sediment Sampling and Analysis, Cargill Irving Elevator Terminal, Portland, Oregon*. August 3, 2001.

U.S. Army Corps of Engineers (USACE), 1998. *Dredged Material Evaluation Framework: Lower Columbia River Management Area*. November.

# TABLES

**Table 1. Summary of Bioassay Testing Results**
**Sediment Investigation**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| Analyte | | Sample Location | | | |
|---|---|---|---|---|---|
| | | Home Control | Composite | T1 | T4 |
| **Grain Size (%)** [a] | | | | | |
| Gravel | | 0.0 | 2.8 | 0.4 | 18.0 |
| Sand | | 98.4 | 75.5 | 86.9 | 58.2 |
| Silt | | 0.2 | 21.7 | 12.7 | 22.8 |
| Clay | | 0.2 | 0.0 | 0.0 | 1.0 |
| **Solid Phase Bioassays** | | | | | |
| *Ampelisca* - | | | | | |
| | Survival (%) | 97.5 | 96.2 | 97.5 | 93.8 |
| *Chironomus* - | | | | | |
| | Survival (%) | 92.9 | 76.2 | **70.0** | 96.2 |
| | Growth (mg) | 0.41 | 0.46 | 0.47 | 0.37 |

% Percent.
mg Milligram.
[ ] Significantly less than the Home Control (at $p < 0.05$) and greater than 20% different from the Home Control response.

[a] The Composite, T1, and T4 grain size results are from the original dataset.



CARG002310

# APPENDIX A

# A Dredge Materials Toxicity Evaluation of Sediment Cores Collected from Cargill Irving Elevator Terminal (Samples June 29, 2001)

Performed For:

Harding ESE
90 Digital Drive
Novato, CA 94949

Prepared By:

Pacific EcoRisk
835 Arnold Dr., Suite 104
Martinez, CA 94553
(925)313-8080

**September, 2001**

PACIFIC ECORISK
ENVIRONMENTAL CONSULTING & TESTING

# A Dredge Materials Toxicity Evaluation of Sediment Cores Collected from Cargill Irving Elevator Terminal (Samples June 29, 2001)

Performed For:

Harding ESE
90 Digital Drive
Novato, CA 94949

Prepared By:

Pacific EcoRisk
835 Arnold Dr., Suite 104
Martinez, CA 94553
(925)313-8080

**September, 2001**

# A Dredge Materials Toxicity Evaluation of Sediment Cores Collected from Cargill Irving Elevator Terminal (Samples June 29, 2001)

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APPENDIX C Test Data Sheets and Summary of Statistics for the Ammonia Toxicity Evaluation of the Amphipod, *Hyalella azteca*.

APPENDIX D Test Data Sheets and Summary of Statistics for the Reference Toxicant Evaluation with the Amphipod, *Hyalella azteca*.

**A Dredge Materials Toxicity Evaluation of Sediment Cores Collected from Cargill Irving Elevator Terminal**
(Samples June 29, 2001)

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| APPENDIX F | Test Data Sheets and Summary of Statistics for the Ammonia Toxicity Evaluation of the Midge, *Chironomus tentans..* |
| APPENDIX G | Test Data Sheets and Summary of Statistics for the Reference Toxicant Evaluation with the Midge, *Chironomus tentans.* |

# A Dredge Materials Toxicity Evaluation of Sediment Cores Collected from Cargill Irving Elevator Terminal

(Samples June 29, 2001)

## 1.0 INTRODUCTION

Under contract to Harding ESE (HESE), Pacific EcoRisk (PER) performed whole sediment toxicity testing for sediment samples collected from the Cargill Irving Terminal area. These sediment toxicity evaluations consisted of performing whole sediment 10-day freshwater amphipod survival tests with *Hyalella azteca*, and whole sediment 10-day estuarine midge survival and growth tests with *Chironomus tentans*. In order to assess the potential role of sediment porewater ammonia in any observed mortalities, an ammonia toxicity test was performed for each of these test species. Finally, to document that the test organisms used in these evaluations were responding to toxicant stress in a typical fashion, concurrent reference toxicant tests were performed. This report describes the performance and results of each of these toxicity tests.

## 2.0 TEST PROCEDURES

The methods used in conducting these tests followed the guidelines established by the U.S. EPA: The amphipod survival test with *Hyalella azteca* and the *Chironomus tentans* survival and growth test were performed following the guidelines established in the EPA manual "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Freshwater Invertebrates" (EPA/600/R-99/064).

### 2.1 RECEIPT AND HANDLING OF THE SEDIMENT SAMPLES

On June 29, 2001, HESE staff collected sediment samples from sampling stations within the Cargill Irving Elevator Terminal, which were designated site I.Ds. "T1", "T4" and "Composite". These sediment samples were delivered, under chain of custody, to the PER testing lab on August 20, 2001. Upon receipt, each sample was inspected and logged in, and then placed in a sample refrigerator at 4°C. Copies of the chain of custody records are attached as Appendix A.



CARG002316

On August 21, 2001, each sediment was homogenized and aliquot of each was centrifuged at 2500 g for 15 minutes for collection of sediment porewater and determination of the initial porewater chemistries (Table 1).

Table 1. Sediment porewater initial water quality characteristics.

| Sample ID | pH | Total Ammonia (mg/L N) | Total Sulfide (mg/L) |
|---|---|---|---|
| T-1 | 6.23 | 9.44 | 0.13 |
| T-4 | 6.54 | 4.24 | 0.07 |
| Composite | 6.53 | 4.64 | 0.12 |

## 2.2 TEST ORGANISMS

The *Hyalella azteca* used in these tests were obtained from a commercial supplier (Aquatic Biosystems, Ft. Collins, CO). The *Chironomus tentans* used in these tests were also obtained from a commercial supplier (Enviromental Consulting and Testing Superior, WI).

## 2.3 SEDIMENT TOXICITY TESTING PROCEDURES

### 2.3.1 Hyalella azteca Whole Sediment Toxicity Testing Procedures

The EPA freshwater sediment test is a 10-day solid-phase exposure with % survival of the *Hyalella* as the endpoint. Immediately prior to the set-up of the 10-day solid phase sediment tests with *Hyalella* the sediment samples for each site were removed from the sample refrigerator, allowed to come to room temperature, and were then homogenized. Large debris (root, twigs, etc.) were removed from each sample at this time. The test replicate containers consisted of 275 mL polycarbonate jars, 6.3 cm i.d. x 10.3 cm deep, with a 3 cm ribbon of 220 um mesh NITEX attached to the top of the jars with silicone sealant. There were eight replicate containers for each site. Each of the sediment samples was re-homogenized immediately prior to introduction of the sediments into the test replicates. Approximately 100 mL of sediment was loaded into each of the test replicate containers. The Control treatment sediment consisted of the same reference soil which is used as the routine control sediment by the National Biological Survey (Columbia, MO) in their freshwater sediment toxicity tests. Each of the test replicates was then carefully filled with clean overlying water (synthetic Moderately Hard water, modified for use with *Hyalella* as per the EPA test guidelines). The replicates with sediments and clean overlying water were established 24 hrs prior to the introduction of the amphipods.

After this initial 24 hrs period, a small aliquot of the overlying water in each of the eight treatment replicates was collected and composited for measurement of "pre-test" water quality

characteristics. The overlying water in each replicate was then flushed with one volume of fresh control water (approximately 150 mL) using a modified Zumwalt delivery system (Zumwalt et al. 1994). A small aliquot of the renewed overlying water in each of the eight replicates per treatment was then collected and composited for measurement of "initial" water quality characteristics. Then 10 organisms were randomly allocated into each replicate, followed by the addition of 1.5 mL of YCT food. The test replicates were then returned to the water baths. Each day, for the following nine days, the test replicates were pulled from the water bath, and each replicate was examined for the presence of any dead amphipods. A small aliquot of the overlying water in each of the eight replicates was then collected and composited as before for measurement of D.O., after which each replicate was flushed with one volume of fresh water and the animals fed 1.5 mL of YCT.

On Day 10, the replicate containers were pulled from the water bath, and an aliquot of overlying water was collected from each replicate and composited for analysis of the "final" water quality characteristics. The sediments in each replicate container were then carefully washed out and sieved using a #40 (425 um mesh) stainless steel sieve, and the number of surviving amphipods determined. All statistical analyses were made using the ToxCalc® statistical package (Version 5, TidePool Scientific, McKinleyville, CA).

**2.3.1.1 Ammonia Toxicity Testing with *Hyalella azteca*** - In order to assess the potential effects of elevated ammonia on *Hyalella* used in these tests, an ammonia toxicity evaluation was performed. This consisted of an acute 96 hour static toxicity test with ammonia (as $NH_4Cl$), at nominal concentrations of 5, 10, 20, 40, 80, and 160 mg/L (statistical analysis were performed on the measured ammonia concentrations (5.21, 9.01, 19.7, 38.2, 80.4 and 152 mg/L)).

There were 10 replicates at each treatment level, each replicate consisting of 15 mL of test media in a 30 mL HDPE cup and a small 4 cm x4 cm piece of nitex screen (used as a substrate for amphipods to attach to). The test was initiated by randomly allocating one amphipod into each of the replicate cups. The cups were placed in a temperature-controlled water bath at 23°C under under cool-white fluorescent lighting on a 16L:8D photoperiod. Each replicate cup was examined daily, and the number of live amphipods in each was recorded at this time. Routine water quality characteristics (D.O., pH and temperature) of the treatment waters were measured and recorded for one randomly selected replicate per treatment at test initiation and test termination. After 96 hrs, the number of live amphipods in each replicate cup was determined. The data for each test treatment were analyzed and compared to the Control treatment to determine whether or not any statistically significant differences were observed (statistical analyses were performed using the ToxCalc statistical package).

**2.3.1.2 Reference Toxicant Test Procedures with *Hyalella azteca*** - In order to validate that the *Hyalella* used in these tests were responding in a typical fashion to chemical stress, a reference toxicant test was run. The reference toxicant test consists of an acute 96 hour survival static toxicity test with potassium chloride(KCl), at concentrations of 0.1, 0.2, 0.3, 0.4, and 0.5 mg/L. The test response data were then compared to the ongoing database of response data from previous reference toxicant tests performed in this lab.

There were 10 replicates at each treatment level, each replicate consisting of 15 mL of test media in a 30 mL HDPE cup and a small 4cmx4cm piece of nitex screen (used as a substrate for amphipods to attach to). The test was initiated by randomly allocating one amphipod into each of the replicate cups. The cups were placed in a temperature-controlled water bath at 23°C under under cool-white fluorescent lighting on a 16L:8D photoperiod. Each replicate cup was examined daily, and the number of live amphipods in each was recorded at this time. Routine water quality characteristics (D.O., pH and temperature) of the treatment waters were measured and recorded for one randomly selected replicate per treatment at test initiaitin and test termination. After 96 hrs, the number of live amphipods in each replicate cup was determined.

**2.3.2 *Chironomus tentans* Whole Sediment Toxicity Testing Procedures**

Immediately prior to the set-up of the 10-day solid phase sediment tests with *Chironomus*, the sediment samples for each site were removed from the sample refrigerator, allowed to come to room temperature, and were then homogenized. Large debris (root, twigs, etc) were removed from each sample at this time. The Control treatment sediment consisted of the same control sediment as was used in the *Hyalella* test. Approximately 100 mL of the homogenized sediment from each site were randomly allocated into each of eight labeled replicate containers, each consisting of a 275 mL polycarbonate jar, 6.3 cm i.d. x 10.3 cm deep, with a 3 cm ribbon of 500 µm mesh NITEX attached to the top of the jar with silicone sealant. Each replicate container was carefully filled with clean overlying water (synthetic US EPA Moderately Hard water). The replicates with sediments and clean overlying water were then placed into a temperature-controlled water bath at 23°C under cool-white fluorescent lighting on a 16L:8D photoperiod.

Approximately 24 hrs later, a small aliquot of the overlying water in each of the eight treatment replicates was collected and composited for measurement of "pre-test" water quality characteristics. The overlying water in each replicate was then flushed with four volumes of fresh control water using a modified Zumwalt delivery system , as described in the test guidelines. A small aliquot of the renewed overlying water in each of the eight replicates per treatment was then collected and composited for measurement of "initial" water quality characteristics. Then 10 third instar *Chironomus* larvae were randomly allocated into each replicate. The test replicates were then returned to the water baths. Each day, for the following



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nine days, the test replicates were pulled from the water bath, and each replicate was examined for the presence of any dead larvae. A small aliquot of the overlying water in each of the eight replicates was then collected and composited as before for measurement of D.O., after which each replicate was flushed with four volumes of fresh water and the animals fed 1.5 mL of a fish flake food slurry (prepared with TetraMin® fish flake food, as per test guidelines).

On Day 10, the replicate containers were pulled from the water bath, and an aliquot of overlying water was collected from each replicate and composited for analysis of the "final" water quality characteristics. The sediments in each replicate container were then carefully washed out and examined; the surviving larval *Chironomus* from each replicate were collected via pipette and transferred to a small plastic weigh-boat containing 25-40 mL of clean water. After the contents of each replicate was carefully examined, the number of surviving chironomids was recorded, and the larvae were quickly rinsed in de-ionized water and transferred to pre-dried and pre-weighed aluminum drying pans. These pans were placed into a drying oven at 100°C for 24 hrs. After drying, the pans were transferred into desiccators to cool off, after which each pan was re-weighed to the nearest 0.1 mg; the resulting weight of dried larvae in each pan was then divided by the number of organisms in order to determine the mean dry weight per organism. Following determination of mean dry weight, ash free dry weight (AFDW) was then determined by placing the dried larvae into a muffle furnace at 550°C for 2 hours. After drying, the pans were transferred into desiccators to cool off, after which each pan was re-weighed to the nearest 0.1 mg; the resulting weight of the additionally dried larvae in each pan was subtracted from mean dry weight the then divided by the number of organisms in order to determine the mean AFDW per organism.

The resulting survival and weight data for each of the site sediment treatments were analyzed and compared to the Control treatment to determine whether or not any statistically significant reductions were observed. All statistical analyses were made using the ToxCalc® statistical package.

**2.3.2.1 Ammonia Toxicity Testing with *Chironomus tentans*-** In order to assess the potential effects of elevated ammonia on chironomids used in these tests, an ammonia toxicity evaluation was performed. This consisted of an acute 96 hour static toxicity test with ammonia (as $NH_4Cl$), at nominal concentrations of 5, 10, 20, 40, 80, and 160 mg/L (statistical analysis were performed on the measured ammonia concentrations (6.05,12.4, 20.9, 42.3, 80.0 and 154 mg/L)).

There were two replicates at each treatment level, each replicate consisting of 400 mL of test media in a 600 mL glass beaker. The test was initiated by randomly allocating ten chironomids into each of the replicate beakers. The beakers were placed in a temperature-controlled water



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bath at 23°C under continual darkness. Each replicate container was examined daily, and the number of live chironomids in each was recorded at this time. Routine water quality characteristics (D.O., pH and temperature) of the treatment waters were measured and recorded for one randomly selected replicate per treatment each day. After 96 hrs, the number of live chironomids in each replicate beaker was determined.

**2.3.2.2 Reference Toxicant Test Procedures with *Chironomus tentans*-** In order to validate that the *Chironomus* used in these tests were responding in a typical fashion to chemical stress, a reference toxicant test was run. The reference toxicant test consists of an acute 96 hour survival static toxicity test with copper (as $CuSO_4$), at concentrations of 0.1, 0.2, 0.4, 0.8, 1.6, and 3.2 mg/L. The test response data were then compared to the ongoing database of response data from previous reference toxicant tests performed in this lab.

There were two replicates at each treatment level, each replicate consisting of 400 mL of test media in a 600 mL glass beaker. The test was initiated by randomly allocating ten chironomids into each of the replicate beakers. The beakers were placed in a temperature-controlled water bath at 23°C under continual darkness. Each replicate container was examined daily, and the number of live chironomids in each was recorded at this time. Routine water quality characteristics (D.O., pH and temperature) of the treatment waters were measured and recorded for one randomly selected replicate per treatment each day. After 96 hrs, the number of live organisms in each replicate beaker was determined.



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# 3.0 RESULTS

## 3.1 SEDIMENT TOXICITY TO THE AMPHIPOD *HYALELLA AZTECA*.

The survival results of this test are summarized below in Table 2. Briefly, there was 97.5% survival of the amphipods at the Control treatment. There was not less than 93.8% survival of the *Hyalella* in any of the site sediments, none of which were significantly less than the Control.

The test data sheets and summary of statistical analyses for this test are presented in Appendix B.

**Table 2. Toxicity of Cargill Sediments to *Hyalella azteca* survival and growth.**

| | Rep A | Rep B | Rep C | Rep D | Rep E | Rep F | Rep G | Rep H | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Control | 100 | 90 | 100 | 90 | 100 | 100 | 100 | 100 | 97.5 |
| T1 | 90 | 100 | 100 | 100 | 100 | 100 | 90 | 100 | 97.5 |
| T4 | 100 | 100 | 90 | 100 | 90 | 90 | 90 | 90 | 93.8 |
| Composite | 100 | 100 | 90 | 100 | 100 | 90 | 90 | 100 | 96.2 |

### 3.1.1 Acute Toxicity of Ammonia to *Hyalella azteca*

The results of the ammonia toxicity evaluation are presented in Table 3. There was a mean amphipod survival of 100% at the Control treatment, and 100% survival up through the 38.2 mg/L treatment. Amphipod survival was reduced to 50% at the 80.4 mg/L treatment which was significantly less than the Control. Statistical analysis of the survival data indicated that NOEC was 38.2 mg/L and the LOEC was 80.4 mg/L. The EC50 was 91.9 mg/L.

The test data sheets and the summary of statistical analyses for this test are presented in Appendix C.

### 3.1.2 Results of the Reference Toxicant Evaluation of *Hyalella*

The results of the Ref Tox evaluation of the *Hyalella azteca* used in these tests are presented in Table 4. There was a mean amphipod survival of 100% at the Control treatment and 100% survival up through the 0.3 mg/L treatment. Survival was reduced to 40% at the 0.4 mg/L test treatment, which was significantly less than the Control. There was complete mortality at the remaining test treatment. Statistical analysis of the survival data indicated that NOEC was 0.3 mg/L KCl and the LOEC was 0.4 mg/L KCl. The EC50 was 0.38 mg/L KCl.



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This EC50 value is consistent with previous performance of this test in our laboratory, indicating that these test organisms were responding to toxic stress in a typical fashion.

The test data sheet and the summary of statistical analysis for this test are presented in Appendix D

Table 3. Effects of ammonia on survival of *Hyalella azteca*

| Total $NH_3$ (mg/L-N) | | Overall Mean % Survival |
|---|---|---|
| Nominal $NH_3$ | Measured $NH_3$ | |
| Control | Control | 100 |
| 5.0 | 5.21 | 100 |
| 10.0 | 9.01 | 100 |
| 20.0 | 19.7 | 100 |
| 40.0 | 38.2 | 100 |
| **80.0** | **80.4** | **50*** |
| **160** | **152** | **20 *** |
| NOEC = | | 38.2 mg/L |
| LOEC = | | 80.4 mg/L |
| EC50 = | | 91.9 mg/L |

* Amphipod survival at this treatment level was significantly less than the Control at $p < 0.05$.

Table 4. Reference toxicant testing: Effects of KCl on survival of *Hyalella azteca*

| KCl Treatment (mg/L) | Overall Mean % Survival |
|---|---|
| Control | 100 |
| 0.1 | 100 |
| 0.2 | 100 |
| 0.3 | 100 |
| **0.4*** | **40 *** |
| **0.5*** | **0 *** |
| NOEC = | 0.3 mg/L |
| LOEC = | 0.4 mg/L |
| EC50 = | 0.38 mg/L |

* - Amphipod survival at this treatment level was significantly less than the Control at $p < 0.05$.

### 3.2 SEDIMENT TOXICITY TO *Chironomus tentans*

The survival results of these tests are summarized in Table 5. Briefly, there was a mean of 92.9% survival at the Control treatment, which is within the test acceptability criterion of ≥70% survival. *Chironomus* survival was reduced to 70% in the T1 site sediment, and 76.2%in the

composite site sediment, both of which were significantly less than the Control sediment. There were no significant reduction in *Chironomus* survival associated with the site T4 sediment.

The growth results of these tests are summarized in Table 6. Briefly, there was a mean dry weight of 0.41 mg per organism at the Control treatment. Statistical analysis of the test data indicated that there were no significant reductions in *Chironomus* weight associated with any of the site sediment.

The test data sheets and the summary of statistical analyses for these tests are presented in Appendix E.

Table 5. Toxicity of Site Sediments to *Chironomus tentans* survival (% Survival)

| Site | Rep A | Rep B | Rep C | Rep D | Rep E | Rep F | Rep G | Rep H | Mean |
|---|---|---|---|---|---|---|---|---|---|
| Control | 90 | 100 | 80 | -[A] | 100 | 100 | 100 | 80 | 92.9 |
| T1 | 70 | 80 | 60 | 90 | 50 | 90 | 100 | 20 | 70.0* |
| T4 | 100 | 100 | 100 | 80 | 100 | 100 | 100 | 90 | 96.2 |
| Composite | 60 | 90 | 70 | 70 | 80 | 90 | 80 | 70 | 76.2* |

* Significantly less than the Control at $p < 0.05$.

[A] Replicate spilled – no data was obtained

Table 6. Toxicity of Site Sediments to *Chironomus tentans* growth (mg)

| Site | Rep A | Rep B | Rep C | Rep D | Rep E | Rep F | Rep G | Rep H | Mean Weight |
|---|---|---|---|---|---|---|---|---|---|
| Control | 0.53 | 0.47 | 0.42 | -[A] | 0.32 | 0.38 | 0.33 | 0.43 | 0.41 |
| T1 | 0.49 | 0.34 | 0.60 | 0.32 | 0.53 | 0.40 | 0.35 | 0.71 | 0.47 |
| T4 | 0.32 | 0.38 | 0.37 | 0.42 | 0.34 | 0.38 | 0.35 | 0.41 | 0.37 |
| Composite | 0.56 | 0.39 | 0.57 | 0.40 | 0.45 | 0.41 | 0.37 | 0.51 | 0.46 |

[A] Replicate spilled – no data was obtained

### 3.2.1 Acute Toxicity of Ammonia to *Chironomus tentans*

The results of the ammonia toxicity evaluation are presented in Table 7. There was a mean chironomid survival of 85% at the Control treatment and not less than 65% up through the 42.3 mg/L treatment. Chironomid survival was reduced to 55% and 10% at the 80 and 154 mg/L treatments, respectively, which were significantly less than the Control. Statistical analysis of the survival data indicated that NOEC was 42.3 mg/L and the LOEC was 80 mg/L. The EC50 was 85.3 mg/L. The test data sheets and the summary of statistical analyses for this test are presented in Appendix F.



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| Table 7. Effects of ammonia on survival of *Chironomus tentans* | | | | |
|---|---|---|---|---|
| Total $NH_3$ (mg/L-N) | | % Survival in Test Replicates | | Overall Mean |
| Nominal $NH_3$ | Measured $NH_3$ | Rep A | Rep B | % Survival |
| Control | Control | 70 | 100 | 85 |
| 5.0 | 6.05 | 90 | 90 | 90 |
| 10.0 | 12.4 | 80 | 100 | 90 |
| 20.0 | 20.9 | 100 | 80 | 90 |
| 40.0 | 42.3 | 70 | 60 | 65 |
| **80.0** | **80** | **60** | **50** | **55 *** |
| **160** | **154** | **0** | **20** | **10*** |
| NOEC = | | 42.3 mg/L | | |
| LOEC = | | 80 mg/L | | |
| EC50 = | | 85.3 mg/L | | |

* Midge survival at this treatment level was significantly less than the Control at $p < 0.05$.

### 3.2.2 Results of the Reference Toxicant Evaluation of *Chironomus tentans*

The results of the Ref Tox evaluation of the *Chironomus* used in these tests are presented in Table 8. There was a mean chironomid survival of 95% at the Control treatment and 90% at the 0.1 mg/L Cu treatment. At the 0.2 mg/L Cu treatment, survival decreased to 50% which was significantly less than the Control. Statistical analysis of the survival data indicated that NOEC was 0.1 mg/L Cu and the LOEC was 0.2 mg/L Cu. The EC50 was 0.29 mg/L Cu.

This EC50 value is consistent with previous performance of this test in our laboratory, indicating that these test organisms were responding to toxic stress in a typical fashion. The test data sheets and the summary of statistical analyses for this test are presented in Appendix G.

| Table 8. Reference toxicant testing: Effects of cadmium on survival of *Chironomus tentans* | | | |
|---|---|---|---|
| Copper Treatment (mg/L) | % Survival in Test Replicates | | **Overall Mean** |
| | Rep A | Rep B | **% Survival** |
| Control | 90 | 100 | 95 |
| 0.1 | 90 | 90 | 90 |
| **0.2*** | **80** | **20** | **50*** |
| **0.4*** | **50** | **30** | **40*** |
| **0.8*** | **20** | **0** | **10*** |
| **1.6*** | **0** | **20** | **10*** |
| **3.2*** | **0** | **0** | **0 *** |
| NOEC = | 0.1 mg/L Cu | | |
| LOEC = | 0.2 mg/L Cu | | |
| EC50 = | 0.29 mg/L Cu | | |

* Midge survival at this treatment level was significantly less than the Control at $p < 0.05$.



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# 4.0 SUMMARY AND CONCLUSIONS

Results for the whole sediment toxicity evaluations of the Cargill sediment cores indicated that there was no statistically significant toxicity to *Hyalella azteca* survival for all of the sites tested. However, for the midge sediment tests, both sites T1 and Composite were significantly less than the Control with respect to survival, indicating that these sediment samples are considered slightly toxic to *Chironomus*.

## 4.1 QA/QC SUMMARY

**Test Conditions** - Test conditions (pH, D.O., temperature, etc.) were within acceptable limits for these test organisms. All such analyses were performed according the laboratory Standard Operating Procedures.

**Negative Control** - The biological responses for each of the various test organisms at the Control treatment were within acceptable limits.

**Positive Control** - The results for the concurrent reference toxicant tests were consistent with the reference toxicant test databases, indicating that these test organisms were responding to toxic stress in a typical fashion. A summary of key reference toxicant database values are presented in Tables 9 and 10 for *Hyalella azteca*, and *Chironomus tentans*, respectively.

Table 9. Summary of Reference Toxicant Database for *Hyalella azteca*

| Mean | Standard Deviation | Upper Limit (+2SD) | Lower Limit (-2SD) | Current Result |
|---|---|---|---|---|
| 0.38 mg/L | 0.05 mg/L | 0.42 mg/L | 0.22 | 0.38 mg/L |

Table 10. Summary of Reference Toxicant Database for *Chironomus tentans*

| Mean | Standard Deviation | Upper Limit (+2SD) | Lower Limit (-2SD) | Current Result |
|---|---|---|---|---|
| 0.72 mg/L | 0.36 mg/L | 1.44 mg/L | 0 | 0.29 mg/L |



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# APPENDIX A

## Chain of Custody Record

Harding Lawson Associates
90 Digital Drive
Novato, CA 94949
(415) 883-0112

# CHAIN OF CUSTODY FORM

Seq. No.: № 1067 Collection COC#1080

Lab: PERL

Samplers: Josh Gravenmier

Job Number: 52852.004

Name/Location: Cargill Irving Elevator Terminal

Project Manager: Josh Gravenmier

Recorder: (Signature Required)

| MATRIX | | | | #CONTAINERS & PRESERV. | | | | | | SAMPLE NUMBER | | DATE | | | | STATION DESCRIPTION | | ANALYSIS REQUESTED | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Water | Soil | Air | | Unpres | $H_2SO_4$ | $HNO_3$ | HCL | | | YR | SEQ | YR | MO | DAY | TIME | | DEPTH | Gasoline Range Organics 8015B | Diesel Range Organics 8015B | BTEX plus MTBE | CCR Title 22 Metals (17) | EPA 8021B | EPA 8260B | EPA 8270C | Hyallela survival | | | Chironomus survival and growth | | | | | |
| X | | | | X | | | | | | 01 | COMPOSITE | 01 | 06 | 29 | 1435 | | | | | | | | | | X | | | X | | | | | |
| X | | | | X | | | | | | 01 | T1 | 01 | 06 | 29 | 0900 | | | | | | | | | | X | | | X | | | | | |
| X | | | | X | | | | | | 01 | T2 | 01 | 06 | 29 | 1020 | | | | | | | | | | X | | | X | | | | | |
| X | | | | X | | | | | | 01 | T3 | 01 | 06 | 29 | 1105 | | | | | | | | | | X | | | X | | | | | |
| X | | | | X | | | | | | 01 | T4 | 01 | 06 | 29 | 1143 | | | | | | | | | | X | | | X | | | | | |

## ADDITIONAL INFORMATION

| SAMPLE NUMBER YR | SEQ | TURNAROUND TIME/REMARKS |
|---|---|---|
| | | Home sediment needs grain size analysis |

## CHAIN OF CUSTODY RECORD

| Relinquished By: (signature) | (Print Name) | (Company) | Date/Time |
|---|---|---|---|
| | Josh Gravenmier | Harding ESE | 3/20/01 1650 |
| Received By: (signature) | (Print Name) | (Company) | Date/Time |
| | JOSH BRADLEY | PER | 8/20/01 1605 |
| Relinquished By: (signature) | (Print Name) | (Company) | Date/Time |
| Received By: (signature) | (Print Name) | (Company) | Date/Time |
| Relinquished By: (signature) | (Print Name) | (Company) | Date/Time |
| Received By: (signature) | (Print Name) | (Company) | Date/Time |
| Received By: (signature) | (Print Name) | (Company) | Date/Time |

Method of Shipment:

Laboratory Copy *White* | Project Office Copy *Yellow* | Field or Office Copy *Pink*

00291 1

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# APPENDIX B

## Test Data Sheets and Summary of Statistics for the Toxicity Evaluation of Cargill Sediments with the Amphipod, *Hyallela azteca*

## 10 Day Freshwater Sediment Test-Proportion Survived

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 24 Aug-01 00:00 | Test ID: | 6132 | Sample ID: | T1 |
| End Date: | 03 Sep-01 00:00 | Lab ID: | CAPER-Pacific EcoRisk | Sample Type: | FS-Freshwater Sediment |
| Sample Date: | | Protocol: | EPAFS 94-EPA Freshwater S | Test Species: | HA-Hyalella azteca |
| Comments: | | | | | |

| Conc-% | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Control | 1.0000 | 0.9000 | 1.0000 | 0.9000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| T1 | 0.9000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.9000 | 1.0000 |

| | | | Transform: Arcsin Square Root | | | | | Rank | 1-Tailed |
|---|---|---|---|---|---|---|---|---|---|
| Conc-% | Mean | N-Mean | Mean | Min | Max | CV% | N | Sum | Critical |
| Control | 0.9750 | 1.0000 | 1.3713 | 1.2490 | 1.4120 | 5.501 | 8 | | |
| T1 | 0.9750 | 1.0000 | 1.3713 | 1.2490 | 1.4120 | 5.501 | 8 | 68.00 | 51.00 |

| Auxiliary Tests | Statistic | Critical | Skew | Kurt |
|---|---|---|---|---|
| Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01) | 0.5466 | 0.844 | -1.2778 | -0.4396 |
| F-Test indicates equal variances (p = 1.00) | 1 | 8.8853 | | |

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates no significant differences

# 10 Day Freshwater Sediment Toxicity Test Data

Client: HESE Test ID#: 6132 Date (day 0): 8-24-01

Species: *Hyalella azteca* Organism Log#: 1049 Organism Age/Size: 11-13 days

| DAY | DATE | TEMP | CONTROL D.O. (OLD) | CONTROL D.O. (NEW) | T1 D.O. (OLD) | T1 D.O. (NEW) | SIGN-OFF |
|---|---|---|---|---|---|---|---|
| 1 | 8-25-01 | 23.1 | 6.2 | 7.2 | 6.1 | 7.2 | KL |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 2 | 8-26-01 | 22 on 24.9 | 6.8 | 7.8 | 5.4 | 7.1 | CR MM |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 3 | 8-27-01 | 23.0 | 7.0 | 7.6 | 6.1 | ~~7.1~~ 6.8 | CL |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 4 | 8-28-01 | 23.0 | 6.6 | 7.4 | 6.3 | 7.0 | CL MM |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 5 | 8-29-01 | 23.1 | 7.0 | 7.5 | 4.6 | 6.2 | KL |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 6 | 8-30-01 | 23.2 | 5.7 | 7.0 | 4.9 | 6.4 | MC KL |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 7 | 8-31-01 | 23.1 | 6.1 | 7.4 | 4.9 | 6.5 | KL MC |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 8 | 9-1-01 | 23.0 | 5.6 | 6.8 | 4.2 | 6.5 | CL |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 9 | 9-2-01 | 23.1 | 5.6 | 7.3 | 4.5 | 6.8 | PK MM |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 10 | 9-3-01 | 23.0 | # Alive Organisms/replicate | | # Alive Organisms/replicate | | CL |
| | | | A 10 B 9 C 10 D 9 | | A 9 B 10 C ~~9~~ 10 D 10 | | |
| | | | E 10 F 10 G 10 H 10 | | E 10 F 10 G 9 H 10 | | |

## 10 Day Freshwater Sediment Test-Proportion Survived

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 24 Aug-01 00:00 | Test ID: | 6134 | Sample ID: | T4 |
| End Date: | 03 Sep-01 00:00 | Lab ID: | CAPER-Pacific EcoRisk | Sample Type: | FS-Freshwater Sediment |
| Sample Date: | | Protocol: | EPAFS 94-EPA Freshwater S | Test Species: | HA-Hyalella azteca |
| Comments: | | | | | |

| Conc-% | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Control | 1.0000 | 0.9000 | 1.0000 | 0.9000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| T4 | 1.0000 | 1.0000 | 0.9000 | 1.0000 | 0.9000 | 0.9000 | 0.9000 | 0.9000 |

| | | | Transform: Arcsin Square Root | | | | | | 1-Tailed | |
|---|---|---|---|---|---|---|---|---|---|---|
| Conc-% | Mean | N-Mean | Mean | Min | Max | CV% | N | t-Stat | Critical | MSD |
| Control | 0.9750 | 1.0000 | 1.3713 | 1.2490 | 1.4120 | 5.501 | 8 | | | |
| T4 | 0.9375 | 0.9615 | 1.3102 | 1.2490 | 1.4120 | 6.438 | 8 | 1.528 | 1.761 | 0.0028 |

| Auxiliary Tests | Statistic | Critical | Skew | Kurt |
|---|---|---|---|---|
| Shapiro-Wilk's Test indicates normal distribution (p > 0.01) | 0.8676 | 0.844 | -0.2008 | -1.3217 |
| F-Test indicates equal variances (p = 0.78) | 1.25 | 8.8853 | | |

**Hypothesis Test (1-tail, 0.05)**

Homoscedastic t Test indicates no significant differences



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Reviewed by

# 10 Day Freshwater Sediment Toxicity Test Data

Client: **HESE** Test ID#: 6134 Date (day 0): 8-24-01

Species: *Hyalella azteca* Organism Log#: 1049 Organism Age/Size: 11-13 days

| DAY | DATE | TEMP | CONTROL D.O. (OLD) | CONTROL D.O. (NEW) | T4 D.O. (OLD) | T4 D.O. (NEW) | SIGN-OFF |
|---|---|---|---|---|---|---|---|
| 1 | 8-25-01 | 23.1 | 6.2 | 7.2 | 6.1 | 7.3 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | KL |
| 2 | 8-26-01 | 22 ~~24.9~~ | 6.8 | 7.8 | 5.8 | 7.3 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | AR MM |
| 3 | 8-27-01 | 23.0 | 7.0 | 7.6 | 6.7 | 7.5 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | DD AR |
| 4 | 8-28-01 | 23.0 | 6.6 | 7.4 | 7.3 | 6.0 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | AR MM |
| 5 | 8-29-01 | 23.1 | 7.0 | 7.5 | 5.2 | 6.0 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | KL |
| 6 | 8-30-01 | 23.2 | 6.7 | 7.0 | 5.3 | 6.4 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | KL MC |
| 7 | 8-31-01 | 23.1 | 6.1 | 7.4 | 5.3 | 6.8 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | KL MC |
| 8 | 9-1-01 | 23.0 | 5.6 | 6.8 | 4.5 | 6.4 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | GA |
| 9 | 9-2-01 | 23.1 | ~~6.6~~ | ~~6.5~~ 7.3 | ~~4~~ 5.5 | 7.0 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | GA MM |
| 10 | 9-3-01 | 23.0 | # Alive Organisms/replicate | | # Alive Organisms/replicate | | |
| | | | A 10 B 9 C 10 D 9 | | A 10 B 10 C 9 D 10 | | DD |
| | | | E 10 F 10 G 10 H 10 | | E 9 F 9 G 9 H 9 | | |

## 10 Day Freshwater Sediment Test-Proportion Survived

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 24 Aug-01 00:00 | Test ID: | 6130 | Sample ID: | Composite |
| End Date: | 03 Sep-01 00:00 | Lab ID: | CAPER-Pacific EcoRisk | Sample Type: | FS-Freshwater Sediment |
| Sample Date: | | Protocol: | EPAFS 94-EPA Freshwater S | Test Species: | HA-Hyalella azteca |
| Comments: | | | | | |

| Conc-% | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Control | 1.0000 | 0.9000 | 1.0000 | 0.9000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| Composite | 1.0000 | 1.0000 | 0.9000 | 1.0000 | 1.0000 | 0.9000 | 0.9000 | 1.0000 |

| | | | Transform: Arcsin Square Root | | | | | Rank | 1-Tailed |
|---|---|---|---|---|---|---|---|---|---|
| Conc-% | Mean | N-Mean | Mean | Min | Max | CV% | N | Sum | Critical |
| Control | 0.9750 | 1.0000 | 1.3713 | 1.2490 | 1.4120 | 5.501 | 8 | | |
| Composite | 0.9625 | 0.9872 | 1.3509 | 1.2490 | 1.4120 | 6.244 | 8 | 64.00 | 51.00 |

| Auxiliary Tests | Statistic | Critical | Skew | Kurt |
|---|---|---|---|---|
| Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01) | 0.6933 | 0.844 | -0.87 | -1.3217 |
| F-Test indicates equal variances (p = 0.78) | 1.25 | 8.8853 | | |

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates no significant differences



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Reviewed by:

# 10 Day Freshwater Sediment Toxicity Test Data

Client: HESE Test ID#: 6130 Date (day 0): 8-24-01

Species: *Hyalella azteca* Organism Log#: 1049 Organism Age/Size: 11-13 days old

| DAY | DATE | TEMP | CONTROL D.O. (OLD) | CONTROL D.O. (NEW) | Composite D.O. (OLD) | Composite D.O. (NEW) | SIGN-OFF |
|---|---|---|---|---|---|---|---|
| 1 | 8-25-01 | 23.1 | 6.2 | 7.2 | 5.8 | 7.3 | KL |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 2 | 8.26.01 | 22 ~~24.9~~ | 6.8 | 7.8 | 6.7 | 7.5 | CL |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | MM |
| 3 | 8.27.01 | 23.0 | 7.0 | 7.6 | 6.4 | 7.0 | CL BM |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 4 | 8.28.01 | 23.0 | 6.6 | 7.4 | 6.1 | 7.1 | CL |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | MM |
| 5 | 8-29-01 | 23.1 | 7.0 | 7.5 | 5.1 | 6.2 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | KL MC |
| 6 | 8-30-01 | 23.2 | 5.7 | 7.0 | 5.4 | 6.5 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | MC KL |
| 7 | 8-31-01 | 23.1 | 6.1 | 7.4 | 5.5 | 6.9 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | KL MC |
| 8 | 9.1.01 | 23.0 | 5.6 | 6.8 | 4.8 | 6.6 | EA |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 9 | 9.2.01 | 23.1 | 5.6 | 7.3 | 5.0 | 7.5 | BM |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | MM |
| 10 | 9-3-01 | 23.0 | # Alive Organisms/replicate | | # Alive Organisms/replicate | | BM |
| | | | A 10 B 9 C 10 D 9 | | A 10 B 10 C 9 D 10 | | |
| | | | E 10 F 10 G 10 H 10 | | E 10 F 9 G 9 H 10 | | |

# Freshwater Sediment Test Water Quality Characteristics

Client: HESE Test ID: 6130, 6132, 6134 Date (day 0): 8-24-01

Species: *Hyalella azteca* Sample ID: Comp., T1, T4 Organism Age/Size: 11-13 days old

## Initial Water Quality Characteristics for Overlying Water

Temperature (°C) 23.0 Initials: MC

| Site | pH | D.O. (mg/L) | Conductivity (µs/cm) | Alkalinity | Hardness | Ammonia |
|---|---|---|---|---|---|---|
| Control | 7.36 | 7.7 | 371 | 80 | 94 | 1.24 |
| T1 | 7.32 | 7.4 | 325 | 39 | 90 | 2.09 |
| T4 | 7.32 | 7.4 | 296 | 42 | 86 | 1.14 |
| composite | 7.31 | 7.4 | 307 | 74 | 87 | 1.69 |
| | | | | | | |
| | | | | | | |

## Final Water Quality Characteristics for Overlying Water

Temperature (°C) 23.0 Initials: JB

| Site | pH | D.O. (mg/L) | Conductivity (µs/cm) | Alkalinity | Hardness | Ammonia |
|---|---|---|---|---|---|---|
| Control | 7.08 | 4.9 | 366 | 65 | 110 | 0.297 |
| T1 | 7.02 | 4.2 | 326 | 42 | 92 | 0.446 |
| T4 | 7.02 | 4.6 | 324 | 48 | 90 | 0.755 |
| COMPOSITE | 7.03 | 4.7 | 324 | 47 | 92 | 0.751 |
| | | | | | | |
| | | | | | | |

# APPENDIX C

## Test Data Sheets and Summary of Statistics for the Ammonia Toxicity Evaluation using the Amphipod, *Hyallela azteca*

## Acute Test-96 Hr Survival

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 24 Aug-01 00:00 | Test ID: | 6137 | Sample ID: | REF-Ref Toxicant |
| End Date: | 28 Aug-01 00:00 | Lab ID: | CAPER-Pacific EcoRisk | Sample Type: | TNH3-Ammonia-total |
| Sample Date: | | Protocol: | EPAFS 94-EPA Freshwater S | Test Species: | HA-Hyalella azteca |
| Comments: | | | | | |

| Conc-mg/L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Control | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 5.21 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 9.01 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 19.7 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 38.2 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 80.4 | 0.0000 | 0.0000 | 1.0000 | 1.0000 | 0.0000 | 1.0000 | 0.0000 | 0.0000 | 1.0000 | 1.0000 |
| 152 | 1.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

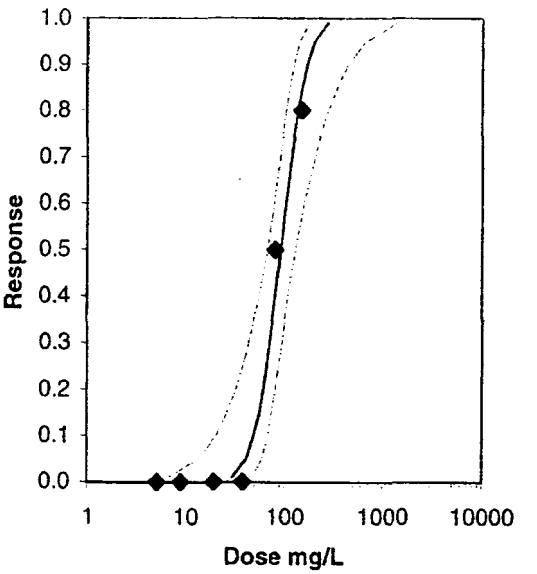
| Conc-mg/L | Mean | N-Mean | Affected | Not Affected | Total | N | Fisher's Exact P | 1-Tailed Critical | Number Resp | Total Number |
|---|---|---|---|---|---|---|---|---|---|---|
| Control | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 | | | 0 | 10 |
| 5.21 | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 | 1.0000 | 0.0500 | 0 | 10 |
| 9.01 | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 | 1.0000 | 0.0500 | 0 | 10 |
| 19.7 | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 | 1.0000 | 0.0500 | 0 | 10 |
| 38.2 | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 | 1.0000 | 0.0500 | 0 | 10 |
| *80.4 | 0.5000 | 0.5000 | 5 | 5 | 10 | 10 | 0.0163 | 0.0500 | 5 | 10 |
| *152 | 0.2000 | 0.2000 | 8 | 2 | 10 | 10 | 0.0004 | 0.0500 | 8 | 10 |

| Hypothesis Test (1-tail, 0.05) | NOEC | LOEC | ChV | TU |
|---|---|---|---|---|
| Fisher's Exact Test | 38.2 | 80.4 | 55.419 | |

### Maximum Likelihood-Probit

| Parameter | Value | SE | 95% Fiducial Limits | | Control | Chi-Sq | Critical | P-value | Mu | Sigma | Iter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Slope | 4.7909 | 1.4013 | 2.0443 | 7.5375 | 0 | 1.08 | 13.277 | 0.9 | 1.9633 | 0.2087 | 6 |
| Intercept | -4.4058 | 2.749 | -9.7938 | 0.9822 | | | | | | | |
| TSCR | | | | | | | | | | | |

| Point | Probits | mg/L | 95% Fiducial Limits | |
|---|---|---|---|---|
| EC01 | 2.674 | 30.039 | 6.5651 | 47.277 |
| EC05 | 3.355 | 41.681 | 13.838 | 59.51 |
| EC10 | 3.718 | 49.633 | 20.427 | 67.824 |
| EC15 | 3.964 | 55.838 | 26.405 | 74.528 |
| EC20 | 4.158 | 61.319 | 32.204 | 80.769 |
| EC25 | 4.326 | 66.448 | 37.969 | 87.025 |
| EC40 | 4.747 | 81.355 | 55.404 | 109 |
| EC50 | 5.000 | 91.889 | 67.003 | 129.54 |
| EC60 | 5.253 | 103.79 | 78.487 | 158.95 |
| EC75 | 5.674 | 127.07 | 96.698 | 235.79 |
| EC80 | 5.842 | 137.7 | 103.79 | 279.08 |
| EC85 | 6.036 | 151.22 | 112.12 | 341.46 |
| EC90 | 6.282 | 170.12 | 122.86 | 442.6 |
| EC95 | 6.645 | 202.58 | 139.68 | 654.95 |
| EC99 | 7.326 | 281.09 | 175.43 | 1383.6 |






ToxCalc v5.0

Reviewed by:

CARG002338

# 96 hour *Hyalella azteca* Reference Toxicant Test Data

Date: 8-24-01 Client: HESE Test ID#: 6137

| $NH_3$ Treatment | Date | Day | Temp (°C) | Survival A | B | C | D | E | F | G | H | I | J | Time Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 8-24-01 | Time 0 | 23.0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Control | 8-25-01 | 24 hrs | 23.1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1200 KEG |
| | 8-26-01 | 48 hrs | 22.9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1130 JB |
| | 8-27-01 | 72 hrs | 23.0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1545 JB |
| | 8-28-01 | 96 hrs | 23.1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1420 JB |
| 5 mg/L | | 24 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 48 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 72 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 96 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 10 mg/L | | 24 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 48 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 72 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 96 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 20 mg/L | | 24 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 48 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 72 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 96 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 40 mg/L | | 24 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 48 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 72 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 96 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 80 mg/L | | 24 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 48 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | |
| | | 72 hrs | | 0 | 0 | 1 | 1 | 1 | 1 | 1 | — | 1 | 1 | |
| | | 96 hrs | | — | — | 1 | 1 | 0 | 1 | 0 | — | 1 | 1 | |
| 160 mg/L | | 24 hrs | | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | |
| | | 48 hrs | | 1 | — | — | — | — | 1 | — | — | — | — | |
| | | 72 hrs | | 1 | — | — | — | — | | — | — | — | — | |
| | | 96 hrs | | 1 | — | — | — | — | 1 | — | — | — | — | |

| $NH_3$ Treatment | Initial Water Chemistires pH | DO | Cond. | Final Water Chemistries pH | DO | Cond. |
|---|---|---|---|---|---|---|
| Control | 8.10 | 8.0 | ~~0~~ 311 | 7.98 | 7.9 | 537 |
| 5 mg/L | 7.90 | 8.0 | 355 | 7.47 | 7.5 | 378 |
| 10 mg/L | 7.88 | 8.0 | 392 | 7.67 | 7.7 | 393 |
| 20 mg/L | 7.78 | 8.0 | 491 | 7.79 | 8.0 | 466 |
| 40 mg/L | 7.64 | 8.0 | 674 | 7.66 | 7.9 | 632 |
| 80 mg/L | 7.48 | 8.0 | 1052 | 7.45 | 8.0 | 945 |
| 160 mg/L | 7.32 | 8.1 | 1760 | 6.13 | 7.7 | 1839 |

# APPENDIX D

## Test Data Sheets and Summary of Statistics for the Reference Toxicant Evaluation of the Amphipod, *Hyallela azteca*

## Acute Test-96 Hr Survival

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 24 Aug-01 00:00 | Test ID: | 6136 | Sample ID: | REF-Ref Toxicant |
| End Date: | 28 Aug-01 00:00 | Lab ID: | CAPER-Pacific EcoRisk | Sample Type: | KCL-Potassium chloride |
| Sample Date: | | Protocol: | EPAFS 94-EPA Freshwater S | Test Species: | HA-Hyalella azteca |
| Comments: | | | | | |

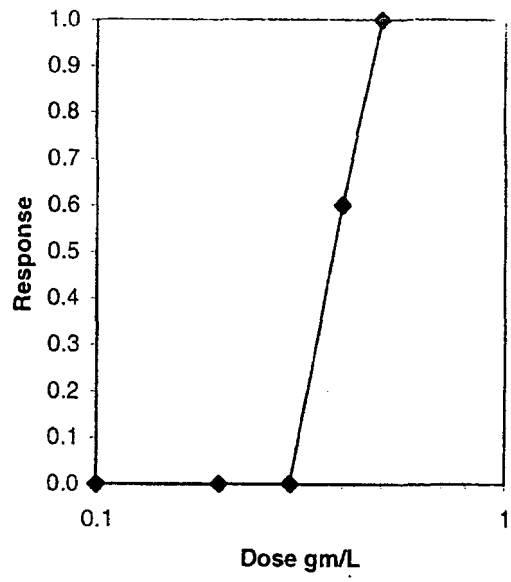
| Conc-gm/L | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Control | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 0.1 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 0.2 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 0.3 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 0.4 | 1.0000 | 0.0000 | 1.0000 | 0.0000 | 0.0000 | 1.0000 | 0.0000 | 0.0000 | 0.0000 | 1.0000 |
| 0.5 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

| Conc-gm/L | Mean | N-Mean | Affected | Not Affected | Total | N | Fisher's Exact P | 1-Tailed Critical | Number Resp | Total Number |
|---|---|---|---|---|---|---|---|---|---|---|
| Control | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 | | | 0 | 10 |
| 0.1 | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 | 1.0000 | 0.0500 | 0 | 10 |
| 0.2 | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 | 1.0000 | 0.0500 | 0 | 10 |
| 0.3 | 1.0000 | 1.0000 | 0 | 10 | 10 | 10 | 1.0000 | 0.0500 | 0 | 10 |
| *0.4 | 0.4000 | 0.4000 | 6 | 4 | 10 | 10 | 0.0054 | 0.0500 | 6 | 10 |
| 0.5 | 0.0000 | 0.0000 | 10 | 0 | 10 | 10 | | | 10 | 10 |

| Hypothesis Test (1-tail, 0.05) | NOEC | LOEC | ChV | TU |
|---|---|---|---|---|
| Fisher's Exact Test | 0.3 | 0.4 | 0.3464 | |

### Trimmed Spearman-Karber

| Trim Level | EC50 | 95% CL | |
|---|---|---|---|
| 0.0% | 0.3837 | 0.3545 | 0.4153 |
| 5.0% | 0.3833 | 0.3511 | 0.4184 |
| 10.0% | 0.3830 | 0.3473 | 0.4223 |
| 20.0% | 0.3823 | 0.3371 | 0.4335 |
| Auto-0.0% | 0.3837 | 0.3545 | 0.4153 |






ToxCalc v5.0

Reviewed by:

CARG002341

# 96 hour *Hyalella azteca* Reference Toxicant Test Data

Date 8-24-01 Client HESE Project HESE/SED/032401 Test ID#: 6136

| KCl Treatment | Date | Day | Temp (°C) | Survival A | B | C | D | E | F | G | H | I | J | Sign-Off Time | Initials |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 8-24-01 | Time 0 | 22° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1500 | CL |
| Control | 8-25-01 | 24 hrs | 23.1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0920 | [illegible] |
| | 8-26-01 | 48 hrs | 22.9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1100 | DB |
| | 8-27-01 | 72 hrs | 23.0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1600 | DB |
| | 8-28-01 | 96 hrs | 23.1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1445 | DB |
| 0.10 g/L | | 24 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | | 48 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | | 72 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | | 96 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| 0.20 g/L | | 24 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | | 48 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | | 72 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | | 96 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| 0.30 g/L | | 24 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | | 48 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | | 72 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | | 96 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| 0.40 g/L | | 24 hrs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | | 48 hrs | | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | | |
| | | 72 hrs | | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | | |
| | | 96 hrs | | 1 | 0 | 1 | 0 | – | 1 | – | – | 0 | 1 | | |
| 0.50 g/L | | 24 hrs | | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | | |
| | | 48 hrs | | 0 | – | 1 | – | 0 | 1 | 0 | 0 | – | – | | |
| | | 72 hrs | | – | – | 0 | – | – | 0 | – | – | – | – | | |
| | | 96 hrs | | – | – | – | – | – | – | – | – | – | – | | |

| KCl Treatment | Initial Water Chemistries pH | DO | Salinity | Conduct. | Final Water Chemistries pH | DO | Salinity | Conduct. |
|---|---|---|---|---|---|---|---|---|
| Control | 8.10 | 8.0 | 0 | 311 | 7.98 | 7.9 | 0.0 | 537 |
| 0.10 g/L | 8.13 | 8.0 | 0 | 499 | 7.97 | 8.0 | 0.0 | 486 |
| 0.20 g/L | 8.14 | 7.9 | 0.1 | 689 | 7.94 | 8.1 | 0.1 | 677 |
| 0.30 g/L | 8.15 | 8.0 | 0.2 | 861 | 7.95 | 8.2 | 0.3 | 856 |
| 0.40 g/L | 8.15 | 8.0 | 0.3 | 1046 | 7.92 | 8.3 | 0.3 | 1036 |
| 0.50 g/L | 8.16 | 8.0 | 0.5 | 1235 | 7.63 | 8.2 | 0.5 | 1223 |

# APPENDIX E

## Test Data Sheets and Summary of Statistics for the Toxicity Evaluation of Cargill Sediments with the Midge, *Chironomus tentans*

## 10 Day Freshwater Sediment Test-Proportion Survived

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 24 Aug-01 00:00 | Test ID: | 6133 | Sample ID: | T1 |
| End Date: | 03 Sep-01 00:00 | Lab ID: | CAPER-Pacific EcoRisk | Sample Type: | FS-Freshwater Sediment |
| Sample Date: | | Protocol: | EPAFS 94-EPA Freshwater S | Test Species: | CT-Chironomus tentans |
| Comments: | | | | | |

| Conc-% | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Control | 0.9000 | 1.0000 | 0.8000 | 1.0000 | 1.0000 | 1.0000 | 0.8000 | |
| T1 | 0.7000 | 0.8000 | 0.6000 | 0.9000 | 0.5000 | 0.9000 | 1.0000 | 0.2000 |

| | | | Transform: Arcsin Square Root | | | | | | 1-Tailed | |
|---|---|---|---|---|---|---|---|---|---|---|
| Conc-% | Mean | N-Mean | Mean | Min | Max | CV% | N | t-Stat | Critical | MSD |
| Control | 0.9286 | 1.0000 | 1.3016 | 1.1071 | 1.4120 | 11.184 | 7 | | | |
| *T1 | 0.7000 | 0.7538 | 1.0179 | 0.4636 | 1.4120 | 29.924 | 8 | 2.243 | 1.771 | 0.0283 |

| Auxiliary Tests | Statistic | Critical | Skew | Kurt |
|---|---|---|---|---|
| Shapiro-Wilk's Test indicates normal distribution (p > 0.01) | 0.9483 | 0.835 | -0.6817 | 0.9076 |
| F-Test indicates equal variances (p = 0.09) | 4.3783 | 10.786 | | |

**Hypothesis Test (1-tail, 0.05)**

Homoscedastic t Test indicates significant differences

## 10 Day Freshwater Sediment Test-Growth(wt)

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 24 Aug-01 00:00 | Test ID: | 6133 | Sample ID: | T1 |
| End Date: | 03 Sep-01 00:00 | Lab ID: | CAPER-Pacific EcoRisk | Sample Type: | FS-Freshwater Sediment |
| Sample Date: | | Protocol: | EPAFS 94-EPA Freshwater S | Test Species: | CT-Chironomus tentans |
| Comments: | | | | | |

| Conc-% | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Control | 0.5322 | 0.4710 | 0.4188 | 0.3200 | 0.3750 | 0.3270 | 0.4325 | |
| T1 | 0.4914 | 0.3450 | 0.5967 | 0.3222 | 0.5340 | 0.4011 | 0.3530 | 0.7100 |

| | | | Transform: Untransformed | | | | | | 1-Tailed | |
|---|---|---|---|---|---|---|---|---|---|---|
| Conc-% | Mean | N-Mean | Mean | Min | Max | CV% | N | t-Stat | Critical | MSD |
| Control | 0.4109 | 1.0000 | 0.4109 | 0.3200 | 0.5322 | 18.706 | 7 | | | |
| T1 | 0.4692 | 1.1418 | 0.4692 | 0.3222 | 0.7100 | 29.499 | 8 | -0.986 | 1.771 | 0.0062 |

| Auxiliary Tests | Statistic | Critical | Skew | Kurt |
|---|---|---|---|---|
| Shapiro-Wilk's Test indicates normal distribution (p > 0.01) | 0.95 | 0.835 | 0.6167 | -0.0956 |
| F-Test indicates equal variances (p = 0.17) | 3.2422 | 10.786 | | |

**Hypothesis Test (1-tail, 0.05)**

Homoscedastic t Test indicates no significant differences



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Reviewed by:

CARG002345

# 10 Day Freshwater Sediment Toxicity Test Data

Client: HESE Test ID#: 6133 Date (day 0): 8-24-01

Species: *Chironomus tentans* Organism Log#: 1051 Organism Age/Size: 3rd instar

| DAY | DATE | TEMP | CONTROL | | T1 | | SIGN-OFF |
|---|---|---|---|---|---|---|---|
| | | | D.O. (OLD) | D.O. (NEW) | D.O. (OLD) | D.O. (NEW) | |
| 1 | 8-25-01 | 23.1 | 6.5 | 7.8 | 5.5 | 7.0 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | KE |
| 2 | 8-26-01 | 22.9 | 6.0 | 7.5 | 5.3 | 7.0 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | MM |
| 3 | 8-27-01 | 23.0 | 6.5 ~~7.0~~ | 7.3 | 5.7 | 6.4 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 4 | 8-28-01 | 23.0 | 5.9 | 7.1 | 5.6 | 6.9 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | MM |
| 5 | 8-29-01 | 23.1 | 5.4 | 6.7 | 5.0 | 6.3 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | KE MC |
| 6 | 8-30-01 | 23.2 | 6.4 | 6.9 | 5.3 | 6.3 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | KE MC |
| 7 | 8-31-01 | 23.1 | 5.9 | 7.3 | 4.5 | 6.9 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | KE MC |
| 8 | 9-1-01 | 23.0 | 5.9 | 7.1 | 4.2 | 6.3 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 9 | 9-2-01 | 23.1 | 6.1 | 7.6 | 4.7 | 6.8 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | MM |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 10 | 9-3-01 | 23.0 | # Alive Organisms/replicate | | # Alive Organisms/replicate | | |
| | | | A 9 B 10 C 8 D — | | A 7 B 8 C 6 D 9 | | |
| | | | E 10 F 10 G 10 H 8 | | E 5 F 9 G 10 H 2 | | |

# Chironomus Weight Data Sheets

Client: **Harding ESE** Species: *Chironomus tentans* Test Date: 8-24-01

Sample ID: T1 Investigator: EA Test ID: 6133

## Dry Weight Calculations

| Pan | Concentration Replicate | | Initial Weight. (mg) | Final Weight. (mg) | # organisms | Ave Dry Weight (mg) |
|---|---|---|---|---|---|---|
| 1 | Control | A | 32.50 | 39.83 | 9 | 0.814 |
| 2 | | B | 31.46 | 38.19 | 10 | 0.673 |
| 3 | | C | 34.42 | 38.78 | 8 | 0.545 |
| 4 | | D | 33.23 | – | – | – |
| 5 | | E | 31.34 | 36.63 | 10 | 0.479 |
| 6 | | F | 29.36 | 34.62 | 10 | 0.526 |
| 7 | | G | 34.55 | 38.80 | 10 | 0.425 |
| 8 | | H | 28.91 | 33.72 | 8 | 0.601 |
| 17 | T1 | A | 38.71 | 45.35 | 7 | 0.948 |
| 18 | | B | 31.61 | 36.90 | 8 | 0.661 |
| 19 | | C | 34.62 | 40.81 | 6 | 1.131 |
| 20 | | D | 31.74 | 37.20 | 9 | 0.606 |
| 21 | | E | 31.18 | 36.56 | 5 | 1.076 |
| 22 | | F | 34.16 | 41.37 | 9 | 0.801 |
| 23 | | G | 29.89 | 36.83 | 10 | 0.694 |
| 24 | | H | 32.52 | 35.57 | 2 | 1.525 |
| QA 1 | | | 33.39 | – | – | – |
| QA 23 | | | 32.94 | – | – | – |

## Ash Free Dry Weight Calculations

| Pan | Concentration Replicate | | Dry Weight. (mg) | Ash Free Dry Weight. (mg) | # organisms | Ave. Ash Free Dry Weight (mg) |
|---|---|---|---|---|---|---|
| 1 | Control | A | 39.83 | 35.04 | 9 | 0.532 |
| 2 | | B | 38.19 | 33.48 | 10 | 0.471 |
| 3 | | C | 38.78 | 35.43 | 8 | 0.419 |
| 4 | | D | – | – | – | – |
| 5 | | E | 36.63 | 33.43 | 10 | 0.320 |
| 6 | | F | 34.62 | 30.87 | 10 | 0.375 |
| 7 | | G | 38.80 | 35.53 | 10 | 0.327 |
| 8 | | H | 33.72 | 30.26 | 8 | 0.433 |
| 17 | T1 | A | 45.35 | 41.91 | 7 | 0.491 |
| 18 | | B | 36.90 | 34.14 | 8 | 0.345 |
| 19 | | C | 40.81 | 37.23 | 6 | 0.597 |
| 20 | | D | 37.20 | 34.30 | 9 | 0.322 |
| 21 | | E | 36.56 | 33.99 | 5 | 0.534 |
| 22 | | F | 41.37 | 37.76 | 9 | 0.401 |
| 23 | | G | 36.83 | 33.30 | 10 | 0.353 |
| 24 | | H | 35.57 | 34.15 | 2 | 0.710 |
| QA 1 | | | 33.42 | – | – | – |
| QA 3 | | | 32.95 | – | – | – |

## 10 Day Freshwater Sediment Test-Growth(wt)

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 24 Aug-01 00:00 | Test ID: | 6135 | Sample ID: | T4 |
| End Date: | 03 Sep-01 00:00 | Lab ID: | CAPER-Pacific EcoRisk | Sample Type: | FS-Freshwater Sediment |
| Sample Date: | | Protocol: | EPAFS 94-EPA Freshwater S | Test Species: | CT-Chironomus tentans |
| Comments: | | | | | |

| Conc-% | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Control | 0.5311 | 0.4710 | 0.4188 | 0.3200 | 0.3750 | 0.3270 | 0.4325 | |
| T4 | 0.3220 | 0.3820 | 0.3650 | 0.4238 | 0.3440 | 0.3770 | 0.3510 | 0.4144 |

| | | | Transform: Untransformed | | | | | | 1-Tailed | |
|---|---|---|---|---|---|---|---|---|---|---|
| Conc-% | Mean | N-Mean | Mean | Min | Max | CV% | N | t-Stat | Critical | MSD |
| Control | 0.4108 | 1.0000 | 0.4108 | 0.3200 | 0.5311 | 18.642 | 7 | | | |
| T4 | 0.3724 | 0.9066 | 0.3724 | 0.3220 | 0.4238 | 9.290 | 8 | 1.281 | 1.771 | 0.0016 |

| Auxiliary Tests | Statistic | Critical | Skew | Kurt |
|---|---|---|---|---|
| Shapiro-Wilk's Test indicates normal distribution (p > 0.01) | 0.979 | 0.835 | 0.3042 | 0.3093 |
| F-Test indicates equal variances (p = 0.06) | 4.8996 | 9.1554 | | |

**Hypothesis Test (1-tail, 0.05)**

Homoscedastic t Test indicates no significant differences



ToxCalc v5.0

Reviewed by:

CARG002348

## 10 Day Freshwater Sediment Test-Proportion Survived

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 24 Aug-01 00:00 | Test ID: | 6135 | Sample ID: | T4 |
| End Date: | 03 Sep-01 00:00 | Lab ID: | CAPER-Pacific EcoRisk | Sample Type: | FS-Freshwater Sediment |
| Sample Date: | | Protocol: | EPAFS 94-EPA Freshwater S | Test Species: | CT-Chironomus tentans |
| Comments: | | | | | |

| Conc-% | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Control | 0.9000 | 1.0000 | 0.8000 | 1.0000 | 1.0000 | 1.0000 | 0.8000 | |
| T4 | 1.0000 | 1.0000 | 1.0000 | 0.8000 | 1.0000 | 1.0000 | 1.0000 | 0.9000 |

| | | | Transform: Arcsin Square Root | | | | | Rank | 1-Tailed |
|---|---|---|---|---|---|---|---|---|---|
| Conc-% | Mean | N-Mean | Mean | Min | Max | CV% | N | Sum | Critical |
| Control | 0.9286 | 1.0000 | 1.3016 | 1.1071 | 1.4120 | 11.184 | 7 | | |
| T4 | 0.9625 | 1.0365 | 1.3535 | 1.1071 | 1.4120 | 8.476 | 8 | 69.50 | 49.00 |

| Auxiliary Tests | Statistic | Critical | Skew | Kurt |
|---|---|---|---|---|
| Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01) | 0.789 | 0.835 | -1.0247 | -0.483 |
| F-Test indicates equal variances (p = 0.55) | 1.6099 | 9.1554 | | |

**Hypothesis Test (1-tail, 0.05)**

Wilcoxon Two-Sample Test indicates no significant differences

# 10 Day Freshwater Sediment Toxicity Test Data

Client: HESE Test ID#: 6135 Date (day 0): 8-24-01

Species: *Chironomus tentans* Organism Log#: 1051 Organism Age/Size: 3rd instar

| DAY | DATE | TEMP | CONTROL D.O. (OLD) | CONTROL D.O. (NEW) | T4 D.O. (OLD) | T4 D.O. (NEW) | SIGN-OFF |
|---|---|---|---|---|---|---|---|
| 1 | 8-25-01 | 23.1 | 6.5 | 7.8 | 5.4 | 7.0 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | ke |
| 2 | 8-26-01 | 22.9 ~~24.~~ | 6.0 | 7.5 | 5.8 | 7.4 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | mm |
| 3 | 8-27-01 | 23.0 | 6.5 | 7.3 | 6.4 | 7.0 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 4 | 8-28-01 | 23.0 | 5.9 | 7.1 | 5.2 | 6.7 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | mm |
| 5 | 8-29-01 | 23.1 | 5.4 | 6.7 | 4.9 | 6.4 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | KE mc |
| 6 | 8-30-01 | 23.2 | 6.4 | 6.9 | 5.3 | 6.6 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | ke mc |
| 7 | 8-31-01 | 23.1 | 5.9 | 7.3 | 4.9 | 6.8 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | ke mc |
| 8 | 9-1-01 | 23.0 | 5.9 | 7.1 | 4.1 | 6.2 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | EA |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 9 | 9-2-01 | 23.1 | 6.1 | 7.6 | 4.7 | 6.5 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | mm |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 10 | 9-3-01 | 23.0 | # Alive Organisms/replicate | | # Alive Organisms/replicate | | |
| | | | A 9 B 10 C 8 D — | | A 10 B 10 C 10 D 8 | | |
| | | | E 10 F 10 G 10 H 8 | | E 10 F 10 G 10 H 9 | | JL |

# Chironomus Weight Data Sheets

Client: **HESE** Species: *Chironomus tentans* Test Date: 8-24-01

Sample ID: T4 Investigator: EA Test ID: 6135

## Dry Weight Calculations

| Pan | Concentration Replicate | | Initial Weight. (mg) | Final Weight. (mg) | # organisms | Ave Dry Weight (mg) |
|---|---|---|---|---|---|---|
| 1 | Control | A | 32.50 | 39.93 | 9 | 0.814 |
| 2 | | B | 31.46 | 38.19 | 10 | 0.673 |
| 3 | | C | 34.72 | 38.78 | 8 | 0.545 |
| 4 | | D | 33.23 | – | – | – |
| 5 | | E | 31.84 | 36.63 | 10 | 0.479 |
| 6 | | F | 29.36 | 34.62 | 10 | 0.526 |
| 7 | | G | 34.55 | 38.80 | 10 | 0.425 |
| 8 | | H | 28.91 | 33.72 | 8 | 0.601 |
| 25 | T4 | A | 33.44 | 40.33 | 10 | 0.689 |
| 26 | | B | 30.50 | 38.64 | 10 | 0.814 |
| 27 | | C | 31.61 | 38.61 | 10 | 0.7 |
| 28 | | D | 33.37 | 40.38 | 8 | 0.876 |
| 29 | | E | 32.66 | 39.38 | 10 | 0.672 |
| 30 | | F | 32.72 | 39.23 | 10 | 0.651 |
| 31 | | G | 31.17 | 38.62 | 10 | 0.745 |
| 32 | | H | 32.85 | 40.24 | 9 | 0.821 |
| QA 1 | | | 33.39 | | | |
| QA 4 | | | ~~32.52~~ 30.40 | | | |

## Ash Free Dry Weight Calculations

| Pan | Concentration Replicate | | Dry Weight. (mg) | Ash Free Dry Weight. (mg) | # organisms | Ave. Ash Free Dry Weight (mg) |
|---|---|---|---|---|---|---|
| 1 | Control | A | 39.93 | 35.05 | 9 | 0.531 |
| 2 | | B | 38.19 | 33.48 | 10 | 0.471 |
| 3 | | C | 38.78 | 35.43 | 8 | 0.418 |
| 4 | | D | – | – | – | – |
| 5 | | E | 36.63 | 33.43 | 10 | 0.32 |
| 6 | | F | 34.62 | 30.87 | 10 | 0.375 |
| 7 | | G | 38.80 | 35.53 | ~~5~~ 10 | 0.327 |
| 8 | | H | 33.72 | 30.26 | 8 | 0.432 |
| 25 | T4 | A | 40.33 | 37.11 | 10 | 0.322 |
| 26 | | B | 38.64 | 34.82 | 10 | 0.382 |
| 27 | | C | 38.61 | 34.96 | 10 | 0.365 |
| 28 | | D | 40.38 | 36.99 | 8 | 0.423 |
| 29 | | E | 39.38 | 35.94 | 10 | 0.344 |
| 30 | | F | 39.23 | 35.46 | 10 | 0.377 |
| 31 | | G | 38.62 | 35.11 | 10 | 0.351 |
| 32 | | H | 40.24 | 36.51 | 9 | 0.414 |
| QA 1 | | | 33.38 | | | – |
| QA 4 | | | 30.41 | | | – |

## 10 Day Freshwater Sediment Test-Proportion Survived

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 24 Aug-01 00:00 | Test ID: | 6131 | Sample ID: | Composite |
| End Date: | 03 Sep-01 00:00 | Lab ID: | CAPER-Pacific EcoRisk | Sample Type: | FS-Freshwater Sediment |
| Sample Date: | | Protocol: | EPAFS 94-EPA Freshwater S | Test Species: | CT-Chironomus tentans |
| Comments: | | | | | |

| Conc-% | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Control | 0.9000 | 1.0000 | 0.8000 | 1.0000 | 1.0000 | 1.0000 | 0.8000 | |
| Composite | 0.6000 | 0.9000 | 0.7000 | 0.7000 | 0.8000 | 0.9000 | 0.8000 | 0.7000 |

| | | | Transform: Arcsin Square Root | | | | | | 1-Tailed | |
|---|---|---|---|---|---|---|---|---|---|---|
| Conc-% | Mean | N-Mean | Mean | Min | Max | CV% | N | t-Stat | Critical | MSD |
| Control | 0.9286 | 1.0000 | 1.3016 | 1.1071 | 1.4120 | 11.184 | 7 | | | |
| *Composite | 0.7625 | 0.8212 | 1.0715 | 0.8861 | 1.2490 | 12.185 | 8 | 3.229 | 1.771 | 0.0090 |

| Auxiliary Tests | Statistic | Critical | Skew | Kurt |
|---|---|---|---|---|
| Shapiro-Wilk's Test indicates normal distribution (p > 0.01) | 0.8986 | 0.835 | -0.2159 | -1.3725 |
| F-Test indicates equal variances (p = 0.77) | 1.2431 | 9.1554 | | |

**Hypothesis Test (1-tail, 0.05)**

Homoscedastic t Test indicates significant differences



ToxCalc v5.0

Reviewed by: JC

## 10 Day Freshwater Sediment Test-Growth(wt)

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 24 Aug-01 00:00 | Test ID: | 6131 | Sample ID: | Composite |
| End Date: | 03 Sep-01 00:00 | Lab ID: | CAPER-Pacific EcoRisk | Sample Type: | FS-Freshwater Sediment |
| Sample Date: | | Protocol: | EPAFS 94-EPA Freshwater S | Test Species: | CT-Chironomus tentans |
| Comments: | Ash-Free Dry Weight | | | | |

| Conc-% | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Control | 0.5322 | 0.4710 | 0.4188 | 0.3200 | 0.3750 | 0.3270 | 0.4325 | |
| Composite | 0.5583 | 0.3933 | 0.5714 | 0.4014 | 0.4475 | 0.4078 | 0.3700 | 0.5100 |

| | | | Transform: Untransformed | | | | | | 1-Tailed | |
|---|---|---|---|---|---|---|---|---|---|---|
| Conc-% | Mean | N-Mean | Mean | Min | Max | CV% | N | t-Stat | Critical | MSD |
| Control | 0.4109 | 1.0000 | 0.4109 | 0.3200 | 0.5322 | 18.706 | 7 | | | |
| Composite | 0.4575 | 1.1133 | 0.4575 | 0.3700 | 0.5714 | 17.211 | 8 | -1.155 | 1.771 | 0.0029 |

| Auxiliary Tests | Statistic | Critical | Skew | Kurt |
|---|---|---|---|---|
| Shapiro-Wilk's Test indicates normal distribution (p > 0.01) | 0.9122 | 0.835 | 0.3979 | -1.2728 |
| F-Test indicates equal variances (p = 0.97) | 1.0492 | 10.786 | | |

**Hypothesis Test (1-tail, 0.05)**

Homoscedastic t Test indicates no significant differences



ToxCalc v5.0

Reviewed by:

CARG002353

# 10 Day Freshwater Sediment Toxicity Test Data

Client: **HESE** Test ID#: 6131 Date (day 0): 8-24-01

Species: *Chironomus tentans* Organism Log#: 1051 Organism Age/Size: 3rd instar

| DAY | DATE | TEMP | CONTROL D.O. (OLD) | CONTROL D.O. (NEW) | Composite D.O. (OLD) | Composite D.O. (NEW) | SIGN-OFF |
|---|---|---|---|---|---|---|---|
| 1 | 8-25-01 | 23.1 | 6.5 | 7.8 | 5.7 | 7.4 | KL |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 2 | 8-26-01 | ~~24~~ 22.9 | 6.0 | 7.5 | 5.5 | 7.1 | MM |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 3 | 8-27-01 | 23.0 | ~~6.5 7.5~~ 6.5 | 7.3 | 5.9 | 7.0 | |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 4 | 8-28-01 | 23.0 | 5.9 | 7.1 | 5.2 | 6.0 | MM |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 5 | 8-29-01 | 23.1 | 5.4 | 6.7 | 4.7 | 6.2 | KE MC |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 6 | 8-30-01 | 23.2 | 6.4 | 6.9 | 5.4 | 6.5 | KE MC |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 7 | 8-31-01 | 23.1 | 5.9 | 7.3 | 5.1 | 6.7 | KE MC |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 8 | 9-1-01 | 23.0 | 5.9 | 7.1 | 4.0 | 6.1 | KE |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 9 | 9-2-01 | 23.1 | 6.1 | 7.6 | 4.6 | 7.2 | MM |
| | | | A 0 B 0 C 0 D 0 | | A 0 B 0 C 0 D 0 | | |
| | | | E 0 F 0 G 0 H 0 | | E 0 F 0 G 0 H 0 | | |
| 10 | 9-3-01 | 23.0 | # Alive Organisms/replicate | | # Alive Organisms/replicate | | |
| | | | A 9 B 10 C 8 D ~~10~~ | | A 6 B 9 C 7 D 7 | | |
| | | | E 10 F 10 G 10 H 8 | | E 8 F 9 G 8 H 7 | | |

* Test beaker accidentally dropped & broken. EA (Rep D)

# Chironomus Weight Data Sheets

Client: **Harding ESE** Species: *Chironomus tentans* Test Date: 8-24-01

Sample ID: **Composite** Investigator: EVA Test ID: 6131

## Dry Weight Calculations

| Pan | Concentration Replicate | | Initial Weight. (mg) | Final Weight. (mg) | # organisms | Ave Dry Weight (mg) |
|---|---|---|---|---|---|---|
| 1 | Control | A | 32.50 | 39.33 | 9 | 0.814 |
| 2 | | B | 31.46 | 38.19 | 10 | 0.673 |
| 3 | | C | 34.42 | 38.78 | 8 | 0.545 |
| 4 | | D | 33.23 | — | — | — |
| 5 | | E | 31.84 | 36.63 | 10 | 0.479 |
| 6 | | F | 29.36 | 34.62 | 10 | 0.526 |
| 7 | | G | 34.55 | 38.80 | 10 | 0.425 |
| 8 | | H | 28.91 | 33.72 | 8 | 0.601 |
| 9 | Composite | A | 38.25 | 44.70 | 6 | 1.075 |
| 10 | | B | 31.70 | 39.12 | 9 | 0.824 |
| 11 | | C | 31.57 | 40.33 | 7 | 1.251 |
| 12 | | D | 34.61 | 40.35 | 7 | 0.82 |
| 13 | | E | 30.90 | 38.34 | 8 | 0.93 |
| 14 | | F | 36.91 | 44.41 | 9 | 0.833 |
| 15 | | G | 33.73 | 39.05 | 8 | 0.665 |
| 16 | | H | 31.85 | 39.33 | 7 | 1.068 |
| QA | | | 33.39 | — | — | — |
| QA | | | 32.52 | — | — | — |

## Ash Free Dry Weight Calculations

| Pan | Concentration Replicate | | Dry Weight. (mg) | Ash Free Dry Weight. (mg) | # organisms | Ave. Ash Free Dry Weight (mg) |
|---|---|---|---|---|---|---|
| 1 | Control | A | 39.83 | 35.04 | 9 | 0.532 |
| 2 | | B | 38.19 | 33.48 | 10 | 0.471 |
| 3 | | C | 38.78 | ~~35.5~~ 35.43 | 8 | 0.415 |
| 4 | | D | — | — | — | — |
| 5 | | E | 36.63 | 33.43 | 10 | 0.32 |
| 6 | | F | 34.62 | 30.87 | 10 | 0.375 |
| 7 | | G | 38.80 | 35.53 | 10 | 0.327 |
| 8 | | H | 33.72 | 30.26 | 8 | 0.432 |
| 9 | Composite | A | 44.70 | 41.35 | 6 | 0.558 |
| 10 | | B | 39.12 | 35.58 | 9 | 0.393 |
| 11 | | C | 40.33 | 36.33 | 7 | 0.571 |
| 12 | | D | 40.35 | 37.54 | 7 | 0.401 |
| 13 | | E | 38.34 | 34.76 | 8 | 0.447 |
| 14 | | F | 44.41 | 40.74 | 9 | 0.407 |
| 15 | | G | 39.05 | 36.09 | 8 | ~~0.47~~ 0.37 |
| 16 | | H | 39.33 | 35.76 | 7 | 0.51 |
| QA | | | | | | |
| QA | | | | | | |

# Freshwater Sediment Test Water Quality Characteristics

Client: HESE Test ID: 6131, 6133, 6135 Date (day 0): 8-24-01

Species: *Chironomus tentans* Sample ID: Comp., T1, T4 Organism Age/Size: 3rd instar

## Initial Water Quality Characteristics for Overlying Water

Temperature (°C) 23.0 Initials: mc

| Site | pH | D.O. (mg/L) | Conductivity (µs/cm) | Alkalinity | Hardness | Ammonia |
|---|---|---|---|---|---|---|
| Control | 8.23 | 7.2 | NT | ~~107~~ 97 | 108 | 0.0684 |
| T1 | 7.98 | 7.4 | NT | ~~78~~ 80 | 84 | 1.67 |
| T4 | 7.93 | 7.2 | NT | ~~82~~ 88 | 79 | 1.14 |
| composite | 7.87 | 7.4 | NT | ~~84~~ 88 | 84 | 1.20 |
| | | | | | | |
| | | | | | | |

## Final Water Quality Characteristics for Overlying Water

Temperature (°C) 23.0 Initials: JC

| Site | pH | D.O. (mg/L) | Conductivity (µs/cm) | Alkalinity | Hardness | Ammonia |
|---|---|---|---|---|---|---|
| Control | 7.51 | 5.8 | 231 | 107 | 92 | 0.216 |
| T1 | 7.46 | 4.0 | 190.7 | 79 | 90 | 0.240 |
| T4 | 7.35 | 4.2 | 184 | 82 | 82 | 0.693 |
| Composite | 7.32 | 3.9 | 190.1 | 84 | 100 | 0.631 |
| | | | | | | |
| | | | | | | |

# APPENDIX F

## Test Data Sheets and Summary of Statistics for the Ammonia Toxicity Evaluation using the Midge, *Chironomus tentans*

## Acute Test-48 Hr Survival

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 29 Aug-01 00:00 | Test ID: | 6139 | Sample ID: | REF-Ref Toxicant |
| End Date: | 31 Aug-01 00:00 | Lab ID: | CAPER-Pacific EcoRisk | Sample Type: | TNH3-Ammonia-total |
| Sample Date: | | Protocol: | EPAFS 94-EPA Freshwater S | Test Species: | CT-Chironomus tentans |
| Comments: | | | | | |

| Conc-mg/L | 1 | 2 |
|---|---|---|
| Control | 0.7000 | 1.0000 |
| 6.05 | 0.9000 | 0.9000 |
| 12.4 | 0.8000 | 1.0000 |
| 20.9 | 1.0000 | 0.8000 |
| 42.3 | 0.7000 | 0.6000 |
| 80 | 0.6000 | 0.5000 |
| 154 | 0.0000 | 0.2000 |

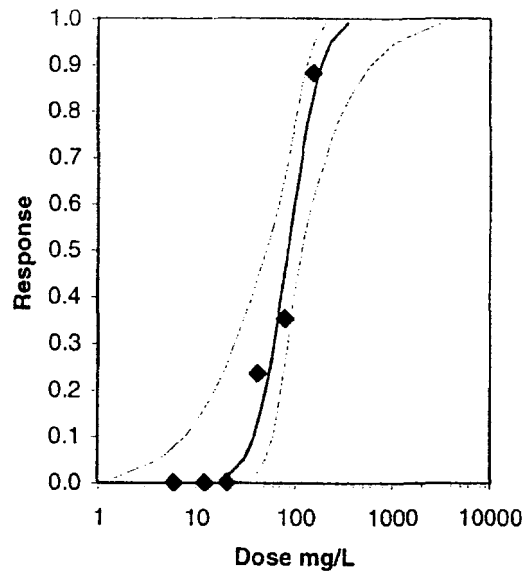
| Conc-mg/L | Mean | N-Mean | Affected | Not Affected | Total | N | Fisher's Exact P | 1-Tailed Critical | Number Resp | Total Number |
|---|---|---|---|---|---|---|---|---|---|---|
| Control | 0.8500 | 1.0000 | 3 | 17 | 20 | 2 | | | 3 | 20 |
| 6.05 | 0.9000 | 1.0588 | 2 | 18 | 20 | 2 | 0.5000 | 0.0500 | 2 | 20 |
| 12.4 | 0.9000 | 1.0588 | 2 | 18 | 20 | 2 | 0.5000 | 0.0500 | 2 | 20 |
| 20.9 | 0.9000 | 1.0588 | 2 | 18 | 20 | 2 | 0.5000 | 0.0500 | 2 | 20 |
| 42.3 | 0.6500 | 0.7647 | 7 | 13 | 20 | 2 | 0.1367 | 0.0500 | 7 | 20 |
| *80 | 0.5500 | 0.6471 | 9 | 11 | 20 | 2 | 0.0412 | 0.0500 | 9 | 20 |
| *154 | 0.1000 | 0.1176 | 18 | 2 | 20 | 2 | 0.0000 | 0.0500 | 18 | 20 |

| Hypothesis Test (1-tail, 0.05) | NOEC | LOEC | ChV | TU |
|---|---|---|---|---|
| Fisher's Exact Test | 42.3 | 80 | 58.172 | |

### Maximum Likelihood-Probit

| Parameter | Value | SE | 95% Fiducial Limits | | Control | Chi-Sq | Critical | P-value | Mu | Sigma | Iter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Slope | 3.8105 | 1.2228 | 1.4139 | 6.2072 | 0.15 | 1.6706 | 13.277 | 0.8 | 1.9312 | 0.2624 | 25 |
| Intercept | -2.3587 | 2.4171 | -7.090[illegible] | 2.3789 | | | | | | | |
| TSCR | 0.168 | 0.0436 | 0.0826 | 0.2534 | | | | | | | |

| Point | Probits | mg/L | 95% Fiducial Limits | |
|---|---|---|---|---|
| EC01 | 2.674 | 20.925 | 1.4681 | 39.609 |
| EC05 | 3.355 | 31.587 | 4.3883 | 51.767 |
| EC10 | 3.718 | 39.341 | 7.8272 | 60.009 |
| EC15 | 3.964 | 45.622 | 11.523 | 66.547 |
| EC20 | 4.158 | 51.321 | 15.615 | 72.496 |
| EC25 | 4.326 | 56.775 | 20.192 | 78.307 |
| EC40 | 4.747 | 73.228 | 37.524 | 97.812 |
| EC50 | 5.000 | 85.342 | 52.393 | 116.26 |
| EC60 | 5.253 | 99.461 | 69.259 | 145.96 |
| EC75 | 5.674 | 128.28 | 96.018 | 244.38 |
| EC80 | 5.842 | 141.92 | 105.81 | 309.77 |
| EC85 | 6.036 | 159.65 | 117.02 | 413.48 |
| EC90 | 6.282 | 185.13 | 131.3 | 601.59 |
| EC95 | 6.645 | 230.58 | 153.7 | 1062.6 |
| EC99 | 7.326 | 348.07 | 202.53 | 3150.4 |






ToxCalc v5.0

Reviewed by:

CARG002358

# 48 Hour Acute *Chironomus* Toxicity Test Data

Client: HESE
Test ID #: 6139
Date: 8-29-01

Test Species: *Chironomus tentans*
Test Material: Ammonia
Control/Dilution Water: 80:20

| Treatment ($mgNH_3/L$) | Temp | pH Old | pH New | D.O. Old | D.O. New | Conductivity (µS/cm) | # Live Animals A | # Live Animals B | Sign-Off |
|---|---|---|---|---|---|---|---|---|---|
| Control | 23.2 | | 8.24 | | 8.2 | 180.8 | 10 | 10 | Time: 1530 |
| 5 | 23.2 | | 8.14 | | 8.2 | 231 | 10 | 10 | |
| 10 | 23.2 | | 8.07 | | 8.2 | 282 | 10 | 10 | Date: 8-29-01 |
| 20 | 23.2 | | 7.97 | | 8.2 | 360 | 10 | 10 | |
| 40 | 23.2 | | 7.83 | | 8.2 | 554 | 10 | 10 | |
| 80 | 23.2 | | 7.68 | | 8.2 | 888 | 10 | 10 | ID: mc |
| 160 | 23.2 | | 7.51 | | 8.2 | 1610 | 10 | 10 | |
| Control | 23.0 | 7.97 | | 6.4 | | | 7 | 10 | Time: 1010 |
| 5 | 23.0 | 7.94 | | 6.0 | | | 9 | 10 | |
| 10 | 23.0 | 7.91 | | 6.0 | | | 9 | 10 | Date: 8-30-01 |
| 20 | 23.0 | 7.88 | | 5.9 | | | 10 | 8 | |
| 40 | 23.0 | 7.84 | | 6.3 | | | 9 | 8 | |
| 80 | 23.0 | 7.74 | | 6.3 | | | 8 | 8 | ID: mc |
| 160 | 23.0 | 7.59 | | 5.9 | | | 5 | 4 | |
| Control | 23.1 | 7.72 | | 6.9 | | 191.1 | 7 | 10 | Time: 1515 |
| 5 | 23.1 | 7.87 | | 6.6 | | 232 | 9 | 9 | |
| 10 | 23.1 | 7.91 | | 6.9 | | 282 | 8 | 10 | Date: 8-31-01 |
| 20 | 23.1 | 7.96 | | 6.8 | | 355 | 10 | 8 | |
| 40 | 23.1 | 7.77 | | 7.0 | | 541 | 7 | 6 | |
| 80 | 23.1 | 7.74 | | 6.9 | | 817 | 6 | 5 | ID: mc |
| 160 | 23.1 | 7.59 | | 6.9 | | 1603 | 0 | 2 | |

# APPENDIX G

## Test Data Sheets and Summary of Statistics for the Reference Toxicant Evaluation of the Midge, *Chironomus tentans*

## Acute Test-48 Hr Survival

| | | | | | |
|---|---|---|---|---|---|
| Start Date: | 29 Aug-01 00:00 | Test ID: | 6138 | Sample ID: | REF-Ref Toxicant |
| End Date: | 31 Aug-01 00:00 | Lab ID: | CAPER-Pacific EcoRisk | Sample Type: | CUSO-Copper sulfate |
| Sample Date: | | Protocol: | EPAFS 94-EPA Freshwater S | Test Species: | CT-Chironomus tentans |
| Comments: | | | | | |

| Conc-ug/L | 1 | 2 |
|---|---|---|
| Control | 0.9000 | 1.0000 |
| 100 | 0.9000 | 0.9000 |
| 200 | 0.8000 | 0.2000 |
| 400 | 0.5000 | 0.3000 |
| 800 | 0.2000 | 0.0000 |
| 1600 | 0.0000 | 0.2000 |
| 3200 | 0.0000 | 0.0000 |

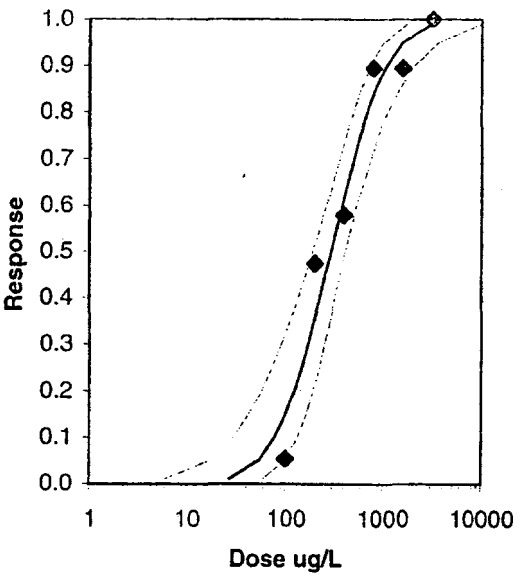
| Conc-ug/L | Mean | N-Mean | | Affected | Not Affected | Total | N | Fisher's Exact P | 1-Tailed Critical | Number Resp | Total Number |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Control | 0.9500 | 1.0000 | 1.3305 | 1 | 19 | 20 | 2 | | | 1 | 20 |
| 100 | 0.9000 | 0.9474 | 1.249 | 2 | 18 | 20 | 2 | 0.5000 | 0.0500 | 2 | 20 |
| *200 | 0.5000 | 0.5263 | 0.7854 | 10 | 10 | 20 | 2 | 0.0017 | 0.0500 | 10 | 20 |
| *400 | 0.4000 | 0.4211 | 0.6825 | 12 | 8 | 20 | 2 | 0.0002 | 0.0500 | 12 | 20 |
| *800 | 0.1000 | 0.1053 | 0.3112 | 18 | 2 | 20 | 2 | 0.0000 | 0.0500 | 18 | 20 |
| *1600 | 0.1000 | 0.1053 | 0.3112 | 18 | 2 | 20 | 2 | 0.0000 | 0.0500 | 18 | 20 |
| 3200 | 0.0000 | 0.0000 | 0.1588 | 20 | 0 | 20 | 2 | | | 20 | 20 |

| Hypothesis Test (1-tail, 0.05) | NOEC | LOEC | ChV | TU |
|---|---|---|---|---|
| Fisher's Exact Test | 100 | 200 | 141.42 | |

### Maximum Likelihood-Probit

| Parameter | Value | SE | 95% Fiducial Limits | | Control | Chi-Sq | Critical | P-value | Mu | Sigma | Iter |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Slope | 2.2583 | 0.4026 | 1.4692 | 3.0474 | 0.05 | 4.2027 | 13.277 | 0.38 | 2.4651 | 0.4428 | 6 |
| Intercept | -0.5671 | 1.0521 | -3.6292 | 1.495 | | | | | | | |
| TSCR | 0.0421 | 0.0443 | -0.0448 | 0.129 | | | | | | | |

| Point | Probits | ug/L | 95% Fiducial Limits | |
|---|---|---|---|---|
| EC01 | 2.674 | 27.228 | 5.9091 | 58.556 |
| EC05 | 3.355 | 54.549 | 16.892 | 99.747 |
| EC10 | 3.718 | 79.006 | 29.417 | 133.19 |
| EC15 | 3.964 | 101.44 | 42.624 | 162.43 |
| EC20 | 4.158 | 123.73 | 57.066 | 190.75 |
| EC25 | 4.326 | 146.71 | 73.091 | 219.58 |
| EC40 | 4.747 | 225.4 | 133.9 | 318.79 |
| EC50 | 5.000 | 291.84 | 188.87 | 407.09 |
| EC60 | 5.253 | 377.85 | 260.25 | 532.17 |
| EC75 | 5.674 | 580.51 | 416.24 | 884.97 |
| EC80 | 5.842 | 688.36 | 491.47 | 1105 |
| EC85 | 6.036 | 839.62 | 590.04 | 1447.1 |
| EC90 | 6.282 | 1078 | 733.63 | 2056.7 |
| EC95 | 6.645 | 1561.3 | 997.08 | 3519 |
| EC99 | 7.326 | 3128 | 1726.3 | 9896.8 |






ToxCalc v5.0

Reviewed by:

CARG002361

# 48 Hour Acute *Chironomus* Toxicity Test Data

Client: HESE
Test ID #: 6138
Date: 8-29-01

Test Species: *Chironomus tentans*
Test Material: Copper sulfate
Control/Dilution Water: 80:20

| Treatment (µgCu/L) | Temp | pH Old | pH New | D.O. Old | D.O. New | Conductivity (µS/cm) | # Live Animals A | # Live Animals B | Sign-Off |
|---|---|---|---|---|---|---|---|---|---|
| Control | 23.2 | | 8.24 | | 8.2 | 180.2 | 10 | 10 | Time: |
| 100 | 23.2 | | 8.28 | | 8.2 | 179.4 | 10 | 10 | 1530 |
| 200 | 23.2 | | 8.27 | | 8.2 | 179.2 | 10 | 10 | Date: |
| 400 | 23.2 | | 8.27 | | 8.2 | 179.4 | 10 | 10 | 8-29-01 |
| 800 | 23.2 | | 8.22 | | 8.2 | 179.5 | 10 | 10 | |
| 1600 | 23.2 | | 8.12 | | 8.2 | 180.1 | 10 | 10 | ID: |
| 3200 | 23.2 | | 7.85 | | 8.2 | 182.1 | 10 | 10 | mc ke |
| Control | 23.0 | 7.48 | | 5.6 | | | 10 | 10 | Time: |
| 100 | 23.0 | 7.90 | | 6.0 | | | 10 | 9 | 1000 |
| 200 | 23.0 | 8.05 | | 6.8 | | | 10 | 10 | Date: |
| 400 | 23.0 | 8.24 | | 7.6 | | | 10 | 10 | |
| 800 | 23.0 | 8.31 | | 7.9 | | | 10 | 8 | 8-30-01 |
| 1600 | 23.0 | 8.30 | | 8.0 | | | 8 | 7 | ID: |
| 3200 | 23.0 | 8.23 | | 8.0 | | | 5 | 7 | mc ke |
| Control | 23.1 | 7.78 | | 7.1 | | 191.7 | 9 | 10 | Time: |
| 100 | 23.1 | 7.78 | | 5.9 | | 192.0 | 9 | 9 | 1615 |
| 200 | 23.1 | 7.78 | | 6.0 | | 193.0 | 8 | 2 | Date: |
| 400 | 23.1 | 7.86 | | 5.3 | | 191.7 | 5 | 3 | 8-31-01 |
| 800 | 23.1 | 8.27 | | 8.0 | | 192.3 | 2 | 0 | |
| 1600 | 23.1 | 8.35 | | 8.3 | | 192.5 | 0 | 2 | ID: |
| 3200 | 23.1 | 8.34 | | 8.4 | | 192.5 | 0 | 0 | mc NN |

09/26/01 WED 17:28 FAX CAS KELSO 002

# CHAIN OF CUSTODY RECORD

K2106412

**PACIFIC ECORISK**
835 Arnold Drive, Suite 104
Martinez, CA 94553
(925)313-8080 fax: (925)313-8089

RESULTS TO:
HESE
90 Digital Dr
Novato, CA 94949
Attn: J. Gravenmier Tel: 415-884-3160

BILL TO:
Attn: Tel:

PROJECT: Cargill

| | SAMPLE IDENTIFICATION | DATE | TIME | SAMPLE MATRIX | GRAB/ COMP. | # CONTAINERS/TYPE | ANALYSES REQUESTED: Grain Size | | | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Control Sed | 8-23-01 | NA | Sed. | Grab | 1 1 plastic | ✓ | | | | | | | | |
| | | | | | | / | | | | | | | | | |
| | | | | | | / | | | | | | | | | |
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| | | | | | | / | | | | | | | | | |

METHOD OF SHIPMENT: FED X ____ UPS ____ HAND ____ OTHER ____

COMMENTS:

CODES:

| RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RECEIVED BY: (SIGNATURE) | DATE | TIME | PAGE # |
|---|---|---|---|---|---|---|
| Kathie Evans | 8-31-01 | 1200 | A Paynton CAS | 9/1/01 | 0830 | OF |

White - Return w/sample Yellow: - Keep for your records

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Pacific Eco-risk
**Project:** Cargill
**Sample Matrix:** Sediment

**Service Request:** k2106412
**Date Collected:** 8/23/01
**Date Received:** 9/1/01
**Date Analyzed:** 9/15/01

Particle Size Determination
ASTM D422M

Sample Name: Control Sed
Lab Code: K2106412-001

| | | |
|---|---|---|
| Sand Fraction: | Dry Weight (Grams) | 74.3453 |
| Sand Fraction: | Weight Recovered (Grams) | 74.2949 |
| Sand Fraction: | Percent Recovery | 99.9 |

| Description | Phi Size | Dry Weight (Grams) | Percent of Total Weight Recovered | |
|---|---|---|---|---|
| Medium Gravel | <-2 Ø | 0.0000 | 0.00 | |
| Fine Gravel | -2 Ø to -1 Ø | 0.0000 | 0.00 | Ø |
| Very Coarse Sand | -1 to 0 Ø | 0.0000 | 0.00 | |
| Coarse Sand | 0 to 1 Ø | 0.7341 | 0.97 | |
| Medium Sand | 1 to 2 Ø | 34.4776 | 45.7 | 98.36 |
| Fine Sand | 2 to 3 Ø | 38.8042 | 51.4 | |
| Very Fine Sand | 3 to 4 Ø | 0.2160 | 0.29 | |
| 62.5 µm | 4 Ø | 0.0800 | 0.11 | |
| 31.3 µm | 5 Ø | 0.0600 | 0.08 | |
| 15.6 µm | 6 Ø | -0.0350 | 0.00 | 0.21 |
| 7.8 µm | 7 Ø | 0.0150 | 0.02 | |
| 3.9 µm | 8 Ø | 0.0500 | 0.07 | |
| 1.95 µm | 9 Ø | 0.0500 | 0.07 | 0.20 |
| 0.98 µm | > 10 Ø | 0.0450 | 0.06 | |
| | | 74.4969 | 98.8 | |

Approved By: Mike Smith Date: 9/25/01

06412WET.MF2 \9/25/01

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | Pacific Eco-risk | **Service Request:** | k2106412 |
| **Project:** | Cargill | **Date Collected:** | 8/23/01 |
| **Sample Matrix:** | Sediment | **Date Received:** | 9/1/01 |
| | | **Date Analyzed:** | 9/15/01 |

Particle Size Determination
ASTM D422M

Sample Name: Control Sed
Lab Code: K2106412-001DUP

| | | |
|---|---|---|
| Sand Fraction: | Dry Weight (Grams) | 75.7581 |
| Sand Fraction: | Weight Recovered (Grams) | 75.7190 |
| Sand Fraction: | Percent Recovery | 99.9 |

| Description | Phi Size | Dry Weight (Grams) | Percent of Total Weight Recovered | |
|---|---|---|---|---|
| Medium Gravel | <-2 Ø | 0.0000 | 0.00 | 0.03 |
| Fine Gravel | -2 Ø to -1 Ø | 0.0192 | 0.03 | |
| Very Coarse Sand | -1 to 0 Ø | 0.0000 | 0.00 | |
| Coarse Sand | 0 to 1 Ø | 0.6167 | 0.82 | |
| Medium Sand | 1 to 2 Ø | 29.0154 | 38.5 | 100.34 |
| Fine Sand | 2 to 3 Ø | 45.7555 | 60.7 | |
| Very Fine Sand | 3 to 4 Ø | 0.2380 | 0.32 | |
| 62.5 µm | 4 Ø | -0.0500 | 0.00 | |
| 31.3 µm | 5 Ø | 0.0500 | 0.07 | 0.07 |
| 15.6 µm | 6 Ø | -0.0450 | 0.00 | |
| 7.8 µm | 7 Ø | -0.0800 | 0.00 | |
| 3.9 µm | 8 Ø | 0.1650 | 0.22 | |
| 1.95 µm | 9 Ø | 0.0550 | 0.07 | 1.52 |
| 0.98 µm | > 10 Ø | 0.0450 | 0.06 | |
| | | 75.7848 | 101 | |

Approved By: Mike Smith Date: 9/25/01

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# Results of Sediment Sampling and Analysis
# Cargill Irving Elevator Terminal
# Portland, Oregon

Prepared for

**Cargill, Incorporated**
P.O. Box 5624
Minneapolis, Minnesota 55440-5624

Harding ESE Project No. 52852.004


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August 1, 2001


Harding ESE
A MACTEC COMPANY

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**Results of Sediment Sampling and Analysis**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

Harding ESE Project No. 52852.004

This document was prepared by Harding ESE, A MACTEC Company (Harding ESE), at the direction of the Cargill, Incorporated for the sole use of the Cargill Irving Elevator Terminal and the appropriate regulatory agencies, the only intended beneficiaries of this work. No other party should rely on the information contained herein without the prior written consent of the Cargill, Incorporated and Harding ESE. This report and the interpretations, conclusions, and recommendations contained within are based in part on information presented in other documents that are cited in the text and listed in the references. Therefore, this report is subject to the limitations and qualifications presented in the referenced documents.



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## DISTRIBUTION



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# 1.0 INTRODUCTION

Cargill, Incorporated (Cargill) is responsible for conducting maintenance dredging at its Irving Elevator Terminal (Terminal) in Portland, Oregon (Figure 1) to facilitate year-round docking operations. Cargill expects to dredge up to 5,000 cubic yards ($yd^3$) of sediment (to the permitted dredge depth of –40 feet mean lower low water [MLLW]) from the adjacent Williamette River in Fall 2001. This area is considered one dredged material management unit (DMMU) and as such can be characterized by a single sediment analysis. Before these sediments can be dredged and disposed of at a pre-selected disposal site, they must meet established standards. To evaluate whether the material proposed for dredging and disposal meets these standards, representative samples of the material must be sampled and tested.

Following testing, the dredged material excavated from Cargill must be disposed of at an appropriate site. A designated disposal area is located at Ross Island. In order to dispose of dredged material at Ross Island, the material must be deemed suitable for unconfined aquatic disposal (SUAD). If the material is not deemed suitable for unconfined aquatic disposal, alternate disposal options are evaluated.

This report presents methods and results of sampling and analysis of the sediments within the Terminal dredging area (Figure 2) as well as an evaluation of the suitability of the sediments for disposal.

## 1.1 Background

The Williamette River is within the Lower Columbia River Management Area (LCRMA) and as such, dredged material management for the Terminal area falls within the guidance of the Dredged Material Evaluation Framework (DMEF; *USACE, 1998*). Cargill has a permit from the USACE, Portland District (Permit No. 95-1063) and Oregon Division of State Lands (DSL; Permit No. RP 3158) to conduct maintenance dredging of up to 8,000 $yd^3$ from the Terminal area.

Plate 2 shows the area covered by Cargill's maintenance dredging permits. The permitted dredge depth for the facility is –38 feet MLLW with a 2 foot overdredge allowance. The Terminal is an isolated dredge



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area that is subject to a high current from the Williamette River. The current produces an eddy near the South end of the Terminal and is the location of the majority of the accumulated sediment above dredge depth. Nearby land use is surrounded by the City of Portland, with a varied urban usage. Just to the North of the Terminal site are a few offices and the Glazer Concrete Plant, while to the immediate South are railroad tracks. The Terminal receives variable, moderate vessel traffic in support of Cargill's grain transfer operations. There is a potential for hydraulic fluid releases and oily bilge water discharges associated with these activities. However, no significant spills have occurred at the facility since Cargill has purchased the property. At the North end of the Terminal exists a large (eight foot diameter) City of Portland Storm drain.

Previous results for the Terminal dredge area are not directly available. Cargill purchased the Terminal area from Bunge in 1995 and has had only slight sediment accumulation to date. As a result, no maintenance dredging has occurred at the Terminal during the Cargill operations. The last known dredging episode at the site occurred 9-11 years ago, during the Bunge ownership. No data is available from that dredge episode. Recent testing for the adjacent Columbia River Navigation Channel in 1998 included one sample from the Terminal site area (*Hart Crowser, 1999*). Two sediment cores were collected at this location and were composited into two depth integrated (0 to 3 feet and 3 to 5 feet) samples. The top sample yielded six polycyclic aromatic hydrocarbons (PAHs) that were above LCRMA Maximum Levels (MLs) and seven PAHs that were detected above the LCRMA Screening Levels (SLs) but below the corresponding ML. The detected concentration of total polychlorinated biphenyls (PCBs) also exceeded the LCRMA ML. The lower sample results were all below the LCRMS SLs except for total PCBs. Significant scouring of the area occurred following this sampling event, so these previous test results may not be indicative of current conditions.

The Terminal area proposed for testing and dredging consists of one sample site, with a total of 4 sediment core samples collected and composited into one sample (Figure 2). As per the direction of the DMMT, each of the individual core samples was also analyzed for the full suite of tests. Square footage,



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depths, and proposed dredging volumes associated with the Terminal dredge area are presented in Table 1. Sampling and testing methods followed those presented in the Sampling and Analysis Plan (SAP; *Harding ESE, 2001a*) and a letter dated June 21, 2001 (*Harding ESE, 2001b*). The sampling and testing methods were approved by the Dredged Material Management Team (DMMT).

## 1.2 Approach

The study was initiated by sampling the Terminal area (Plate 2) to the proposed dredge depth (including permitted overdredge) plus an additional 2 feet of material below the dredging prism (New Surface Material, NSM) for each sample location via a Vibracore device. The dredge prism material was isolated from the NSM for each of the four cores and a single composite (proportional to core length) was created for the area. A suite of chemical and physical tests were conducted on the whole core composite sample for the dredge prism, as specified in the Sampling and Analysis (*Harding ESE, 2001a*). The dredge prism material from each of the individual core samples was also analyzed for the same suite of chemical and physical tests as per the June 21, 2001 letter (*Harding ESE, 2001b*). This report presents a detailed description of the sampling and testing conducted for the Terminal sediments, including:

- A figure showing the proposed dredging site and the sample locations within the site (Figures 1 and 2)
- A narrative description of sampling procedures (Section 2.1)
- A coring log (Appendix A; Table 2)
- Chain-of-custody forms (Appendix B)
- Testing methods and protocols (Sections 2.2 through 2.3)
- A discussion of quality assurance/quality control (Section 2.3; Section 3.2)
- A summary of the test results (Section 3.0; Table 3; Appendix C)



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- Conclusions and recommendations regarding the suitability of dredged material for disposal (Section 4.0)
- References (Section 5.0).



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# 2.0 METHODS

The following sections summarize the methods used to conduct the sediment sampling, as well as the chemical and physical analyses. Sediment sampling and analysis methods followed guidelines set forth by the USACE and EPA (*USACE, 1998; EPA and USACE, 1998*) and those specified in the SAP (*Harding ESE, 2001a*) and June 21, 2001 letter (*Harding ESE, 2001b*), except where noted.

## 2.1 Sampling Methods

Sediment sampling at the Terminal was conducted by Harding ESE on June 29, 2001. Appendix A details the exact date and times each core sample was collected. One composite sample (composited from four individual cores) and each of the individual cores were tested. The Terminal samples were collected using a Vibracore.

Sample locations were determined in the field by line of sight determinations from those proposed in the SAP (*Harding ESE, 2001a*). The actual sample locations were recorded using a differential Global Positioning System (GPS) in the field and are detailed as part of the coring log (Table 2). The GPS unit (Furuno GPS Plotter GP-1810) antenna was secured to a fixed point on the crane of the sampling vessel for the Terminal samples, directly over the vibracore sampling device. The deviations observed between the T1 and T4 proposed and actual sample locations (Figure 2) are a result of finding a scoured area at the proposed location which was already below the permitted dredge depth. Each sample location was still within the dredge area and all the samples collected are considered representative. The Terminal proposed sampling depths were 42 feet below MLLW corresponding to the 38 feet proposed dredge depth plus a two-foot overdredge plus two additional feet of NSM. The proposed depth was only achieved at one (sample T2) of the four locations. However, three of the four locations did exceed the –40 feet MLLW that corresponds to the proposed dredge depth plus overdredge. One individual core sample failed to achieve the entire proposed dredge depth plus overdredge due to refusal (sample T4). All four



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locations hit a sand refusal, which stopped the vibracore penetration. These deviations are not considered significant and the dredge area is determined to be adequately sampled.

The following information was recorded on core log sheets and/or chain-of-custody records for each core sample (copies of the original core logs and chain of custody forms are provided in Appendixes A and B, respectively):

- Date and time of collection
- Sample identification
- Sample location (latitude and longitude) (coring log only)
- Water depth, tide height (coring log only)
- Core penetration and core retrieval amount, portion of core used (feet) (coring log only)
- Description of core (color, odor, stratification, particle type/size) (coring log only)
- Identification of sampler and recorder
- Number and size of sample containers
- Type of samples (e.g. composite)
- Analyses to be performed (chain-of-custody record only).

Table 2 summarizes the sample locations and depths and provides relevant observations. All necessary precautions were taken to prevent contamination of the sediment core samples.

The 4 individual cores (designated T1, T2, T3, and T4) were separated into dredge prism material and NSM. The dredge prism material was subsequently composited (proportional to each cores length) into one sample, with the designation Composite, at a decontaminated location of the Terminal site in



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Portland, Oregon. At the direction of the DMMT, each of the core sample dredge prism material was also sampled. Subsamples of each of the four core samples and the one composite sample were placed via decontaminated stainless steel spoons into pre-cleaned glass jars, sealed, placed in a cooler, and shipped (on ice) under chain-of-custody to Columbia Analytical Services (CAS) in Kelso, Washington for chemical and physical analysis. The volatiles and sulfides subsamples from each core were taken immediately upon extrusion from the core tubes to minimize any loss. The composite sample volatiles and sulfide subsamples were created by taking a second subsample from each freshly extruded core and subsequently mixing within a sealed sample container.

Archives for possible future chemical and/or bioassay analysis (stored at either 4 or -20°C) were taken from each individual core (both dredge prism material and NSM [except for T4]) and the composite sample. All samples were stored at 4°C (or -20°C) at all times until used or archived. Proper chain-of-custody procedures (Appendix B) were followed at all times and at all stages of the collection and analysis process. All the composite and individual core testing was initiated within two weeks of sample collection.

## 2.2 Chemical and Physical Analysis of Sediments

Each of the composite samples was tested for the list of chemicals shown in Table 3. The methods and detection limits specified for the analyses correspond to those specified in DMEF (*USACE, 1998*) and the SAP (*Harding ESE, 2001a*). The chemical and physical analyses of the composite and individual core samples were conducted by CAS. The analysis report is provided in Appendix C. CAS is an Environmental Laboratory Accreditation Program (ELAP) certified laboratory (ELAP Certificate #2286). All analytical results were reported in dry weight, except for total solids which was reported in wet weight.

The sediment samples were analyzed for total solids by EPA Test Method 160.3 and total volatile solids by EPA Test Method 160.4. The sulfide and total organic carbon (TOC) analysis were run by the Puget



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Sound Estuary Program method. Ammonia (as nitrogen) was measured following the Plumb methodology. Grain size determination of particle size was done following ASTM Test Method D422 (with hydrometer). The analysis for priority pollutant metals, except for mercury, utilized Inductively Couple Plasma/Mass Spectrometry (ICP/MS) techniques (EPA Test Method 200.8). The analysis of mercury was performed using an Atomic Absorption Spectrophotometric (AA) technique (EPA Test Method 7471). Organotin compounds were analyzed using GC-FPD (Krone Method). Due to a lack of sediment porewater, only the composite sample was analyzed for organotin compounds in the interstitial water. However, organotin analysis was performed on the whole sediment for the composite and individual core samples. PAHs, phthalates, phenols, and other miscellaneous semi-volatile compounds were analyzed for by GC using EPA Test Methods 8270C SIM. Chlorinated hydrocarbons were analyzed by EPA Test Method 8260B. Organochlorine pesticides were done by EPA Test Method 8081A. Polychlorinated Biphenyls (PCBs) were done by EPA Test Method 8082.

## 2.3 Quality Assurance Procedures

Quality Assurance/Quality Control (QA/QC) was performed by subcontractors (field samplers and laboratories) for each method or analysis with specificity for every method and analyte requested and/or representative analytes listed in the test method's QA/QC. QA/QC requirements listed in the SAP were followed. QA/QC data is reported for all samples submitted and all analyses as appropriate (Appendix C).

Harding ESE conducted a thorough data validation on all results received. Results of procedural blanks, reagent blanks, and standard reference materials were reviewed and used to validate contaminant concentrations observed in the sediments. The results of the data validation/review are presented in Section 3.2.



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# 3.0 RESULTS AND DISCUSSION

The sections below present the results of the chemical and physical analyses.

## 3.1 Chemical Testing

The results of the chemical analyses for the Terminal samples are presented in Table 3. The original laboratory reports are included in Appendix C. The results of the chemical analyses are summarized below and, where applicable, compared to the DMEF (*USACE, 1998*) sediment screening values.

### *Conventionals*

The Terminal composite sample generated a total solids content of 72.0 percent; total volatile solids were 3.03 percent; total organic carbon content was 0.67 percent; total sulfide was 2.3 mg/kg; and the ammonia level was 108 mg/kg.

The Terminal individual core samples generated total solids contents ranging from 68.6 to 76.9 percent; total volatile solids ranged from 2.68 to 3.96 percent; total organic carbon content ranged from 0.40 to 0.82 percent; total sulfide ranged from 0.9 to 3.0 mg/kg; and the ammonia level ranged from 65 to 152 mg/kg.

### *Grain Size*

The Terminal composite sample contained 75.5 percent sand. The Terminal core samples contained 86.9, 69.0, 72.9, and 58.2 percent sand for samples T1, T2, T3, and T4, respectively.

### *Metals*

Metals were detected in the Terminal composite sample, but all concentrations were below the DMEF (*USACE, 1998*) screening levels. Metals were also detected in all of the core samples at the site, but all concentrations were below the DMEF screening levels.

### *Organotins*

The composite sample interstitial water tributyltin (TBT) concentration was 0.058 µg/kg, which is below the DMEF (*USACE, 1998*) screening level. Total TBT was detected in the composite sample at a concentration of 210 µg/kg.

No interstitial water TBT values are available for the individual core samples because the samples had a high sand content making collection of porewater from the individual core sample available volume unfeasible. The individual core total TBT concentrations ranged from 12 to 220 µg/kg. Based on the similarities to the whole core composite (grain size, TOC, TBT), it is likely that the individual core samples would have porewater concentrations similar to that for the whole core composite.

### *Polycyclic Aromatic Hydrocarbons (PAH)*

The composite sample Low Molecular Weight (LMW) PAH concentration for the Terminal was 181 µg/kg, while the High Molecular Weight (HMW) PAH concentration was 612 µg/kg. All composite sample PAH concentrations were below the DMEF (*USACE, 1998*) screening levels.

The individual core sample LMW PAH concentrations ranged from 147 to 351 µg/kg, while the HMW PAH concentrations were between 441 and 3,457 µg/kg. All composite sample PAH concentrations were below the DMEF (*USACE, 1998*) screening levels.

### *Chlorinated Hydrocarbons*

No chlorinated hydrocarbons were detected in the Terminal composite sample or the individual core samples.

### *Phthalates*

Only dimethyl phthalate was detected in the Terminal composite sample (5.4 µg/kg), and this concentration was below the DMEF (*USACE, 1998*) screening level. Some phthalates (di-n-butyl phthalate, butyl benzyl phthalate, and bis(2-ethylhexyl)phthalate) were also detected in the core samples at the site, but all concentrations were below the DMEF (*USACE, 1998*) screening levels.



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### *Phenols*

Only phenol and 4-methylphenol were detected in the Terminal composite sample (44 and 50 µg/kg respectively), and these concentrations were both below the DMEF (*USACE, 1998*) screening levels. Some phenols (phenol, 4-methylphenol, and pentachlorophenol) were also detected in the core samples at the site but all concentrations were below the DMEF (*USACE, 1998*) screening levels.

### *Miscellaneous Extractables*

Only benzyl alcohol, benzoic acid, and dibenzofuran were detected in the Terminal composite sample (5.7, 110, and 9.2 µg/kg respectively), and these concentrations were all below the DMEF (*USACE, 1998*) screening levels. Some miscellaneous extractables (benzyl alcohol, benzoic acid, and dibenzofuran) were also detected in the core samples at the site, but all concentrations were below the DMEF (*USACE, 1998*) screening levels.

### *Organochlorine Pesticides*

No organochlorine pesticides were detected in the Terminal composite sample. Some organochlorine pesticides, specifically DDT, were detected in the T3 core sample (2.42 µg/kg of total DDT), but these concentrations were below the DMEF (*USACE, 1998*) screening levels. No organochlorine pesticides were detected in other the Terminal core samples.

### *Polychlorinated Biphenyls (PCBs)*

PCBs were detected in the Terminal composite sample (48 µg/kg of total PCBs), and this concentration is below the DMEF (*USACE, 1998*) screening level. PCBs were also detected in the core samples at the site, ranging from 13 to 130 µg/kg, but all concentrations did not exceed the DMEF (*USACE, 1998*) screening level.

## 3.2 Results of QA/QC Review

The sections below provide a summary of the QA/QC information. The laboratory reports included in Appendix C provide more detailed QA/QC information.

A data review was performed on sediment samples from the Terminal samples from laboratory reports submitted by CAS. The data was evaluated using the criteria specified in the SAP (*Harding ESE, 2001a*) and CAS internal quality assurance program. All conventional parameters were analyzed using the test methods developed for sediment samples as cited in Table 3 of the SAP, but were evaluated using EPA guidelines for data validation. The data was evaluated to determine that analytical holding times were met, chain of custody forms were filled out properly, required reporting limits were achieved, and that method blank, surrogates, laboratory control sample (LCS), matrix spike/matrix spike duplicate (MS/MSD) and laboratory duplicate results were within laboratory established acceptance limits. Any parameters that were determined to be outside of acceptance criteria were further evaluated to assess the impact, if any, to the data presented.

All QC parameters were determined to be within acceptance criteria with the following exceptions:

- Grain Size by ASTM Test Method D422: The analysis was not run in triplicate for the batch of samples. The duplicate analysis of the composite sample however, was very similar (sand content between the two runs was 75.5 and 73.9% respectively), indicating that no qualification of the results is required.

- Metals by EPA Test Method 200.8: The method blank associated with all samples from the sampling event contained antimony at 0.04 mg/kg and chromium at 0.14 mg/kg. The reported values for antimony in all the samples (composite, T1, T2, T3, and T4) should be considered to likely have laboratory contamination and are non-detected with reporting limits raised to 0.11 mg/kg, 0.12 mg/kg, 0.09 mg/kg, 0.08 mg/kg, and 0.15 mg/kg respectively. The detected values reported for chromium in all five samples were greater than 5 times the amount detected in the method blank and, therefore, are not affected by the blank contamination. The values reported for chromium in these samples do not require qualification. The spike recovery for antimony in the LCS associated with all samples from the sampling event was high, outside of QC limits. As previously discussed, antimony will be

considered non-detect in all samples at raised reporting limits due to method blank contamination. As a result, the high recovery in the LCS has no effect on the sample results. Similarly, the MS performed on the composite sample, had a reported recovery for antimony below acceptance limits, but does not have a significant effect on the qualified, non-detect values reported in the samples. A duplicate analysis was performed by the laboratory on the composite sample. Although sample results are not qualified based on duplicate results, the relative percent difference (RPD) between the primary and duplicate analysis provides an indication of the precision of the analysis, or possible non-homogeneity of the sample provided. The RPD between the primary and duplicate analysis for all metals was within the <50% acceptance criteria, with the exception of silver, which had a reported RPD of 108%.

- Organotins by GC-FPD (Krone Test Method): [redacted]. The reporting limit used by the laboratory for tri-n-butyltin in all samples was significantly higher than the 0.01 µg/kg reporting limit required by the SAP. All samples had detected results for tri-n-butyltin. As a result, the elevated reporting limits used do not affect the usability of the data. The surrogate recovery for sample T3 was less than half the lower acceptance limit of 33%. This sample was re-analyzed with similar results, with 5% and 6% recoveries reported, respectively. Due to this severe QC exceedance, the results reported for all butyltins in this sample should be considered estimated, with a low bias, and possible false negatives reported. The composite was used for the MS/MSD analysis. Tri-n-butyltin was reported within acceptance limits in the MS, but was reported as very high, outside of acceptance limits in the MSD at 952%. Due to the relatively high amount of tri-n-butyltin present in the composite sample as compared to the spike amount added, the recovery reported in both the MS and MSD is likely inaccurate. Results reported for tri-n-butyltin in all samples from the sampling event should be considered estimated, with no directional bias. The composite, T1, T2, and T4 samples were analyzed and reported twice for butyltins, due to high values obtained for tri-n-butyltin in the original analysis. The reported values for tri-n-butyltin in the original analytical results were

above the calibration range of the instrument, and required dilution. The values reported from the second analysis should be used to assess tri-n-butyltin results, while values from the first analysis should be used for all other butyltins.

- Semi-volatile compounds by EPA Test Method 8270C using Selective Ion Monitoring (SIM): Still need data. Bis(2-ethylhexyl)phthalate had an elevated detection limit (180 µg/kg) above the SAP target of 20 µg/kg. However, the 8,300 µg/kg SL for bis(2-ethylhexyl)phthalate indicates that this will have no effect on the usefulness of the data for evaluation. An elevated detection limit was also observed for 2,4-dimethylphenol (as high as 23 µg/kg) above the SAP target of 6 µg/kg. The 29 µg/kg SL for 2,4-dimethylphenol indicates that this will have no effect on the usefulness of the data for evaluation.

- Chlorinated Hydrocarbons by EPA Test Method 8260B: One out of three surrogates in samples T2 and T4 were reported high, outside of acceptance limits. The samples were non-detect for all compounds, and no qualification of the data is required.

- Organochlorine Pesticides by EPA Test Method 8081A: The MSD recovery for dieldrin in the composite sample, was outside of acceptance limits at 2%. The non-detect results reported for both the composite and discrete samples should be considered estimated, with the possibility that false negatives may have been reported. The RPD between the primary and confirmation analyses for 4,4-DDD in sample T3 was greater than the 40% acceptance limit. The value reported for 4,4-DDD in this sample should be considered an estimate, with no directional bias. The value reported for this compound was below the method reporting limit (MRL), but above the method detection limit (MDL) and was qualified as estimated by the laboratory.

- Polychlorinated Biphenyls by EPA Test Method 8082: The RPD between the primary and confirmation analyses for Aroclor 1260 in sample T3 was greater than the 40% acceptance limit. The value reported for Aroclor 1260 in this sample should be considered an estimate, with no directional

bias. The value reported for this compound was below the MRL, but above the MDL and was qualified as estimated by the laboratory.

The overall assessment of the chemical and physical data reported for samples from the Terminal, with the few exceptions previously discussed, indicates that the data presented meet the project requirements and are considered useable for the intended purpose.



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# 4.0 CONCLUSIONS

The findings of the sediment sampling and analyses are summarized and recommendations are presented below.

## 4.1 Summary of Findings

The results of the analyses for the Terminal can be summarized as follows:

- Sediment sampling and analyses were generally in accordance with appropriate regulatory guidelines, the approved SAP (*Harding ESE, 2001a*), and the June 21, 2001 letter (*Harding ESE, 2001b*).
- All chemical, and physical analyses met acceptable detection limits, test acceptability criteria, and quality assurance requirements.
- All composite sample chemical concentrations were below the DMEF (*USACE, 1998*) screening levels. The screening level for each chemical identifies chemical concentrations at or below which there is no reason-to-believe that dredged material disposal would result in unacceptable adverse effects due to toxicity measured by sediment bioassays. Sediments containing chemical concentrations at or below all SL values are judged to be suitable for aquatic disposal without the need for biological testing. Consequently, no biological testing was initiated for the Terminal samples.
- Based on the chemical and physical data from the dredging prism samples, it is unlikely that the proposed new surface material will have high concentrations of chemicals of concern.

## 4.2 Recommendations

Based on the results of the chemical and physical analyses, sediments from the Terminal area DMMU appear to be suitable for unconfined aquatic disposal. It is proposed that these sediments be disposed of at the Ross Island disposal site.



CARG002385

## 5.0 REFERENCES

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## DISTRIBUTION

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**Cargill Irving Elevator Terminal**
**Portland, Oregon**

August 1, 2001

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# TABLES

**FIGURES**

# APPENDIX A

# CORE LOGS

# APPENDIX B

# CHAIN OF CUSTODY FORMS

# APPENDIX C

# CHEMICAL AND PHYSICAL ANALYSIS REPORT

**Table 1. Estimated Areas, Volumes, and Depths**
**Sediment Investigation**
**Cargill Irving Elevator Terminal**
**Portland, Oregon**

| Site | Site Area ($ft^2$) | Range of Current Depths (feet below MLLW) [a] | Proposed Dredge Depth (+ overdredge) in feet below MLLW | Achieved Depth (feet below MLLW) [b] | Anticipated Dredging Volume ($yd^3$) |
|---|---|---|---|---|---|
| Terminal | 84,000 | 36-40 | 38 + 2 | 38-40 | 5,000 |
| TOTAL | 84,000 | | | | 5,000 |

| | |
|---|---|
| $ft^2$ | Square feet. |
| MLLW | Mean low lower water. |
| $yd^3$ | Cubic yards. |

[a] Based on a bathymetric survey conducted June 23, 2001.

[b] See Table 2. New Surface Material not included.



CARG002393

Irving 0013.PDF

FEDERAL COMMUNICATIONS COMMISSION

# ASSIGNMENT OF AUTHORIZATION

Approved by OMB
3060-0127
Expires 5/31/94
See below for public burden estimate

*(To be used in the Private Radio Services indicated below, where the present licensee's activities are intended to be continued under new ownership.)*

1. The present licensee completes the information requested below.
2. This form is then attached to the proper application form (see below) which has been completed by the party requesting the station license, the assignee.
3. If more than one authorization is involved, use a separate Assignment of Authorization and a separate application form for each requested authorization.

**INVOLUNTARY ASSIGNMENT**

In the event of the assignor's death or legal disability, it is requested that, in lieu of the declaration appearing below, you submit a copy of the court order or other documentary proof that you are the person legally qualified to succeed to the assignor's business assets, or a statement explaining the circumstances under which control must be involuntarily transferred to the assignee, accompanied by the appropriate application form (see below) for assignment of each such authorization.

| RADIO SERVICE APPLICATION FORMS | COMMISSION RULES |
|---|---|
| FCC Form 574 - Application for Private Land Mobile and General Mobile Radio Services | 90.119 |
| FCC Form 402 - Application for Station Authorization in the Private Operational Fixed Microwave Radio Service | 94.27 |
| FCC Form 406 - Application for Ground Station Authorization in the Aviation Services | 87.21 |
| FCC Form 503 - Application for Land Radio Station License in the Maritime Services | 80.19 |

| CURRENT AUTHORIZATION | |
|---|---|
| Radio Service<br>Business (IB) | Licensee Name and Station Location<br>Bunge Corporation |
| Call Sign WQX399 | 800 N.E. River Street<br>Portland, Oregon |

CERTIFICATION

I hereby propose the assignment of all my right, title and interest in the authorization described above. Such assignment to Cargill, Incorporated shall not be completed nor become effective until authorization has been issued by the Commission in the name of the assignee. My authorization will be submitted to the Commission for cancellation upon completion of assignment.

| Name of Assignor (include title, if applicable) | Assignor's Signature and Date |
|---|---|
| | |

Notice to Individuals Required by The Privacy Act of 1974 and the Paperwork Reduction Act of 1980

Sections 301, 303 and 308 of the Communications Act of 1934, as amended, (licensing powers) authorize the FCC to request the information on this application. The purpose of the information is to determine your eligibility for a license. The information will be used by FCC staff to evaluate the application, to determine station location, to provide information for enforcement and rule making proceedings and to maintain a current inventory of licensees. No license can be granted unless all information requested is provided. Your response is required to obtain this benefit.

Public burden for this collection of information is estimated to be five minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to the Federal Communications Commission, Information and Records Management Branch, Room 416, Washington, DC 20554, and to the Office of Management and Budget, Paperwork Reduction Project, (3060-0127), Washington, DC 20503.

FCC 1046
JANUARY 1992

**FCC 600**
**Main Form**

**FEDERAL COMMUNICATIONS COMMISSION**

Approved by OMB 3060-0623
Expires 10/31/97
Est. Avg. Burden Hours Per Response: 4 Hrs.

**FCC Use Only**
(File Number)

FEE Use Only

# Application for Mobile Radio Service Authorization
or Rural Radiotelephone Service Authorization

## FILING FEE

| (a) Fee Type Code | (b) Fee Multiple | (c) Fee Due for Fee Type Code in (a) | (d) Total Amount Due | FEE Use Only |
|---|---|---|---|---|
| PALM | 1 | $ 45 | $ 45 | |

## APPLICANT

| | |
|---|---|
| 1. Legal Name of Applicant<br>Cargill, Incorporated | 2. Voice Telephone Number |
| 3. Assumed Name Used for Doing Business (if any) | 4. Fax Telephone Number |
| 5. Mailing Street Address or P.O. Box 15407 McGinty Road West<br>ATTENTION: | |
| 6. City<br>Wayzata | 7. State MN / 8. Zip Code 55391 |

| | |
|---|---|
| 9. Name of Contact Representative (if other than applicant)<br>Robert H. Schwaninger, Jr. | 10. Voice Telephone Number<br>( 202 ) 223-8837 |
| 11. Firm or Company Name<br>Brown and Schwaninger | 12. Fax Telephone Number<br>( 202 ) 659-0071 |
| 13. Mailing Street Address or P.O. Box<br>1835 K Street, N.W. Suite 650 | |
| 14. City<br>Washington | 15. State DC / 16. Zip Code 20006 |

## CLASSIFICATION OF FILING

17. This filing is a (an) ( N ) New Application Amendment to a pending application.

18. Does the applicant believe that this filing should be classified as **MINOR** under 47 U.S.C. § 309? ( D ) Yes No Does not apply

19. If not minor under 47 U.S.C. § 309, classification for purposes of competitive bidding: ( ) Initial Modification Renewal

| | |
|---|---|
| 20. If this filing is in reference to an existing station:<br>**Call sign of existing station:** WQX399 | 21. If this filing is an amendment to a pending application:<br>**File number of pending application:** **Date Filed:** |

## NATURE OF SERVICE

22. This filing is for authorization to provide or use the following type(s) of radio service:
( P ) Commercial mobile Private mobile Both commercial and private mobile Fixed

| | | |
|---|---|---|
| 23. Users are or will be: ( I ) Public subscribers Eligibles Internal | | 24. Status: ( N ) Profit Not for profit |
| 25. Interconnected service? ( N ) Yes No | 26. Radio Service code: ( IB ) | 27. Type of operation code: ( ) |



CARG002396

## ENVIRONMENTAL POLICY

| | | |
|---|---|---|
| 28. Would a Commission grant of any proposal in this application or amendment have a significant environmental effect as defined by 47 C.F.R. 1.1307?<br>* If "yes", attach environmental assessment as required by 47 C.F.R. 1.1308 and 47 C.F.R. 1.1311 | (N) | Yes No |

## ALIEN OWNERSHIP

| | | |
|---|---|---|
| 29. Is the applicant a foreign government or the representative of any foreign government? | (N) | Yes No |
| 30. Is the applicant an alien or the representative of an alien? | (N) | Yes No |
| 31. Is the applicant a corporation organized under the laws of any foreign government? | (N) | Yes No |
| 32. Is the applicant a corporation of which any officer or director is an alien or of which more than one-fifth of the of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? | (N) | Yes No |
| 33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which any officer or more than one-fourth of the directors are aliens, or of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?<br>* If "yes", attach exhibit explaining nature and extent of alien or foreign ownership or control. | (N) | Yes No |

## BASIC QUALIFICATIONS

| | | |
|---|---|---|
| 34. Has the applicant or any party to this application or amendment had any FCC authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, construction permit denied by the Commission?<br>* If "yes", attach exhibit explaining circumstances. | (N) | Yes No |
| 35. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? | (N) | Yes No |
| 36. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? | (N) | Yes No |
| 37. Is the applicant or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? | (N) | Yes No |
| 38. Does the undersigned certify (by responding "Y" to this question), that neither the applicant nor any other party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance?<br>* See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes. | (Y) | Yes No |

## CERTIFICATION

The APPLICANT waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually, and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

39. Applicant is a (an) (C) Individual Unincorporated Association Partnership Corporation Governmental Entity

| | |
|---|---|
| 40. Typed Name of Person Signing | 41. Title |
| 42. Signature | 43. Date |

**WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).**



Cargill, Incorporated WQX399

FCC 600

FEDERAL COMMUNICATIONS COMMISSION

# SCHEDULE D
## Administrative Data
(all services except those for which Schedule A is required)

Approved by OMB 3060-0623 Expires 10/31/97 Est. Avg. Burden Hours Per Response: 4 Hrs.

FCC Use Only

| Licensee Name | Radio Service | Call Sign or Station Location (City, State) |
|---|---|---|
| Cargill, Incorporated | IB | WQX399 |

## PURPOSE OF FILING

D1. The purpose of this filing is to:

( ) N request a new station license.
( ) M modify an existing licensed station(s).
( ) R renew an existing licensed station.
( ) X reinstate an expired call sign.
( A ) A assign an existing license.

D2. If system licensing, list call signs of stations to be combined. (First call sign will be retained.)

D3. Specify proposed modifications, if any:

## ASSOCIATED CALL SIGNS

D4. Call signs:

## RADIO SYSTEM OPERATION POINT OF CONTACT

| D5. Street Address, City, State | D6. Voice Telephone Number |
|---|---|
| , | |

## ASSOCIATED BROADCAST STATION

| D7. Call Sign | D8. City | D9. State |
|---|---|---|
| | | |

## MARKET AREA

D10. Market Area / Number

## PAGING OPERATIONS

D11. Number of Paging Receivers

## ELIGIBILITY

| D12. Describe Activity | D13. Rule Section |
|---|---|
| Applicant is engaged in a commercial activity, specifically, | 90.75(a)(1) |

FOR FREQUENCY COORDINATOR'S USE ONLY

D14. Frequency Coordination Number ( )

| FCC 600 | FEDERAL COMMUNICATIONS COMMISSION<br>**SCHEDULE E**<br>**Station Location Data**<br>(all services except those for which Schedule A is required) | Approved by OMB 3060-0623<br>Expires 10/31/97<br>Est. Avg. Burden Hours Per Response: 4 Hrs.<br>**FCC Use Only** |
|---|---|---|

| Licensee Name | Radio Service | Call Sign or Station Location (City, State) |
|---|---|---|
| Cargill, Incorporated | IB | WQX399 |

E1. Specify the datum used to determine all coordinates on this filing: ( 2 ) NAD27 NAD83 Other (Specify _____ )

## FIXED OR PERMANENT LOCATIONS

| LOC | E2. Station Address / Geographic Location | E3. City | E4. County | E5. State |
|---|---|---|---|---|
| A | 800 N.E. River Street | Portland | Multnomah | OR |
| B | | | | |
| C | | | | |
| D | | | | |
| E | | | | |
| F | | | | |

| LOC | E6. Latitude (degrees, minutes, seconds) | E7. Longitude (degrees, minutes, seconds) | E8. Ground Elevation (meters) |
|---|---|---|---|
| A | 45-32-00 | 122-40-18 | 15 |
| B | | | |
| C | | | |
| D | | | |
| E | | | |
| F | | | |

## CONTROLS MEETING THE 20 FOOT CRITERIA, MOBILE OR TEMPORARY LOCATIONS

| LOC | E9. Radius (km) | E10. Area of Operation Code | E11. LATITUDE | LONGITUDE | COUNTY | STATE | E12. Operations (S) South of Line A and/or (W) West of Line C |
|---|---|---|---|---|---|---|---|
| G | 80 | A | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| FCC 600 | FEDERAL COMMUNICATIONS COMMISSION<br>SCHEDULE F<br>Antenna Structure Data<br>(All Services) | Approved by OMB 3060-0823<br>Expires 10/31/97<br>Est. Avg. Burden Hours Per Response: 4 Hrs.<br>FCC Use Only |
|---|---|---|

| Licensee Name | Radio Service | Call Sign or Station Location (City, State) |
|---|---|---|
| Cargill, Incorporated | IB | WQX399 |

## STATUS AND IDENTIFYING INFORMATION

| LOC | F1. Location Number | F2. New or Existing | F3. Call Sign of Existing Station | F4. Radio Service | E5. Tower Owner's Name and Telephone Number |
|---|---|---|---|---|---|
| A | | E | WQX399 | IB | |
| B | | | | | |
| C | | | | | |
| D | | | | | |
| E | | | | | |
| F | | | | | |

## STRUCTURE TYPE AND HEIGHT

| LOC | F6. Figure Number (see reverse) | F7. Structure Type | F8. Height of Support Structure (b) (meters) | F9. Overall Height of Structure (d) (meters) | F10. FCC Tower Number |
|---|---|---|---|---|---|
| A | | | | | |
| B | | | | | |
| C | | | | | |
| D | | | | | |
| E | | | | | |
| F | | | | | |

## FAA NOTIFICATION

| LOC | F11. FAA notified? Yes No | F12. Date FAA Notification Filed | F13. FAA Regional Office Notified | F14. FAA Study Number |
|---|---|---|---|---|
| A | | | | |
| B | | | | |
| C | | | | |
| D | | | | |
| E | | | | |
| F | | | | |

FCC 600

FEDERAL COMMUNICATIONS COMMISSION

# SCHEDULE G
## Technical Data

(all services except those for which Schedule A is required)

Approved by OMB 3060-0623 Expires 10/31/97 Est. Avg. Burden Hours Per Response: 4 Hrs.

FCC Use Only

| Licensee Name | Radio Service | Call Sign or Station Location (City, State) |
|---|---|---|
| Cargill, Incorporated | IB | WQX399 |

| LOC | G1. Frequency (MHz) | G2. Station Class | G3. No. Units | G4. Emission | G5. Output | G6. ERP | G7. AAT (meters) | G8. Ant. Ht. (meters) |
|---|---|---|---|---|---|---|---|---|
| A | 464.37500 | FB | 1 | 20K0F3E | 30 | | | 9 |
| G | 464.37500 | MO | 10 | 20K0F3E | 5 | | | |

Irving 0014.PDF

Federal Communications Commission
Gettysburg, PA 17325-7245

# RADIO STATION LICENSE

Licensee Name: CARGILL INCORPORATED

Radio Service: IB BUSINESS
Call Sign: KA96089
Frequency Advisory No./Service Area:

File Number: 9510D001789

License Issue Date: 11/09/1995
License Expiration Date: 07/06/1997

Pagers -******

951109A 458 1 1Z

CARGILL INCORPORATED
15407 MC GINTY RD W
WAYZATA MN 55391

REGULATORY STATUS: PMRS

## Station Technical Specifications

| FCC I.D. | Frequencies (MHz) | Station Class | No. of Units | Emission Designator | Output Power (Watts) | E.R.P. (Watts) | Ground Eleva | Ant. Hgt. To Tip | Antenna Latitude | Antenna Longitude |
|---|---|---|---|---|---|---|---|---|---|---|
| 1: | 464.38750 | MO | 11 | 20K0F3E | 2.000 | | | | | |

AREA OF OPERATION
SITE 1: 3 KMRA 45-32-00N 122-40-18W MULTNOMAH OR

CONTROL POINTS: 800 NE RIVER ST PORTLAND OR
CONTROL POINT PHONE: 503-281-9177

The latitude/longitude are authorized in North American Datum 1927 (NAD27). Additionally, the antenna height to tip, ground elevation, AAT and area of operation units are authorized in metric.

EMISSION DESIGNATOR(S) CONVERTED TO CONFORM TO DESIGNATOR(S) SET OUT IN PART 2 OF THE COMMISSION'S RULES.



FEDERAL COMMUNICATIONS COMMISSION

This authorization becomes invalid and must be returned to the Commission if the stations are not placed in operation within eight months, unless an extension of time has been granted. EXCEPTIONS: 1) 800 MHz trunked and certain 900 MHz station licenses cancel automatically if not constructed within 1 year 2) IVDS authorizations automatically cancel if service is not made available in accordance with Section 95.833(a) of the Commission's Rules 3) There are no time limitations for placing GMRS stations in operation.

FCC 574-L April 1995

## CONDITIONS OF GRANT

A. Subject to the provisions of the Communications Act of 1934, as amended, subsequent acts, treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions and requirements set forth in this authorization the licensee or permittee hereof is authorized to use and operate the radio transmitting facilities herein described. This authorization shall not vest in the licensee or permittee any right to operate the station nor any right in the use of the frequencies designated in the authorization beyond the term hereof, nor in any other manner than authorized herein.

B. Neither this authorization nor the right granted herein shall be assigned or otherwise transferred to any person, firm, company, or corporation except by specific authorization of the Commission.

C. This authorization is issued on the licensee's representation that the statements contained in licensee's application are true and that the undertakings therein contained, so far as they are consistent herewith, will be carried out in good faith. The licensee shall, during the term of this license, render such service as will serve public interest, convenience, or necessity to the full extent of the privileges herein conferred.

D. This authorization is subject to the right of use or control by the Government of the United States conferred by Section 706 of the Communications Act of 1934, as amended.

## FOR FCC USE ONLY

# SPECIAL CONDITIONS / ADMINISTRATIVE NOTES

NUMBERS NOT LISTED ARE RESERVED

8. For medical ambulance dispatch only. Equipment authorized herein shall not be used in the performance of funeral or other routine operations.

9. Limited for coordinated use in cooperation with hospitals authorized on this frequency.

10. To be used for ambulance and rescue squad work only.

12. Operations authorized in accordance with the Railroad Frequency Assignment Plan.

13. Authorized in accordance with Rule Sections 90.176, 90.621(g), and 90.621(h).

14. Licensee has 90 days to continue operating under parameters of previous authorization.

16. Operations onboard aircraft are subject to the limitations set forth under Rule Section 90.423(a).

17. For nationwide use limited by Rule Section 90.19(e)(14). (Frequency 155.475 MHz)

18. For intersystem communications as limited by Rule Section 90.19(g)(4).

20. This system may not be used for fixed service purposes.

22. This grant does not extend the period within which you must place the station in operation or meet loading requirements. That period begins from the date of your original authorization.

23. This license is for demonstration purposes only and may not be used for day to day business activity. This system is for secondary use and the mobiles licensed herein will not count toward the total mobile loading of these frequencies.

31. The use of radio for demonstration purposes in connection with the sale of radio equipment is limited by the following conditions:

    a. The equipment shall be under the control of the licensee at all times. Purchasers or prospective customers shall not be permitted to operate the equipment in any manner in the absence of authorized employees of the licensee.

    b. No person other than the licensee shall use the assigned call sign(s).

    c. No representation shall be made by the licensee to any person that a radio transmitter may be utilized prior to the issuance of an authorization by the Commission.

    d. Demonstration of radio equipment and/or coverage surveys should be completed within two weeks.

    e. Equipment demonstrated under the terms of this license shall be on frequencies available under Part 90 of the Rules.

    f. The technical parameters of the radio service in which the frequency(ies) is allocated shall be observed.

32. Special Condition for operating interconnected facilities under the provisions of Rule Section 90.261:
    These frequencies are authorized on a secondary non-interference basis to Land Mobile operations; any unresolved interference resulting from operation on these frequencies will be cause for cancellation. The provisions of Rule Section 90.261 governing antenna directivity and minimum mileage criteria from urbanized areas must be strictly complied with. Antenna structures must fully meet the requirements of Special Condition #35. Transmissions must directly relate to those activities which constitute the licensee's eligibility. Personal communications are expressly forbidden.

33. Special Condition for operating interconnected facilities under the provisions of Rule Section 90.267: These frequencies are authorized for use on a secondary non-interference basis to regularly assigned adjacent channel operations at a maximum of two watts output power. Interference resulting from operation on these frequencies will be cause for cancellation. The provisions of Rule Section 90.267 must be strictly complied with. Directional antennas must be used and their installed height may not exceed twenty feet above ground. Transmissions must directly relate to those activities which constitute the licensee's eligibility. Personal communications are expressly forbidden.

34. 800/900 MHz Loading and Construction Instructions - This authorization is issued subject to these conditions. If this facility is not constructed within one year of the date of this grant, and has not been authorized an extended construction period, the license cancels automatically. If the five year mobile loading requirements applicable to this system (see 90.631) are not met, and if waiting lists for trunked frequencies exist in your geographic area of operation, this license cancels automatically. The Commission will, however, in these circumstances consider authorizing you for one channel (frequency pair) for each existing 100 mobile stations, or fraction thereof, operating on your previously authorized frequencies.

35. Antenna structures for land, base and fixed stations authorized in the Private Radio Bureau for operation at temporary unspecified locations may be erected without specific prior approval of the Commission where such antenna structures do not exceed a height of 200 feet above ground level; provided that the overall height of such antennas more than 20 feet above ground, including their supporting structures (whether natural formation or man-made), does not exceed a slope of 1 foot above the established airport elevation for each 100 feet of distance or fraction thereof from the nearest boundary

(Continued on reverse)

of such airport. Any antenna to be erected in excess of the foregoing limitations requires prior Commission approval. Licensees seeking such approval should file application for modification of license. In addition, notification to the Federal Aviation Administration is required whenever the antenna will exceed 200 feet above the ground and whenever notification is otherwise required by Section 17.7 of the Commission's Rules. Such notification should be given by filing FAA Form 7460-1, Notice of Proposed Construction or Alteration, in duplicate, with the nearest office of the Federal Aviation Administration, which form is available from that office.

36. This license is issued subject to the following condition: Grant of this license is predicated upon Canadian indication that no harmful interference is anticipated to existing Canadian stations. Canada's determination was based upon the results of actual field test transmissions. If interference should arise due to operation of this station in non-conformance with the technical parameters actually employed in conducting the field test transmissions, this license shall automatically cancel and subsequent operations would be unlicensed.

37. This license is issued subject to the condition that the station may only be operated on the specific frequencies paired or associated with SMR system(s) providing mobile relay service to the licensee.

38. Authorized on a secondary basis.

39. Authorized on a secondary basis. Any renewal of this authorization will require that the Commission recoordinate with IRAC.

40. For intersystem communications as limited by Rule Section 90.21(c)(2).

41. A license issued to a corporation or association may not be used for personal communications; Rule Section 95.179(b).

42. Maximum allowable Output Power for Control/ Mobile stations is 100 watts.

43. This license is a conditional grant subject to formal ratification of the US and Mexico agreement which made the frequencies hereon available for assignment. Until ratification of the agreement, this authorization may be cancelled by the Commission without prior notice or right of appeal.

44. Use of this frequency is limited to transmissions that are in compliance with the SPEN Plan. (Frequency 154.680 MHz)

45. Secondary site subject to the condition that no interference is caused to co-channel users in an adjacent communications area.

46. A license issued to an individual may be used only by the licensee and members of the immediate family who reside in the same household, see Rule Section 95.179.

47. This authorization is granted subject to the condition that no harmful interference is caused to co-channel Canadian stations. Furthermore, no protection is afforded to your transmissions from interference that may be caused by these authorized Canadian operations.

48. A review of your previous authorization showed Output Power(s) in excess of the Commission's Rules. Your current authorization reflects the maximum output(s) allowed for your station(s). If you have any questions regarding this change, contact the Consumer Assistance Branch office at (717) 337-1212.

49. Effective Radiated Power (ERP) has been reduced to be in compliance with Rule Section 90.635.

50. Effective Radiated Power (ERP) has been reduced to comply with Rule Sections 90.307, 90.309, and 90.315.

51. Area of operation has been reduced to comply with Rule Section 90.305.

52. The maximum Effective Radiated Power (ERP) allowed for the Control station authorized in this system is 5 watts.

53. Only those frequencies identified by Public Notice are available for use.

54. The use of specific frequencies shall be in accordance with Public Notices issued by the Commission. See Rule Section 90.264.

55. For coordination and cooperation with state police only.

56. Authorized on a non-loading basis.

57. Authorized by inter-pool service.

58. Pagers equal 100,000.

59. These frequencies may not be used within 68.4 miles of the US and Mexico border, nor within 100 miles of the US and Canada border.

60. Authorized pursuant to Rule Section 90.621(b)(4)/(5).

61. Effective Radiated Power (ERP) has been amended to be in compliance with Rule Section 90.619.

62. Failure to certify annually as to station construction commitments will terminate the authority for the extended implementation period and will require complete system construction within six months of the first missed annual certification date.

63. Per Rule 90.35(a) temporary base stations shall be located not more than 50 miles from the geographic center of the urbanized area listed in Rule 90.303.

64. Changes were made to your antenna parameters to agree with information on file with the Commission for the structure.

# HIGH INTENSITY OBSTRUCTION LIGHTING SPECIFICATIONS FOR ANTENNA STRUCTURES

It is to be expressly understood that the issuance of these specifications is in no way to be considered as precluding additional or modified marking or lighting as may hereafter be required under the provisions of Section 303(q) of the Communications Act of 1934, as amended.

## TOP LIGHTING

A. There shall be installed at the top of the antenna structure a white capacitor discharge omnidirectional light which conforms to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. This light shall be mounted on the highest point of the structure. If the antenna or other appurtenance at its highest point is incapable of supporting the omnidirectional light, one or more such lights shall be installed on a suitable adjacent support with the lights mounted not more than 20 feet below the tip of the appurtenance. The lights shall be positioned so as to permit unobstructed viewing of at least one light from aircraft at any normal angle of approach. The light unit(s) shall emit a beam with a peak intensity around its periphery of approximately 20,000 candelas during daytime and twilight, and approximately 4,000 candelas at night.

B. There shall be installed at the top of the skeletal or other main support structure three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 4,000 candelas at night. The light units shall be mounted in a manner to ensure unobstructed viewing from aircraft at any normal angle of approach, so that the effective intensity of the full beam is not impaired by any structural member of the skeletal framework. The units will normally be adjusted so that the center of the beam is in the horizontal plane.

## INTERMEDIATE LIGHTING

C. At the approximate one-half level of the skeletal tower there shall be installed three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 4,000 candelas at night. The light units shall be mounted in a manner to ensure unobstructed viewing from aircraft at any normal angle of approach, so that the effective intensity of the full beam is not impaired by any structural member of the skeletal framework. The normal angular adjustment of the beam centers above the horizontal shall be two degrees (2°).

D. At the approximate one-third and two-thirds levels of the skeletal tower there shall be installed three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 4,000 candelas at night. The light units shall be mounted in a manner to ensure unobstructed viewing from aircraft at any normal angle of approach, so that the effective intensity of the full beam is not impaired by any structural member of the skeletal framework. The normal angular adjustment of the beam centers above the horizontal shall be two degrees (2°) at the one-third level and one degree (1°) at the two-thirds level.

E. At the approximate one-fourth, one-half and three-fourths levels of the skeletal tower there shall be installed three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 4,000 candelas at night. The light units shall be mounted in a manner to ensure unobstructed viewing from aircraft at any normal angle of approach, so that the effective intensity of the full beam is not impaired by any structural member of the skeletal framework. The normal angular adjustment of the beam centers above the horizontal shall be three degrees (3°) at the one-fourth level, two degrees (2°) at the one-half level and one degree (1°) at the three-fourths level.

F. At the approximate one-fifth, two-fifths, three-fifths and four-fifths levels of the skeletal tower there shall be installed three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 4,000 candelas at night. The light units shall be mounted in a manner to ensure unobstructed viewing from aircraft at any normal angle of approach, so that the effective intensity of the full beam is not impaired by any structural member of the skeletal framework. The normal angular adjustment of the beam centers above the horizontal shall be three degrees (3°) at the one-fifth level, two degrees (2°) at the two-fifths level, one degree (1°) at the three-fifths level and zero degrees (0°) at the four-fifths level.

G. At the approximate one-sixth, one-third, one-half, two-thirds and five-sixths levels of the skeletal tower there shall be installed three or more high intensity light units which conform to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems. The complement of units shall emit a white high intensity light and produce an effective intensity of not less than 200,000 candelas (daytime) uniformly about the antenna structure in the horizontal plane. The effective intensity shall be reduced to approximately 20,000 candelas at twilight, and to approximately 4,000 candelas at night. The light units shall be mounted in a manner to ensure unobstructed viewing from aircraft at any normal angle of approach, so that the effective intensity of the full beam is not impaired by any structural member of the skeletal framework. The normal angular adjustment of the beam centers above the horizontal shall be three degrees (3°) at the one-sixth level, two degrees (2°) at the one-third level, two degrees (2°) at the one-half level, one degree (1°) at the two-thirds level and zero degrees (0°) at the five-sixths level.

H. All lights shall be syncronized to flash simultaneously at 40 pulses per minute. The light system shall be equipped with a light sensitive control device which shall face the north sky and cause the intensity steps to change automatically when the north sky illumination on a vertical surface is as follows:

1. Day to Twilight: Shall not occur before the illumination drops to 60 footcandles, but shall occur before it drops below 30 footcandles.

2. Twilight to Night: Shall not occur before the illumination drops to 5 footcandles, but shall occur before it drops to 2 footcandles.

3. Night to Day: The intensity changes listed in 1. and 2. above shall be reversed in transitioning from the night to day modes.

## TEMPORARY LIGHTING

I. During construction of an antenna structure for which high intensity lighting is required, at least two lights shall be installed at the uppermost part of the structure. In addition, at each level where permanent obstruction lighting will be required, two similar lights shall be installed. Each temporary light shall consist of at least 1,500 candelas (peak effective intensity), syncronized to flash simultaneously at 40 pulses per minute. Temporary lights shall be operated continuously, except for periods of actual construction, until the permanent obstruction lights have been installed and placed in operation. Lights shall be positioned to ensure unobstructed viewing from aircraft at any normal angle of approach. If practical, the permanent obstruction lights may be installed at each level as the structure progresses. *NOTE:* If battery operated, the batteries should be replaced or recharged at regular intervals to preclude failure during operation.

## OPTIONAL LIGHTING

J. Antenna structures shall be equipped with:

1. High intensity lighting for daytime use and red lighting for nighttime use as specified in FCC Form 715; or

2. High intensity lighting, 24 hours a day, which conforms to FAA/DOD Specification L-856, High Intensity Obstruction Lighting Systems.

# OBSTRUCTION MARKING AND LIGHTING SPECIFICATIONS FOR ANTENNA STRUCTURES

It is to be expressly understood that the issuance of these specifications is in no way to be considered as precluding additional or modified marking or lighting as may hereafter be required under the provisions of Section 303(q) of the Communications Act of 1934, as amended.

## PAINTING

1 Antenna structures shall be painted throughout their height with alternate bands of aviation surface orange and white, terminating with aviation surface orange bands at both top and bottom. The width of the bands shall be equal and approximately one-seventh the height of the structure, provided however, that the bands shall not be more than 100 feet nor less than 1½ feet in width. All towers shall be cleaned or repainted as often as necessary to maintain good visibility.

## TOP LIGHTING

2 There shall be installed at the top of the tower at least two 116- or 125-watt lamps (A21/TS) enclosed in aviation red obstruction light globes. The two lights shall burn simultaneously from sunset to sunrise and shall be positioned so as to insure unobstructed visibility of at least one of the lights from aircraft at any normal angle of approach. A light sensitive control device or an astronomic dial clock and time switch may be used to control the obstruction lighting in lieu of manual control. When a light sensitive device is used it should be adjusted so that the lights will be turned on at a north sky light intensity level of about thirty-five foot candles and turned off at a north sky light intensity level of about fifty-eight foot candles.

3 There shall be installed at the top of the structure one 300 m/m electric code beacon equipped with two 620- or 700-watt lamps (PS-40, Code Beacon type), both lamps to burn simultaneously, and equipped with aviation red color filters. Where a rod or other construction of not more than 20 feet in height and incapable of supporting this beacon is mounted on top of the structure and it is determined that this additional construction does not permit unobstructed visibility of the code beacon from aircraft at any normal angle of approach, there shall be installed two such beacons positioned so as to insure unobstructed visibility of at least one of the beacons from aircraft at any normal angle of approach. The beacons shall be equipped with a flashing mechanism producing not more than 40 flashes per minute nor less than 12 flashes per minute with a period of darkness equal to approximately one-half of the luminous period.

## INTERMEDIATE LIGHTING (BEACONS)

4 At approximately one-half of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event this beacon cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any normal angle of approach, there shall be installed two such beacons. Each beacon shall be mounted on the outside of the tower at the prescribed height.

5 At approximately two-fifths of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event this beacon cannot be installed in a manner to insure unobstructed visibility of it from aircraft at any normal angle of approach, there shall be installed two such beacons. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

6 On levels at approximately two-thirds and one-third of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

7 On levels at approximately four-sevenths and two-sevenths of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

8 On levels at approximately three-fourths, one-half and one-fourth of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of the beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

9 On levels at approximately two-thirds, four-ninths and two-ninths of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

10 On levels at approximately four-fifths, three-fifths, two-fifths and one-fifth of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be

**THIS FORM IS A PART OF AND SHALL BE ATTACHED TO THE CURRENT INSTRUMENT OF AUTHORIZATION**

*(All previous editions should be destroyed.)*



CARG002408

installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

10.1 On levels at approximately eight-elevenths, six-elevenths, four-elevenths and two elevenths of the overall height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

10.2 On levels at approximately five-sixths, two-thirds, one-half, one-third and one-sixth of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

10.3 On levels at approximately ten-thirteenths, eight-thirteenths, six thirteenths, four-thirteenths and two-thirteenths of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

10.4 On levels at approximately six-sevenths, five-sevenths, four-sevenths, three-sevenths two-sevenths and one-seventh of the over-all height of the tower one similar flashing 300 m/m electric code beacon shall be installed in such position within the tower proper that the structural members will not impair the visibility of this beacon from aircraft at any normal angle of approach. In the event these beacons cannot be installed in a manner to insure unobstructed visibility of the beacons from aircraft at any normal angle of approach, there shall be installed two such beacons at each level. Each beacon shall be mounted on the outside of diagonally opposite corners or opposite sides of the tower at the prescribed height.

## (SIDE LIGHTS)

11 At the approximate mid point of the over-all height of the tower there shall be installed at least two 116- or 125-watt lamps (A21/TS) enclosed in aviation red obstruction light globes. Each light shall be mounted so as to insure unobstructed visibility of at least one light at each level from aircraft at any normal angle of approach.

12 On levels at approximately two-thirds and one-third of the over-all height of the tower, there shall be installed at least two 116- or 125-watt lamps (A21/TS) enclosed in aviation red obstruction light globes. Each light shall be mounted so as to insure unobstructed visibility of at least one light at each level from aircraft at any normal angle of approach.

13 On levels at approximately three-fourths and one-fourth of the over-all height of the tower, at least one 116- or 125-watt lamp (A21/TS) enclosed in aviation red obstruction light globe shall be installed on each outside corner of the structure.

14 On levels at approximately four-fifths, three-fifths and one-fifth of the over-all height of the tower, at least one 116- or 125-watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

15 On levels at approximately five-sixths, one-half, and one-sixth of the over-all height of the tower, at least one 116- or 125-watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of structure.

16 On levels at approximately six-sevenths, five-sevenths, three-sevenths and one-seventh of the over-all height of the tower at least one 116- or 125-watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

17 On levels at approximately seven-eighths, five-eighths, three-eighths and one-eighth of the over-all height of the tower, at least one 116- or 125-watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

18 On levels at approximately eight-ninths, seven-ninths, five-ninths, one-third and one-ninth of the over-all height of the tower, at least one 116- or 125-watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

19 On levels at approximately nine-tenths, seven-tenths, one-half, three-tenths and one-tenth of the over-all height of the tower, at least one 116- or 125-watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

19.1 On levels at approximately ten-elevenths, nine-elevenths, seven-elevenths, five-elevenths, three-elevenths and one-eleventh of the over-all height of the tower at least one 116- or 125-watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

19.2 On levels at approximately eleven-twelfths, three-fourths, seven-twelfths, five-twelfths, one-fourth and one-twelfth of the over-all height of the tower at least one 116- or 125-watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

19.3 On levels at approximately twelve-thirteenths, eleven-thirteenths, nine-thirteenths, seven-thirteenths, five-thirteenths, three-thirteenths and one-thirteenth of the over-all height of the tower at least one 116- or 125-watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

19.4 On levels at approximately thirteen-fourteenths, eleven-fourteenths, nine-fourteenths, one-half, five-fourteenths three-fourteenths and one-fourteenth of the over-all height of the tower at least one 116- or 125-watt lamp (A21/TS) enclosed in an aviation red obstruction light globe shall be installed on each outside corner of the structure.

20 All lighting shall be exhibited from sunset to sunrise unless otherwise specified.

21 All lights shall burn continuously or shall be controlled by a light sensitive device adjusted so that the lights will be turned on at a north sky light intensity level of about 35 foot candles and turned off at a north sky light intensity level of about 58 foot candles.

22 During construction of an antenna structure, for which obstruction lighting is required, at least two 116- or 125-watt lamps (A21/TS) enclosed in aviation red obstruction light globes, shall be installed at the uppermost point of the structure. In addition, as the height of the structure exceeds each level at which permanent obstruction lights will be required, two similar lights shall be displayed nightly from sunset to sunrise until the permanent obstruction lights have been installed and placed in operation, and shall be positioned so as to insure unobstructed visibility of at least one of the lights at any normal angle of approach. In lieu of the above temporary warning lights, the permanent obstruction lighting fixtures may be installed and operated at each required level as each such level is exceeded in height during construction.

Irving 0017.PDF

# CARGILL, INCORPORATED
## LAW DEPARTMENT

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Corporate Vice President
General Counsel
& Secretary

John S. Erickson
Vice President &
Deputy
General Counsel

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Thomas W. MacLeod
Maria-Inés Raij
Randall J. Romsdahl
Timothy A. Thomas
Peter A. Vorbrich

Writer's Direct Dial Number
(612) 742-6358

September 18, 1995

**VIA COURIER**

Valerie M. Furman
Brown and Schwaninger
1835 K Street, N.W., Suite 650
Washington, DC 20006

RE: Application for Assignment of Business Radio Service Stations WQX399 and KA69089, Portland, Oregon; WNDL770, Garden City, KS and KNIN754, Hutchinson, Kansas
Our File No.

Dear Valerie:

As we have discussed, please arrange for the transfer of the above FCC radio licenses from Bunge Corporation to Cargill, Incorporated. Please contact me if you have any questions regarding the information I have provided.

Sincerely,

Randall J. Romsdahl

RJR:na
Enclosures
cil/46190

cc: R. Friedrich/CGD/20
R. Nordmeyer/CGD/Wichita, KS
D. Laurents/CGD/Portland, OR

FEDERAL COMMUNICATIONS COMMISSION

# ASSIGNMENT OF AUTHORIZATION

Approved by OMB
3060-0127
Expires 5/31/94
See below for public burden estimate

*(To be used in the Private Radio Services indicated below, where the present licensee's activities are intended to be continued under new ownership.)*

1. The present licensee completes the information requested below.
2. This form is then attached to the proper application form (see below) which has been completed by the party requesting the station license, the assignee.
3. If more than one authorization is involved, use a separate Assignment of Authorization and a separate application form for each requested authorization.

**INVOLUNTARY ASSIGNMENT**

In the event of the assignor's death or legal disability, it is requested that, in lieu of the declaration appearing below, you submit a copy of the court order or other documentary proof that you are the person legally qualified to succeed to the assignor's business assets, or a statement explaining the circumstances under which control must be involuntarily transferred to the assignee, accompanied by the appropriate application form (see below) for assignment of each such authorization.

| RADIO SERVICE APPLICATION FORMS | COMMISSION RULES |
|---|---|
| FCC Form 574 - Application for Private Land Mobile and General Mobile Radio Services | 90.119 |
| FCC Form 402 - Application for Station Authorization in the Private Operational Fixed Microwave Radio Service | 94.27 |
| FCC Form 406 - Application for Ground Station Authorization in the Aviation Services | 87.21 |
| FCC Form 503 - Application for Land Radio Station License in the Maritime Services | 80.19 |

| CURRENT AUTHORIZATION | |
|---|---|
| Radio Service<br>Business (IB) | Licensee Name and Station Location<br>Bunge Corporation |
| Call Sign KA69089 | 2 MIRA Portland, Oregon |

CERTIFICATION

I hereby propose the assignment of all my right, title and interest in the authorization described above. Such assignment to Cargill, Incorporated shall not be completed nor become effective until authorization has been issued by the Commission in the name of the assignee. My authorization will be submitted to the Commission for cancellation upon completion of assignment.

| Name of Assignor (include title, if applicable) | Assignor's Signature and Date |
|---|---|
| BUNGE CORPORATION<br>By Richard Kerwin, SR VP | R. Kerwin 7/14/95 |

Notice to Individuals Required by The Privacy Act of 1974 and the Paperwork Reduction Act of 1980

Sections 301, 303 and 308 of the Communications Act of 1934, as amended, (licensing powers) authorize the FCC to request the information on this application. The purpose of the information is to determine your eligibility for a license. The information will be used by FCC staff to evaluate the application, to determine station location, to provide information for enforcement and rule making proceedings and to maintain a current inventory of licensees. No license can be granted unless all information requested is provided. Your response is required to obtain this benefit.

Public burden for this collection of information is estimated to be five minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to the Federal Communications Commission, Information and Records Management Branch, Room 416, Washington, DC 20554, and to the Office of Management and Budget, Paperwork Reduction Project, (3060-0127), Washington, DC 20503.

FCC 1046
JANUARY 1992

ATTACHMENT
~~WQX399~~
KA 69089

Please provide the following information:

1. Cargill, Incorporated's voice telephone number: 612-742-6957

2. Contact point address and telephone number: Tony Salgado
503-281-9177

3. The "commercial activity" in which Cargill, Incorporated is engaged:
grain elevator operations

4. Structure type:

5. Height of the structure (excluding any appurtenances):

6. Overall height of the structure (including any appurtenances):

7. Tower owner's name and telephone number:

8. Was notification of tower construction given to the FAA?

same information as previous license held by Bunge

   a. if yes, please indicate FAA regional office notified, date of notification, and FAA study number:

FEDERAL COMMUNICATIONS COMMISSION

# ASSIGNMENT OF AUTHORIZATION

Approved by OMB
3060-0127
Expires 5/31/94
See below for public burden estimate

*(To be used in the Private Radio Services indicated below, where the present licensee's activities are intended to be continued under new ownership.)*

1. The present licensee completes the information requested below.
2. This form is then attached to the proper application form (see below) which has been completed by the party requesting the station license, the assignee.
3. If more than one authorization is involved, use a separate Assignment of Authorization and a separate application form for each requested authorization.

**INVOLUNTARY ASSIGNMENT**

In the event of the assignor's death or legal disability, it is requested that, in lieu of the declaration appearing below, you submit a copy of the court order or other documentary proof that you are the person legally qualified to succeed to the assignor's business assets, or a statement explaining the circumstances under which control must be involuntarily transferred to the assignee, accompanied by the appropriate application form (see below) for assignment of each such authorization.

| RADIO SERVICE APPLICATION FORMS | COMMISSION RULES |
|---|---|
| FCC Form 574 - Application for Private Land Mobile and General Mobile Radio Services | 90.119 |
| FCC Form 402 - Application for Station Authorization in the Private Operational Fixed Microwave Radio Service | 94.27 |
| FCC Form 406 - Application for Ground Station Authorization in the Aviation Services | 87.21 |
| FCC Form 503 - Application for Land Radio Station License in the Maritime Services | 80.19 |

| CURRENT AUTHORIZATION | |
|---|---|
| Radio Service<br>Business (IB) | Licensee Name and Station Location<br>Bunge Corporation |
| Call Sign KA69089 | 2 MIRA Portland, Oregon |

CERTIFICATION

I hereby propose the assignment of all my right, title and interest in the authorization described above. Such assignment to Cargill, Incorporated shall not be completed nor become effective until authorization has been issued by the Commission in the name of the assignee. My authorization will be submitted to the Commission for cancellation upon completion of assignment.

| Name of Assignor (include title, if applicable) | Assignor's Signature and Date |
|---|---|
| | |

Notice to Individuals Required by The Privacy Act of 1974 and the Paperwork Reduction Act of 1980

Sections 301, 303 and 308 of the Communications Act of 1934, as amended, (licensing powers) authorize the FCC to request the information on this application. The purpose of the information is to determine your eligibility for a license. The information will be used by FCC staff to evaluate the application, to determine station location, to provide information for enforcement and rule making proceedings and to maintain a current inventory of licensees. No license can be granted unless all information requested is provided. Your response is required to obtain this benefit.

Public burden for this collection of information is estimated to be five minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to the Federal Communications Commission, Information and Records Management Branch, Room 416, Washington, DC 20554, and to the Office of Management and Budget, Paperwork Reduction Project, (3060-0127), Washington, DC 20503.

FCC 1046
JANUARY 1992

**FCC 600**
Main Form

FEDERAL COMMUNICATIONS COMMISSION

Approved by OMB 3060-0623 Expires 10/31/97 Est. Avg. Burden Hours Per Response: 4 Hrs.

FCC Use Only
(File Number)

FEE Use Only

# Application for Mobile Radio Service Authorization

or Rural Radiotelephone Service Authorization

## FILING FEE

| (a) Fee Type Code | (b) Fee Multiple | (c) Fee Due for Fee Type Code in (a) | (d) Total Amount Due | FEE Use Only |
|---|---|---|---|---|
| PALM | 1 | $ 45 | $ 45 | |

## APPLICANT

| | |
|---|---|
| 1. Legal Name of Applicant<br>Cargill, Incorporated | 2. Voice Telephone Number |
| 3. Assumed Name Used for Doing Business (if any) | 4. Fax Telephone Number |
| 5. Mailing Street Address or P.O. Box 15407 McGinty Road West<br>ATTENTION: | |
| 6. City<br>Wayzata | 7. State MN / 8. Zip Code 55391 |

| | |
|---|---|
| 9. Name of Contact Representative (if other than applicant)<br>Robert H. Schwaninger, Jr. | 10. Voice Telephone Number<br>( 202 ) 223-8837 |
| 11. Firm or Company Name<br>Brown and Schwaninger | 12. Fax Telephone Number<br>( 202 ) 659-0071 |
| 13. Mailing Street Address or P.O. Box<br>1835 K Street, N.W. Suite 650 | |
| 14. City<br>Washington | 15. State DC / 16. Zip Code 20006 |

## CLASSIFICATION OF FILING

17. This filing is a (an) ( N ) New Application Amendment to a pending application.

18. Does the applicant believe that this filing should be classified as MINOR under 47 U.S.C. § 309? ( D ) Yes No Does not apply

19. If not minor under 47 U.S.C. § 309, classification for purposes of competitive bidding: ( ) Initial Modification Renewal

| | |
|---|---|
| 20. If this filing is in reference to an existing station:<br>**Call sign of existing station:** KA96089 | 21. If this filing is an amendment to a pending application:<br>**File number of pending application:** **Date Filed:** |

## NATURE OF SERVICE

22. This filing is for authorization to provide or use the following type(s) of radio service:
( P ) Commercial mobile Private mobile Both commercial and private mobile Fixed

| | | |
|---|---|---|
| 23. Users are or will be: ( I ) Public subscribers Eligibles Internal | | 24. Status: ( N ) Profit Not for profit |
| 25. Interconnected service? ( N ) Yes No | 26. Radio Service code: ( IB ) | 27. Type of operation code: ( ) |



CARG002415

## ENVIRONMENTAL POLICY

| | | | |
|---|---|---|---|
| 28. Would a Commission grant of any proposal in this application or amendment have a significant environmental effect as defined by 47 C.F.R. 1.1307?<br>* If "yes", attach environmental assessment as required by 47 C.F.R. 1.1308 and 47 C.F.R. 1.1311 | (N) | Yes | No |

## ALIEN OWNERSHIP

| | | | |
|---|---|---|---|
| 29. Is the applicant a foreign government or the representative of any foreign government? | (N) | Yes | No |
| 30. Is the applicant an alien or the representative of an alien? | (N) | Yes | No |
| 31. Is the applicant a corporation organized under the laws of any foreign government? | (N) | Yes | No |
| 32. Is the applicant a corporation of which any officer or director is an alien or of which more than one-fifth of the of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? | (N) | Yes | No |
| 33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which any officer or more than one-fourth of the directors are aliens, or of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?<br>* If "yes", attach exhibit explaining nature and extent of alien or foreign ownership or control. | (N) | Yes | No |

## BASIC QUALIFICATIONS

| | | | |
|---|---|---|---|
| 34. Has the applicant or any party to this application or amendment had any FCC authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, construction permit denied by the Commission?<br>* If "yes", attach exhibit explaining circumstances. | (N) | Yes | No |
| 35. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? | (N) | Yes | No |
| 36. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? | (N) | Yes | No |
| 37. Is the applicant or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? | (N) | Yes | No |
| 38. Does the undersigned certify (by responding "Y" to this question), that neither the applicant nor any other party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance?<br>* See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes. | (Y) | Yes | No |

## CERTIFICATION

The APPLICANT waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually, and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

39. Applicant is a (an) (C) Individual Unincorporated Association Partnership Corporation Governmental Entity

| | |
|---|---|
| 40. Typed Name of Person Signing | 41. Title |
| 42. Signature | 43. Date |

**WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).**



Cargill, Incorporated KA96089

| FCC 600 | FEDERAL COMMUNICATIONS COMMISSION<br>**SCHEDULE D**<br>**Administrative Data**<br>(all services except those for which Schedule A is required) | Approved by OMB 3060-0623<br>Expires 10/31/97<br>Est. Avg. Burden Hours Per Response: 4 Hrs.<br>**FCC Use Only** |
|---|---|---|

| Licensee Name | Radio Service | Call Sign or Station Location (City, State) |
|---|---|---|
| Cargill, Incorporated | IB | KA96089 |

## PURPOSE OF FILING

D1. The purpose of this filing is to:

( ) N request a new station license.
( ) M modify an existing licensed station(s).
( ) R renew an existing licensed station.
( ) X reinstate an expired call sign.
( A ) A assign an existing license.

D2. If system licensing, list call signs of stations to be combined. (First call sign will be retained.)

D3. Specify proposed modifications, if any:

## ASSOCIATED CALL SIGNS

D4. Call signs:

## RADIO SYSTEM OPERATION POINT OF CONTACT

| D5. Street Address, City, State | D6. Voice Telephone Number |
|---|---|
| , | |

## ASSOCIATED BROADCAST STATION

| D7. Call Sign | D8. City | D9. State |
|---|---|---|
| | | |

## MARKET AREA

D10. Market Area / Number

## PAGING OPERATIONS

D11. Number of Paging Receivers

## ELIGIBILITY

| D12. Describe Activity | D13. Rule Section |
|---|---|
| Applicant is engaged in a commercial activity, specifically, | 90.75(a)(1) |

FOR FREQUENCY COORDINATOR'S USE ONLY

D14. Frequency Coordination Number ( )

| FCC 600 | FEDERAL COMMUNICATIONS COMMISSION<br>**SCHEDULE D**<br>**Administrative Data**<br>(all services except those for which Schedule A is required) | Approved by OMB 3060-0623<br>Expires 10/31/97<br>Est. Avg. Burden Hours Per Response: 4 Hrs.<br>**FCC Use Only** |
|---|---|---|

| Licensee Name | Radio Service | Call Sign or Station Location (City, State) |
|---|---|---|
| Cargill, Incorporated | IB | KA96089 |

## PURPOSE OF FILING

D1. The purpose of this filing is to:

( ) N request a new station license.
( ) M modify an existing licensed station(s).
( ) R renew an existing licensed station.
( ) X reinstate an expired call sign.
( A ) A assign an existing license.

D2. If system licensing, list call signs of stations to be combined. (First call sign will be retained.)

D3. Specify proposed modifications, if any:

## ASSOCIATED CALL SIGNS

D4. Call signs:

## RADIO SYSTEM OPERATION POINT OF CONTACT

| D5. Street Address, City, State | D6. Voice Telephone Number |
|---|---|
| , | |

## ASSOCIATED BROADCAST STATION

| D7. Call Sign | D8. City | D9. State |
|---|---|---|
| | | |

## MARKET AREA

D10. Market Area / Number

## PAGING OPERATIONS

D11. Number of Paging Receivers

## ELIGIBILITY

| D12. Describe Activity | D13. Rule Section |
|---|---|
| Applicant is engaged in a commercial activity, specifically, | 90.75(a)(1) |

FOR FREQUENCY COORDINATOR'S USE ONLY

D14. Frequency Coordination Number ( )

FCC 600

FEDERAL COMMUNICATIONS COMMISSION

# SCHEDULE G
## Technical Data

(all services except those for which Schedule A is required)

Approved by OMB 3060-0623. Expires 10/31/97 Est. Avg. Burden Hours Per Response: 4 Hrs.

FCC Use Only

| Licensee Name | Radio Service | Call Sign or Station Location (City, State) |
|---|---|---|
| Cargill, Incorporated | IB | KA96089 |

| LOC | G1. Frequency (MHz) | G2. Station Class | G3. No. Units | G4. Emission | G5. Output | G6. ERP | G7. AAT (meters) | G8. Ant. Ht. (meters) |
|---|---|---|---|---|---|---|---|---|
| G | 464.38750 | MO | 11 | 20K0F3E | 2 | | | |



CARG002419

FEDERAL COMMUNICATIONS COMMISSION

# ASSIGNMENT OF AUTHORIZATION

Approved by OMB
3060-0127
Expires 5/31/94
See below for public burden estimate

*(To be used in the Private Radio Services indicated below, where the present licensee's activities are intended to be continued under new ownership.)*

1. The present licensee completes the information requested below.
2. This form is then attached to the proper application form (see below) which has been completed by the party requesting the station license, the assignee.
3. If more than one authorization is involved, use a separate Assignment of Authorization and a separate application form for each requested authorization.

**INVOLUNTARY ASSIGNMENT**

In the event of the assignor's death or legal disability, it is requested that, in lieu of the declaration appearing below, you submit a copy of the court order or other documentary proof that you are the person legally qualified to succeed to the assignor's business assets, or a statement explaining the circumstances under which control must be involuntarily transferred to the assignee, accompanied by the appropriate application form (see below) for assignment of each such authorization.

| RADIO SERVICE APPLICATION FORMS | COMMISSION RULES |
|---|---|
| FCC Form 574 - Application for Private Land Mobile and General Mobile Radio Services | 90.119 |
| FCC Form 402 - Application for Station Authorization in the Private Operational Fixed Microwave Radio Service | 94.27 |
| FCC Form 406 - Application for Ground Station Authorization in the Aviation Services | 87.21 |
| FCC Form 503 - Application for Land Radio Station License in the Maritime Services | 80.19 |

| CURRENT AUTHORIZATION | |
|---|---|
| Radio Service<br>Business (IB) | Licensee Name and Station Location<br>Bunge Corporation<br>800 N.E. River Street<br>Portland, Oregon |
| Call Sign WQX399 | |

CERTIFICATION

I hereby propose the assignment of all my right, title and interest in the authorization described above. Such assignment to Cargill, Incorporated shall not be completed nor become effective until authorization has been issued by the Commission in the name of the assignee. My authorization will be submitted to the Commission for cancellation upon completion of assignment.

| Name of Assignor (include title, if applicable) | Assignor's Signature and Date |
|---|---|
| BUNGE CORPORATION<br>By Richard Kerwin, Sr VP | R. Kerwin 7/14/95 |

Notice to Individuals Required by The Privacy Act of 1974 and the Paperwork Reduction Act of 1980

Sections 301, 303 and 308 of the Communications Act of 1934, as amended, (licensing powers) authorize the FCC to request the information on this application. The purpose of the information is to determine your eligibility for a license. The information will be used by FCC staff to evaluate the application, to determine station location, to provide information for enforcement and rule making proceedings and to maintain a current inventory of licensees. No license can be granted unless all information requested is provided. Your response is required to obtain this benefit.

Public burden for this collection of information is estimated to be five minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to the Federal Communications Commission, Information and Records Management Branch, Room 416, Washington, DC 20554, and to the Office of Management and Budget, Paperwork Reduction Project, (3060-0127), Washington, DC 20503.

FCC 1046
JANUARY 1992

ATTACHMENT
WQX399

Please provide the following information:

1. Cargill, Incorporated's voice telephone number: 612-742-6957

2. Contact point address and telephone number: Tony Salgado
503-281-9177

3. The "commercial activity" in which Cargill, Incorporated is engaged:
grain elevator operations

4. Structure type:

5. Height of the structure (excluding any appurtenances):

6. Overall height of the structure (including any appurtenances):

7. Tower owner's name and telephone number:

8. Was notification of tower construction given to the FAA?

same information as previous license held by Bunge

   a. if yes, please indicate FAA regional office notified, date of notification, and FAA study number:

FEDERAL COMMUNICATIONS COMMISSION

# ASSIGNMENT OF AUTHORIZATION

Approved by OMB
3060-0127
Expires 5/31/94
See below for public burden estimate

*(To be used in the Private Radio Services indicated below, where the present licensee's activities are intended to be continued under new ownership.)*

1. The present licensee completes the information requested below.
2. This form is then attached to the proper application form (see below) which has been completed by the party requesting the station license, the assignee.
3. If more than one authorization is involved, use a separate Assignment of Authorization and a separate application form for each requested authorization.

**INVOLUNTARY ASSIGNMENT**

In the event of the assignor's death or legal disability, it is requested that, in lieu of the declaration appearing below, you submit a copy of the court order or other documentary proof that you are the person legally qualified to succeed to the assignor's business assets, or a statement explaining the circumstances under which control must be involuntarily transferred to the assignee, accompanied by the appropriate application form (see below) for assignment of each such authorization.

| RADIO SERVICE APPLICATION FORMS | COMMISSION RULES |
|---|---|
| FCC Form 574 - Application for Private Land Mobile and General Mobile Radio Services | 90.119 |
| FCC Form 402 - Application for Station Authorization in the Private Operational Fixed Microwave Radio Service | 94.27 |
| FCC Form 406 - Application for Ground Station Authorization in the Aviation Services | 87.21 |
| FCC Form 503 - Application for Land Radio Station License in the Maritime Services | 80.19 |

| CURRENT AUTHORIZATION | |
|---|---|
| Radio Service<br>Business (IB) | Licensee Name and Station Location<br>Bunge Corporation<br>800 N.E. River Street<br>Portland, Oregon |
| Call Sign WQX399 | |

CERTIFICATION

I hereby propose the assignment of all my right, title and interest in the authorization described above. Such assignment to Cargill, Incorporated shall not be completed nor become effective until authorization has been issued by the Commission in the name of the assignee. My authorization will be submitted to the Commission for cancellation upon completion of assignment.

| Name of Assignor (include title, if applicable) | Assignor's Signature and Date |
|---|---|
| | |

Notice to Individuals Required by The Privacy Act of 1974 and the Paperwork Reduction Act of 1980

Sections 301, 303 and 308 of the Communications Act of 1934, as amended, (licensing powers) authorize the FCC to request the information on this application. The purpose of the information is to determine your eligibility for a license. The information will be used by FCC staff to evaluate the application, to determine station location, to provide information for enforcement and rule making proceedings and to maintain a current inventory of licensees. No license can be granted unless all information requested is provided. Your response is required to obtain this benefit.

Public burden for this collection of information is estimated to be five minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to the Federal Communications Commission, Information and Records Management Branch, Room 416, Washington, DC 20554, and to the Office of Management and Budget, Paperwork Reduction Project, (3060-0127), Washington, DC 20503.

FCC 1046
JANUARY 1992

**FCC 600**
Main Form

FEDERAL COMMUNICATIONS COMMISSION

Approved by OMB 3060-0623
Expires 10/31/97
Est. Avg. Burden Hours Per Response: 4 Hrs.

FCC Use Only
(File Number)

FEE Use Only

# Application for Mobile Radio Service Authorization

or Rural Radiotelephone Service Authorization

## FILING FEE

| (a) Fee Type Code | (b) Fee Multiple | (c) Fee Due for Fee Type Code in (a) | (d) Total Amount Due | FEE Use Only |
|---|---|---|---|---|
| PALM | 1 | $ 45 | $ 45 | |

## APPLICANT

| | |
|---|---|
| 1. Legal Name of Applicant<br>Cargill, Incorporated | 2. Voice Telephone Number |
| 3. Assumed Name Used for Doing Business (if any) | 4. Fax Telephone Number |
| 5. Mailing Street Address or P.O. Box 15407 McGinty Road West<br>ATTENTION: | |
| 6. City<br>Wayzata | 7. State MN / 8. Zip Code 55391 |

| | |
|---|---|
| 9. Name of Contact Representative (if other than applicant)<br>Robert H. Schwaninger, Jr. | 10. Voice Telephone Number<br>( 202 ) 223-8837 |
| 11. Firm or Company Name<br>Brown and Schwaninger | 12. Fax Telephone Number<br>( 202 ) 659-0071 |
| 13. Mailing Street Address or P.O. Box<br>1835 K Street, N.W. Suite 650 | |
| 14. City<br>Washington | 15. State DC / 16. Zip Code 20006 |

## CLASSIFICATION OF FILING

17. This filing is a (an) ( N ) New Application Amendment to a pending application.

18. Does the applicant believe that this filing should be classified as **MINOR** under 47 U.S.C. § 309? ( D ) Yes No Does not apply

19. If not minor under 47 U.S.C. § 309, classification for purposes of competitive bidding: ( ) Initial Modification Renewal

| | |
|---|---|
| 20. If this filing is in reference to an existing station:<br>**Call sign of existing station:** WQX399 | 21. If this filing is an amendment to a pending application:<br>**File number of pending application:** **Date Filed:** |

## NATURE OF SERVICE

22. This filing is for authorization to provide or use the following type(s) of radio service:
( P ) Commercial mobile Private mobile Both commercial and private mobile Fixed

| | | |
|---|---|---|
| 23. Users are or will be: ( I ) Public subscribers Eligibles Internal | | 24. Status: ( N ) Profit Not for profit |
| 25. Interconnected service? ( N ) Yes No | 26. Radio Service code: ( IB ) | 27. Type of operation code: ( ) |



CARG002423

## ENVIRONMENTAL POLICY

| | | | |
|---|---|---|---|
| 28. Would a Commission grant of any proposal in this application or amendment have a significant environmental effect as defined by 47 C.F.R. 1.1307?<br>* If "yes", attach environmental assessment as required by 47 C.F.R. 1.1308 and 47 C.F.R. 1.1311 | (N) | Yes | No |

## ALIEN OWNERSHIP

| | | | |
|---|---|---|---|
| 29. Is the applicant a foreign government or the representative of any foreign government? | (N) | Yes | No |
| 30. Is the applicant an alien or the representative of an alien? | (N) | Yes | No |
| 31. Is the applicant a corporation organized under the laws of any foreign government? | (N) | Yes | No |
| 32. Is the applicant a corporation of which any officer or director is an alien or of which more than one-fifth of the of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? | (N) | Yes | No |
| 33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which any officer or more than one-fourth of the directors are aliens, or of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country?<br>* If "yes", attach exhibit explaining nature and extent of alien or foreign ownership or control. | (N) | Yes | No |

## BASIC QUALIFICATIONS

| | | | |
|---|---|---|---|
| 34. Has the applicant or any party to this application or amendment had any FCC authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, construction permit denied by the Commission?<br>* If "yes", attach exhibit explaining circumstances. | (N) | Yes | No |
| 35. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? | (N) | Yes | No |
| 36. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? | (N) | Yes | No |
| 37. Is the applicant or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? | (N) | Yes | No |
| 38. Does the undersigned certify (by responding "Y" to this question), that neither the applicant nor any other party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862, because of a conviction for possession or distribution of a controlled substance?<br>* See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes. | (Y) | Yes | No |

## CERTIFICATION

The APPLICANT waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually, and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

39. Applicant is a (an) (C) Individual Unincorporated Association Partnership Corporation Governmental Entity

| | |
|---|---|
| 40. Typed Name of Person Signing | 41. Title |
| 42. Signature | 43. Date |

**WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).**



Cargill, Incorporated WQX399

| FCC 600 | FEDERAL COMMUNICATIONS COMMISSION<br>**SCHEDULE D**<br>**Administrative Data**<br>(all services except those for which Schedule A is required) | Approved by OMB 3060-0623 Expires 10/31/97 Est. Avg. Burden Hours Per Response: 4 Hrs.<br>**FCC Use Only** |
|---|---|---|

| Licensee Name | Radio Service | Call Sign or Station Location (City, State) |
|---|---|---|
| Cargill, Incorporated | IB | WQX399 |

## PURPOSE OF FILING

D1. The purpose of this filing is to:

( ) N request a new station license.
( ) M modify an existing licensed station(s).
( ) R renew an existing licensed station.
( ) X reinstate an expired call sign.
( A ) A assign an existing license.

D2. If system licensing, list call signs of stations to be combined. (First call sign will be retained.)

D3. Specify proposed modifications, if any:

## ASSOCIATED CALL SIGNS

D4. Call signs:

## RADIO SYSTEM OPERATION POINT OF CONTACT

| D5. Street Address, City, State | D6. Voice Telephone Number |
|---|---|
| , | |

## ASSOCIATED BROADCAST STATION

| D7. Call Sign | D8. City | D9. State |
|---|---|---|
| | | |

## MARKET AREA

D10. Market Area / Number

## PAGING OPERATIONS

D11. Number of Paging Receivers

## ELIGIBILITY

| D12. Describe Activity | D13. Rule Section |
|---|---|
| Applicant is engaged in a commercial activity, specifically, | 90.75(a)(1) |

FOR FREQUENCY COORDINATOR'S USE ONLY

D14. Frequency Coordination Number ( )

| FCC 600 | FEDERAL COMMUNICATIONS COMMISSION<br>**SCHEDULE E**<br>**Station Location Data**<br>(all services except those for which Schedule A is required) | Approved by OMB 3060-0623 Expires 10/31/97 Est. Avg. Burden Hours Per Response: 4 Hrs.<br>**FCC Use Only** |
|---|---|---|

| Licensee Name | Radio Service | Call Sign or Station Location (City, State) |
|---|---|---|
| Cargill, Incorporated | IB | WQX399 |

E1. Specify the datum used to determine all coordinates on this filing: ( 2 ) NAD27 NAD83 Other (Specify _____ )

## FIXED OR PERMANENT LOCATIONS

| LOC | E2. Station Address / Geographic Location | E3. City | E4. County | E5. State |
|---|---|---|---|---|
| A | 800 N.E. River Street | Portland | Multnomah | OR |
| B | | | | |
| C | | | | |
| D | | | | |
| E | | | | |
| F | | | | |

| LOC | E6. Latitude (degrees, minutes, seconds) | E7. Longitude (degrees, minutes, seconds) | E8. Ground Elevation (meters) |
|---|---|---|---|
| A | 45-32-00 | 122-40-18 | 15 |
| B | | | |
| C | | | |
| D | | | |
| E | | | |
| F | | | |

## CONTROLS MEETING THE 20 FOOT CRITERIA, MOBILE OR TEMPORARY LOCATIONS

| LOC | E9. Radius (km) | E10. Area of Operation Code | E11. LATITUDE | LONGITUDE | COUNTY | STATE | E12. Operations (S) South of Line A and/or (W) West of Line C |
|---|---|---|---|---|---|---|---|
| G | 80 | A | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| FCC 600 | FEDERAL COMMUNICATIONS COMMISSION<br>SCHEDULE F<br>Antenna Structure Data<br>(All Services) | Approved by OMB 3060-0623<br>Expires 10/31/97<br>Est. Avg. Burden Hours Per Response: 4 Hrs.<br>FCC Use Only |
|---|---|---|

| Licensee Name | Radio Service | Call Sign or Station Location (City, State) |
|---|---|---|
| Cargill, Incorporated | IB | WQX399 |

## STATUS AND IDENTIFYING INFORMATION

| LOC | F1. Location Number | F2. New or Existing | F3. Call Sign of Existing Station | F4. Radio Service | E5. Tower Owner's Name and Telephone Number |
|---|---|---|---|---|---|
| A | | E | WQX399 | IB | |
| B | | | | | |
| C | | | | | |
| D | | | | | |
| E | | | | | |
| F | | | | | |

## STRUCTURE TYPE AND HEIGHT

| LOC | F6. Figure Number (see reverse) | F7. Structure Type | F8. Height of Support Structure (b) (meters) | F9. Overall Height of Structure (d) (meters) | F10. FCC Tower Number |
|---|---|---|---|---|---|
| A | | | | | |
| B | | | | | |
| C | | | | | |
| D | | | | | |
| E | | | | | |
| F | | | | | |

## FAA NOTIFICATION

| LOC | F11. FAA notified? Yes No | F12. Date FAA Notification Filed | F13. FAA Regional Office Notified | F14. FAA Study Number |
|---|---|---|---|---|
| A | | | | |
| B | | | | |
| C | | | | |
| D | | | | |
| E | | | | |
| F | | | | |

FCC 600

FEDERAL COMMUNICATIONS COMMISSION

# SCHEDULE G
## Technical Data

(all services except those for which Schedule A is required)

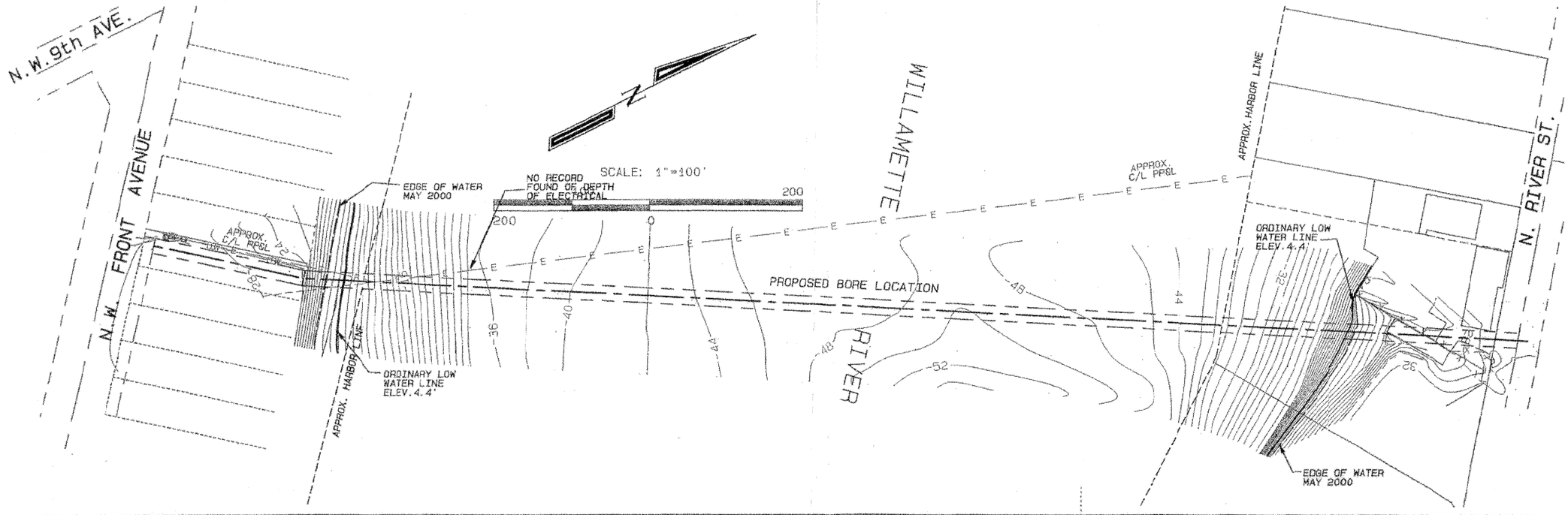
Approved by OMB 3060-0623 Expires 10/31/97 Est. Avg. Burden Hours Per Response: 4 Hrs.

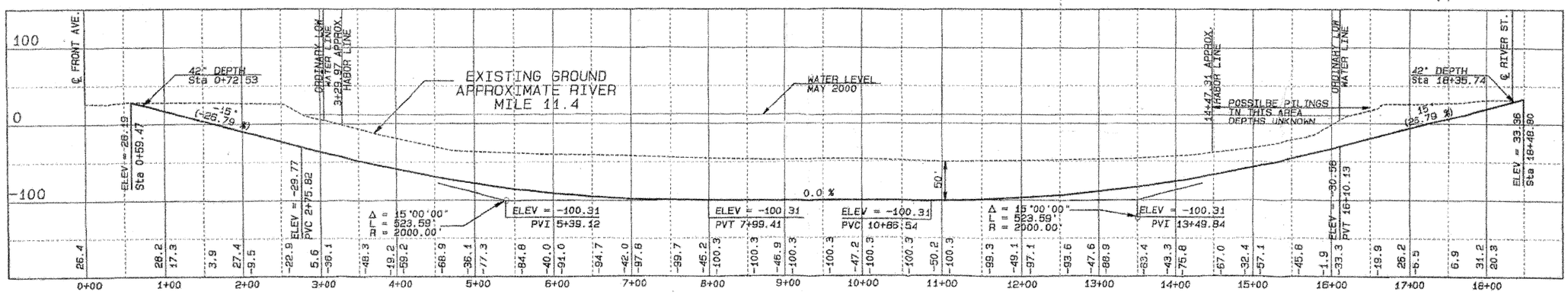
FCC Use Only

| Licensee Name | Radio Service | Call Sign or Station Location (City, State) |
|---|---|---|
| Cargill, Incorporated | IB | WQX399 |

| LOC | G1. Frequency (MHz) | G2. Station Class | G3. No. Units | G4. Emission | G5. Output | G6. ERP | G7. AAT (meters) | G8. Ant. Ht. (meters) |
|---|---|---|---|---|---|---|---|---|
| A | 464.37500 | FB | 1 | 20K0F3E | 30 | | | 9 |
| G | 464.37500 | MO | 10 | 20K0F3E | 5 | | | |

Irving 0020.PDF




PROFILE

SCALE: 1"=100'

NOTES:

CONTOURS WERE SCALED FROM U.S. ARMY ENGINEER DISTRICT, PORTLAND CONSTRUCTION-OPERATIONS DIVISION MAP WR-8-130 WILLAMETTE RIVER MILE 7.5 TO BROADWAY BRIDGE MAP DATED 6 MAY 1999.

CONTOUR INTERVALS OF 2 FEET.

VERTICAL DATUM NGVD 1929

**SURVEYOR'S CERTIFICATE**

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION AT THE REQUEST OF

SIGNATURE DATE

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON JULY 16, 1990 JOHN G. BARBIERI 1871

12-31-01

SURVEY FOR BROADWING INC. AUSTIN, TEXAS

**RECORDERS CERTIFICATE**

FILED FOR RECORD THIS ___ DAY OF ___ 20___ AT ___ M, IN BOOK ___ OF SURVEYS AT PAGE ___ AT THE REQUEST OF ___

MANAGER/AUDITOR

SUPT. OF RECORDS/DEPUTY AUDITOR

RECORDING NO.

DIVISION OF STATE LANDS LEASE AREA DRAWING

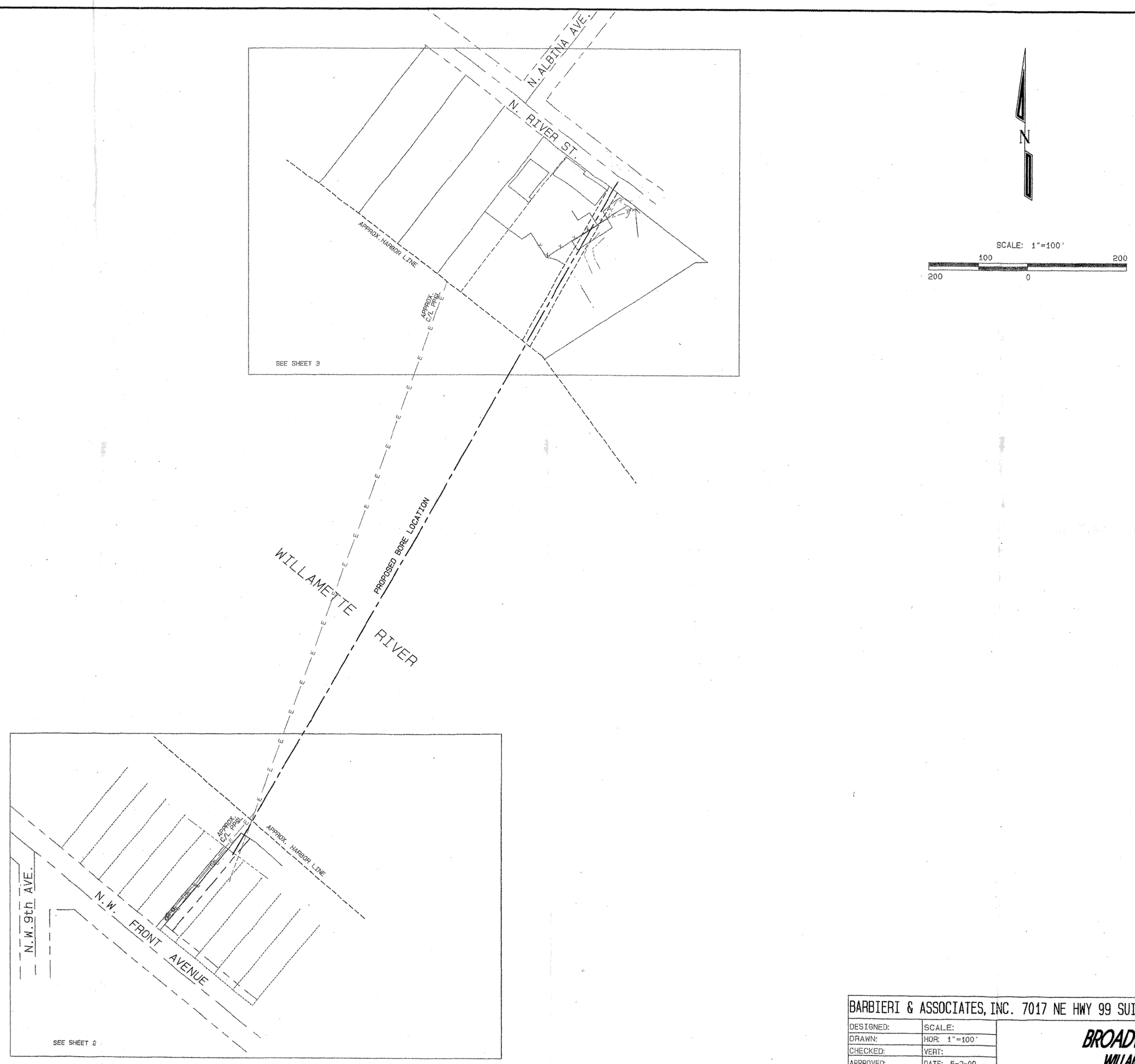
FIBER OPTIC CABLE ROUTE WILLAMETTE RIVER CROSSING DIRECTIONAL BORE

BARBIERI & ASSOCIATES, INC.
ENGINEERING PLANNING SURVEYING
7017 NE HWY 99 SUITE 204
VANCOUVER, WA. 98665
(360) 695-1001 FAX (360) 695-6182

| | |
|---|---|
| SHEET | 1 OF 1 |
| SCALE | 1"=100' |
| DATE | 6-07-00 |
| JOB No. | 20035 |
| DRAWN | DJB |
| CHECKED | JGB |
| PRO. FILE | BROADWRP |

CARG002430

Irving 0021.PDF




BARBIERI & ASSOCIATES, INC. 7017 NE HWY 99 SUITE 204 VANCOUVER, WA. 98665 (360) 695-1001

| | | |
|---|---|---|
| DESIGNED: | SCALE: | |
| DRAWN: | HOR: 1"=100' | |
| CHECKED: | VERT: | |
| APPROVED: | DATE: 5-2-00 | |
| REVISION: 5-22-00 | | |

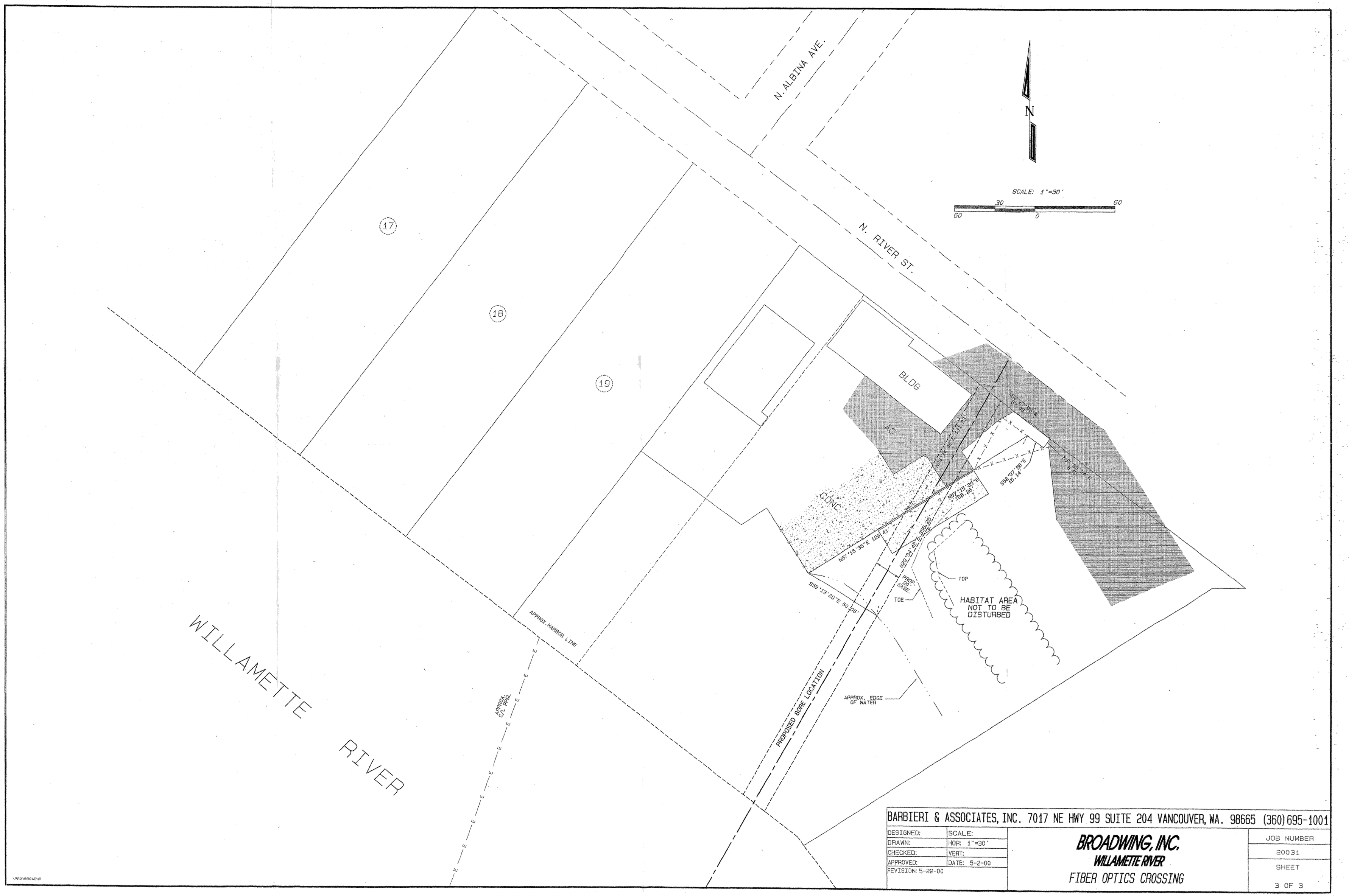
**BROADWING, INC.**
**WILLAMETTE RIVER**
FIBER OPTICS CROSSING

JOB NUMBER
20031

SHEET
1 OF 3

\PRO\BROADWR

CARG002432

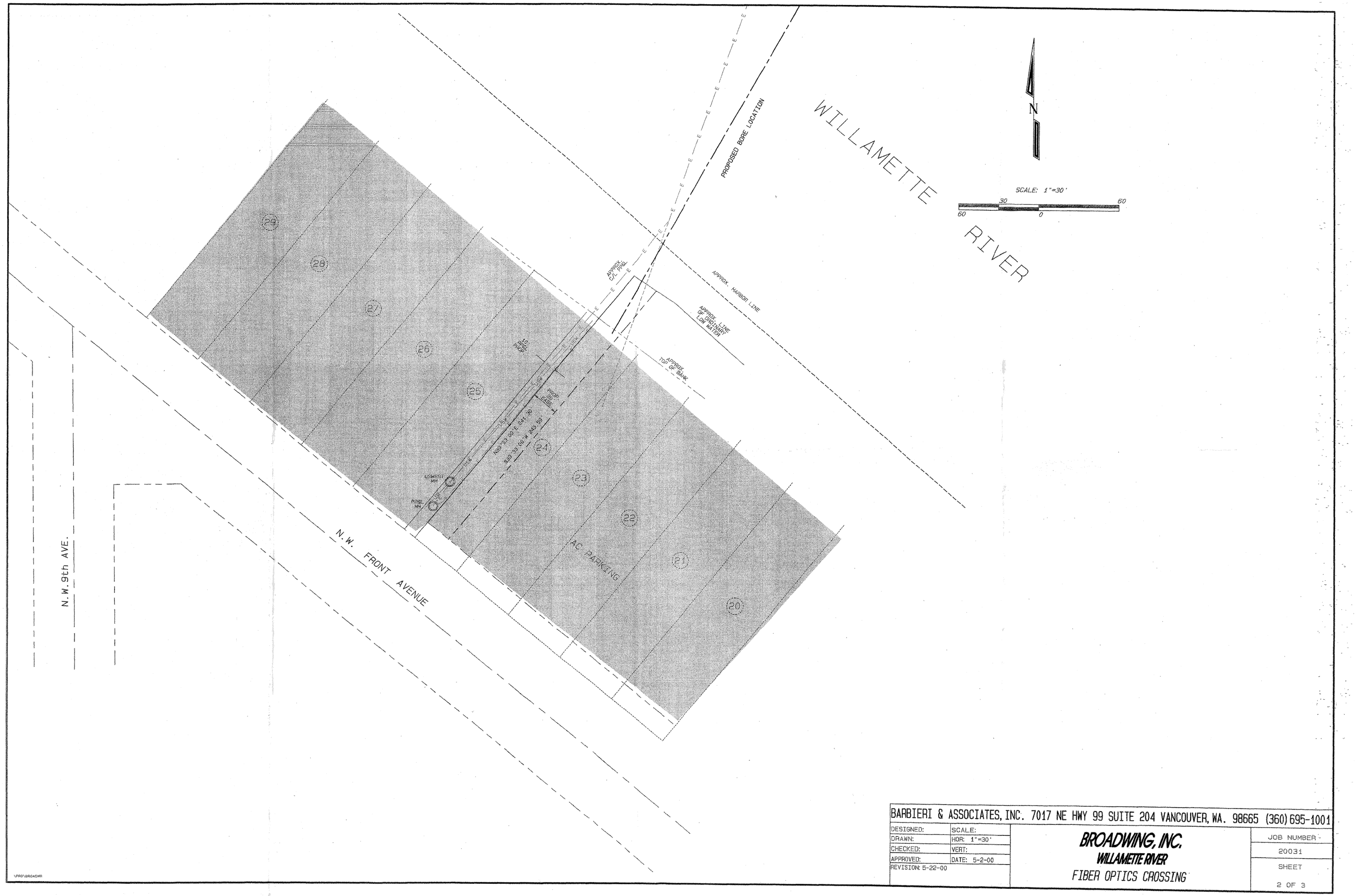



BARBIERI & ASSOCIATES, INC. 7017 NE HWY 99 SUITE 204 VANCOUVER, WA. 98665 (360) 695-1001

| | | | |
|---|---|---|---|
| DESIGNED: | SCALE: | **BROADWING, INC.** | JOB NUMBER |
| DRAWN: | HOR: 1"=30' | **WILLAMETTE RIVER** | 20031 |
| CHECKED: | VERT: | FIBER OPTICS CROSSING | SHEET |
| APPROVED: | DATE: 5-2-00 | | 3 OF 3 |
| REVISION: 5-22-00 | | | |

\PROJ\BROADWR

CARG002433




BARBIERI & ASSOCIATES, INC. 7017 NE HWY 99 SUITE 204 VANCOUVER, WA. 98665 (360) 695-1001

| | | | |
|---|---|---|---|
| DESIGNED: | SCALE: | BROADWING, INC. | JOB NUMBER |
| DRAWN: | HOR: 1"=30' | WILLAMETTE RIVER | 20031 |
| CHECKED: | VERT: | FIBER OPTICS CROSSING | SHEET |
| APPROVED: | DATE: 5-2-00 | | 2 OF 3 |
| REVISION: 5-22-00 | | | |

\PRO\BROADWR

CARG002434

Irving 0022.PDF

*File Title:* 510 - Portland, OR - Underground Power Line Easement in Portland, Oregon - CGONA
*File Description:*

*File Part Title:*
General

2006/10341/0001

**Property Description**
A parcel of land lying in the SW quarter of Section 27, Township 1 North, Range 1 East, City of Portland, County of Multnomah and State of Oregon

*File Plan:*
General / Agreements / Physical Facilities Real Estate / Portland, OR

Note:

FC: JKASTAN

FOR RECORDS USE ONLY

ACTIVE CLOSED INDEFINITE RESTRICTED

Date Closed _____

Retention Code _____

Tax Hold Year _____

Corporate Hold(s) _____

Off Site Box Number _____

2006/10341/0001

Irving 0023.PDF

PACIFICORP
PACIFIC POWER UTAH POWER

*Keeping our Clients the Priority*

*From the Desk of*
*Maggie Hodny*

John Hi-
A recorded copy for your files. Thank you again for working with PacifiCorp.
Take care-
Maggie Hodny

*825 NE Multnomah, Suite 1000*
*Portland, OR 97232*
*Telephone (503) 813-5889*
*Fax (503) 813-6214*
*Email: Maggie.Hodny@PacifiCorp.com*

Irving 0024.PDF

Recorded in MULTNOMAH COUNTY, OREGON
C. Swick, Deputy Clerk
A49 7
Total : 51.00 ATKLM

2006-129165 07/14/2006 09:35:29am

| | |
|---|---|
| Name of Document: | Easement Agreement |
| Grantor: | Cargill, Incorporated, a Delaware corporation |
| Grantee: | PacifiCorp, an Oregon corporation |
| After Recording return to: | PacifiCorp<br>Attn: Maggie Hodny<br>825 NE Multnomah Street, Suite 1000<br>Portland, OR 97232 |
| Legal Description: | 1N1E27CD - Tax lot 500 |

1.

# EASEMENT AGREEMENT

THIS EASEMENT AGREEMENT ("Agreement") is effective the 29th day of June, 2006, by and between **Cargill, Incorporated**, a Delaware corporation, whose principal mailing address is 15407 McGinty Road, Wayzata, Minnesota ("Cargill") and **PacifiCorp**, an Oregon corporation, whose principal mailing address is 825 NE Multnomah St., Suite 1000, Portland, Oregon ("Grantee") with reference to the following facts:

## RECITALS

Grantee desires to obtain from Cargill and Cargill desires to grant and convey to Grantee an easement for the purposes hereinafter set forth, upon and subject to the terms and conditions hereinafter set forth.

NOW THEREFORE, in consideration of the covenants and agreements contained herein and in consideration of Ten Dollars ($10.00) and good and valuable or other consideration, the parties hereto, intending to be legally bound, hereby mutually agree as follows:

## AGREEMENTS

1. Cargill hereby grants to Grantee, its agents, contractors, subcontractors, successors and assigns, an easement for a right-of-way ten (10) feet in width and Two Hundred Sixty Seven (267) feet in length, more or less, to be installed for the sole purpose of construction, reconstruction, operation, maintenance, repair, replacement, enlargement, and removal of a underground electric distribution and communication lines and all necessary or desirable accessories and appurtenances thereto, including without limitation: wires, fibers, cables and other conductors and conduits therefore, and pads, transformers switches, cabinets, vaults on, across, or under the surface of the real property (the "Easement") in, under, upon, across and through the following described real estate, more particularly described on Exhibit A, attached hereto and by this reference made a part hereof, together with the right of ingress and egress (the "Easement Area").

2. The Easement shall be non-exclusive. Cargill and its lessees, licensees, successors and assigns shall have the right to use the surface and subsurface of the Easement Area for any purpose not inconsistent with Grantee's permitted use as described in paragraph one.

3. Grantee shall have the right to clear and keep clear brush, trees, shrubbery, roots, buildings and other obstructions which, in Grantee's judgment, may interfere with the safe, proper and expeditious laying, construction, maintenance, alteration, inspection, repair, replacement, protection, relocation, operation and removal of said electric distribution and communication lines and accessories, or any part thereof, within or upon the Easement Area.

4. **Grantee shall construct, install, maintain, repair, remove, replace, inspect and operate the Easement so as to occasion the least practicable damage and inconvenience to Cargill and restore the ground surface to the condition and contour as existed immediately prior to the commencement of any work, to accommodate the construction of the Easement.**

5. Grantee shall not use the Easement for any other purpose than that specified herein.

6. The rights of Grantee under this Agreement may not be assigned without Cargill's consent.

7. Grantee, with Cargill's cooperation, shall be responsible for obtaining all necessary permits, licenses, approvals and consents required for the construction, installation, maintenance, repair, inspection and operation of the Easement. Grantee shall install and maintain the Easement in a manner as may be required by all applicable laws, rules, regulations, codes, ordinances and orders, and shall prevent the wastewater from entering any unapproved lands or waters.

8. **Grantee agrees to defend, indemnify and save Cargill harmless against all actions, claims, damages or demands which may be brought or made against Cargill in connection with the construction, operation, or maintenance of Grantee's improvements upon this easement, but not if such action, claim, or damages arise out of or by reason of any negligence or willful misconduct by**

**Cargill, its employees, customers, agents, or other parties whom Cargill authorizes to share this non-exclusive easement.**

9. Cargill warrants that it is the owner of the Easement Area and that Cargill has the full power, right and authority to convey this Easement to Grantee without the consent of any third party and that Grantee's use of the same will be undisturbed during the term hereof.

10. This Agreement represents the entire Agreement between the parties with respect to the subject matter addressed herein and supersedes all prior or contemporaneous agreements or understandings, written or oral, between the parties with respect to the same subject matter, and shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. No amendment to this Agreement shall be binding upon the parties, unless it is in writing and is executed by duly authorized representatives of each of the parties.

11. This Agreement shall be construed and enforced in accordance with and governed by, the laws of the State of Oregon.

**To have and to hold the above described rights and easements, until such time as Grantee, its successors and assigns, fail to use the Easement for a period of one (1) year, at which time such Easement shall automatically revert to the Cargill.**

IN WITNESS WHEREOF, the parties have executed this instrument as of the day and year first above written.

GRANTOR

CARGILL, INCORPORATED
a Delaware corporation

By: Richard R. Calhoun
Print name: Richard R. Calhoun
Its: Vice-President (GOSCNA)

GRANTEE

PACIFICORP
an Oregon corporation

By: Katherine Hill
Print name: Katherine Hill
Its: Real Estate Manager

STATE OF MINNESOTA )
COUNTY OF HENNEPIN )

I hereby certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared **Richard R. Calhoun**, known to me to be the person described in and who executed the foregoing instrument, who acknowledged before me that he executed the same, and an oath was taken.

(Check one:) ☒ said person(s) is personally known to me
[ ] said person(s) provided the following type of identification:_____

Notary rubber stamp seal

JOHN J. KASTAN
Notary Public-Minnesota
My Commission Expires Jan 31, 2010

Witness my hand and official seal in the County and state last aforesaid this 29th day of June, A.D. 2006.

Notary Signature

John J. Kastan
Printed Notary Signature

STATE OF OREGON )
COUNTY OF MULTNOMAH )

I hereby certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared KATHERINE HILL, known to me to be the person described in and who executed the foregoing instrument, who acknowledged before me that she executed the same, and an oath was taken.

(Check one:) ☒ said person(s) is/are personally known to me
[ ] said person(s) provided the following type of identification:_____

Notary rubber stamp seal

OFFICIAL SEAL
MAGGIE J HODNY
NOTARY PUBLIC-OREGON
COMMISSION NO. 366040
MY COMMISSION EXPIRES FEB. 26, 2007

Witness my hand and official seal in the County and state last aforesaid this 12th day of JULY, A.D. 2006.

Notary Signature

MAGGIE J. HODNY
Printed Notary Signature

This Instrument was drafted by:
Cargill Law Department
Mark T. Quayle, esq.
15407 McGinty Road West, MS24
Wayzata, MN 55391

# EXHIBIT A

## Legal Description

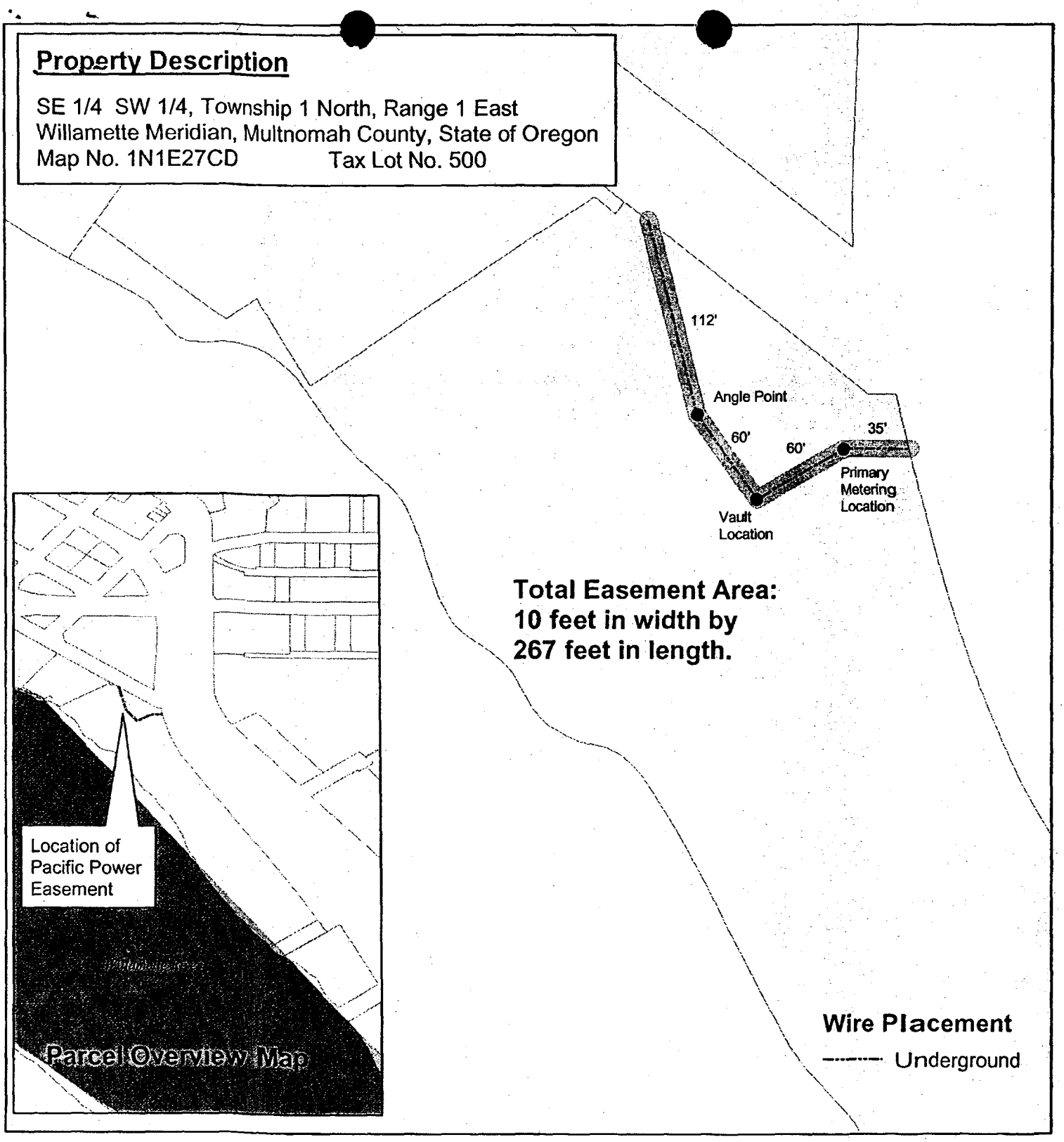
Parcel I:

A parcel of land lying in the Southwest quarter of Section 27, Township 1 North, Range 1 East, City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:

Beginning at a point on the Southwesterly line of North River Street, said point being South 50°58'41" East a distance of 235.49 feet from the East corner of River Lot 19, Albina, as conveyed to Dillingham Corporation, by Deed recorded February 13, 1969 in Book 663 Page 196, Deed Records; thence along said Southwesterly line South 50°58'41" East a distance of 179.04 feet to a point; thence leaving said Southwesterly line of North River Street North 88°46'41" West a distance of 13.54 feet to a point; thence South 59°22'30" West 361.2 feet more or less to a point on the Harbor line; thence along said Harbor line North 34°31'11" West 8.0 feet more or less; thence North 50°14'11" West 268.8 feet more or less to a point on the Southwesterly extension of the Southeasterly line of River Lot 19, Albina; thence leaving said Harbor line North 39°01'19" East along said Southwesterly extension and Southeasterly line a distance of 145.9 feet more or less to a point; thence leaving said Southwesterly extension of the Southeasterly line of River Lot 19, Albina, South 52°19'00" East a distance of 93.00 feet to a point; thence North 58°02'25" East a distance of 22.60 feet to a point; thence South 30°52'05" East a distance of 57.93 feet to a point; thence North 58°44'50" East a distance of 194.39 feet to a point; thence South 50°58'41" East a distance of 15.14 feet to a point; thence North 39°01'19" East a distance of 8.25 feet to the point of beginning.

## Property Description

SE 1/4 SW 1/4, Township 1 North, Range 1 East
Willamette Meridian, Multnomah County, State of Oregon
Map No. 1N1E27CD Tax Lot No. 500




CC#: 11206 WO#: 2755132

ROW File #: 2005-0361

Name: CARGILL, INC.

# EXHIBIT B

N

This drawing should be used only as a representation of the location of the easement being conveyed. The exact location of all structures, lines, and appurtenances is subject to change within the boundaries of the described easement area.

PACIFIC POWER
A DIVISION OF PACIFICORP

1 inch equals 75 feet 1:900

Irving 0025.PDF

# EASEMENT AGREEMENT

THIS EASEMENT AGREEMENT ("Agreement") is effective the 29th day of June, 2006, by and between **Cargill, Incorporated**, a Delaware corporation, whose principal mailing address is 15407 McGinty Road, Wayzata, Minnesota ("Cargill") and **PacifiCorp**, an Oregon corporation, whose principal mailing address is 825 NE Multnomah St., Suite 1000, Portland, Oregon ("Grantee") with reference to the following facts:

## RECITALS

Grantee desires to obtain from Cargill and Cargill desires to grant and convey to Grantee an easement for the purposes hereinafter set forth, upon and subject to the terms and conditions hereinafter set forth.

NOW THEREFORE, in consideration of the covenants and agreements contained herein and in consideration of Ten Dollars ($10.00) and good and valuable or other consideration, the parties hereto, intending to be legally bound, hereby mutually agree as follows:

## AGREEMENTS

1. Cargill hereby grants to Grantee, its agents, contractors, subcontractors, successors and assigns, an easement for a right-of-way ten (10) feet in width and Two Hundred Sixty Seven (267) feet in length, more or less, to be installed for the sole purpose of construction, reconstruction, operation, maintenance, repair, replacement, enlargement, and removal of a underground electric distribution and communication lines and all necessary or desirable accessories and appurtenances thereto, including without limitation: wires, fibers, cables and other conductors and conduits therefore, and pads, transformers switches, cabinets, vaults on, across, or under the surface of the real property (the "Easement") in, under, upon, across and through the following described real estate, more particularly described on Exhibit A, attached hereto and by this reference made a part hereof, together with the right of ingress and egress (the "Easement Area").

2. The Easement shall be non-exclusive. Cargill and its lessees, licensees, successors and assigns shall have the right to use the surface and subsurface of the Easement Area for any purpose not inconsistent with Grantee's permitted use as described in paragraph one.

3. Grantee shall have the right to clear and keep clear brush, trees, shrubbery, roots, buildings and other obstructions which, in Grantee's judgment, may interfere with the safe, proper and expeditious laying, construction, maintenance, alteration, inspection, repair, replacement, protection, relocation, operation and removal of said electric distribution and communication lines and accessories, or any part thereof, within or upon the Easement Area.

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8. **Grantee agrees to defend, indemnify and save Cargill harmless against all actions, claims, damages or demands which may be brought or made against Cargill in connection with the construction, operation, or maintenance of Grantee's improvements upon this easement, but not if such action, claim, or damages arise out of or by reason of any negligence or willful misconduct by**

**Cargill, its employees, customers, agents, or other parties whom Cargill authorizes to share this non-exclusive easement.**

9. Cargill warrants that it is the owner of the Easement Area and that Cargill has the full power, right and authority to convey this Easement to Grantee without the consent of any third party and that Grantee's use of the same will be undisturbed during the term hereof.

10. This Agreement represents the entire Agreement between the parties with respect to the subject matter addressed herein and supersedes all prior or contemporaneous agreements or understandings, written or oral, between the parties with respect to the same subject matter, and shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. No amendment to this Agreement shall be binding upon the parties, unless it is in writing and is executed by duly authorized representatives of each of the parties.

11. This Agreement shall be construed and enforced in accordance with and governed by, the laws of the State of Oregon.

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IN WITNESS WHEREOF, the parties have executed this instrument as of the day and year first above written.

GRANTOR

CARGILL, INCORPORATED
a Delaware corporation

By: _____
Print name: Richard R. Calhoun
Its: Vice-President (GOSCNA)

GRANTEE

PACIFICORP
an Oregon corporation

By: _____
Print name: Katherine Hill
Its: Real Estate Manager

STATE OF MINNESOTA )

COUNTY OF HENNEPIN )

I hereby certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared **Richard R. Calhoun**, known to me to be the person described in and who executed the foregoing instrument, who acknowledged before me that he executed the same, and an oath was taken.

(Check one:) ☒ said person(s) is personally known to me

[ ] said person(s) provided the following type of identification:_____

Notary rubber stamp seal

JOHN J. KASTAN
Notary Public-Minnesota
My Commission Expires Jan 31, 2010

Witness my hand and official seal in the County and state last aforesaid this 29th day of June, A.D. 2006.

Notary Signature

John J. Kastan
Printed Notary Signature

STATE OF OREGON )

COUNTY OF MULTNOMAH )

I hereby certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared KATHERINE HILL, known to me to be the person described in and who executed the foregoing instrument, who acknowledged before me that she executed the same, and an oath was taken.

(Check one:) ☒ said person(s) is/are personally known to me

[ ] said person(s) provided the following type of identification:_____

Notary rubber stamp seal

OFFICIAL SEAL
MAGGIE J HODNY
NOTARY PUBLIC-OREGON
COMMISSION NO. 366040
MY COMMISSION EXPIRES FEB. 26, 2007

Witness my hand and official seal in the County and state last aforesaid this 12th day of July, A.D. 2006.

Notary Signature

MAGGIE J. HODNY
Printed Notary Signature

This Instrument was drafted by:
Cargill Law Department
Mark T. Quayle, esq.
15407 McGinty Road West, MS24
Wayzata, MN 55391

# EXHIBIT A

## Legal Description

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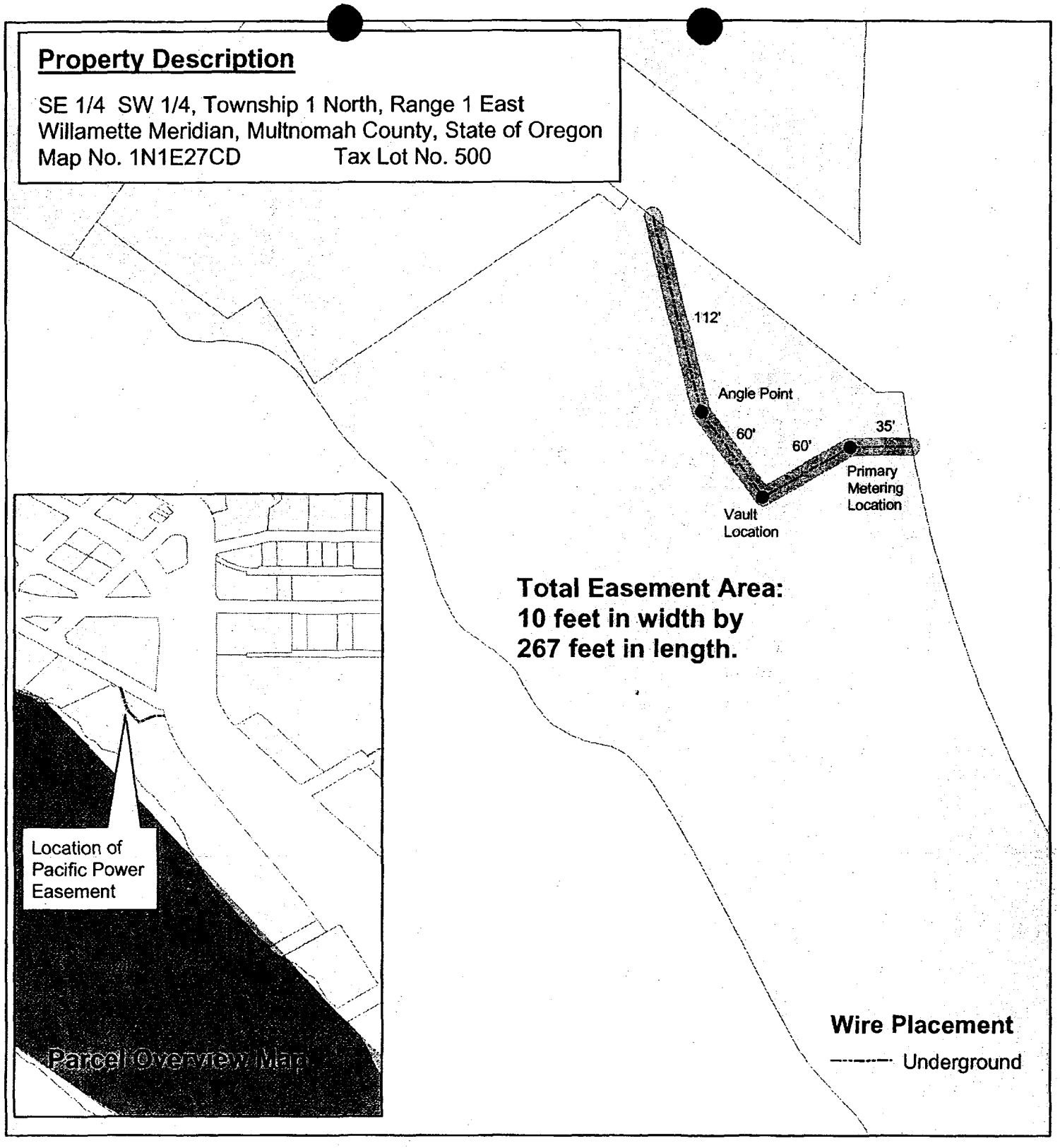
## Property Description

SE 1/4 SW 1/4, Township 1 North, Range 1 East
Willamette Meridian, Multnomah County, State of Oregon
Map No. 1N1E27CD Tax Lot No. 500




CC#: 11206 WO#: 2755132

ROW File #: 2005-0361

Name: CARGILL, INC.

# EXHIBIT B

This drawing should be used only as a representation of the location of the easement being conveyed. The exact location of all structures, lines, and appurtenances is subject to change within the boundaries of the described easement area.

PACIFIC POWER
A DIVISION OF PACIFICORP

1 inch equals 75 feet 1:900

Irving 0026.PDF

PACIFIC POWER
A DIVISION OF PACIFICORP

825 NE Multnomah
Portland, Oregon 97232

July 13, 2006

John J. Kastan
Cargill Incorporated
PO Box 5624
Minneapolis, MN 55440-5624

**CERTIFIED MAIL** – Return Receipt Requested

RE: Easement Agreement and Compensation

Dear John:

Enclosed is an original Easement Agreement between Cargill, Incorporated and PacifiCorp. We have sent our copy to be recorded in Multnomah County, State of Oregon.

In exchange for granting this easement to PacifiCorp, we agreed to compensate Cargill $3,000.00. This figure is based on a percentage of real market value of land only. Please find the compensation enclosed.

We would like to thank you for allowing PacifiCorp d.b.a. Pacific Power to continue to provide safe, reliable and affordable electricity to the Portland community.

Should you have any questions or concerns please contact me. Thank you.

Sincerely,

Maggie Hodny
Pacific Power
Property Agent
825 NE Multnomah Street, Suite 1000
Portland, OR 97232

Irving 0027.PDF

Cargill Law

June 29, 2006

Maggie Hodny
Pacific Power
Right-of-Way Department
825 NE Multnomah, Suite 1000
Portland, OR 97239

RE: Easement Agreement

Dear Maggie:

Enclosed are two original Easement Agreements between Cargill, Incorporated and PacifiCorp. Please have these two agreements signed and notarized on behalf of PacifiCorp, retaining one agreement for your file and returning one to my attention.

Should you have any questions please contact me. Thank you.

Sincerely,

John J. Kastan
Senior Paralegal

JJK:cs
Enclosures
#1023207

**John J. Kastan**
Senior Paralegal
(952) 742-2742
John_Kastan@cargill.com

Mailing Address:
P.O. Box 5624
Minneapolis, MN 55440-5624

Location/Shipping Address:
15407 McGinty Road West
Wayzata, MN 55391-5624

Facsimile:
(952) 367-1229
or (952) 742-6349

# EASEMENT AGREEMENT

THIS EASEMENT AGREEMENT ("Agreement") is effective the 29th day of June, 2006, by and between **Cargill, Incorporated**, a Delaware corporation, whose principal mailing address is 15407 McGinty Road, Wayzata, Minnesota ("Cargill") and **PacifiCorp**, an Oregon corporation, whose principal mailing address is 825 NE Multnomah St., Suite 1000, Portland, Oregon ("Grantee") with reference to the following facts:

## RECITALS

Grantee desires to obtain from Cargill and Cargill desires to grant and convey to Grantee an easement for the purposes hereinafter set forth, upon and subject to the terms and conditions hereinafter set forth.

NOW THEREFORE, in consideration of the covenants and agreements contained herein and in consideration of Ten Dollars ($10.00) and good and valuable or other consideration, the parties hereto, intending to be legally bound, hereby mutually agree as follows:

## AGREEMENTS

1. Cargill hereby grants to Grantee, its agents, contractors, subcontractors, successors and assigns, an easement for a right-of-way ten (10) feet in width and Two Hundred Sixty Seven (267) feet in length, more or less, to be installed for the sole purpose of construction, reconstruction, operation, maintenance, repair, replacement, enlargement, and removal of a underground electric distribution and communication lines and all necessary or desirable accessories and appurtenances thereto, including without limitation: wires, fibers, cables and other conductors and conduits therefore, and pads, transformers switches, cabinets, vaults on, across, or under the surface of the real property (the "Easement") in, under, upon, across and through the following described real estate, more particularly described on Exhibit A, attached hereto and by this reference made a part hereof, together with the right of ingress and egress (the "Easement Area").

2. The Easement shall be non-exclusive. Cargill and its lessees, licensees, successors and assigns shall have the right to use the surface and subsurface of the Easement Area for any purpose not inconsistent with Grantee's permitted use as described in paragraph one.

3. Grantee shall have the right to clear and keep clear brush, trees, shrubbery, roots, buildings and other obstructions which, in Grantee's judgment, may interfere with the safe, proper and expeditious laying, construction, maintenance, alteration, inspection, repair, replacement, protection, relocation, operation and removal of said electric distribution and communication lines and accessories, or any part thereof, within or upon the Easement Area.

4. **Grantee shall construct, install, maintain, repair, remove, replace, inspect and operate the Easement so as to occasion the least practicable damage and inconvenience to Cargill and restore the ground surface to the condition and contour as existed immediately prior to the commencement of any work, to accommodate the construction of the Easement.**

5. Grantee shall not use the Easement for any other purpose than that specified herein.

6. The rights of Grantee under this Agreement may not be assigned without Cargill's consent.

7. Grantee, with Cargill's cooperation, shall be responsible for obtaining all necessary permits, licenses, approvals and consents required for the construction, installation, maintenance, repair, inspection and operation of the Easement. Grantee shall install and maintain the Easement in a manner as may be required by all applicable laws, rules, regulations, codes, ordinances and orders, and shall prevent the wastewater from entering any unapproved lands or waters.

8. **Grantee agrees to defend, indemnify and save Cargill harmless against all actions, claims, damages or demands which may be brought or made against Cargill in connection with the construction, operation, or maintenance of Grantee's improvements upon this easement, but not if such action, claim, or damages arise out of or by reason of any negligence or willful misconduct by**

**Cargill, its employees, customers, agents, or other parties whom Cargill authorizes to share this non-exclusive easement.**

9. Cargill warrants that it is the owner of the Easement Area and that Cargill has the full power, right and authority to convey this Easement to Grantee without the consent of any third party and that Grantee's use of the same will be undisturbed during the term hereof.

10. This Agreement represents the entire Agreement between the parties with respect to the subject matter addressed herein and supersedes all prior or contemporaneous agreements or understandings, written or oral, between the parties with respect to the same subject matter, and shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. No amendment to this Agreement shall be binding upon the parties, unless it is in writing and is executed by duly authorized representatives of each of the parties.

11. This Agreement shall be construed and enforced in accordance with and governed by, the laws of the State of Oregon.

**To have and to hold the above described rights and easements, until such time as Grantee, its successors and assigns, fail to use the Easement for a period of one (1) year, at which time such Easement shall automatically revert to the Cargill.**

IN WITNESS WHEREOF, the parties have executed this instrument as of the day and year first above written.

GRANTOR

CARGILL, INCORPORATED
a Delaware corporation

By: _____
Print name: Richard R. Calhoun
Its: Vice-President (GOSCNA)

GRANTEE

PACIFICORP
an Oregon corporation

By: _____
Print name: _____
Its: _____

STATE OF MINNESOTA )
COUNTY OF HENNEPIN )

I hereby certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared **Richard R. Calhoun**, known to me to be the person described in and who executed the foregoing instrument, who acknowledged before me that he executed the same, and an oath was taken.

(Check one:) ☒ said person(s) is personally known to me
[ ] said person(s) provided the following type of identification:_____

Notary rubber stamp seal

JOHN J. KASTAN
Notary Public-Minnesota
My Commission Expires Jan 31, 2010

Witness my hand and official seal in the County and state last aforesaid this 29th day of June, A.D. 2006.

Notary Signature

John J. Kastan
Printed Notary Signature

STATE OF _____)
COUNTY OF _____)

I hereby certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared _____, known to me to be the person described in and who executed the foregoing instrument, who acknowledged before me that _____ executed the same, and an oath was taken.

(Check one:) [ ] said person(s) is/are personally known to me
[ ] said person(s) provided the following type of identification:_____

Notary rubber stamp seal

Witness my hand and official seal in the County and state last aforesaid this _____ day of _____, A.D. 2006.

Notary Signature

Printed Notary Signature

This Instrument was drafted by:
Cargill Law Department
Mark T. Quayle, esq.
15407 McGinty Road West, MS24
Wayzata, MN 55391

# EXHIBIT A

## Legal Description

Parcel I:

A parcel of land lying in the Southwest quarter of Section 27, Township 1 North, Range 1 East, City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:

Beginning at a point on the Southwesterly line of North River Street, said point being South 50°58'41" East a distance of 235.49 feet from the East corner of River Lot 19, Albina, as conveyed to Dillingham Corporation, by Deed recorded February 13, 1969 in Book 663 Page 196, Deed Records; thence along said Southwesterly line South 50°58'41" East a distance of 179.04 feet to a point; thence leaving said Southwesterly line of North River Street North 88°46'41" West a distance of 13.54 feet to a point; thence South 59°22'30" West 361.2 feet more or less to a point on the Harbor line; thence along said Harbor line North 34°31'11" West 8.0 feet more or less; thence North 50°14'11" West 268.8 feet more or less to a point on the Southwesterly extension of the Southeasterly line of River Lot 19, Albina; thence leaving said Harbor line North 39°01'19" East along said Southwesterly extension and Southeasterly line a distance of 145.9 feet more or less to a point; thence leaving said Southwesterly extension of the Southeasterly line of River Lot 19, Albina, South 52°19'00" East a distance of 93.00 feet to a point; thence North 58°02'25" East a distance of 22.60 feet to a point; thence South 30°52'05" East a distance of 57.93 feet to a point; thence North 58°44'50" East a distance of 194.39 feet to a point; thence South 50°58'41" East a distance of 15.14 feet to a point; thence North 39°01'19" East a distance of 8.25 feet to the point of beginning.

Cargill Law

June 29, 2006

Maggie Hodny
Pacific Power
Right-of-Way Department
825 NE Multnomah, Suite 1000
Portland, OR 97239

RE: Easement Agreement

Dear Maggie:

Enclosed are two original Easement Agreements between Cargill, Incorporated and PacifiCorp. Please have these two agreements signed and notarized on behalf of PacifiCorp, retaining one agreement for your file and returning one to my attention.

Should you have any questions please contact me. Thank you.

Sincerely,

John J. Kastan
Senior Paralegal

JJK:cs
Enclosures
#1023207

**John J. Kastan**
Senior Paralegal
(952) 742-2742
John_Kastan@cargill.com

Mailing Address:
P.O. Box 5624
Minneapolis, MN 55440-5624

Location/Shipping Address:
15407 McGinty Road West
Wayzata, MN 55391-5624

Facsimile:
(952) 367-1229
or (952) 742-6349

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Cargill Law

June 15, 2006

**VIA OVERNIGHT DELIVERY**

Mr. Gene Loffler
CLD Pacific Grain
Suite 1133
222 S.W. Columbia Street
Portland, OR 97201

RE: Easement Agreement

Dear Gene:

Cargill always uses its own easement agreement forms. I prepared the easement based on the one previously provided by PacifiCorp. Andy Augustine signed them today and I am sending you three originals by overnight mail. Please have all three signed and notarized.

Please forward one original to PacifiCorp and return the other two to me for our files. Please let me know if you have any questions. Thank you.

Sincerely,

John J. Kastan
Senior Paralegal

JJK:jag
(1003816)

**John J. Kastan**
Senior Paralegal
(952) 742-2742
John_Kastan@cargill.com

Mailing Address:
P.O. Box 5624
Minneapolis, MN 55440-5624

Location/Shipping Address:
15407 McGinty Road West
Wayzata, MN 55391-5624

Facsimile:
(952) 367-1229
or (952) 742-6349

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# EASEMENT AGREEMENT

THIS EASEMENT AGREEMENT ("Agreement") is effective the 15TH day of JUNE, 2006, by and between **Cargill, Incorporated**, a Delaware corporation, whose principal mailing address is 15407 McGinty Road, Wayzata, Minnesota ("Cargill") and **PacifiCorp**, an Oregon corporation, whose principal mailing address is 825 NE Multnomah St., Suite 1000, Portland, Oregon ("Grantee") with reference to the following facts:

## RECITALS

Grantee desires to obtain from Cargill and Cargill desires to grant and convey to Grantee an easement for the purposes hereinafter set forth, upon and subject to the terms and conditions hereinafter set forth.

NOW THEREFORE, in consideration of the covenants and agreements contained herein and in consideration of Three Thousand and 00/100 Dollars ($3,000.00) and good and valuable or other consideration, the parties hereto, intending to be legally bound, hereby mutually agree as follows:

## AGREEMENTS

1. Cargill hereby grants to Grantee, its agents, contractors, subcontractors, assignees and subtenants an easement for a right-of-way ten (10) feet in width and Two Hundred Sixty Seven (267) feet in length, more or less, to be installed for the sole purpose of construction, reconstruction, operation, maintenance, repair, replacement, enlargement, and removal of a underground electric distribution and communication lines and all necessary or desirable accessories and appurtenances thereto, including without limitation: wires, fibers, cables and other conductors and conduits therefore, and pads, transformers switches, cabinets, vaults on, across, or under the surface of the real property (the "Easement") in, under, upon, across and through certain real estate, the legal description and representative drawing of which are set forth in Exhibit A, attached hereto and by this reference made a part hereof, together with the right of ingress and egress (the "Easement Area").

2. The Easement shall be non-exclusive. Cargill and its lessees, licensees, successors and assigns shall have the right to use the surface and subsurface of the Easement Area for any purpose not inconsistent with Grantee's permitted use as described in paragraph one.

3. Grantee shall have the right to clear and keep clear brush, trees, shrubbery, roots, buildings and other obstructions which, in Grantee's judgment, may interfere with the safe, proper and expeditious laying, construction, maintenance, alteration, inspection, repair, replacement, protection, relocation, operation and removal of said electric distribution and communication lines and accessories, or any part thereof, within or upon the Easement Area.

4. **Grantee shall construct, install, maintain, repair, remove, replace, inspect and operate the Easement so as to occasion the least practicable damage and inconvenience to Cargill and restore the ground surface to the condition and contour as existed immediately prior to the commencement of any work, to accommodate the construction of the Easement.**

5. Grantee shall not use the Easement for any other purpose than that specified herein.

6. The rights of Grantee under this Agreement may not be assigned without Cargill's consent.

7. Grantee, with Cargill's cooperation, shall be responsible for obtaining all necessary permits, licenses, approvals and consents required for the construction, installation, maintenance, repair, inspection and operation of the Easement. Grantee shall install and maintain the Easement in a manner as may be required by all applicable laws, rules, regulations, codes, ordinances and orders, and shall prevent the wastewater from entering any unapproved lands or waters.

8. **Grantee agrees to defend, indemnify and save Cargill harmless against all actions, claims, damages or demands which may be brought or made against Cargill by reason of anything done by Grantee, its employees, customers, or agents, in the exercise or purported exercise of the rights, privileges and duties herein granted.**

9. Cargill warrants that it is the owner of the Easement Area and that Cargill has the full power, right and authority to convey this Easement to Grantee without the consent of any third party and that Grantee's use of the same will be undisturbed during the term hereof.

10. This Agreement represents the entire Agreement between the parties with respect to the subject matter addressed herein and supersedes all prior or contemporaneous agreements or understandings, written or oral, between the parties with respect to the same subject matter, and shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. No amendment to this Agreement shall be binding upon the parties, unless it is in writing and is executed by duly authorized representatives of each of the parties.

11. This Agreement shall be construed and enforced in accordance with and governed by, the laws of the State of Oregon.

**To have and to hold the above described rights and easements, until such time as Grantee, its successors and assigns, fail to use the Easement for a period of one (1) year, at which time such Easement shall automatically revert to the Cargill.**

IN WITNESS WHEREOF, the parties have executed this instrument as of the day and year first above written.

GRANTOR

CARGILL, INCORPORATED
a Delaware corporation

By: _____
Print name: ANDY AUGUSTINE
Its: VICE-PRESIDENT / CONTROLLER

GRANTEE

PACIFICORP
an Oregon corporation

By: _____
Print name: _____
Its: _____

STATE OF MINNESOTA )
COUNTY OF HENNEPIN )

I hereby certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared ANDY AUGUSTINE, known to me to be the person described in and who executed the foregoing instrument, who acknowledged before me that he executed the same, and an oath was taken.

(Check one:) [X] said person(s) is/are personally known to me
[ ] said person(s) provided the following type of identification:_____

Notary rubber stamp seal

JOHN J. KASTAN
Notary Public-Minnesota
My Commission Expires Jan 31, 2010

Witness my hand and official seal in the County and state last aforesaid this 15TH day of JUNE, A.D. 2006.

Notary Signature

JOHN J. KASTAN
Printed Notary Signature

STATE OF _____ )
COUNTY OF _____)

I hereby certify that on this day, before me, an officer duly authorized to administer oaths and take acknowledgments, personally appeared _____, known to me to be the person described in and who executed the foregoing instrument, who acknowledged before me that _____ executed the same, and an oath was taken.

(Check one:) [ ] said person(s) is/are personally known to me
[ ] said person(s) provided the following type of identification:_____

Notary rubber stamp seal

Witness my hand and official seal in the County and state last aforesaid this _____ day of _____, A.D. 2006.

Notary Signature

Printed Notary Signature

This Instrument was drafted by:
Cargill Law Department
Thomas W. Lindberg, esq.
15407 McGinty Road West, MS24
Wayzata, MN 55391

# EXHIBIT A

## Legal Description

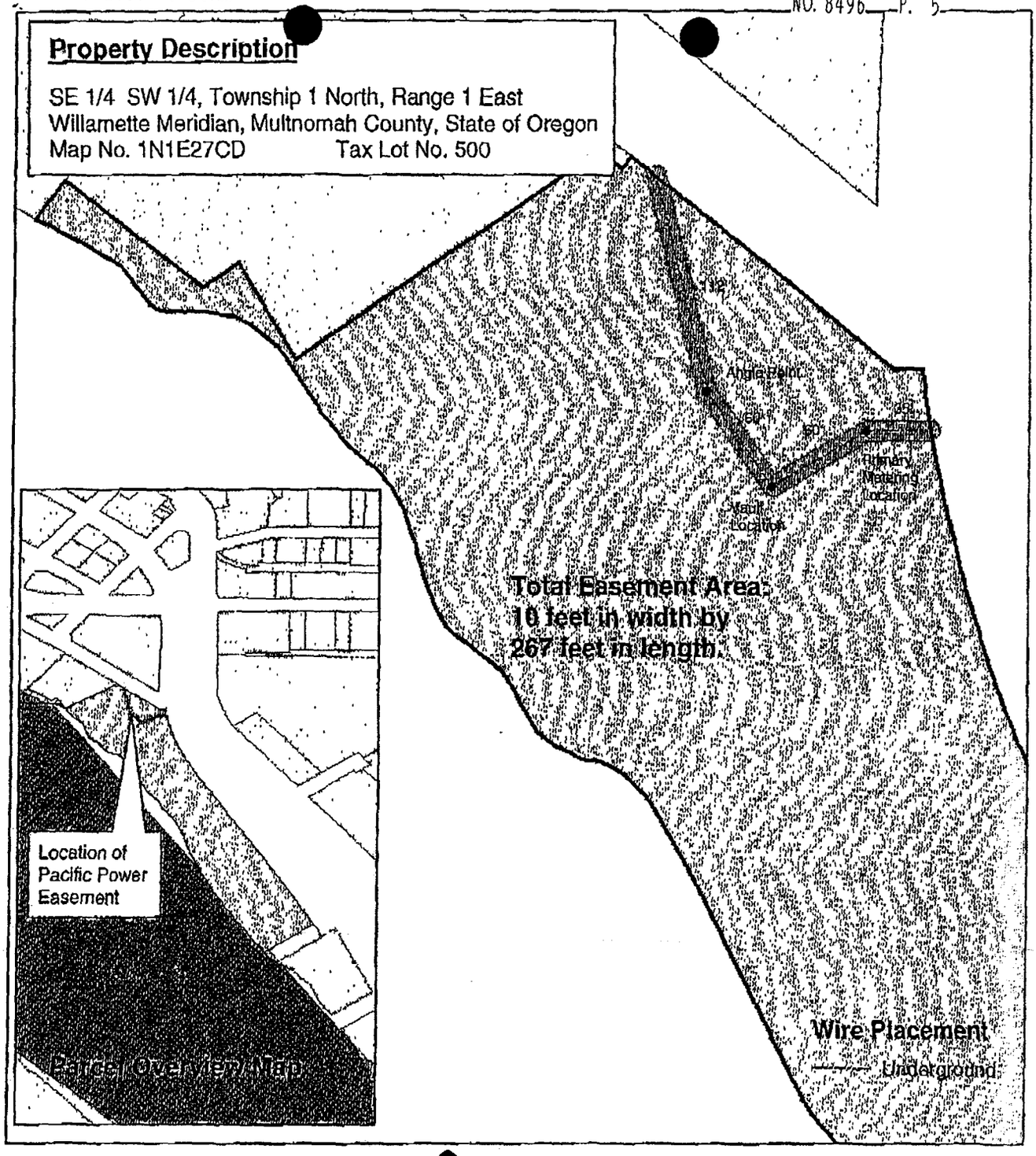
Parcel I:

A parcel of land lying in the Southwest quarter of Section 27, Township 1 North, Range 1 East, City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:

Beginning at a point on the Southwesterly line of North River Street, said point being South 50°58'41" East a distance of 235.49 feet from the East corner of River Lot 19, Albina, as conveyed to Dillingham Corporation, by Deed recorded February 13, 1969 in Book 663 Page 196, Deed Records; thence along said Southwesterly line South 50°58'41" East a distance of 179.04 feet to a point; thence leaving said Southwesterly line of North River Street North 88°46'41" West a distance of 13.54 feet to a point; thence South 59°22'30" West 361.2 feet more or less to a point on the Harbor line; thence along said Harbor line North 34°31'11" West 8.0 feet more or less; thence North 50°14'11" West 268.8 feet more or less to a point on the Southwesterly extension of the Southeasterly line of River Lot 19, Albina; thence leaving said Harbor line North 39°01'19" East along said Southwesterly extension and Southeasterly line a distance of 145.9 feet more or less to a point; thence leaving said Southwesterly extension of the Southeasterly line of River Lot 19, Albina, South 52°19'00" East a distance of 93.00 feet to a point; thence North 58°02'25" East a distance of 22.60 feet to a point; thence South 30°52'05" East a distance of 57.93 feet to a point; thence North 58°44'50" East a distance of 194.39 feet to a point; thence South 50°58'41" East a distance of 15.14 feet to a point; thence North 39°01'19" East a distance of 8.25 feet to the point of beginning.

**Property Description**

SE 1/4 SW 1/4, Township 1 North, Range 1 East
Willamette Meridian, Multnomah County, State of Oregon
Map No. 1N1E27CD Tax Lot No. 500




CC#: 11206 WO#: 2755132

ROW File #: 2005-0361

Name: CARGILL, INC.

# EXHIBIT A

This drawing should be used only as a representation of the location of the easement being conveyed. The exact location of all structures, lines, and appurtenances is subject to change within the boundaries of the described easement area.

PACIFIC POWER
A DIVISION OF PACIFICORP

1 inch equals 70 feet 1:839

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Please fill in all highlighted areas and pri[illegible] copies 1 for shipment and 1 for your records[illegible]

# REQUEST FOR AIR FREIGHT SERVICES

(Use for all special services)

| | | |
|---|---|---|
| ☐ IEP<br>☐ SMPX<br>☐ DOX<br>☐ MERCH | WGT. | LX<br>EXP.<br>C/E<br>C/B |

| | | | |
|---|---|---|---|
| BILL TO: GOSNA | DDL CODE: 106 | LOCATION CODE: | REQUISITION NO: NAAFS 38883.67638 |
| REQUESTED BY: John Kastan | DATE: 6/15/2006 | TELEX NO.: | PHONE NO.: |
| DEPARTMENT: Law | LOCATION: 24 | PHONE NO.: 22742 | ADDRESSEE: CLD Pacific Grain<br>Suite 1133<br>222 S.W. Columbia Street<br>Portland, OR 97201 |
| MUST BE DELIVERED BY<br>DATE: 6/16/2006 | TIME: 10:00 AM | | |
| REPLACEMENT VALUE: | AMOUNT INSURED: | VALUE FOR CUSTOMS: | |
| CONTENTS: Documents | | | ATTN: Mr. Gene Loffler |

FLIGHT INFORMATION

AWB NO.

| | | | | |
|---|---|---|---|---|
| ADCOM | ☐ DHL | ☐ First Courier | ☐ Mohawk | ☐ TNT Skypack |
| ☐ Airborne | ☐ Emery | ☐ Griffin | ☐ NNR | ☐ UPS |
| ☐ A.I.T. | ☐ FedEx | ☐ Ind. Packing | ☐ Sureway | ☐ USPO |
| ☐ OTHER | | | | |

MAWBL NO.

SPECIAL INSTRUCTIONS

☐ PROOF OF DELIVERY ☐ VERBAL ☐ WRITTEN

FOR EXPRESS SERVICE USE ONLY

☐ POUCH DUTY ☐ POUCH ☐ PREPAID ☐ COLLECT ☐ 3RD PARTY

| | | |
|---|---|---|
| P.O.D. ☐ | ☐ VERBAL<br>☐ WRITTEN | SIGNATURE<br>DATE & TIME |

| PCS | WEIGHT | SIZE |
|---|---|---|
| | | X X = |
| | | X X = |
| | | X X = |
| | | X X = |
| | | X X = |
| | | X X = |
| | | X X = |
| | | X X = |
| | | X X = |
| NOTES | | X X = |

| PIECES | LBS. | Ks | CUBIC INCHES |
|---|---|---|---|
| ☐ SPEC. SHEET ATTH | ☐ MSDS | ☐ PHYTO CERT. | ☐ PACKING LIST | DIM. WGT. |

| MAIL SERVICE | AMOUNT |
|---|---|
| Freight | |
| Invoices | |
| Bill of lading | |
| Bid | |
| Dry Ice | |
| Insurance | |
| Handling | |
| Labels | |
| Labor | |
| Packing | |
| POD | |
| RA/Haz | |
| SLI SED | |
| Mileage | |
| Tel/Fax | |
| TOTAL AMOUNT | $ |

CARG002474

Irving 0031.PDF

CLD Pacific Grain, LLC
KOIN Center
222 SW Columbia St.
Suite 1133
Portland, OR 97201

(503) 243-1133 Telephone
(503) 243-5079 Fax

**CLD PACIFIC GRAIN, LLC**

# Fax

| | | | |
|---|---|---|---|
| **To:** | Andy | **From:** | Gene L. |
| **Fax:** | X4297 | **Pages:** | 5 |
| **Phone:** | | **Date:** | 6/5/06 |
| **Re:** | | **CC:** | |

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

• **Comments:**

Andy- We had a meeting on site about a month ago to walk through this project.

It is in preparation of a City project that is running a large storm sewer tunnel under the area.

Please pass this on for review + signature. They can contact me with questions. (503-243-1133)

Thanks,
Gene

*IMPORTANT CONFIDENTIALITY NOTICE*

THIS FAX COMMUNICATION IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL TO WHOM IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PROPREITARY, CONFIDENTIAL OR PRIVILEGED. IF YOU ARE NOT THE INTENDED RECIPIENT (OR AN EMPLOYEE OR AGENT RESPONSIBLE FOR DELIVERING THIS COMMUNICATION TO THE INTENDED RECIPIENT), YOU ARE HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE NOTIFY THE SENDER IMMEDIATELY BY TELEPHONE AND RETURN IT TO THE SENDER BY MAIL. SENDER WILL REIMBURSE YOU FOR ANY EXPENSE INCURRED. THANK YOU.

Return to: Pacific Power
Attn: Maggie Hodny
825 NE Multnomah Street, Suite 1000
Portland, OR 97232

CC#: 11206 WO#: 2755132 RW#: 2005-0361

## UNDERGROUND RIGHT OF WAY EASEMENT

For value received, **Cargill, Incorporated, a Delaware Corporation** ("Grantor"), hereby grants to PacifiCorp, an Oregon corporation, its successors and assigns, ("Grantee"), an easement for a right of way 10 feet in width and 267 feet in length, more or less, for the construction, reconstruction, operation, maintenance, repair, replacement, enlargement, and removal of an underground electric distribution and communication lines and all necessary or desirable accessories and appurtenances thereto, including without limitation: wires, fibers, cables and other conductors and conduits therefor; and pads, transformers, switches, cabinets, vaults on, across, or under the surface of the real property of Grantor in **Multnomah** County, State of **Oregon**, more particularly described as follows and as more particularly described and/or shown on Exhibit(s) A attached hereto and by this reference made a part hereof:

**Parcel I:**
**A parcel of land lying in the Southwest quarter of Section 27, Township 1North, Range 1 East, City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:**

**Beginning at a point on the Southwesterly line of North River Street, said point being South 50° 58' 41" East a distance of 235.49 feet from the East corner of River Lot 19, Albina, as conveyed to Dillingham Corporation, by Deed recorded February 13, 1969 in Book 663 Page 196, Deed Records; thence along said Southwesterly line South 50° 58' 41" East a distance of 179.04 feet to a point; thence leaving said Southwesterly line of North River Street North 88° 46' 41" West a distance of 13.54 feet to a point; thence South 59° 22' 30" West 361.2 feet more or less to a point on the Harbor line; thence along said Harbor line North 34° 31' 11" West 8.0 feet more or less; thence North 50° 14' 11" West 268.8 feet more or less to a point on the Southwesterly extension of eh Southeasterly line of River Lot 19, Albina; thence leaving said harbor line North 39° 01' 19" East along said Southwesterly extension and Southeasterly line a distance of 145.9 feet more or less to a point; thence leaving said Southwesterly extension of the Southeasterly line of River Lot 19, Albina, South 52° 19' 00" East a distance of 93.00 feet to a point; thence North 58° 02' 25" East a distance of 22.60 feet to a point; thence South 30° 52' 05" East a distance of 57.93 feet to a point; thence North 58° 44' 50" East a distance of 194.39 feet to a point; thence South 50° 58' 41" East a distance of 15.14 feet to a point; thence North 39° 01' 19" East a distance of 8.25 feet to the point of beginning.**

**Tax Map Number: 1N-1E-27CD** **Tax Lot Number: 500**

Together with the right of access to the right of way from adjacent lands of Grantor for all activities in connection with the purposes for which this easement has been granted; and together with the present and (without payment therefor) the future right to keep the right of way clear of all brush, trees, timber, structures, buildings and other hazards which might endanger Grantee's facilities or impede Grantee's activities.

At no time shall Grantor place or store any flammable materials (other than agricultural crops), or light any fires, on or within the boundaries of the right of way. Subject to the foregoing limitations, the surface of the right of way may be used for agricultural crops and other purposes not inconsistent, as determined by Grantee, with the purposes for which this easement has been granted.

The rights and obligations of the parties hereto shall be binding upon and shall benefit their respective heirs, successors and assigns.

DATED this _____ day of _____, 2006.

_____

**Cargill, Incorporated**

**REPRESENTATIVE ACKNOWLEDGEMENT**

State of_____
County of _____

This instrument was acknowledged before me on _____(date) by
_____(name(s) of person(s))
as _____(type of authority, e.g., officer, trustee, etc.) of
_____.(name of party on behalf of whom instrument was executed)

_____(Signature of Notarial officer)
_____(My commission expires: Date)

(Seal)

PACIFIC POWER
A MIDAMERICAN ENERGY HOLDINGS COMPANY

825 NE Multnomah
Portland, Oregon 97232

May 26th, 2006

Mr. Gene Loffler
CLD Pacific Grain
222 SW Columbia Street, Suite 1133
Portland, OR 97201

**CERTIFIED MAIL** – Return Receipt Requested

RE: Request for Pacific Power Easement
Site Address: 800 North River Street
R/W File No. 2005-0361

Dear Mr. Loffler,

Over the past several months Pacific Power has been working with the City of Portland on a phased sewer project. After several discussions and meetings, Pacific Power has been asked to relocate existing overhead and underground power lines to accommodate the City of Portland's construction site for the sanitary sewer project. The project requires Pacific Power to remove and re-align existing overhead and underground power lines on North River Street.

Due to specific design requirements it has been identified that we will be reconfiguring the electrical service to property you own at 800 North River Street. Therefore an easement must be acquired across your property. We are requesting a 10 foot wide by 267 foot long easement area for underground electrical wire to provide service to your property and to the City of Portland.

We have enclosed the easement document for your review. In exchange for granting this easement to Pacific Power, we will compensate you $3,000.00. This figure is based on a percentage of real market value of land only. If you have had a recent comparative market analysis or appraisal performed on the property in question, we would be more than happy to review those figures and calculate a new offer based on those findings.

Please review the material enclosed, and contact me at 503.813.5889 with any questions or concerns you may have regarding this request. We would like to thank you in advance for allowing Pacific Power to continue to provide safe, reliable and affordable electricity to the Portland community. I look forward to hearing from you.

Sincerely,

Maggie Hodny
Pacific Power
Property Agent
825 NE Multnomah Street, Suite 1000
Portland, OR 97232

Return to: Pacific Power
Attn: Maggie Hodny
825 NE Multnomah Street, Suite 1000
Portland, OR 97232

CC#: 11206 WO#: 2755132 RW#: 2005-0361

## UNDERGROUND RIGHT OF WAY EASEMENT

For value received, **Cargill, Incorporated, a Delaware Corporation** ("Grantor"), hereby grants to PacifiCorp, an Oregon corporation, its successors and assigns, ("Grantee"), an easement for a right of way **10** feet in width and **267** feet in length, more or less, for the construction, reconstruction, operation, maintenance, repair, replacement, enlargement, and removal of an underground electric distribution and communication lines and all necessary or desirable accessories and appurtenances thereto, including without limitation: wires, fibers, cables and other conductors and conduits therefor; and pads, transformers, switches, cabinets, vaults on, across, or under the surface of the real property of Grantor in **Multnomah** County, State of **Oregon**, more particularly described as follows and as more particularly described and/or shown on Exhibit(s) A attached hereto and by this reference made a part hereof:

GUSCNA
– PORTLAND, OR
"EASEMENT
Legal Description"

**Parcel I:**
**A parcel of land lying in the Southwest quarter of Section 27, Township 1North, Range 1 East, City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:**

**Beginning at a point on the Southwesterly line of North River Street, said point being South 50° 58' 41" East a distance of 235.49 feet from the East corner of River Lot 19, Albina, as conveyed to Dillingham Corporation, by Deed recorded February 13, 1969 in Book 663 Page 196, Deed Records; thence along said Southwesterly line South 50° 58' 41" East a distance of 179.04 feet to a point; thence leaving said Southwesterly line of North River Street North 88° 46' 41" West a distance of 13.54 feet to a point; thence South 59° 22' 30" West 361.2 feet more or less to a point on the Harbor line; thence along said Harbor line North 34° 31' 11" West 8.0 feet more or less; thence North 50° 14' 11" West 268.8 feet more or less to a point on the Southwesterly extension of eh Southeasterly line of River Lot 19, Albina; thence leaving said harbor line North 39° 01' 19" East along said Southwesterly extension and Southeasterly line a distance of 145.9 feet more or less to a point; thence leaving said Southwesterly extension of the Southeasterly line of River Lot 19, Albina, South 52° 19' 00" East a distance of 93.00 feet to a point; thence North 58° 02' 25" East a distance of 22.60 feet to a point; thence South 30° 52' 05" East a distance of 57.93 feet to a point; thence North 58° 44' 50" East a distance of 194.39 feet to a point; thence South 50° 58' 41" East a distance of 15.14 feet to a point; thence North 39° 01' 19" East a distance of 8.25 feet to the point of beginning.**

**Tax Map Number: 1N-1E-27CD** **Tax Lot Number: 500**

Together with the right of access to the right of way from adjacent lands of Grantor for all activities in connection with the purposes for which this easement has been granted; and together with the present and (without payment therefor) the future right to keep the right of way clear of all brush, trees, timber, structures, buildings and other hazards which might endanger Grantee's facilities or impede Grantee's activities.

At no time shall Grantor place or store any flammable materials (other than agricultural crops), or light any fires, on or within the boundaries of the right of way. Subject to the foregoing limitations, the surface of the right of way may be used for agricultural crops and other purposes not inconsistent, as determined by Grantee, with the purposes for which this easement has been granted.

The rights and obligations of the parties hereto shall be binding upon and shall benefit their respective heirs, successors and assigns.

DATED this _____ day of _____, 2006.

_____

**Cargill, Incorporated**

**REPRESENTATIVE ACKNOWLEDGEMENT**

State of_____
County of _____

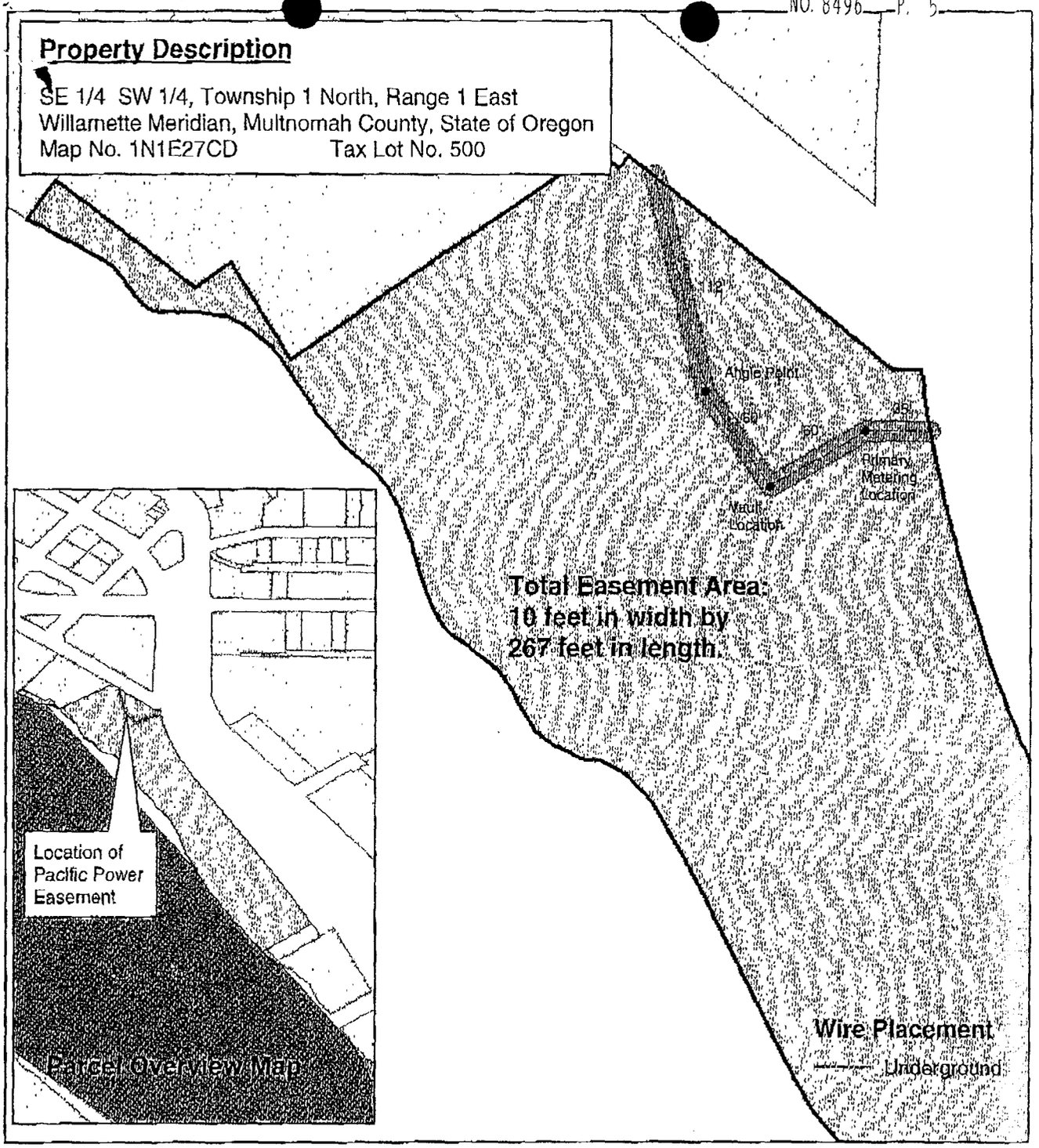
This instrument was acknowledged before me on _____(date) by
_____(name(s) of person(s))
as _____(type of authority, e.g., officer, trustee, etc.) of
_____.(name of party on behalf of whom instrument was executed)

_____(Signature of Notarial officer)
_____(My commission expires: Date)

(Seal)

**Property Description**

SE 1/4 SW 1/4, Township 1 North, Range 1 East
Willamette Meridian, Multnomah County, State of Oregon
Map No. 1N1E27CD Tax Lot No. 500




CC#: 11206 WO#: 2755132

ROW File #: 2005-0361

Name: CARGILL, INC.

# EXHIBIT A

N

This drawing should be used only as a representation of the location of the easement being conveyed. The exact location of all structures, lines, and appurtenances is subject to change within the boundaries of the described easement area.

PACIFIC POWER
A DIVISION OF PACIFICORP

1 inch equals 70 feet 1:839

Irving 0033.PDF

# Pacific Northwest Cargill Locations

# Cargill Portland
# T-4 Export Elevator

## Description

The total storage capacity is approximately 7.5 million bushels. Grain is received by rail, barge and truck. Grain can be shipped by barge or vessel. The facility is located along the Williamette River at Terminal 4, Foot of North Lombard, Portland, Oregon.

## Berth Data

The dock is 512' long with 40' water draft. Maximum beam is 90'. Air draft is 76'. Average vessel length is 800'. Longest vessel handled was 1,100'.

The average load rate in an 8-hour shift is 8,000 m/t. the maximum load rate is 13,000 m/t. Fresh potable water is available to vessels.

## Space

| | |
|---|---|
| A. Concrete Annex – | 1,500,000 |
| B. Large Steel Flat – | 6,000,000 |
| Total Elevator Space – | 7,500,000 |

## Lease

The elevator property is leased from the Port of Portland. There are two 5-year lease options remaining starting June 1996.

## Common Carriers

A. Barges – Tidewater/ Shaver
B. Rail Cars – Union Pacific/ Burlington Northern
C. Ship/Vessels – Tidewater/ Shaver/ Foss

# Cargill Portland T-4 Handling Capacities

| INBOUND | Per/hr. | Per/shift |
|---|---|---|
| North Rail Pit | 5 | 40 |
| South Rail Pit | 7 | 50 |
| Barge | 25m bph | 1-2 Barges |
| To Tanks | 10m bph ea. | 80m bph ea. |

| OUTBOUND | Per/hr | Per/shift |
|---|---|---|
| Rail | 4 | 32 |
| Barge | 30m bph | 2 barges |
| X-Tanks | 3-7,500 bph ea. | 20-50,000 bph ea. |
| Ship | | 10,000 m/t |

**RAIL YARD CAPACITY**
Track 6: 15
Track 7: 10
Track 8: 25
Track 9: 28
Total Capacity: 78

**RAIL YARD EMPTY CAPACITY**
South Pit: 25
North Pit: 20

Total Empty Capacity: 45

**PELLET MILL**
20-30,000 Tons pelletized/yr.
25 tons/hr

**BBP CLEANING CAPACITY**
450 s/t per hour

**STORAGE CAPACITY**
Concrete Uprights: 1.5 million bushels
8 Steel Tanks: 6.0 million bushels
Tanks 1,2,5,& 6 used for pellets
Tanks 3,4,7 & 8 used for grain
Facility Capacity: 7.5 million bushels

**BERTH DATA**
Water draft: 40'
Air draft: 76'
Max. beam width: 130'
Dock length: 512'
LOA (comfortable): 800'
LOA (largest handled): 1,100'
Fresh water available from the Port of Portland

CARG002487

# Cargill Portland
# Irving Elevator

## Description

The total storage capacity is 1.5 million bushels. Grain is received by truck, rail and barge. Grain is shipped by vessel or barge. The elevator is located on mile 11.4 of the Willamette River, between the Fremont and Broadway bridges.

## Berth Data

The dock is 325' long, with a 40' water draft. Maximum beam is 130'. Air draft is 103'. Average vessel length is 738'. The longest vessel loaded was 940'.

The average load rate in an 8-hour shift is 8,000 M/T. The maximum load rate is 21,000 M/T per day with two shifts. Grains loaded are soft white wheat and spring wheat.

## Space

| | | |
|---|---|---|
| Upright concrete bins: | Old House | 500,000 bushels |
| | New House | 1,000,000 bushels |
| | Total | 1,500,000 bushels |

## Common Carriers

Barges – Tidewater/ Shaver/ Foss
Rail Cars – Union Pacific/ Burlington Northern
Ship/Vessels – Tidewater/ Shaver/ Foss

# Cargill Portland Irving Elevator

**Handling Capacities**

| INBOUND | Per/hr. | Per/shift |
|---|---|---|
| Rail | 7-1/2 | 52 |
| Barge | 25 M BPH | 1-2 Barges |
| Trucks | 10 | 100 |

| OUTBOUND | Per/hr | Per/shift |
|---|---|---|
| Barge | 25M | 2 Barges |
| Ship | 40M | 8,000 M/T |

**RAIL YARD CAPACITY**

Track 113: 11 cars
Track 802: 5 cars
Track 803: 16 cars
Track 804: 22 cars
Total Capacity: 54 cars

**STORAGE CAPACITY**

| | | | |
|---|---|---|---|
| New House: | 16 bins @ | 57,325 bu/each | |
| | 7 bins @ | 15,500 bu/each | |
| | | 1,025 Million bushels | |
| Old House: | 8 bins @ | 39,330 bu/each | (4 of these are shipping bins) |
| | 6 bins @ | 12,500 bu/each | |
| | 3 bins @ | 25,000 bu/each | |
| | 2 bins @ | 11,660 bu/each | |
| | | 489 Million bushels | |

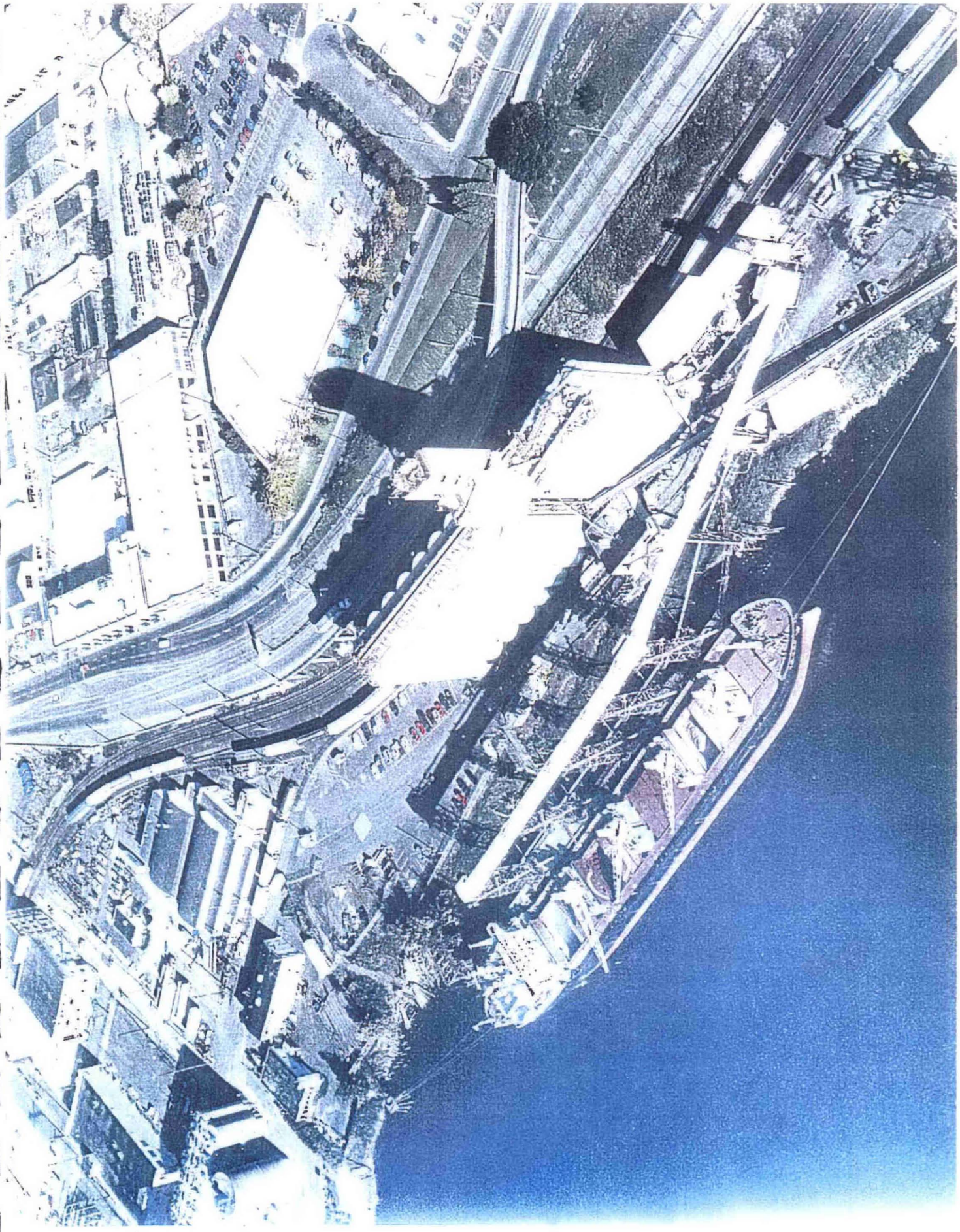
**CLEANING CAPACITY**

Cimbria-Bratney Cleaning and Scalping System with double aspiration wth 40M bph Capacity

**BERTH DATA**

| | |
|---|---|
| Water draft: | 40' |
| Air draft: | 103' |
| Max. Beam Width: | 130' |
| Dock Length: | 325' |
| LOA (comfortable) | 738' |
| LOA (largest handled): | 940' |

Fresh water available

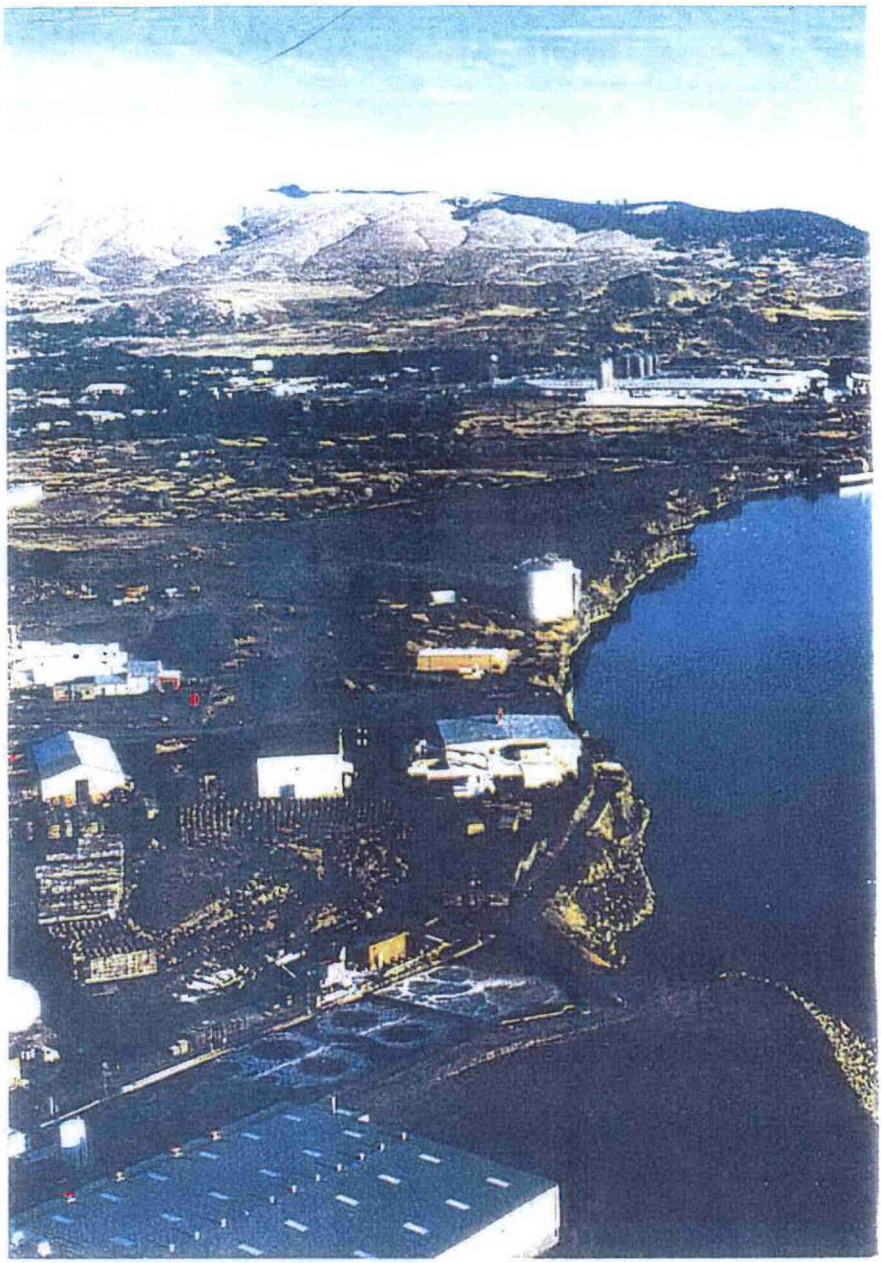


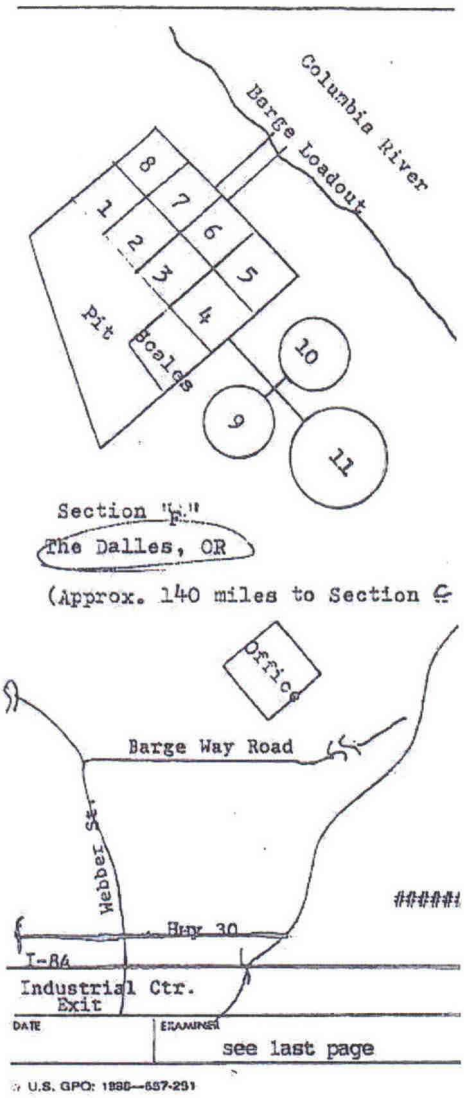
CARG002490

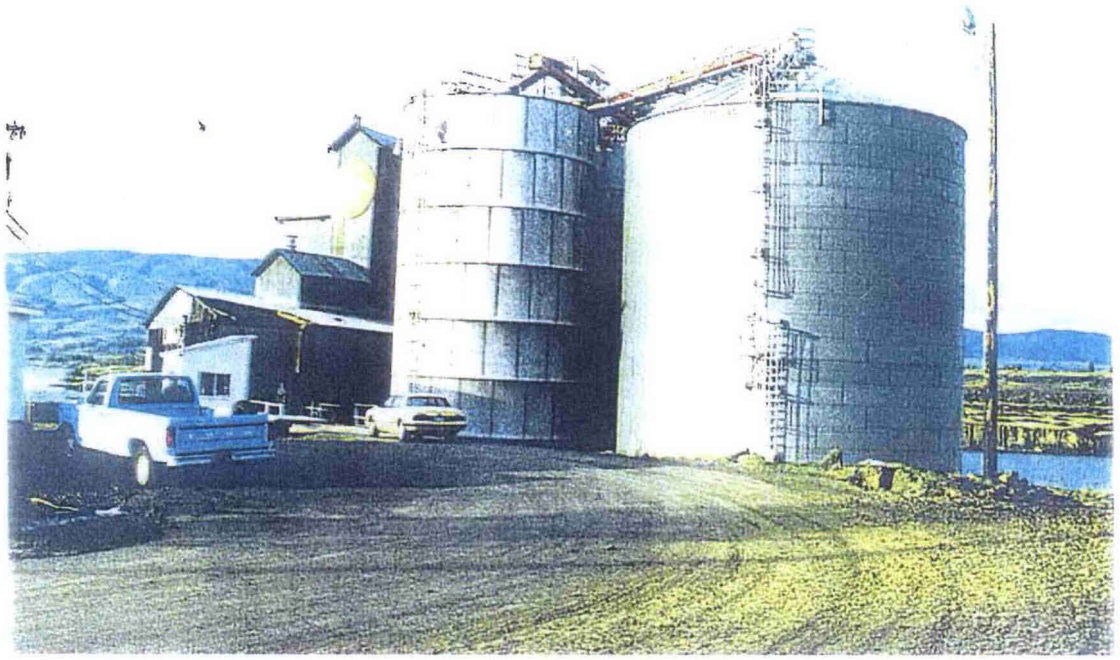
# The Dalles

Property leased from the Port of The Dalles
Facility owned by Cargill

| | |
|---|---|
| SPACE: | 270m bushel |
| UNLOAD CAPACITY: | 6m BPH |
| Loadout capacity: | 10m BPH |
| 3 year average put-thru (June 1997 through May 2000): | 3,564m |
| 3-year avg. Variable Expenses (June 1997 through May 2000): | $290M |



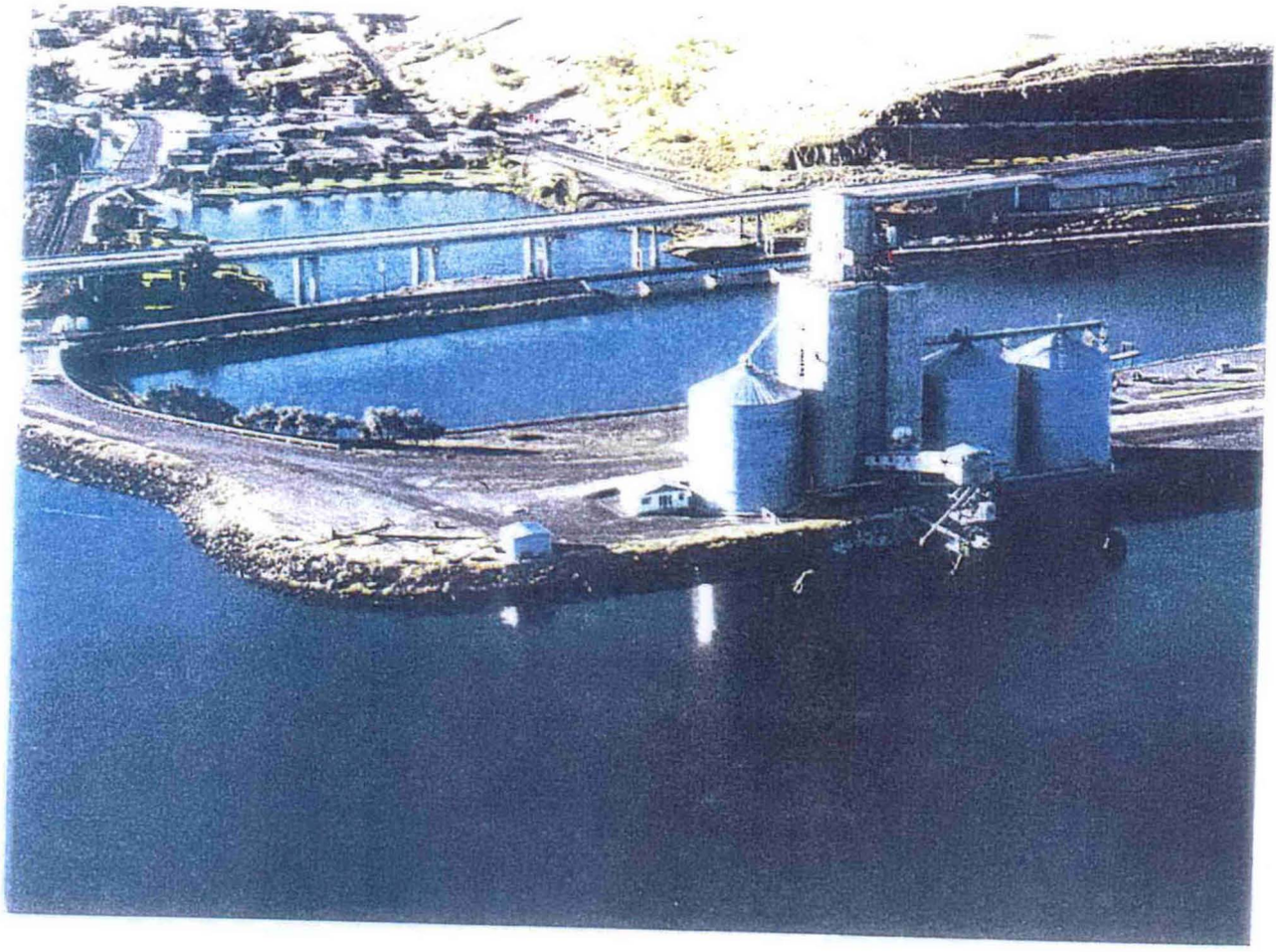

Columbia River
Barge Loadout
8
7
1
6
2
5
3
4
Pit
Scales
10
9
11
Section "E"
The Dalles, OR
(Approx. 140 miles to Section C
Office
Barge Way Road
Webber St.
Hwy 30
I-84
Industrial Ctr.
Exit
DATE
EXAMINER
see last page
U.S. GPO: 1986—657-291

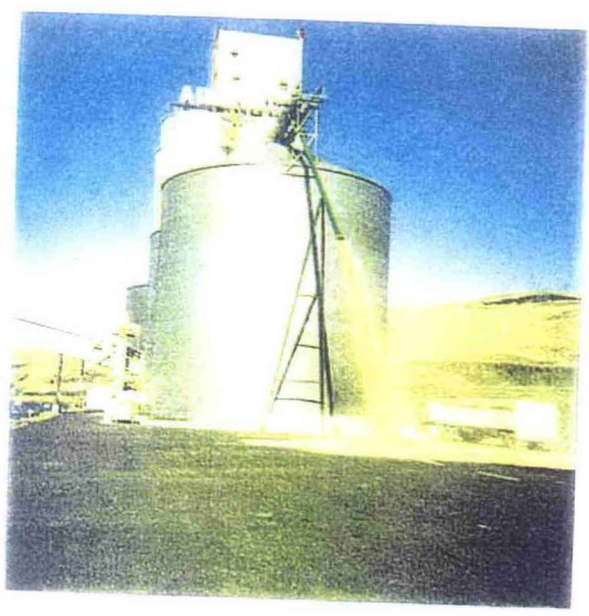


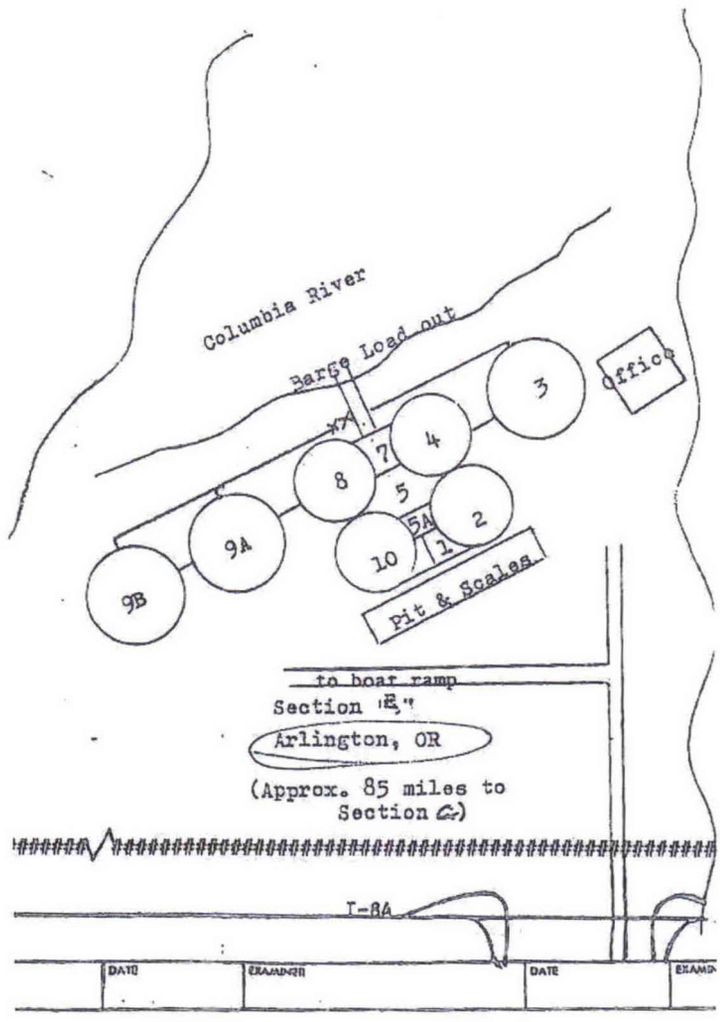
# Arlington

Facility leased from Port of Arlington
Lease options go through 2017 at current rate

| | |
|---|---|
| Space: | 769,000 upright space<br>Capability to put approximately 260m on ground |
| Unload Capacity: | 6m BPH |
| Loadout capacity | 15m BPH |
| 3 year average put-thru<br>(June 1997 through May 2000): | 3,564m |
| 3-year avg. Variable Expenses<br>(June 1997 through May 2000): | $256M |






Columbia River
Barge Load out
Office
3
4
7
8
5
5A
2
1
9A
10
9B
Pit & Scales
to boat ramp
Section "E"
Arlington, OR
(Approx. 85 miles to
Section G)
I-84
DATE
EXAMINER
DATE
EXAMIN

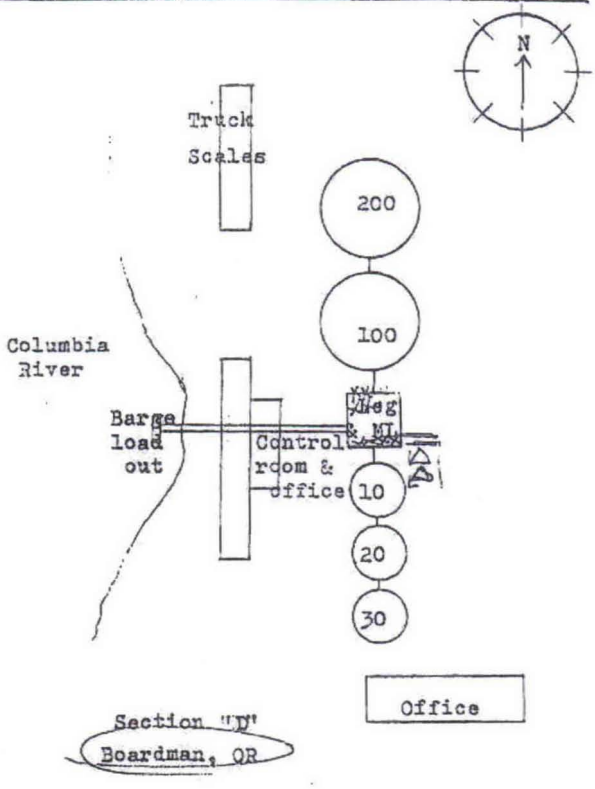
# Boardman

Cargill owns property and facility

| | |
|---|---|
| Space: | 1,045m total<br>2 x 400m<br>1 x 200m<br>3 x 15m |
| Unload Capacity: | 10m BPH |
| Loadout capacity: | 25m BPH |
| 3 year average put-thru<br>(June1997 through May 2000): | 4,343m |
| 3-year avg. Variable Expenses<br>(June1997 through May 2000): | $417M |

WAREHOUSE PROGRAM

| | |
|---|---|
| Elevators - Portland, OR | CODE NO. 8-1754 |




(Approx. 55 miles to Section C)



| | | |
|---|---|---|
| | DATE | EXAMINER |

Burbank/Pasco

| | |
|---|---|
| Burbank: | Facility leased from Port of Walla Walla<br>Lease options go through 2008 at current rate |
| Pasco: | Acquired from Continental Grain July 1999 |
| Space: | Burbank – 2,600m total space<br>730m upright<br>2,000m flat<br><br>Pasco – 450m woodhouse |

| | | |
|---|---|---|
| Unload Capacity: | Burbank: | 10m BPH |
| | Pasco: | 6m BPH |
| Loadout capacity | Burbank: | 10m BPH |
| | Pasco: | 15m BPH |

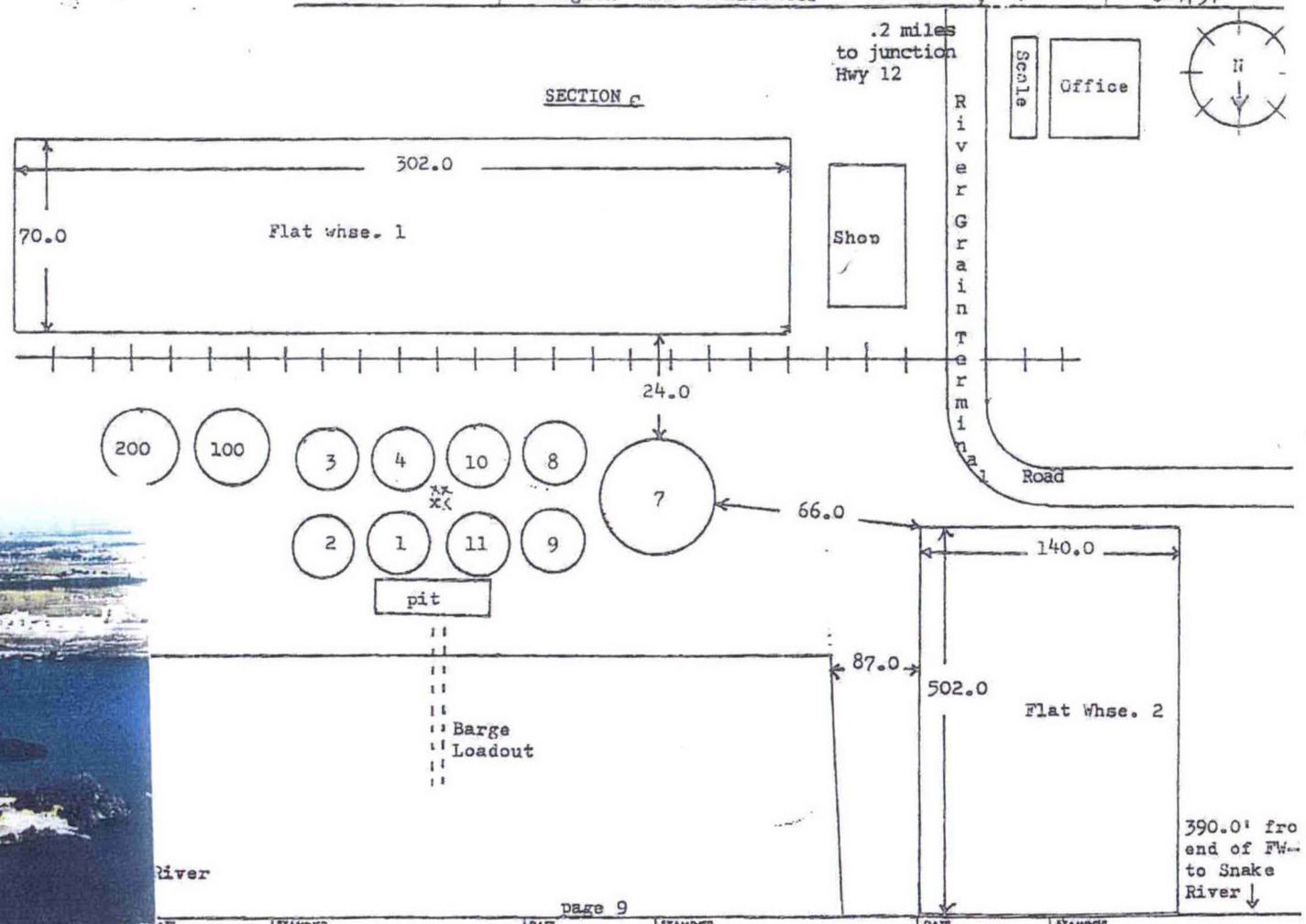
| | |
|---|---|
| 3 year average put-thru<br>(June 1997 through May 2000): | 11,944m |
| 3-year avg. Variable Expenses<br>(June 1997 through May 2000): | $867M |

*Pasco Put thru and viable expenses July 17, 1999 through May 2000 are included in the above averages

BURBANK

FORM TW-134 (5/75) **WAREHOUSE DIAGRAM** USDA-AMS-TW. DIVISI

| LICENSE NO. | NAME AND LOCATION OF WAREHOUSE | CODE NO. |
|---|---|---|
| 3-7429 | Cargill PNW . . . Elevators Portland, OR | 8-1754 |






| DATE | EXAMINER | DATE | EXAMINER | DATE | EXAMINER |
|---|---|---|---|---|---|
| | | | | | |

U.S. GOVERNMENT PRINTING OFFICE: 1975—0-577-64

CARG002498

# PASCO, WA

Lewiston

Facility acquired from Continental Grain July 1999

| | |
|---|---|
| Space: | 1,850m total<br>650 upright concrete<br>200m steel tanks<br>1,000 m ground |
| Unload Capacity: | 15m BPH |
| Loadout capacity | 30m BPH |

- Put-thru (July 1999 through May 2000): 9,460m
- Variable Expenses (July 1999 through May 2000): 956m
- Date of acquisition through year-end

# LEWISTON, ID

Irving 0035.PDF

# LEASE AGREEMENT

This **LEASE AGREEMENT** (the "Lease") is made and entered into effective as of the 3rd of December, 2001, by and between **CARGILL, INCORPORATED**, a Delaware corporation with its principal place of business at 15407 McGinty Road West, Wayzata, Minnesota 55391-2399 (hereafter "Lessor") and **CLD PACIFIC GRAIN, LLC**, a Delaware limited liability company with an address of 222 SW Columbia, Suite 1133, Portland, Oregon 97201 (hereafter "Lessee").

**WITNESSETH:**

**WHEREAS**, Lessee has been organized to lease, sublease and operate certain grain facilities for the purpose of originating, merchandising, storing, drying, handling, cleaning, elevating and transporting grain, primarily wheat and barley, in accordance with the Limited Liability Company Agreement between Cargill, Incorporated and Louis Dreyfus Corporation dated as of December 3, 2001 (the "LLC Agreement");

**WHEREAS**, Lessor owns and/or leases various grain facilities at Portland (Terminal 4 and Irving), The Dalles, Arlington and Boardman, Oregon; Burbank and Pasco, Washington; and Lewiston, Idaho; and

**WHEREAS**, Lessor desires to lease and/or sublease, as applicable, to Lessee, and Lessee desires to lease and/or sublease from Lessor, the aforementioned grain facilities;

**NOW, THEREFORE**, for and in consideration of the foregoing and the terms, conditions, covenants and agreements herein contained, the parties hereto agree as follows:

## ARTICLE I
## DEFINITIONS

Section 1.01. Certain Definitions. In this Lease, the following terms have the following meanings:

(a) Assets. "Assets" shall have the meaning set forth in Section 2.01 herein.

(b) Award. "Award" shall mean the amounts recovered as compensation or damages on account of a Taking, including all amounts paid pursuant to any agreement which has been made in settlement or under threat of any such action or proceeding, less the reasonable costs and expenses incurred in collecting such amounts.

(c) Capital Improvement(s). "Capital Improvements" shall have the meaning set forth in Section 11.01 herein.

(d) Cargill Leased Facilities. "Leased Facilities" shall have the meaning set forth in Section 2.01.

(e) Cargill Owned Facilities. "Owned Facilities" shall have the meaning set forth in Section 2.01.

(f) Casualty. "Casualty" shall mean any damage or destruction of the Facilities, or any portion thereof, by fire or other casualty.

(g) Commencement Date. "Commencement Date" shall have the meaning set forth in Section 3.01.

(h) Date of Casualty. "Date of Casualty" shall mean the date on which the Casualty occurs.

(i) Date of Taking. "Date of Taking" shall mean the earlier of the date upon which the use, occupancy or title of the Premises, or any portion thereof, is vested in, or possession thereof is taken by, the entity exercising the power of eminent domain.

(h) Date of Casualty. "Date of Casualty" shall mean the date on which the Casualty occurs.

(i) Date of Taking. "Date of Taking" shall mean the earlier of the date upon which the use, occupancy or title of the Premises, or any portion thereof, is vested in, or possession thereof is taken by, the entity exercising the power of eminent domain.

(j) Deficiency. "Deficiency" shall have the meaning set forth in Section 14.01(a).

(k) Deficiency Related Losses. "Deficiency Related Losses" shall have the meaning set forth in Section 14.01(a).

(l) Environmental. "Environmental" shall mean anything pertaining to the water (including surface water, groundwater, water vapor, and wetlands), land (including land surface or subsurface), air, fish, wildlife, vegetation, biota and all other natural resources.

(m) Environmental Laws. "Environmental Laws" shall mean and include any and all present and future federal, state or local laws, statutes, ordinances, rules, regulations, orders, judgments, restrictions, or determinations or other requirements of any governmental authority, including, without limitation, all common law and judicial principles of liability, regulating, relating to or imposing liability or standards of conduct concerning, any Environmental matters, as in effect on the date of the execution of this Lease, including, without limitation, the National Environmental Policy Act, the Clean Water Act, the Clean Air Act, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 ("CERCLA"), the Federal Water Pollution Control Act, the Occupational Safety and Health Act of 1970, the Resource Conservation and Recovery Act of 1976 ("RCRA"), the Hazardous Materials Transportation Act of 1975, the Safe Drinking Water Act, the Toxic Substances Control Act, the Federal Insecticide, Fungicide and Rodenticide Act, as amended by the Federal Environmental Pesticide Control Act of 1972 and by the Federal Pesticide Act of 1978, the Emergency Planning and Community Right-To-Know Act of 1986, the United States Environmental Protection Agency's Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks, 40 C.F.R. Part 280, The Atomic Energy Act of 1954, the Acid Precipitation Act of 1980, the Low-Level Radioactive Waste Policy Act, the Nuclear Waste Policy Act of 1982 and the Solid Waste Disposal Act and any so-called "Superfund" or "Superlien" laws and any comparable or similar Environmental laws (whether local, state or federal), together with all amendments in effect from time to time, and all rules and regulations promulgated from time to time, under or with respect to any or all of the foregoing laws.

(n) Event of Default. "Event of Default" shall have the meaning set forth in Section 3.02.

(o) Excluded Assets. "Excluded Assets" shall have the meaning set forth in Section 2.02.

(p) Expiration Date. "Expiration Date" shall have the meaning set forth in Section 3.01.

(q) Facility(ies). "Facility" or "Facilities," as the case may be, shall mean that certain tract(s) or parcel(s) of land owned and/or leased by Lessor, which land is more particularly described in Exhibit A attached hereto, together with all rights, privileges, easements and appurtenances in connection therewith or belonging thereto and all buildings, fixtures, structures, improvements, machinery, equipment, computer hardware and software, office furniture and furnishings, and other tangible personal property situated on Lessor's land or affixed thereto, and all rights and interests appurtenant thereto, necessary for the operation of a grain business. A nonexhaustive list of the personal property included within the

reason for determining the Fair Market Value of the particular asset and based upon the assumption that the asset is capable of being transferred without restriction.

(s) Hazardous Substance. "Hazardous Substance" shall mean, without limitation, any flammable substances, explosives, radon, radioactive materials, asbestos (and any substance or material containing asbestos), urea formaldehyde foam insulation, the group of organic compounds known as polychlorinated biphenyls, lead (and any substance or material containing lead), chemicals known to cause cancer or reproductive toxicity, pollutants, effluents, contaminants, emissions or other materials (including, without limitation, raw materials, final or intermediate products, and wastes) that may cause or pose a present or potential hazard to human health or safety or the Environment when Released or during manufacture, processing, generation, treatment, storage, transportation, disposal, abatement, removal, remediation, or any other use or handling; petroleum and petroleum-based products, including crude oil and any fraction thereof, natural gas or synthetic gas used for fuel; methane, hazardous materials, hazardous wastes, underground storage tanks or storage facilities; and other substances or related materials defined as hazardous or toxic in, or otherwise included within the scope of, any Environmental Law.

(t) Indemnified Taxes. "Indemnified Taxes" shall have the meaning set forth in Section 8.01.

(u) Landlord. "Landlord" shall have the meaning set forth in Section 2.04.

(v) Lease Year. "Lease Year" shall mean each successive twelve (12) month period commencing on the Commencement Date and on the anniversary date thereof.

(w) Legal Requirements. "Legal Requirements" shall have the meaning set forth in Section 18.01.

(x) Lessee. "Lessee" shall mean CLD Pacific Grain, LLC.

(y) Lessee Indemnities. "Lessee Indemnities shall have the meaning set forth in Section 14.01(a).

(z) Lessee Losses. "Lessec Losses" shall have the meaning set forth in Section 14.01(a).

(aa) Lessor. "Lessor" shall mean Cargill, Incorporated.

(bb) Lessor Indemnities. "Lessor Indemnities" shall have the meaning set forth in Section 14.02(a).

(cc) Lessor Losses. "Lessor Losses" shall have the meaning set forth in Section 14.02(a).

(dd) LLC Agreement. "LLC Agreement" shall mean the Limited Liability Company Agreement between Cargill, Incorporated and Louis Dreyfus Corporation dated as of December 3, 2001.

(ee) Members. "Members" shall mean the owners of Lessee who, upon the Commencement Date, shall be Louis Dreyfus Corporation and Cargill, Incorporated, exclusively.

(ff) Net Book Value. "Net Book Value" shall mean, for any particular Capital Improvement, the original cost of such Capital Improvement less its accumulated book depreciation to date. Capitalization, depreciation method and useful lives shall be determined in accordance with generally accepted accounting principles.

(gg) Person. "Person" shall mean any individual, corporation, partnership, joint venture, association, trust, governmental authority or agency or any other entity or organization of any kind or character.

(hh) Permitted Exceptions. "Permitted Exceptions" shall have the meaning set forth in Section 2.03.

(ii) Post-Lease Environmental Evaluation. "Post-Lease Environmental Evaluation" shall have the meaning set forth in Section 14.04.

(jj) Post-Lease Environmental Evaluation Report. "Post Lease Environmental Evaluation Report" shall have the meaning set forth in Section 14.04.

(kk) Preliminary Environmental Evaluation. "Preliminary Environmental Evaluation" shall have the meaning set forth in Section 14.04.

(ll) Preliminary Environmental Evaluation Report. "Preliminary Environmental Evaluation Report" shall have the meaning set forth in Section 14.04.

(mm) Premises. "Premises" shall mean the Cargill Owned Facilities and the Cargill Leased Facilities, collectively.

(nn) Prime Leases. "Prime Leases" shall have the meaning set forth in Section 2.04.

(oo) Property Taxes. "Property Taxes" shall have the meaning set forth in Section 8.01.

(pp) Purpose. "Purpose" shall have the meaning set forth in Section 5.01.

(qq) Release. "Release" has the same meaning as given to that term under CERCLA or any other applicable Environmental Law or under the regulations promulgated under CERCLA or any other applicable Environmental Law and includes, without limitation, any contamination or spillage governed by any Environmental Law.

(rr) Rent. "Rent" shall have the meaning as set forth in Section 4.01.

(ss) Taking. "Taking" shall mean the transfer of the use, occupancy or title of the Premises, or any portion thereof, to an entity exercising the power of eminent domain in any actual or threatened action or proceeding pursuant to any law, general or special; a Taking affecting a "Substantial Portion of the Premises" means a Taking which renders the Premises or the Facility unsuitable or uneconomical for use and occupancy by Lessee for substantially the same purpose as the Premises or the Facility was used immediately prior to the Taking.

(tt) Taxes. "Taxes" shall have the meaning set forth in Section 8.01.

(uu) Technical Information. "Technical Information" shall mean all blueprints, drawings, specifications, operating instructions, and procedures and other technical information owned by Lessor or in Lessor's possession relating to the Facilities or the business conducted at the Facilities.

(vv) Term. "Term" shall have the meaning set forth in Section 3.01.

(ww) Work. "Work" shall have the meaning set forth in Section 17.01.

## ARTICLE II
## DEFINITION OF ASSETS; LEASE OF PREMISES

Section 2.01. Definition of Assets. This Lease relates to the lease of certain assets comprising the Premises owned by Lessor in or near Portland (Irving), Boardman, Oregon, and Lewiston, Idaho (the "Cargill Owned Facilities"), and the sublease of certain assets comprising the Premises leased by Lessor in or near Portland (Terminal 4), The Dalles and Arlington, Oregon, and Burbank and Pasco, Washington (the "Cargill Leased Facilities"), and the license of certain Technical Information, which assets are generally described as follows (the following collectively hereinafter referred to as the "Assets"):

(a) the Cargill Owned Facilities;

(b) the Cargill Leased Facilities; and

(c) the Technical Information.

Section 2.02. Definition of Excluded Assets. The following properties of Lessor are not included in the Assets and are not being leased, subleased or licensed by Lessor to Lessee pursuant to this Lease (the following collectively hereinafter referred to as the "Excluded Assets"):

(a) Cash on hand and in bank deposits;

(b) Contracts and permits (assignable agreements, grain contracts and permits will be assigned by Lessor to Lessee pursuant to an Assignment and Assumption Agreement to be entered into between the parties independent of this Lease);

(c) Accounts receivable; and

(d) Inventory of grain owned by Lessor and located at the Facilities (inventory will be sold by Lessor to Lessee pursuant to a Bill of Sale entered into between the parties independent of this Lease).

Section 2.03. Lease of Cargill Owned Facilities. Upon and subject to the terms, conditions, covenants and agreements set forth in this Lease, Lessor hereby leases to Lessee, and Lessee hereby leases from Lessor, the Cargill Owned Facilities.

Section 2.04. Sublease of Cargill Leased Facilities. Upon and subject to the terms and conditions, covenants and agreements set forth in this Lease, Lessor hereby subleases to Lessee the Cargill Leased Facilities, subject to the Permitted Exceptions. With respect to the Cargill Leased Facilities, this Lease is subject and subordinate to the primary leases between Lessor and Lessor's respective landlord's ("Landlord(s)") under such primary leases (the "Prime Leases"), which are listed on Exhibit A, and copies of which have been provided to Lessee. All the terms, covenants and conditions contained in the Prime Leases shall be applicable to this Lease with respect to the Cargill Leased Facilities with the same force and effect as if Lessor were the Landlord under the Prime Lease and Lessee were the tenant thereunder, including without limitation any rent obligation to the Landlords arising under the Prime Leases. Lessor shall have all rights against Lessee as would be available to the respective Landlords against the tenant under the Prime Leases if such breach were by the tenant thereunder. To the extent that there is any conflict between this Lease and the Prime Leases with respect to the Cargill Leased Facilities, and/or to the extent that the Prime Leases are more stringent than this Lease with respect to the Cargill Leased Facilities, then the applicable Prime Lease shall control with respect to the applicable Cargill Leased Facility(ies). Further, Lessee shall comply with any requirements of Landlords as may be set forth as a condition or requirement of Lessee in any such Landlord's consent to sublease the applicable Prime Lease.

Notwithstanding anything herein contained, the only services or rights to which Lessee is entitled

hereunder with regard to the Cargill Leased Facilities are those to which Lessor is entitled under the Prime Leases, and that for all such services and rights, Lessee will look solely to the respective Landlords under the Prime Leases. Lessor will cooperate with Lessee to secure the cooperation of the Landlords under the Prime Leases with respect to any matter arising under the Prime Leases as to which such cooperation is reasonably required.

Section 2.05. License of Technical Information. Lessor grants to Lessee possession of and the right and license to use the Technical Information during the Term of this Lease.

## ARTICLE III
## TERM AND TERMINATION OF LEASE

Section 3.01. Term. The term of this Lease shall commence effective as of December 3, 2001 (the "Commencement Date") and shall be coterminous with the LLC Agreement (the "Term," and the date of expiration of the Term shall be referred to as the "Expiration Date"), unless earlier terminated pursuant to this Lease. Each succeeding Lease Year shall commence upon the anniversary date of the Commencement Date.

Section 3.02. Default. The occurrence of any of the following events shall constitute a default by Lessor or Lessee (hereinafter referred to as "Event of Default"), as the case may be, in the performance of their respective obligations hereunder:

(a) failure of Lessee to pay Rent within thirty (30) days after receiving written notice from Lessor notifying it of its delinquency, or failure of Lessee upon demand to pay any other amount required to be paid herein;

(b) failure of either party to timely comply with any covenant, condition or obligation, other than the payment of Rent, imposed on or required to be performed by such party under this Lease (and such failure shall continue thirty (30) days after written notice has been provided to the breaching party by the non-breaching party);

(c) failure of Lessee to perform or observe any covenant required to be performed or observed by Lessee under Article XIII hereof;

(d) any representation or warranty made by either party herein shall prove to be untrue in any material respect as of the date of issuance or making thereof;

(e) either party shall become insolvent or bankrupt or generally fail to pay, or shall admit in writing its inability to pay, its debts as they come due, or shall make an assignment for the benefit of, or any composition or arrangement with, its creditors, or shall apply for, consent to or acquiesce in the appointment of a trustee, receiver, liquidator or other custodian, for itself, its business or all or a substantial part of its property, or, in the absence of such application, consent or acquiescence, a trustee, receiver, liquidator or other custodian shall be appointed for such party, its business or a substantial part of its property and is not discharged within one hundred and twenty (120) days;

(f) any bankruptcy, reorganization, debt arrangement, or other case or proceeding under any bankruptcy, insolvency or similar law of any applicable jurisdiction, or any dissolution, winding up or liquidation case or proceeding shall be commenced in respect of either party, and, if such case or proceeding is not commenced by such affected party, as it shall be consented to or acquiesced in by such party or remain undismissed for thirty (30) days; or such party shall take any action to authorize, or in furtherance of, any of the events described in subsection (e) or this subsection (f);

(g) either party's business is dissolved, terminated or is discontinued;

(h) either party sells, transfers, or disposes of all or substantially all of its assets or property or a material portion thereof, or merges with any other entity or engages in any form of reorganization or recapitalization without the prior written consent of the other party;

(i) a transfer in the ownership of Lessee's outstanding Member interests or other action (issuance of new interests, etc.) resulting in a change in the controlling interest of Lessee without the prior written consent of Lessor;

(j) Lessee attempts to move, sell, or transfer any substantial personal property being leased to it hereunder, or encumber the Premises or part with possession, or sublet or assign this Lease or any interest herein without Lessor's prior written consent; or

(k) any act or omission by Lessee or Lessor that results in the termination or forfeiture of any rights under any of the Prime Leases.

Section 3.03. Lessor's Remedies. Upon the occurrence of any Event of Default of Lessee and at any time thereafter so long as the same shall be continuing, Lessor may, at its option, declare this Lease to be in default and may do one or more of the following with respect to the Premises as Lessor in its sole discretion shall elect, all of which are hereby authorized by Lessee, to the extent permitted by and subject to compliance with any mandatory requirements of applicable law then in effect:

(a) Lessor may terminate this Lease by giving Lessee written notice of termination, in which event Lessee shall immediately quit and vacate the Premises and deliver and surrender possession of the Premises to Lessor, and this Lease shall be terminated at the time designated by Lessor in its notice of termination to Lessee;

(b) with or without terminating this Lease, Lessor may enter upon and take possession of the Premises and expel or remove Lessee and any other person who may be occupying the Premises, without being liable for prosecution or any claim for damages;

(c) Lessor may re-lease the Premises or any part thereof, on such terms and conditions as Lessor may deem satisfactory, and receive the rent for any such re-leasing, in which event Lessee shall pay Lessor on demand any deficiency that may arise by reason of such re-leasing;

(d) Lessor may collect and sue Lessee, from time to time, for the amount of any annual Rent or other amounts then owing by Lessee to Lessor pursuant to this Lease;

(e) with or without terminating this Lease, Lessor may bring an action against Lessee to recover from Lessee all damages suffered, incurred or sustained by Lessor as a result of, by reason of or in connection with such Event of Default; or

(f) Lessor may do whatever Lessee is obligated to do under the terms of this Lease, in which event Lessee shall reimburse Lessor on demand for any expenses, including, without limitation, reasonable attorneys' fees, which Lessor may incur in effecting satisfaction and performance of or compliance with the Lessee's duties and obligations under this Lease.

Section 3.04. Prime Lease Termination. In the event that any one or more of the Prime Leases is canceled, expires, is not renewed or is otherwise terminated, this Lease shall terminate partially to the extent this Lease relates to the Assets that are the subject of or related to the Prime Lease; provided, however, that (a) if Lessor desires to extend or renew such Prime Lease or enter into a new lease with Landlord, Lessor shall have the right to negotiate such renewal, in good faith consultation with Lessee and subject to Lessee's approval, which shall not be unreasonably withheld; and (b) if Lessor has no desire to extend or renew the Prime Lease or enter into a new lease with the Landlord, then Lessee may in its discretion enter into negotiations with Landlord for a new lease. Such partial termination of this Lease

shall coincide with the termination of the Prime Lease(s). All rent payable will be prorated to the date of termination. Lessor shall use its best efforts to continuously inform Lessee of negotiations pertaining to such a termination. Lessor shall not agree to the early termination of any of the Prime Leases without the prior written consent of the Lessee. To the extent that Lessor has the right under any of the Prime Leases to exercise any one or more options to renew such Prime Leases, Lessee reasonably may require Lessor to exercise, or not to exercise, such option(s), as the case may be.

Section 3.05. Lessee's Remedies. Upon the occurrence of any Event of Default by Lessor and at any time thereafter so long as the same shall be continuing, Lessee may, at its option, terminate partially this Lease with respect to the Facilities that are the subject of or related to the Event of Default, or may terminate the entire Lease in the event that all Facilities are the subject of or related to the Event of Default, by giving Lessor written notice of termination, in which event Lessee shall immediately quit and vacate the Premises which are the subject of the termination and deliver and surrender possession of such Premises to Lessor, and this Lease, and Lessee's obligations under it shall be terminated at the time designated by Lessee in its notice of termination to Lessor, except to the extent of any obligations that have accrued as of the termination date.

Section 3.06. Non-Exclusive Remedy. The right of either party to terminate this Lease as set forth hereinabove shall be in addition to and not in exhaustion of such other rights and remedies as may be available under this Lease, at law or in equity.

## ARTICLE IV
## RENT

Section 4.01. Rent. During the Term of this Lease, Lessee shall pay to Lessor at Lessor's address specified in Section 24.01, an annual rental of ONE MILLION FOUR HUNDRED THOUSAND DOLLARS AND NO/100 ($1,400,000.00) (hereafter "Rent"), payable in equal quarterly installments of THREE HUNDRED AND FIFTY THOUSAND DOLLARS AND NO/100 ($350,000.00) each, payable in advance on the first day of each calendar quarter during each Lease Year, with the first payment being due and payable on the Commencement Date; provided, however, in the event the Term commences or ends other than coincident with the first and last day of a calendar quarter respectively, then Rent for such partial quarter shall be prorated for the number of days of such quarter included in the Term on the basis of a ninety (90) day quarter and payable for such partial quarter in advance of such period. In the event that any installment of Rent is due on any Saturday, Sunday, national or bank holiday, or other day which is not a regular business day, such installment need not be made on such day, but may be made on the next succeeding regular business day which is not a Saturday, Sunday, or national or bank holiday, and no interest shall accrue as a result of any such delay in payment. The annual rental set forth hereinabove is more specifically detailed in Exhibit C attached hereto and the parties agree that the fair portion of the Rent allocated to each Facility is as set forth in such Exhibit. "Rent" as defined herein shall be in addition to Lessee's obligation to pay all rents under the Prime Leases as set forth in Section 2.04.

Section 4.02. Rent Adjustment. Upon the commencement of each successive five (5) year period from the Commencement Date, the Rent shall be increased by an amount equal to the result of the then current Rent multiplied by the increase, if any, in the U.S. Consumer Price Index for the immediately preceding five (5) year period of the Lease Term (as such Consumer Price Index is published in the Money Rates section of the Wall Street Journal on the first and last day,or nearest day thereto, when published).

Section 4.03. Change in Scope of Assets. To the extent the scope of the Assets leased and licensed to Lessee is increased or decreased during the Term hereof by the parties' mutual written agreement, by a Casualty, or by a Taking, the parties recognize that corresponding increases or decreases in Rent may be necessary, depending upon what affect such increase or decrease in scope would have on the value of Lessor's Assets. If the parties mutually determine that the scope of the Assets leased by

Lessor to Lessee should be increased or decreased, or if a Casualty or Taking occurs, as the case may be, the parties will mutually determine what impact, if any, such increase or decrease will have on the Rent to be paid pursuant to this Lease. If the parties cannot agree on the applicable increase or decrease in the scope of the Assets (if any), Casualty or Taking, as the case may be, such determination shall be submitted to an appraisal company mutually acceptable to Lessor and Lessee for a final and binding determination on the impact such increase, decrease, Casualty or Taking shall have on the Rent of Lessor's Assets. Any agreement or determination resulting in a change in the Rent payable under this Lease must be reduced to writing and executed by Lessor and Lessee, and shall be effective from the date on which such increase or decrease in the scope of the Assets, Casualty or Taking occurred. The parties shall equally share the costs of any independent third party appraiser retained pursuant to this Section.

Section 4.04. Interest Charge. Lessee shall pay to Lessor interest on all Rent not paid within thirty (30) days from the due date thereof until paid at a rate equal to one and one-half percent (1½%) per month or the highest lawful rate, whichever is less.

## ARTICLE V
## USE OF PREMISES

Section 5.01. Use of Premises. Lessee may use the Premises leased hereunder solely for the Business Purpose, as defined in the LLC Agreement (the "Purpose"). Notwithstanding the foregoing, Lessee shall not use or occupy the Premises, or permit the Premises to be used or occupied, in violation of any Legal Requirements or in such a way as to invalidate any insurance on the Premises.

## ARTICLE VI
## LESSOR'S REPRESENTATIONS, WARRANTIES AND COVENANTS

Section 6.01. Representations and Warranties. As an inducement to Lessee to enter into this Lease, Lessor represents, warrants and covenants to Lessee that on the date hereof:

(a) No Inconsistent Obligations. Neither the execution and delivery of this Lease, nor the consummation of the transactions contemplated herein, will result in a violation or breach of, or constitute a default under any contract or agreement, deed to secure debt, security agreement, personal property lease or any other commitment or restriction of any nature whatsoever, to which all or any part of the Land or Facilities are subject or bound; nor will such actions result in the creation of any claim, lien, charge or encumbrance on any portion of the Land or Facilities.

(b) Land and Facilities.

(i) With respect to Land and/or Facilities owned by Lessor, Lessor will own the Land and Facilities free and clear of any liens, charges, claims, security interests, encumbrances or other restrictions, whether existing of record or otherwise.

(ii) With respect to Land and/or Facilities not owned by Lessor, Lessor will have secured any required consent of any applicable third parties to sublease any such Land and Facilities, if any, but which will be subleased to Lessee pursuant to this Lease, such Land and Facilities being free and clear of any liens, charges, claims, security interests, encumbrances or other restrictions, whether of record or otherwise, except for the Permitted Exceptions as set forth in Exhibit C attached hereto.

(iii) Lessee shall peaceably hold and enjoy the Land and Facilities with exclusive control and possession thereof during the Term, subject to the terms and conditions of this Lease and the Prime Leases to the extent required in this Lease.

(c) Existence. Lessor is a corporation duly organized and validly existing under the laws of the State of Delaware.

(d) Authority. Lessor has the power and authority to lease the Land and Facilities to Lessee and consummate this Lease, and this Lease and all instruments and agreements contemplated by this Lease to which Lessor is a party or signatory have been duly authorized, executed and delivered by Lessor and constitute the legal, valid and binding obligations of Lessor.

(e) No Claims or Investigations. There is no litigation, action, claim, proceeding, or governmental investigation pending or threatened against Lessor which would have a materially adverse effect on Lessor's ability to fulfill its obligations arising under this Lease.

(f) Condemnation; Taking. Lessor has not received any notice nor is it aware of any pending action to Take all or any portion of the Land, nor has Lessor agreed or committed to dedicate any part of the Land for a Taking or otherwise.

(g) Compliance with Laws. To the best of Lessor's knowledge, Lessor is in substantial compliance with all material laws, rules and regulations applicable to the Facilities.

(h) Full Force and Effect. The Prime Leases are in full force and effect, and to the best of Lessor's knowledge, no default exists under the Prime Leases, and no event has occurred which, with the giving of notice or the passage of time, or both, would constitute a default thereunder.

Section 6.02. DISCLAIMER OF WARRANTIES. EXCEPT AS EXPRESSLY PROVIDED IN SECTION 6.01 ABOVE, LESSOR MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES OF ANY KIND WHATSOEVER RELATING TO THE PREMISES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE; THE DESIGN OR CONDITION OF THE PREMISES; THE QUALITY OR CAPACITY OF THE PREMISES; THE WORKMANSHIP IN THE PREMISES; COMPLIANCE OF THE PREMISES WITH THE REQUIREMENTS OF ANY LAW, RULE OR SPECIFICATION; OR PATENT INFRINGEMENTS OR LATENT DEFECTS, IT BEING UNDERSTOOD AND AGREED THAT THE PREMISES ARE BEING LEASED "AS IS" AND "WITH ALL FAULTS" AND THAT ALL RISKS AS BETWEEN LESSOR AND LESSEE SHALL BE BORNE BY LESSEE. **LESSOR SHALL NOT BE RESPONSIBLE FOR LOSS OF PROFIT OR FINANCIAL LOSS OR INCIDENTAL OR CONSEQUENTIAL DAMAGES HOWSOEVER ARISING, INCLUDING, BUT NOT LIMITED TO, LOSS OR INTERRUPTION OF BUSINESS, EVEN IF DIRECTLY OR INDIRECTLY CAUSED BY OR ATTRIBUTABLE TO THE INADEQUACY OF THE PREMISES.**

## ARTICLE VII
## LESSEE'S REPRESENTATIONS, WARRANTIES AND COVENANTS

Section 7.01. Representations and Warranties. As an inducement to Lessor to enter into this Lease, Lessee represents, warrants and covenants to Lessor that on the date hereof that:

(a) Existence. Lessee is a limited liability company duly organized and validly existing under the laws of the State of Delaware.

(b) Authority. Lessee has the power and authority to lease the Land and Facilities from Lessor and consummate this Lease, and this Lease and all instruments and agreements contemplated by this Lease to which Lessee is a party or signatory have been duly authorized, executed and delivered by Lessee and constitute the legal, valid and binding obligations of Lessee.

(c) No Claims or Investigations. There is no litigation, action, claim, proceeding, or governmental investigation pending or threatened against Lessee which would have a materially adverse effect on Lessee's ability to fulfill its obligations arising under this Lease.

(d) Licenses and Permits. Lessee has obtained all material licenses, permits, tariffs and governmental approvals required by applicable law or governmental regulations necessary or appropriate in connection with the ownership and operation of the Assets except those of which Lessor has been notified by Lessee in writing and to which Lessor has consented. To the knowledge of Lessee, Lessee is in substantial compliance with all material laws, ordinances, rules or regulations applicable to the ownership and operation of the Facilities including, but not limited to, OSHA and EPA regulations or similar regulations (including Environmental Laws) and all zoning, building or use regulations and ordinances.

(e) Prime Leases. Lessee has read and is familiar with the terms of the Prime Leases.

## ARTICLE VIII
## TAXES AND ASSESSMENTS

Section 8.01. Taxes and Assessments on the Premises. Lessee shall pay as and when they become due and payable, and upon demand shall indemnify, defend and hold harmless each Lessor Indemnitee against, all federal, state, local and foreign taxes (including real and personal property taxes, ad valorem taxes, sales and use taxes and assessments (whether general or special, levied, assessed or imposed upon the Premises (and any additions or improvements thereto)), all taxes and assessments levied, assessed or imposed on Lessee's personal property, rental taxes, transfer taxes, excise taxes, registration and recording taxes, license taxes and other government fees, charges, assessments or withholdings, (together with any penalties, interest or additions thereto) ("Taxes") imposed by any governmental authority during the Term with respect to (i) the Premises, (ii) the lease, sublease, operation, ownership, maintenance, improvement, leasing, transfer, disposition or condition of the Premises, or (iii) this Lease, the Prime Leases or the Transactions contemplated hereunder or thereunder or in related documents; excepting only Taxes imposed on the Lessor or Landlord in the nature of net income taxes with respect to Rent paid hereunder (collectively the "Indemnified Taxes"); provided, however, that Lessor shall be responsible for all personal property, real property and other similar Taxes and assessments levied, assessed or imposed upon the Premises ("Property Taxes") with respect to the period of time prior to the Commencement Date regardless of when such taxes and assessments are due and payable.

Section 8.02. Proration of Taxes. Should the Term hereof expire or sooner terminate as herein provided during a fiscal year for the payment of any such Property Taxes, there shall be a proration between the parties hereto of that portion of the Property Taxes allocable to the Land and Facilities for such year. Such proration shall be on the basis of the then most recent tax bills assessed against the Land and Facilities with appropriate adjustment made at the time actual bills are received.

Section 8.03. Contest of Taxes. So long as in the reasonable judgment for the Lessor such contest does not create a material risk of forfeiture or criminal liability and so long as Lessee has agreed, in a manner satisfactory to the Lessor, to pay any costs of such contest and any required indemnity should the contest prove unsuccessful, Lessee may, at its cost and expense and in its own name, contest any Indemnified Taxes and assessments and, in the event of any such contest, may permit the Indemnified Taxes so contested to remain unpaid during the period of such contest and any appeal therefrom. Lessor shall cooperate with Lessee in all such protests and shall provide to Lessee, on request, documentation reasonably requested by Lessee to support any such contest of Indemnified Taxes.



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## ARTICLE IX
## UTILITIES AND SERVICES

Section 9.01. Utilities and Services. Lessee shall make all arrangements for, and pay or cause to be paid when due, all charges for utilities and services incurred in the operation, use and occupancy of the Premises, including, but not limited to, electricity, gas, water, sanitary and storm sewer. Lessor shall have no obligation to provide any such utilities and services and in no event shall Lessor have any liability for the interruption of any such utilities and services. All utility charges, including without limitation, gas, oil, electricity, telephone, sewer and water, pertaining to the Facilities shall be prorated between Lessor and Lessee as of the Commencement Date; and accordingly, any invoices for utility charges received following said Commencement Date which have accrued up to and including the Commencement Date shall be for Lessor's account and any invoices for utility charges which accrue after the Commencement Date shall be for Lessee's account.

## ARTICLE X
## MAINTENANCE AND REPAIRS

Section 10.01. Maintenance and Repairs. Lessee shall maintain the Premises in good order, repair and condition, reasonable wear and tear excepted, and shall make all structural and nonstructural, foreseen and unforeseen and ordinary and extraordinary repairs and replacements which may be required to keep the Premises in good order, repair and condition, reasonable wear and tear excepted, and in compliance, in all material respects, with Legal Requirements. All repairs, maintenance, replacements and the like shall be completed in accordance with the provisions of Article XVII hereof.

## ARTICLE XI
## ALTERATIONS, ADDITIONS, ENHANCEMENTS AND CAPITAL IMPROVEMENTS

Section 11.01. Capital Improvements. Except to the extent limited in any of the Prime Leases, Lessee shall have the right, from time to time, to make any additions, alterations, enhancements and improvements to the Premises that Lessee desires to make; provided that such additions, alterations or improvements shall have no material adverse effect on the value of Lessor's Land or Facilities and shall be completed in accordance with the provisions of Article XVII (hereafter "Capital Improvements").

Section 11.02. Title to Capital Improvements. Except as may be otherwise provided in the Prime Leases or as provided herein, title to all Capital Improvements shall transfer to Lessor upon termination of this Lease (or upon partial termination of this Lease with respect to Capital Improvements located at a Facility that is the subject of partial termination of this Lease); provided, however, (i) if Lessee is able to do so without material, unrepaired damage to the Facility(ies), Lessee may remove such Capital Improvements prior to the termination or partial termination of this Lease, or (ii) at the election of Lessor by notice to Lessee prior to the termination (or partial termination as the case may be) Lessor may elect to purchase such Capital Improvements, in which event Lessor shall pay to Lessee the Net Book Value of such Capital Improvements.

## ARTICLE XII
## ACCESS AND INSPECTION

Section 12.01. Access and Inspection. Lessor shall have no duty or obligation to enter or inspect the Premises leased hereunder but shall have the right to do so (i) in order to ensure Lessee's compliance with the terms of this Lease and the Prime Leases, (ii) in the event of Lessee's violation of any Environmental Laws which impact the Land or Facilities, or (iii) any other breach by Lessee of the terms and conditions of this Lease or the Prime Leases. Any such entry and inspection shall be accomplished only after prior arrangement with Lessee and in a manner so as to cause the least interference reasonable with Lessee's business operations and, if required by Lessee, only when accompanied by a designated representative of Lessee. Lessor's agents and representatives shall comply with all Lessee's plant safety

and other rules and regulations while at the Premises. Notwithstanding anything to the contrary in this Section, Lessor reserves the right to enter the Premises without notifying Lessee so long as it does not unreasonably interfere with the operations of Lessee if any Environmental Release occurs, any significant Environmental condition is discovered, or any other significant incident or event occurs on the Premises in which Lessor desires to investigate and monitor the matter.

## ARTICLE XIII
## INSURANCE

Section 13.01. Lessee's Insurance Requirements. Lessee shall maintain in full force and effect, at all times during the Term of this Lease, all insurance in types and amounts reasonably required by Lessor and which are customary to be obtained by tenants under long-term leases of this nature and which are otherwise consistent within the terms of this Lease. Such insurance shall include, without limitation, a minimum of the following types of insurance:

(a) Workers' Compensation insurance, including without limitation Long Shore and Harbor Workers coverage, with statutory limits.

(b) Employer's Liability insurance with limits of One Million Dollars ($1,000,000) on a per occurrence basis.

(c) All Risk Property insurance (or special causes of loss form) insuring the Facilities in an amount equal to the full replacement value of the Facilities, or other amount as mutually agreed by the parties. Such insurance shall include coverage for debris removal and demolition expenses.

(d) Commercial General Liability insurance, including contractual liability, with primary limits of not less than One Million Dollars ($1,000,000) on a per occurrence basis.

(e) Auto Liability insurance with primary limits of not less than One Million Dollars ($1,000,000) on a per occurrence basis.

(f) Umbrella Liability insurance with limits of not less than Five Million Dollars ($5,000,000) on a per occurrence basis.

Section 13.02. Insurance Policies. Any insurance required to be maintained pursuant to Section 13.01 shall be written by companies reasonably acceptable to the parties and legally qualified to issue such insurance. The All Risk Property, Commercial General Liability, Auto Liability and Umbrella Liability insurance policies shall name "Cargill, Incorporated" and the Landlord(s) under the Prime Leases as an additional insured. Each policy shall provide that it will not be canceled, non-renewed or the coverage thereof reduced from the requirements set forth in Section 13.01, except after not less than thirty (30) days written notice to Lessee and Lessor. Prior to the Commencement Date and thereafter upon each policy renewal, Lessee shall deliver to Lessor copies of policies or certificates of insurance, as requested by Lessor, evidencing the existence of all insurance which is required to be maintained by Lessee hereunder.

Section 13.03. Notification of Significant Events to Lessor. In the event any serious personal injury (including death) or property damage occurs at any Facility, Lessee agrees to give Lessor prompt notice and a general description of the occurrence. Lessee agrees to reasonably cooperate with Lessor in the event Lessor has any questions concerning such personal injury or property damage.

## ARTICLE XIV
## INDEMNIFICATION

Section 14.01. Indemnification by Lessor.

(a) Lessor shall defend, indemnify and hold harmless Lessee, its Members (excluding Lessor), its Members' affiliates, and their respective officers, directors, employees, agents and representatives ("Lessee Indemnitees") from and against and in respect of any and all claims, liabilities, losses, damages, fines, penalties, costs or expenses (including reasonable attorneys' fees, expert and consultant fees, investigation costs and response, removal, and corrective action and other remediation or cleanup costs) suffered or incurred by any Lessee Indemnitee (collectively, "Lessee Losses") to the extent such Lessee Losses arise from, by reason of or in connection with (i) any negligent act or omission or the willful misconduct of Lessor or any of its officers, directors, employees, agents or representatives with respect to a duty owed Lessee hereunder, (ii) any misrepresentation, breach of warranty or breach or nonfulfillment of any agreement or covenant of Lessor contained in this Lease, or (iii) the ownership, possession, occupancy or use of the Premises by Lessor prior to the Term of this Lease (including but not limited to Lessee Losses arising out of Lessor's handling, storage, discharge, transport or disposal of Hazardous Substances). Notwithstanding the foregoing, in the absence of fraud and except as otherwise provided in this Lease, Lessee shall be solely responsible for all Lessee Losses that arise from any structural or operational defect, deficiency or failure ("Deficiency") of any of the improvements, machinery and equipment at the Facilities ("Deficiency Related Losses"), regardless of whether any such Deficiency existed prior to the Effective Date.

(b) Lessor's obligations under this Section 14.01 shall survive the expiration or early termination (or partial termination) of this Lease for any reason. Lessee shall notify Lessor within a reasonable time after any claim for indemnification arises and is known to Lessee and shall give Lessor a reasonable opportunity (i) to conduct any proceedings or negotiations in connection therewith necessary or appropriate to defend any Lessee Indemnitee, (ii) to take all other required steps or proceedings to settle or defend any such claim, and (iii) to employ counsel, reasonably acceptable to Lessee, to contest any such claim in the name of any Lessee Indemnitee or otherwise; and all expenses in connection therewith shall be borne by Lessor. If Lessor fails, within a reasonable time (not to exceed sixty (60) days) to take the foregoing actions, Lessee may employ its own counsel and take any or all of the foregoing actions, all at the cost and expense of Lessor.

Section 14.02. Indemnification by Lessee.

(a) Lessee shall defend, indemnify and hold harmless each Lessor Indemnitee from and against and in respect of any and all claims, liabilities, losses, damages, fines, penalties, costs or expenses (including reasonable attorneys' fees, expert and consultant fees, investigation costs and response, removal, and corrective action and other remediation or cleanup costs) suffered or incurred by any Lessor Indemnitee (collectively, "Lessor Losses") to the extent such Lessor Losses arise from, by reason of or in connection with (i) the possession, occupancy or use by Lessee or its employees of the Premises during the Term of this Lease (including but not limited to Lessor Losses arising out of the handling, storage, discharge, transport or disposal of Hazardous Substances), (ii) any negligent act or omission or the willful misconduct of Lessee or any of its officers, directors, employees, agents or representatives, (iii) any misrepresentation, breach of warranty or breach or nonfulfillment of any agreement or covenant of Lessee contained in this Lease, (iv) any Work on the Premises done by or on behalf of Lessee pursuant to Article XVII, or (v) any Deficiency Related Losses. Further, with respect to the Leased Facilities, Lessee shall neither do nor permit anything to be done which would cause any of the Prime Leases to be terminated or forfeited by reason of any right of termination or forfeiture reserved or vested in the Landlords under the Prime Leases, and Lessee shall indemnify and hold Lessor harmless from and against all claims of any kind whatsoever by reason of any breach or default on the part of Lessee by reason of which any one of the Prime Leases may be terminated or forfeited.

(b) Lessee's obligations under this Section 14.02 shall survive the expiration or early termination (or partial termination) of this Lease for any reason. Lessor shall notify Lessee within a reasonable time after any claim for indemnification arises and is known to Lessor and shall give Lessee a reasonable opportunity (i) to conduct any proceedings or negotiations in connection therewith necessary or appropriate to defend any Lessor Indemnitee, (ii) to take all other required steps or proceedings to settle or defend any such claim, and (iii) to employ counsel, reasonably acceptable to Lessor, to contest any such claim in the name of any Lessor Indemnitee or otherwise; and all expenses in connection therewith shall be borne by Lessee. If Lessee fails, within a reasonable time (not to exceed sixty (60) days) to take the foregoing actions, Lessor may employ its own counsel and take any or all of the foregoing actions, all at the cost and expense of Lessee.

Section 14.03. Environmental Notices. Each party shall immediately provide the other party with a copy of all notifications (written or oral), including any form of notice, inquiry, investigation, request for information or records or governmental order or claim, which such party gives or receives after the Commencement Date and which relates to: (i) any actual or alleged non-compliance by Lessor or Lessee with, or obligation or liability of Lessor or Lessee under any Environmental Law to the extent such Environmental Law relates to the Premises or the party's ownership or use of or operations or activities on the Premises, or (ii) any actual or alleged past, present or future Release or threatened Release of any Hazardous Substance on, at, under or from the Land.

Section 14.04. Environmental Assessments. The parties have jointly conducted an Environmental evaluation of the Premises satisfactory to both parties (the "Preliminary Environmental Evaluation"), and each party has received a copy of the reports as to the Environmental condition of the Premises immediately prior to the Commencement Date (the "Preliminary Environmental Evaluation Report"), such Preliminary Lease Environmental Evaluation Report being incorporated herein by this reference. The parties also agree to jointly conduct, immediately prior to or immediately after the Expiration Date or the earlier termination of this Lease, as the case may be, through an environmental firm mutually acceptable to the parties (or through mutually acceptable employees or representatives of Lessor and Lessee), an Environmental evaluation of the Premises satisfactory to both parties (the "Post-Lease Environmental Evaluation"). Each party shall receive a copy of the reports as to the Environmental condition of the Premises as of the date of this Lease's expiration or earlier termination, as applicable (the "Post-Lease Environmental Evaluation Report"). The parties agree that for purposes of this Article XIV, the Preliminary Lease Environmental Evaluation Report shall be used by the parties as evidence of the Environmental condition of the Premises as of the Commencement Date of this Lease and the Post-Lease Environmental Evaluation Report shall be used by the parties as evidence of the Environmental condition of the Premises as of the Expiration Date (or earlier termination date, if applicable) of this Lease. The parties understand that the Preliminary Environmental Evaluation Report and the Post-Lease Environmental Evaluation Report are not intended to be all-inclusive, but shall serve as a general, preliminary baseline as to the Environmental conditions which existed at the Facilities at the time such documents were prepared.

Section 14.05 Structural and Operational Assessments. The parties have jointly conducted structural and operational assessments of the Facilities for the purpose of identifying any structural or operational defect, deficiency or failure that shall not be considered a Deficiency for purposes of this Lease and which are identified on Exhibit D attached hereto, and which shall be resolved in the manner set forth in Exhibit D.

## ARTICLE XV
## FIRE AND CASUALTY

Section 15.01. Casualty Loss. If any Facility leased to Lessee hereunder is substantially damaged or destroyed by a Casualty, to the extent that Lessee cannot continue its normal business operations at such Facility or if the Facility is rendered untenantable or unfit for occupancy as a result

thereof, then and in such event, Lessee may elect to terminate this Lease, but only as applicable to, and to the extent that it relates to, such damaged or destroyed Facility by notice to Lessor within one hundred and eighty (180) days after the occurrence of such damage or destruction. In the event of such a termination, all insurance proceeds received in connection with such damage or destruction, less any portion applied to the cost of repairing, razing, cleanup and environmental restoration of the Facility, shall be paid to Lessor. In the event any portion of this Lease is terminated because of damage or destruction to a particular Facility, the Rent payable under Section 4.01 hereunder shall be recalculated as a result of such termination in accordance with Section 4.02 herein. To the extent a Casualty occurs which causes any Facility (or portion thereof) to be untenantable for Lessee, Lessee's obligation to pay Rent during such period shall be proportionately abated.

## ARTICLE XVI
## CONDEMNATION

Section 16.01. Total Taking. If there occurs a Taking of all or a Substantial Portion of the Premises, other than a Taking for temporary use not exceeding one hundred and eighty (180) days, then this Lease shall terminate effective as of the Date of Taking, and such date shall be the Expiration Date, without prejudice, however, to the rights of Lessor and Lessee to recover an Award.

Section 16.02. Partial Taking. If there occurs a Taking of less than a Substantial Portion of the Premises, then this Lease and all duties and obligations of Lessee under this Lease shall remain unmodified, unaffected and in full force and effect, except that Rent shall be proportionally abated during the reconstruction, restoration and repair of the Facility(ies).

Section 16.03. Temporary Taking. If there occurs a Taking of the Premises or any portion thereof, for temporary use not exceeding one hundred and eighty (180) days, then this Lease shall remain in full force and effect for the remainder of the Term except that Rent shall be proportionally abated during the period of such temporary Taking and, provided that during such time as Lessee shall be out of possession or use of the Premises by reason of such Taking, the failure to keep, observe, perform, satisfy and comply with the terms and conditions of this Lease due to such Taking, shall not be an Event of Default hereunder.

Section 16.04. Awards. Any Award for a Taking, permanent or temporary, of all or any portion of the Premises shall be paid to the Lessor or Lessee, as their interests may appear.

## ARTICLE XVII
## WORK AT THE FACILITIES

Section 17.01. Standards for Performance. Lessee shall cause all work permitted or required to be done at the Premises pursuant to Articles X and XI hereof (the "Work") to be in compliance with all Legal Requirements. Lessee shall be solely responsible for construction means, methods, techniques, sequences and procedures, and for coordinating all activities related to the Work. Lessor shall have no duty or obligation to inspect the Work, but shall have the right to do so.

Section 17.02. Completion of Work. Whenever Lessee elects or is required to perform any Work upon the Premises, Lessee shall promptly commence the Work and, once commenced, diligently and continuously pursue the Work and complete the Work within a reasonable time.

Section 17.03. Liens. Unless required by law, Lessee shall not permit the filing of any liens or other encumbrances against the Land or Facilities whether such liens or encumbrances may be filed by contractors, subcontractors, suppliers or materialmen in connection with the Work or otherwise. Lessee shall use its best commercial efforts to have any liens or encumbrances against the Land or Facilities removed in a timely manner.

## ARTICLE XVIII
## COMPLIANCE WITH LAWS

Section 18.01. Compliance with Laws. Lessee, at its cost and expense, shall during the Term of this Lease comply in all material respects with all federal, state and local laws, rules, regulations, codes, ordinances, orders and other requirements, present or future, that are promulgated by (i) any governmental, administrative, regulatory authority, bureau or agency, or (ii) court, tribunal or administrative body having jurisdiction over the Premises and that are applicable to the Premises or the ownership, lease, use or occupancy thereof by Lessee during the Term of this Lease, including but not limited to, all Environmental Laws (collectively, the "Legal Requirements").

## ARTICLE XIX
## ASSIGNMENT; PLEDGE OF LEASEHOLD INTEREST

Section 19.01. Assignment. Lessee shall neither assign this Lease or any right, interest or obligation hereunder nor sublet all or any part of the Land or Facilities without the prior written consent of Lessor, which may be withheld for any or no reason. Any assignment or sublease consented to by Lessor shall be subject to all of the terms, covenants, conditions, requirements, restrictions and provisions of this Lease, and as applicable, the Prime Leases. No assignment or sublease permitted hereunder shall release Lessee from liability for the performance of any of its duties and obligations hereunder and Lessee shall be and remain primarily liable for the performance of this Lease by its assignee. Any attempted assignment, sublease or transfer of this Lease or any interest herein not complying with the requirements of this Section shall be deemed null and void and of no legal consequence.

Section 19.02. No Mortgage or Pledge. Lessee shall not, without the prior written consent of Lessor, which consent may be withheld for any or no reason, mortgage, pledge, transfer, assign or convey any estate or interest of Lessee under this Lease to secure any indebtedness of Lessee or for any other purpose.

## ARTICLE XX
## EXPIRATION; SURRENDER

Section 20.01. Expiration; Surrender. Except as otherwise provided herein, this Lease shall terminate on the Expiration Date, except with respect to obligations and liabilities of the parties hereunder, actual or contingent, which have arisen on or prior to the Expiration Date. On the Expiration Date, Lessee shall surrender possession of the Assets to Lessor, in good order, safe condition and repair, ordinary wear and tear excepted. Lessee shall have the right, but not the obligation, to remove from the Facility any personal property of any kind or nature owned by Lessee prior to the Expiration Date, provided that the portion of the Premises to which such items may have been affixed shall be restored by Lessee to good order, safe condition and repair. All property of Lessee which is not timely removed by Lessee from the Premises as aforesaid, at the option of Lessor, (i) shall become the property of Lessor on an "as is, where is" basis, or (ii) may be removed from the Premises by Lessor at Lessee's cost and expense and, in neither case, shall Lessee have any claims against Lessor with respect thereto. All machinery, equipment, computer hardware and software, office furniture and furnishings and other tangible personal property which is included within the definition of "Facilities" and originally leased by Lessor to Lessee hereunder shall remain the property of Lessor and shall be surrendered to Lessor upon this Lease's expiration or earlier termination. Lessee shall use commercially reasonable efforts in maintaining adequate records identifying leased personal property as compared to personal property which is purchased and owned by Lessee during its use and occupation of the Premises.

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## ARTICLE XXI
## SIGNAGE

Section 21.01. Signage. Lessee shall have the right to designate, and thereafter change, the name of the Premises, and may install signs, sculptures or graphics identifying the Premises by Lessee's (or any permitted successor and assign) name or logo.

Section 21.02. No Proprietary Rights. Lessor shall not have any proprietary rights, under this Lease, in or to the name or logo given to the Premises by Lessee. In addition, Lessor shall not have any right under this Lease to use such name or logo except as a means of identifying the Premises and then only for so long as Lessee occupies the Premises.

## ARTICLE XXII
## CONFIDENTIALITY

Section 22.01. Terms of Lease Confidential. Lessor and Lessee agree that the contents of this Lease and any other agreement entered into between the parties shall be maintained in strict confidence and shall not be disclosed by either party to any third party without the prior written consent of the other party, except as required by law.

## ARTICLE XXIII
## NET LEASE

Section 23.01. Net Lease. It is understood and agreed that the Rent provided for herein shall be absolutely net to Lessor throughout the Term of this Lease, free of any real estate taxes, assessments, insurance premiums, utility costs, repair and maintenance costs and all other operating costs, expenses, liabilities, charges or other deductions whatsoever with respect to the Premises and/or the ownership, leasing, operation, maintenance, repair, use or occupation thereof, or with respect to any interest of Lessor therein, it being the intention of the parties hereto that by the execution of this Lease, Lessee shall, during the Term, assume with respect to the Premises every obligation relating thereto which the ownership thereof would entail and which, but for this Lease, would be borne by Lessor. This Lease is a "triple net lease" and, notwithstanding any law to the contrary, all Rent payable under this Lease by Lessee shall be paid without offset, counterclaim, abatement or defense, and this Lease shall not be subject to termination by Lessee by reason of any cause whatsoever, unless such right to terminate is expressly set forth in this Lease.

## ARTICLE XXIV
## MISCELLANEOUS

Section 24.01. Notices. All rental payments, notices, requests, demands or other communications required or permitted to be given or made under this Lease shall be in writing and delivered personally or sent by overnight courier, telecopy transmission or prepaid, certified or registered U.S. airmail, return receipt requested and duly addressed as set forth below. Any such notice, demand, request or communication shall be deemed to have been duly given (i) immediately if delivered personally or made by a confirmed telecopy, (ii) the day of delivery to the recipient if sent by overnight courier, or (iii) five (5) days after mailing. In proving the same it shall be sufficient to show that the envelope containing the notice, demand, request or communication was duly addressed, stamped and posted or that receipt of a facsimile was confirmed by the recipient. The addressees and telecopy numbers of the parties for purposes of this Lease are as follows:

To Lessor: Cargill, Incorporated
15407 McGinty Road West
Wayzata, Minnesota 55391-2399
Attention: US NAGO BU Leader

Fax: (952) 742-7242

To Lessee: CLD Pacific Grain, LLC
Suite 1133
222 S.W. Columbia
Portland, Oregon 97201
Attention: Arnie Schaufler
Fax: (503) 243-5079

Any party hereto may change its address for the purpose of this Lease by giving written notice to the other party at the address and in the manner provided above.

Section 24.02. Headings. The headings appearing in this Lease were inserted for the purposes of convenience and ready reference. They do not purport to and shall not be deemed to define, limit or extend the scope or intent of the provisions to which they appertain.

Section 24.03. Binding Effect. Subject to the provisions of Section 19.01, all provisions contained in this Lease shall be binding upon, inure to the benefit of, and shall be enforceable by, the respective permitted successors and assigns of Lessor and Lessee to the same extent as if each such permitted successor and assign were named as a party hereto.

Section 24.04. Severability. If any provision of this Lease, or the application thereof to any Person or circumstance, shall be held to be invalid or unenforceable, then in each such event the remainder of this Lease or the application of such provision to any other Person or any other circumstance (other than those as to which it shall be invalid or unenforceable) shall not be thereby affected, and each provision hereof shall remain valid and enforceable to the fullest extent permitted by law.

Section 24.05. Waiver. No failure on the part of any party to exercise, and no delay in exercising any right, power or remedy hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right, power or remedy by any such party preclude any other or further exercise thereof or the exercise of any other right, power or remedy. No express waiver or assent by any party hereto to any breach of or default in any term or condition of this Lease shall constitute a waiver of or an assent to any succeeding breach of or default of the same or any other term or condition hereof. Any waiver of a provision of this Lease shall be in writing and signed by the waiving party.

Section 24.06. Applicable Law. This Lease shall be governed by, construed under and interpreted and enforced in accordance with the internal laws of the State of Delaware.

Section 24.07. Entire Agreement. This Lease, including Exhibits A through E attached hereto, contains the entire understanding between Lessor and Lessee with respect to the subject matter hereof. No representations, warranties, inducements, understandings, promises or agreements, oral or otherwise, between the parties not embodied in this Lease shall be of any force or effect.

Section 24.08. Modifications. This Lease shall not be modified or amended in any respect except by a written agreement executed by Lessor and Lessee in the same manner as this Lease is executed.

Section 24.09. Holding Over. If Lessee remains in possession of the Premises after the Expiration Date or the termination of this Lease, as the case may be, with Lessor's acquiescence but without any modification of this Lease, Lessee shall be a tenant at will at the annual rental in effect on the Expiration Date and subject to all the other terms and provisions hereof (except as to the Term).

Section 24.10. Counterparts. This Lease may be executed in several counterparts, each of which shall be deemed an original, and all of such counterparts together shall constitute one and the same instrument.

Section 24.11. Memorandum of Lease. Lessor and Lessee, at Lessee's request, will execute a memorandum of this Lease in recordable form, which Lessee may, at its expense, file for record. However, neither Lessor nor Lessee shall record this Lease without the written consent of the other party.

Section 24.12. Dispute Resolution. All disputes arising under this Lease will be resolved by the parties through the dispute resolution procedures described on Exhibit E attached hereto and incorporated herein by this reference.

Section 24.13 Lessor Approval. Where Lessor approval is required in this Agreement, such approval may be withheld for any or no reason whatsover except as otherwise specifically provided in this Agreement.

**IN WITNESS WHEREOF**, the parties have caused this Lease to be duly executed by their duly authorized officers and have delivered this Lease effective as of the day and year first above written.

**CARGILL, INCORPORATED**
(Lessor)

By: _____
Name: _____
Title: _____

**CLD PACIFIC GRAIN, LLC**
(Lessee)

By: _____
Name: _____
Title: _____

**EXHIBIT "A"**

**List of Prime Leases and Legal Descriptions of the Land**

## LEASED FACILITIES

### Portland, OR (T-4)

Lease and Agreement between The Port of Portland and Cargill, Incorporated dated July 1, 1975, as supplemented and amended.

No legal description.

### Boardman, OR

SK Farms, Inc. Submerged Lands and Dock Structures Lease Agreement dated April 1, 1983 between Port of Morrow and SK Farms, Inc. Assigned to Cargill by Big River Farms, Inc., successor to SK Farms, Inc., on June 9, 1992.

Legal Description:

### Burbank, WA

Lease by and between Port of Walla Walla and River Grain Terminal, Inc. dated May 1, 1958, as assigned to Cargill, Incorporated, and as supplemented and extended.
Lease by and between Port of Walla Walla and River Grain Terminal, Inc. dated September 28, 1959, as assigned to Cargill, Incorporated and as supplemented and extended.

Legal Description:

A tract of land in Walla Walla County, State of Washington, in Section 2, Township 8N, Range 30E, Willamette Meridian, described as follows:

Beginning at the Northeast corner of Section 2, Township 8N, Range 30 E, Willamette Meridian; thence S. 89°41'23" W. a distance of 1,255.22 feet to an intersection with the Westerly right of way line of Old State Highway No. 3; thence S. 00°46'51" W. a distance of 300 feet to the True Point of Beginning; thence S. 00°46'51" W. a distance of 1, 134.68 feet along the Westerly right of way line of said Highway to an intersection with the Northerly line of the easement to the Salt Lake Pipeline Company; thence N. 44°23'05" W. along said easement line a distance of 460'± to an intersection with a line running parallel with and 8 feet distance from the outside rail of the Westerly Railroad spur serving grain storage facilities, said parallel line being on the Easterly side of said Railroad spur; thence in a Northerly direction along said parallel line to an intersection with a line that is 80 feet distance and parallel to the Northeasterly wall of the Northeasterly Storage Warehouse; thence in a Northwesterly direction along said parallel line a distance of 520'± to an intersection with the North boundary line of the Port of Walla Walla; thence East along said boundary line to the point of beginning.

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Lease by and between Port of Walla Walla and Cargill, Incorporated dated July 25, 1978, as extended.

Legal Description:

Beginning at the NE Corner of Section 2, Township 8N, Range 30 E, Willamette Meridian, and running S 0°30' E. along the East line of said Section 2, a distance of 814.25 feet; thence S 88°35' W., parallel to the North line of Section 2, a distance of 1772.0 feet; thence N 1°25' E., a distance of 42.0 feet to the True Point of Beginning which is the South corner of the building commonly known as Flathouse #2. Thence N 52°35' W., 500 feet along the building line to the Northwest Corner of said building; thence N 37°25' E., a distance of 140 feet to the North Corner of said building; thence S 52°35' E., 500 feet to the Southeast Corner of said building; thence S 37°25' W., 140 feet to the True Point of Beginning.

Lease by and between Port of Walla Walla and Cargill dated January 1, 1993. Need written consent of Port.

Legal Description:

That certain one-story, metal-framed, office complex building consisting of approximately 2,200 square feet, located in the Port of Walla Walla's Burbank Industrial site and situated on the following described real property situated in the County of Walla Walla, State of Washington:

Beginning at the Northeast corner of Section 2, Township 8N, Range 30 E, Willamette Meridian; thence S. 89°41'23" W. a distance of 1,255.22 feet to an intersection with the Westerly right of way line of Old State Highway No. 3; thence S. 00°46'51" W. a distance of 300 feet to the True Point of Beginning; thence S. 00°46'51" W. a distance of 1, 134.68 feet along the Westerly right of way line of said Highway to an intersection with the Northerly line of the easement to the Salt Lake Pipeline Company; thence N. 44°23'05" W. along said easement line a distance of 460'± to an intersection with a line running parallel with and 8 feet distance from the outside rail of the Westerly Railroad spur serving grain storage facilities, said parallel line being on the Easterly side of said Railroad spur; thence in a Northerly direction along said parallel line to an intersection with a line that is 80 feet distance and parallel to the Northeasterly wall of the Northeasterly Storage Warehouse; thence in a Northwesterly direction along said parallel line a distance of 520'± to an intersection with the North boundary line of the Port of Walla Walla; thence East along said boundary line to the point of beginning.

Lease by and between Port of Walla Walla and Cargill dated June 4, 1999.

No legal description. See sketch attached to lease.

**Pasco**

Lease Agreement between Port of Pasco and Cargill, Incorporated dated July 22, 1999.

Legal Description:

Office building (1,605 square feet) located at 720 W. River Street. That portion of Lots 16 to 30 inclusive of River Block, the Riverside Addition to Pasco, Washington, lying northerly of the U.S. Government taking line for McNary Dam Pool, and the south thirty-three (33) feet of vacated River Avenue lying adjacent to said Lots 16 to 30 inclusive, all in the Riverside Addition to the City of Pasco, as recorded in Volume B, page 44, records of county auditor, Franklin County, Washington, EXCEPT that an easement is reserved for an underground pipe line serving the River Terminals Tank Farm, said easement being fifteen (15) feet in width. Also reserved is a five (5) foot easement for an underground water main located at the westerly boundary of the described property on the map attached to the lease. Also a non-exclusive easement 17'x11' adjoining the north boundary of property, as indicated on the map attached to the lease, is granted to the Grain Company for railcar siding.

**The Dalles**

Lease Agreement by and between The Port of The Dalles, successor to Pacific Inland Navigation Company, Inc. and Cargill, Incorporated dated April 1, 1960.

Legal Description:

Beginning at a point, a brass screw set in rock, 2202.7 feet north and 1548.6 feet east from the quarter corner of the south line of Section 33, Township 2 North, Range 13 East Willamette Meridian, in Wasco County, Oregon; thence downstream along the south bank of the Columbia River a distance of 150 feet; thence S 55°05'W a distance 220 feet; thence S 34°55"E a distance of 550 feet; thence N 55°05"E to the south bank of the Columbia River; thence downstream along the south bank of the Columbia River 400 feet more or less to the point of beginning. Said tract contains 2.56 acres more or less.

**Arlington**

Agreement by and between the Port of Arlington and Cargill, Incorporated dated September 1, 1967.

Legal Description:

A tract of land located on property of the Port of Arlington delineated on the drawing marked Exhibit B (1/27/67) attached to the Memorandum of Agreement between the Port and the United States of America dated June 15, 1967 referred to in Section 26 of

the foregoing agreement; said tract being approximately 420 feet in length, running from the northeasterly corner of the top of the fill, westerly along the river side of the fill to a point, thence at right angles and in a southerly direction approximately 150, thence at right angles and in an easterly direction parallel to the first line above described, a distance of approximately 420 feet, thence at right angles and in a northerly direction a distance of approximately 150 feet to the point of beginning.

**OWNED FACILITIES**

**Lewiston, ID**

**PARCEL 1:** Beginning at the intersection of 4th Avenue North and 15th Street North, in Section 31, Township 36 North, Range 5 West of the Boise Meridian, in the City of Lewiston, Idaho; thence South 88 degrees 15' 18" East a distance of 280 feet; thence South 1 degree C9' 36" West a distance of 10 feet to the Northwest corner of the Lewiston Roundup Association property; thence South degrees 46' 58" West a distance of 79.95 feet; thence North 61 degrees 22' 00" West a distance of 413.16 feet to the True point of Beginning, said point being the Northwest corner of Lewis-Clark Terminal Association, Inc., property; thence from said True Point of Beginning South 28 degrees 38' 05" West distance of 428.91 feet to a point which is North 28 degrees 27' 15" East a distance of 50 feet from the Government Take Line; thence North 61 degrees 32' 45" West a distance of 431.31 feet to a point which is North 26 degrees 27' 15" East a distance of 50 feet from the Government Take Line; thence following a 368.06 foot radius curve to the right, said curve having a delta angle of 57 degrees 46' 57" a distance of 371.19 feet to a point; thence North 3 degrees 45' 48" West a distance of 307.23 feet to a point; thence South 61 degrees 22' 00" East, a distance of 907.85 feet to the True Point of Beginning.

**LESS AND EXCEPT THE FOLLOWING FROM PARCEL 1:**

A parcel of land in Section 31, T. 36 N., K 5 W., B.M., in the City of Lewiston, County of Nez Perce, State of Idaho, and being more particularly described as follows:
Commencing a City Monument 23-12 at the intersection of 6th Avenue North and 15th Street; thence S 01 ° 11'08" W. for 499.67 feet to City Monument 23-6 at the intersection of 3rd Avenue North and 15th Street; thence S 39°03'53" W for 142.36 feet to the northeast comer of Trustee's Deed recorded as Instrument No. 464905 of County Records; thence N 61°22'00" W along the north line of said deed for 780.98 feet to the True Point of Beginning; thence S 35°43'55" W for 168.39 feet; thence N 03 °45'48" W for 197.90 feet; thence S 61 °22'00" E for 126.84 feet to the Point of Beginning; containing 0.24 acres more or less.

**PARCEL 2:** A non-exclusive easement for ingress and egress granted to Fribourg Investment Company L.P., a Delaware Limited Partnership in Easement Deed recorded May 17, 1984 as Instrument No. 476867, over and across the following described land:

Commencing at the Brass Cap Monument marking the intersection of 15th Street North and 3rd Avenue North; thence North 61 degrees 21'22" West 55.73 feet; thence South 28 degrees 38'05" West 40.00 feet to the South line of 3rd Avenue North and the Point of Beginning; thence continue South 28 degrees 38'05" West 100.00 feet to the North line of the Continental Grain Company property and the Point of Terminus.

**PARCEL 3:** A non-exclusive easement for ingress and egress granted to Fribourg Investment Company, L.P., a Delaware Limited Partnership in Easement Deed recorded May 17, 1984 as Instrument No. 476867, over and across the following described land:

Commencing at the brass cap monument marking the intersection of the centerlines of 16th Street North, 6th Avenue North and 3rd Avenue North; thence South 61 degrees 21'22" East 325.22 feet along the centerline of 3rd Avenue North; thence south 29 degrees 38'38" West 40.01 feet to the South line of 3rd Avenue North and the Point of Beginning; thence continue South 29 degrees 38'38" West 100.01 feet to the North line of the Continental Grain company property and the Point of Terminus.

**PARCEL 4:** An easement for overhead conveyor facility and legs or support structures therefor and granted to Fribourg Investment Company, L.P., a Delaware Limited Liability Partnership in Easement Deed recorded May 17, 1984 as Instrument No. 476868, over and across the following described land:

Commencing at the U.S. Cops of Engineers G.T.L. monument number 520-54-1-5A; thence North 61 degrees 32'45" 229.0 feet along U.S. G.T.L. line to the Point of Beginning; thence North 28 degrees 27'15" East 50 feet to the Point of Terminus

**Boardman, OR**

A tract of land in Sections 2 and 3, Township 4 North, Range 25 West, Willamette Meridian, Morrow County, Rregon, being more particularly described as follows:

Commencing at the one-quarter corner common to Sections 2 and 11, Township 4 North, Range 25 East, Willamette Meridian, as shown on Morrow County Record Survey no. 290-k, dated January 28, 1980; thence South 88°22'10" West a distance of 2,663.94 feet to the southwest corner of said section 21; thence north 1°52'20" west a distance of 1,267.36 feet to the point of beginning, thence North 88'22'10" East a distance of 684.91 feet to a point, thence North 01°52'20" West a distance of 670.96 feet to a point; thence South 88°22'10" West a distance of 728.22 feet to the high water line, as meandered on aforesaid survey; thence southerly along said high water line the following 6 (six) courses and distances:

(1) South 39°41'00" West a distance of 3.22 feet to a point,

(2) South 21°59'30" West a distance of 103.49 feet to a point,

(3) South 07°29'30" West a distance of 105.08 feet to a point,

(4) South 00°37'00" West a distance of 104.43 feet to a point,

(5) South 05°10'30" East a distance of 226.52 feet to a point,

(6) South 06°46,'00" East a distance of 104.49 feet to a point,

Thence North 88°22'10" East a distance of 83.94 feet to the point of beginning,

**Portland, OR (Irving)**

**PARCEL I:** A parcel of land lying in the Southwest quarter of Section 27, Township 1 North, Range 1 East, City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:
Beginning at a point on the Southwesterly line of North River Street, said point being South 50°58'41" East a distance of 235.49 feet from the East corner of River Lot 19, Albina, as conveyed to Dillingham Corporation, by Deed recorded February 13, 1969 in Book 663 Page 196, Deed Records; thence along said Southwesterly line South 50°58'41" East a distance of 179.04 feet to a point; thence leaving said Southwesterly line of North River Street North 88°46'41" West a distance of 13.54 feet to a point; thence South 59°22'30" West 361.2 feet more or less to a point on the Harbor line; thence along said Harbor line North 34°31"31"' West 8.0 feet more or less; thence North 50°14'11" West 268.8 feet more or less to a point on the Southwesterly extension of the Southeasterly line of River Lot 19, Albina; thence leaving said Harbor line North 39°01'19" East along said Southwesterly extension and Southeasterly line a distance of 145.9 feet more or less to a point; thence leaving said Southwesterly extension of the Southeasterly line of River Lot 19, Albina, South 52°19'00" East a distance of 93.00 feet to a point; thence North 58°02'25" East a distance of 22.60 feet to a point; thence South 30° 52'05" East a distance of 57.93 feet to a point; thence North 58°44'50" East a distance of 194.39 feet to a point; thence South 50°58'41" East a distance of 15.14 feet to a point; thence North 39°01"19' East a distance of 8.25 feet to the point of beginning.

**EXCEPTING THEREFROM** ownership of the State of Oregon in and to that portion of the premises herein described lying below the line of ordinary high water of the Willamette River.

**PARCEL II:** A tract of land in the William Irving Donation Land Claim and Joshua Delay Donation Land Claim: Also of the Southwest one quarter of Section 27 and the Northwest one quarter of Section 34, Township 1 North, Range 1 East of the Willamette Meridian in the City of Portland, County of Multnomah and State of Oregon; described as follows:

Beginning at a point in the North line of the said William Irving Donation Land Claim, that is North 89°42'45" East 270.89 feet from the Northwest corner of said Claim, which point is the Northwest corner of Third Street extended in the Old City of East Portland, said point is North 89°42'45" East 16.20 feet from the intersection of said Donation Land Claim line with the Southwesterly line of North River Street, also is the intersection of said Donation Land Claim line with the Northerly prolongation of the curve of the Western right of way line of the Oregon-Washington Railway and Navigation Co., as described and recorded March 24, 1882 in Deed Book 54 at Page 77 said Multnomah County; thence Southeasterly along the Westerly line of Third Street and the Westerly right of way line of said O.W.R. & N. CO., 1163.75 feet to a point in the Northerly line of the Northern Pacific Terminal tract recorded December 9, 1882 in Deed Book 62 at Page 139, which point is the intersection with the South line of North Dixon street extended Westerly; thence along the Westerly extension of the South line of North Dixon Street and the Northerly line of the said Northern Pacific Terminal tract, South 51°33'30" West 212.42 feet to the intersection with the harbor line of the Eastern bank of the Willamette River; thence North 36°01.'45" west 1196.00 feet along said Harbor line to the intersection with the Northerly line of the Interior Warehouse Tract, recorded February 3, 1954, in Deed took

1642, at Page 318, said Multnomah County; thence North 57°54'45" East 361.24 feet along said line to a point in the North line of said William Irving Donation Land Claim line; thence North 89°42'45" East along said Donation Land Claim line to the point of beginning.

**EXCEPTING THEREFROM** ownership of the State of Oregon in and to that portion of the premises herein described lying below the line of ordinary high water of the Willamette River.

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**EXHIBIT "B"**

**Personal Property**

**SEE ATTACHED.**

**EXHIBIT "C"**

**Rent**

The following is the annual rental breakdown by location:

| | |
|---|---|
| Irving | $1,000,000.00 |
| T4 | -0- |
| Arlington | $ 40,000.00 |
| Boardman | $ 110,000.00 |
| Burbank | $ 80,000.00 |
| Pasco | $ 30,000.00 |
| Dalles | $ 25,000.00 |
| Lewiston | $ 115,000.00 |

$ 6,900.00 taxable personal property
$108,100.00 nontaxable real estate

**TOTAL RENT: $1,400,000.00**

# EXHIBIT D

## Structural and Operational Assessments for Each Cargill Facility

All issues shall be resolved by the responsible party in a reasonable time period except as specifically set forth below:

**Arlington, OR**

| Issue | Party Responsible |
|---|---|
| Headhouse handrail brought to code | Lessor (within 5 years) |
| Hard wire aeration fans | Lessor (within 5 years) |
| Mineral oil add system | Lessor (within 5 years) |

**Boardman, OR**

| Issue | Party Responsible |
|---|---|
| Various guarding issues | Lessor |
| Replace South leg drive reducer | Lessor |
| Add screw take ups on legs | Lessor |
| Mineral oil add system | Lessor (within 5 years) |
| Test well | Lessor |

**Burbank, WA**

| Issue | Party Responsible |
|---|---|
| Bend pulleys on legs need rub blocks | Lessor |
| Bin top hand rails not to code | Lessor (within 5 years) |
| Tank #7 repairs around door | Lessor |
| Big flat storage building repairs | Lessor |
| Hard wire aeration fans | Lessor (within 5 years) |
| Mineral oil add system | Lessor (within 5 years) |
| Test well | Lessor |

**Lewiston, ID**

| Issue | Party Responsible |
|---|---|
| Toe boards, railings, etc. | Lessor |
| Oil leak main leg drive | Lessor |
| Rail fall protection | Lessor (within 5 years) |
| Walkway along bin top screw conveyor or engineered fall protection | Lessor |

**Pasco, WA**

| Issue | Party Responsible |
|---|---|
| Hazard monitoring , 2 belts not covered in system | Lessor (if facility operates) |
| Handrails guards | Lessor |
| Bank stabilization | Port of Pasco |
| Mineral oil add system | Lessor (within 5 years) |

**Portland, OR (Terminal 4)**

| Issue | Party Responsible |
|---|---|
| Railing on car shed roof | Lessor (within 5 years) |
| Various electrical issues-old wire/conduits | Lessor (within 5 years) |
| Office fire alarm panel - replacement | Lessor (within 5 years) |
| Leg #7 venting | Lessor (within 5 years) |
| All dust system main fans need guards over outlets | Lessor (within 5 years) |
| Rail fall protection | Lessor (within 5 years) |
| Hazard monitoring to Cargill specifications | Lessor (if facility operates) |
| Concrete spalling | Lessor (within 5 years) |
| Dust system high pressure line repairs | Lessor (within 5 years) |
| Paint on steel tanks (lead paint?) | Lessor (within 5 years) |
| Clean up hydraulic leak C-10 motor building + rock | Lessor |

**Portland, OR (Irving)**

| **Issue** | **Party Responsible** |
|---|---|
| Truck dump dust returns to leg, needs changed | Lessor |
| Dredging | Lessor $250M if needed and used by 12/31/02. Will be extended if permiting is delayed by regulatory agencies |
| Bioaccumulation testing of dredge spoils | Lessor |

**The Dalles, OR**

| **Issue** | **Party Responsible** |
|---|---|
| Guarding issues, mainly handrails | Lessor |
| Minor electrical items | Lessor |
| Load limit on truck trestle, some planks need replaced | Lessor |
| Mineral oil add system | Lessor (within 5 years) |

# EXHIBIT "E"

## Dispute Resolution

1. **Mediation.** If a dispute or disagreement arising out of, or relating to, the formation, interpretation, performance or breach of this Lease or any amendment hereto, exists (a "Dispute"), either party may require the other party to submit the reasons for its position, in writing, and to then enter into good faith negotiations to attempt to resolve the Dispute. If such Dispute cannot be settled by good faith negotiation among the parties within thirty (30) days, either party may require that the Dispute be submitted in writing for resolution to senior management representative of both parties ("Senior Representative"). If such Dispute is not resolved within sixty (60) days of having been submitted to the Senior Representatives, either party may require that the Dispute be resolved in accordance with Section 2 hereinbelow. All negotiations and written statements pursuant to this Exhibit E are confidential and shall be treated as compromise and settlement negotiations for purposes of the U.S. Federal Rules of Evidence and state rules of evidence. If the parties reach agreement pertaining to any Dispute pursuant to the procedures set forth in this Exhibit E, such agreement shall be reduced to writing, signed by the parties and shall be final and binding upon them.

2. **Arbitration.**

(a) If the Dispute cannot be resolved as a result of the negotiations generally described in Section 1 hereinabove above or within such additional time frame as the parties may mutually agree to, the Dispute shall be settled by final and binding arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("AAA"); provided, however, that if such rules are inconsistent with any of the provisions of this Agreement, the terms and conditions of this Agreement shall control. Any such arbitration shall be conducted in Portland, Oregon at a place and time agreed upon by the parties or, failing agreement, selected by the arbitrators.

(b) Any arbitration shall be conducted before a panel of three (3) arbitrators who shall be compensated for their services at a rate to be determined by the AAA in the event the parties are not able to agree on their rate of compensation, but based upon hourly or daily consulting rates for the neutral arbitrator reasonably consistent with such arbitrator's normal charges for fees. Within fifteen (15) business days after notice by any party seeking arbitration under this provision, the party requesting arbitration shall appoint one (1) arbitrator and within fifteen (15) business days thereafter the other party shall appoint the second arbitrator. The persons so appointed shall meet the qualification requirements set forth in Section 2(c) hereinbelow. Within fifteen (15) business days after the appointment of the second arbitrator, the two arbitrators so chosen shall mutually agree upon the selection of the third, impartial and neutral arbitrator who must have knowledge of lease agreements similar to the Lease. In the event the arbitrators cannot agree upon the selection of the third arbitrator, the AAA rules for selection of such an arbitrator shall be followed, provided that the selection is from among such persons who meet the above-stated requirements. Notwithstanding anything to the contrary in the foregoing, for any Dispute for which the amount in controversy is less than $50,000, only one (1) arbitrator shall be used, and shall be selected by written agreement of the parties(or if agreement cannot be reached by the parties, by the AAA).

(c) Each arbitrator so appointed shall have substantial experience and familiarity with the type of business to be conducted by the Company as contemplated by the Business Purpose and lease agreements similar to the Lease.

(d) Each party shall bear its own costs and expenses of arbitration including, but not limited to, filing fees and attorneys' fees and each party hereby agrees to pay its pro rata share of the administrative fees of the AAA and of the compensation to be paid to the arbitrators in any such arbitration and its pro rata share of the of the costs of transcripts and other expenses of the arbitration

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proceedings, subject, however, to allocation of costs and expenses (excluding attorneys' fees) by the arbitrators consistent with the award.

(e) The parties shall make available to the arbitrator(s) all non-privileged books, records, schedules and other information reasonably requested by them. Such materials are to be made available to the arbitrator(s) at such times as are deemed necessary by them to make their decision as herein provided.

(f) The arbitrator(s) may conduct any pre-trial proceedings by telephonic conference call rather than by a face-to-face meeting.

(g) The arbitrator(s) shall, prior to rendering their decision on the arbitration matter, afford each party an opportunity, both orally and in writing, to present any relevant evidence (the formal rules of evidence applicable to judicial proceedings shall not apply) and to express, orally and/or in writing that party's point of view and arguments as to the proper determination of the arbitration matter; provided, however, that any party submitting written material shall be required to deliver a copy of such written material to the other party concurrently with the delivery thereof to the arbitrator(s) and such other party shall have the opportunity to submit a written reply, a copy of which shall also be delivered to the other party concurrently with the delivery thereof to the arbitrator(s). Oral arguments shall take place only at a hearing before the arbitrator(s) at which all parties are afforded a reasonable opportunity to be present and be heard.

(h) In the event of a willful default by any of the parties in appearing before the arbitrator(s) after due written notice shall have been given, the arbitrator(s) are hereby authorized to render a decision upon the testimony of the party(ies) appearing before the arbitrator(s).

(i) The arbitrator(s) shall make a decision and award resolving the dispute within forty-five (45) calendar days after the selection of the last arbitrator, or the first arbitrator if only one arbitrator is to decide the dispute; and within fifteen (15) days of the last hearing held concerning such dispute(s).

(j) Any judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof.

(k) Except in the case of Disputes in which the amount in controversy is less than $50,000, within thirty (30) days after the arbitrators make their decision and award, the arbitrators shall render findings of fact and conclusions of law and a written opinion setting forth the basis and reasons for any decision and award rendered by them and deliver such documents to all parties along with a signed copy of the award. For Disputes in which the amount in controversy is less than $50,000, the arbitrator shall, within thirty (30) days after his decision and award, render only a brief opinion in support of the award.

(l) The arbitrator(s) shall have the authority to grant any equitable and legal remedies that would be available in any judicial proceeding instituted to resolve a Dispute, including the award of interim or preliminary relief; provided, however, the arbitrator(s) shall not have the authority to award punitive damages.

(m) The arbitrator(s) chosen in accordance with these provisions shall not have the power to alter, amend or otherwise affect the terms of these arbitration provisions in this Lease or any other agreement entered into between the parties, and shall take into effect to the extent possible the intentions of the parties prior to entering into such agreements.

3. Provisional Remedies. The procedures specified in this Exhibit shall be the sole and exclusive procedures for the resolution of Disputes; provided a party, without prejudice to the mandatory procedures of this Exhibit, may file a complaint for tolling of the statute of limitations, or seek a preliminary injunction or other provisional judicial relief, if in its sole judgment such action is necessary to avoid irreparable damage or to preserve the status quo. Notwithstanding such action, the parties will continue to participate in good faith in the procedures specified in this Exhibit.

4. Tolling Statute of Limitations. All applicable statutes of limitation and defenses based upon the passage of time shall be tolled while the procedures specified in this Exhibit are in process. The parties will take such action, if any, required to effectuate such tolling.

5. Consent to Jurisdiction; Service of Process. SUBJECT TO SECTIONS A AND B SET FORTH HEREINABOVE, EACH PARTY HEREBY IRREVOCABLY AND UNCONDITIONALLY:

(a) AGREES THAT ANY ACTION, SUIT OR PROCEEDING BY EITHER PARTY ARISING FROM OR RELATING TO ANY DISPUTE MAY BE BROUGHT IN ANY STATE OR FEDERAL COURT OF COMPETENT JURISDICTION SITTING IN THE STATE OF OREGON, TO THE EXCLUSION OF ANY OTHER POTENTIAL STATES HAVING JURISDICTION, AND SUBMITS TO THE JURISDICTION OF SUCH COURTS SOLELY FOR SUCH PURPOSE;

(b) WAIVES ANY OBJECTION WHICH IT MAY HAVE AT ANY TIME TO THE LAYING OF VENUE OF ANY SUCH LITIGATION BROUGHT IN ANY SUCH COURT, WAIVES ANY CLAIM THAT ANY SUCH LITIGATION HAS BEEN BROUGHT IN AN INCONVENIENT FORUM, AND WAIVES ANY RIGHT TO OBJECT, WITH RESPECT TO ANY SUCH LITIGATION BROUGHT IN ANY SUCH COURT, THAT SUCH COURT DOES NOT HAVE JURISDICTION OVER SUCH PARTY; AND

(c) CONSENTS AND AGREES TO SERVICE OF ANY SUMMONS, COMPLAINT OR OTHER LEGAL PROCESS IN ANY SUCH LITIGATION BY REGISTERED OR CERTIFIED U.S. MAIL, POSTAGE PREPAID, TO SUCH PARTY AT THE ADDRESS FOR NOTICES SET FORTH IN THE LEASE, AND CONSENTS AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE IN EVERY RESPECT VALID AND EFFECTIVE SERVICE (BUT NOTHING HEREIN SHALL AFFECT THE VALIDITY OR EFFECTIVENESS OF PROCESS SERVED IN ANY OTHER MANNER PERMITTED BY LAW).

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## PERMANENT TUNNEL EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS, that Cargill Incorporated, a Delaware corporation (Grantor), in consideration of the sum of Three Hundred Fifty ($350) and no/100 Dollars, and other good and valuable consideration, to it paid by the City of Portland, a municipal corporation of the State of Oregon (Grantee), does hereby grant unto said City of Portland a non-exclusive perpetual easement for the purpose of constructing, reconstructing, operating, inspecting, monitoring and maintaining a subsurface sewer tunnel facility and appurtenances, through, under and along the following described parcel:

R/W #6246-3027 (Tunnel)

Parcel 1: A portion of that tract of land described as Parcel 1 and Parcel 2 in Document 95-83651 recorded July 17,1995, Multnomah County Deed Records, situated in the southwest quarter of Section 27, TIN, R1E, W.M., in the City of Portland, and State of Oregon. The subsurface horizontal outline of said easement is described as follows:

Beginning at a point on the southwesterly line of N. River Street, said point being S 50° 58' 41" E, a distance of 235.49 feet from the east corner of River Lot 19, Albina; thence S 39° 01' 19" W, a distance of 8.25 feet; thence N 50° 58' 41" W, a distance of 15.14 feet; thence S 5 8° 44' 50" W, a distance of 8.50 feet; thence along the arc of a 1,026.00 foot radius non-tangent curve to the left, through a central angle of 01 ° 46' 16", an arc distance of 31.71 feet, (the chord bears S° 49' 48' 51" E, 31.71 feet); thence S 50° 42' 00" E, a distance of 61.20; thence N 01 ° 26' 00" E, a distance of 21.70 feet, to the southwesterly line of N. River Street; thence N 50° 58' 41" W, along said southwesterly line, a distance of 61.66 feet, to the Point of Beginning;

Contains 1,297 square feet and is generally depicted on Exhibits A and B attached hereto.

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1N1E27CD 500

After Recording Return to:

106/8QO/Linda Birth

Tax Statement shall be sent to:

No Change

Parcel 2: A portion of that tract of land described as Parcel 1 and Parcel 2 in Document 95-83651 recorded July 17, 1995, Multnomah County Deed Records, situated in the southwest quarter of Section 27, TIN, TIE, W.M., in the City of Portland, and State of Oregon. The subsurface horizontal outline of said easement is described as follows:

Beginning at a point on the southwesterly line of N. River Street, said point being S 50° 58' 41" E, a distance of 410.55 feet from the east comer of River Lot 19, ALBINA; thence S 06° 21' 48" E, a distance of 14.75 feet; thence S 62° 33' 00" W, a distance of 8.02 feet; thence S 50° 42' 00" E, a distance of 39.10 feet; thence along the arc of a 733.90 foot radius non-tangent curve to the right, through a central angle of 03° 12' 33", an arc distance of 41.11 feet, (the chord bears N 07° 44' 40" W, 41.10 feet); thence N 88° 49' 38" W, a distance of 16.70 feet, to the southwesterly line of N. River Street; thence N 50° 58' 41" W, along said southwesterly line, a distance of 3.26 feet to the Point of Beginning;

Contains 651 square feet and is generally depicted on Exhibits A and B attached hereto. IT

IS UNDERSTOOD and agreed that:

A. This easement includes the right of access for construction, inspection, maintenance or other sewerage system activities.

B. Grantor reserves the right to use the easement area for any lawful purpose not inconsistent with Grantee's permitted use, including the installation, maintenance, repair, removal, replacement or relocation of underground utilities and services, paths, roadways or driveways, parking lots, landscaping and continued operation and development of Grantor's property which do not materially interfere with the operation and maintenance of the tunnel facility or jeopardize the integrity of the facility. It is specifically agreed that the Grantor may construct buildings and other improvements within the Easement Area, if said improvements do not interfere with the Grantee's ability to operate and maintain the tunnel facility or jeopardize the integrity of the tunnel facility. Underground improvements within the Easement Area must be consistent with Exhibit B, which specifically prohibits any underground improvements within thirteen (13) feet either side of the tunnel, and shall not install load bearing underground improvements within thirty-nine (39) feet above the crown of the tunnel and non-load bearing underground improvements within twenty-six (26) feet of the crown of the tunnel, as shown on Exhibit B, attached hereto. Grantor further agrees to provide prior notification of its intent to use the easement area for above or below surface installations, which must be approved by the Director of the Bureau of Environmental Services to ensure compliance with this easement.

C. This easement does not grant or convey to Grantee any right or title to the surface of the soil along the route of said sewer.

D. This easement includes the right to make visual and photographic inspection of the surface and associated improvements during construction.

E. This easement shall bind the heirs and assigns of Grantor and shall inure to the benefit of the successors in title of Grantee.



CARG002545

F. Grantor represents and warrants that it has the authority to grant this easement, that to its knowledge the subject property is free from all liens and encumbrances that would materially affect the easement grant, and that it will defend the same to Grantee against the lawful claims and demands of all persons whomsoever.

G. This easement is granted pursuant to the exercise of the eminent domain power and authority of Grantee, with the consideration paid by Grantee accepted as just compensation for the property or property rights conveyed, which includes damages to the property remainder, if any, resulting from the acquisition or use of said property or property rights.

H. Grantor represents that to the best of its knowledge after appropriate inquiry under the circumstances, the subject property is in compliance with all local, State and Federal environmental laws and regulations.

I. Grantor represents that it has disclosed all knowledge of any release of hazardous substances onto or from the property, and disclosed any known report, investigation, survey or environmental assessment regarding the subject property, "Release" and "hazardous substance" shall have the meaning as defined under Oregon Law.

J. Grantor warrants that there are no underground storage tanks, as defined under Oregon Law, presently on or under the subject property.

K. Grantee, by accepting this easement, is not accepting liability for any preexisting release of hazardous substances onto or from the subject property, and Grantor is not attempting to convey any such liability.

IN WITNESS WHEREOF, Cargill Incorporated, a Delaware corporation, pursuant to a resolution of its Board of Directors, duly and legally adopted, has caused these presents to be signed by R. Wayne Teddy (name) as President (title)
and _____ (name) as _____ (title)
on this 30th day of MAY, 2007.

Cargill, Incorporated,
A Delaware corporation

By: R Wayne Teddy
R. Wayne Teddy, President GOSCNA
By: _____



CARG002546

STATE OF MINNESOTA

County of HENNEPIN

This instrument was acknowledged before me on 5/30, 2007, by R. Wayne Teddy (name) as President of GOSCNA (title) and _____ (name) as _____ (title) of Cargill, Incorporated, a Delaware corporation.

JOHN J. KASTAN
Notary Public-Minnesota
My Commission Expires Jan 31, 2010

Notary Public for the State of Minnesota
My Commission expires

APPROVED AS TO FORM:

_____
City Attorney

APPROVED:

_____
Bureau of Environmental Services Director
or designee



CARG002547

**EXHIBIT "B"**

**Licenses & Permits**

Portland, Oregon ("Odock")

1. Alarm Permit
2. Hazardous Substance Permit
3. Air Discharge Permit
4. Scale Permit
5. Dust Emissions Permit
6. Ship Spouts Permit
7. Barge Leg Boom Permit
8. Elevator Permit
9. Pressure Vessel Permit

Windust

1. Elevator Permit

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## TEMPORARY CONSTRUCTION EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS, that Cargill Incorporated, a Delaware corporation (Grantor) in consideration of the sum of Sixty Nine Thousand Four Hundred Forty Eight ($69,448) and no/100 Dollars, and other good and valuable consideration, to it paid by the City of Portland, a municipal corporation of the State of Oregon (Grantee), does hereby grant unto said City of Portland a temporary easement for the purpose of supporting construction activities associated with the East Side Combined Sewer Overflow Project, through, under, over and along the following described parcel:

R/W #6246-3027 (TCE)

A portion of that tract of land described as Parcel 1 and Parcel 2 in Document 95-83651 recorded July 17, 1995, Multnomah County Deed Records, situated in the southwest quarter of Section 27, T1N, R1E, W.M., in the City of Portland, and State of Oregon, described as follows:

Beginning at a point on the southwesterly line of N. River Street, said point being S 50° 58' 41" E, a distance of 261.31 feet from the east corner of River Lot 19, Albina; thence S 82° 18' 56" W, a distance of 3.26 feet; thence S 11° 58' 18" E, a distance of 159.48 feet; thence S 14° 46' 55" E, a distance of 103.43 feet; thence along the arc of a 159.00 foot non-tangent curve to the left, through a central angle of 18° 00' 40", an arc distance of 49.98 feet, ( the chord bears S 26° 06' 06" E, 49.78 feet); thence N 73° 59' 12" E, a distance of 83.60 feet; thence along the arc of a 752.78 foot non-tangent curve to the right, through a central angle of 13° 17' 58", an arc distance of 174.73 feet, (the chord bears N 13° 34' 27" W, 174.34 feet); thence S 62° 33' 00" W, a distance of 92.97 feet; thence N 27° 26' 26" W, a distance

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1N1E27CD 500

After Recording Return to:

106/800/Linda Birth

Tax Statement shall be sent to:

No Change

of 21.66 feet; thence N 01° 26' 00" E, a distance of 109.73 feet to the southwesterly line of N. River Street; thence N 50° 58' 41" W, along said southwesterly line, a distance of 35.84 feet to the Point of Beginning;

Contains 16,740 square feet or 0.384 acres, and is generally depicted on Exhibit A attached hereto.

IT IS UNDERSTOOD and agreed that:

A. This easement is temporary and granted for original construction for a term of 5 years 1 month, commencing no earlier than December 1, 2006 and terminating no later than December 31, 2011. However, use of the easement area shall not exceed a total of 1,365 days (3 years 9 months) during the time it is in effect and Grantor shall be provided reasonable opportunity to make nonconflicting use of the easement area when the area is not being used by Grantee.

B. In the event of project delays, the term of this easement will automatically extend by the same amount of time as the period of delay, but in no event will it be extended beyond midnight December 31, 2012.

C. Grantee agrees to provide Grantor with at least five (5) days notice prior to commencing work under this easement.

D. Grantee agrees that it will make every reasonable effort to minimize construction impacts and will maintain access to Grantor's property to the extent practicable.

E. Grantee will restore the easement area to a condition that is as good as or better than the condition existing prior to the original construction.

F. Grantor reserves all other rights not conveyed herein, but will not exercise said rights in any manner that would be inconsistent or interfere with or materially affect rights herein granted.

G. This easement shall bind the heirs and assigns of Grantor and shall inure to the benefit of the successors in title of Grantee.

H. Grantor represents and warrants that it has the authority to grant this easement, that to its knowledge the subject property is free from all liens and encumbrances that would materially affect the easement grant, and that it will defend the same to Grantee against the lawful claims and demands of all persons whomsoever.

I. This easement is granted pursuant to the exercise of the eminent domain power and authority of Grantee, with the consideration paid by Grantee accepted as just compensation for the property or property rights conveyed, which includes damages to the property remainder, if any, resulting from the acquisition or use of said property or property rights.

J. Grantor represents that to the best of its knowledge, after appropriate inquiry under the circumstances, the subject property is in compliance with all local, State and Federal



CARG002551

environmental laws and regulations.

K. Grantor represents that it has disclosed all of its knowledge of any release of hazardous substances onto or from the property, and disclosed any known report, investigation, survey or environmental assessment regarding the subject property. "Release" and "hazardous substance" shall have the meaning as defined under Oregon law.

L. Grantor warrants that there are no underground storage tanks, as defined under Oregon law, presently on or under the subject property.

M. Grantee, by accepting this easement, is not accepting liability for any preexisting release of hazardous substances onto or from the subject property, and Grantor is not attempting to convey any such liability.

IN WITNESS WHEREOF, Cargill Incorporated, a Delaware corporation, pursuant to a resolution of its Board of Directors, duly and legally adopted, has caused these presents to be signed by R. Wayne Teddy (name) as President of GOSCNA (title) and _____ (name) as _____ (title) on this 30TH day of MAY, 2007.

Cargill Incorporated,
A Delaware corporation

By: R. Wayne Teddy
R. Wayne Teddy, President GOSCNA

By: _____

STATE OF MINNESOTA

County of HENNEPIN

This instrument was acknowledged before me on MAY 30, 2007, by R. Wayne Teddy (name) as President of GOSCNA (title) and _____ (name) as _____ (title) of Cargill Incorporated, a Delaware corporation.

JOHN J. KASTAN
Notary Public-Minnesota
My Commission Expires Jan 31, 2010

John J. Kastan
Notary Public for the State of MINNESOTA
My Commission expires Jan. 31, 2007



CARG002552

APPROVED AS TO FORM:

_____
City Attorney

APPROVED:

_____
Bureau of Environmental Services Director
or his designee



CARG002553

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**PERMANENT SHAFT EASEMENT**

KNOW ALL PERSONS BY THESE PRESENTS, that Cargill Incorporated, a Delaware corporation (Grantor), in consideration of the sum of Thirty Three Thousand Two Hundred Two ($33,202) and no/100 Dollars, and other good and valuable consideration, to it paid by the City of Portland, a municipal corporation of the State of Oregon (Grantee), does hereby grant unto said City of Portland an exclusive and perpetual easement for the purpose of laying down, constructing, reconstructing, operating, inspecting, monitoring and maintaining a sewer or sewers, sewer shaft facilities and appurtenances, through, under, over and along the following described parcel:

R/W #6246-3027 (Shaft)

A portion of that tract of land described as Parcel 1 and Parcel 2 in Document 95-83651 recorded July 17, 1995, Multnomah County Deed Records, situated in the southwest quarter of Section 27, T1N, R1E, W.M., in the City of Portland, and State of Oregon, described as follows:

Beginning at a point on the southwesterly line of N. River Street, said point being S 50° 58' 41" E, a distance of 297.15 feet from the east corner of River Lot 19, Albina; thence S 01° 26' 00" W, a distance of 109.73 feet; thence S 27° 26' 26" E, a distance of 21.66 feet; thence N 62° 33' 00" E, a distance of 92.97 feet; thence N 06° 21' 48" W, a distance of 14.75 feet, to the southwesterly line of N. River Street; thence N 50° 58' 41" W, along said southwesterly line, a distance of 113.40 feet to the Point of Beginning.

Contains 6,634 square feet or 0.152 acres, and is generally depicted on Exhibit A attached hereto.

---

1N1E27CD 500

After Recording Return to:

106/800/Linda Birth

Tax Statement shall be sent to:

No Change

IT IS UNDERSTOOD and agreed that:

A. Grantee will restore the easement area to a condition that is as good as or better than the condition existing prior to the original construction, except as to permanent changes made necessary by and authorized under this easement.

B. No other utilities, buildings, facilities, easements, material storage, grade change or tree planting will be allowed within the easement boundaries without prior written consent of the Director of the Bureau of Environmental Services. Landscaping which by its nature is shallow rooted and may be easily removed to permit access to the sewer lines and facilities authorized by this easement shall not require consent.

C. This easement includes the right of access for construction, inspection, maintenance or other sewerage system activities and reasonable rights of access to the easement area across Grantor's adjacent property.

D. Grantor reserves all other rights not conveyed herein, but will not exercise said rights in any manner that would be inconsistent or interfere with or materially affect rights herein granted.

E. This easement shall bind the heirs and assigns of Grantor and shall inure to the benefit of the successors in title of Grantee.

F. Grantor represents and warrants that it has the authority to grant this easement, that to its knowledge the subject property is free from all liens and encumbrances that would materially affect the easement grant, and that it will defend the same to Grantee against the lawful claims and demands of all persons whomsoever.

G. This easement is granted pursuant to the exercise of the eminent domain power and authority of Grantee, with the consideration paid by Grantee accepted as just compensation for the property or property rights conveyed, which includes damages to the property remainder, if any, resulting from the acquisition or use of said property or property rights.

H. Grantor represents that to the best of its knowledge, after appropriate inquiry under the circumstances, the subject property is in compliance with all local, State and Federal environmental laws and regulations.

I. Grantor represents that it has disclosed all of its knowledge of any release of hazardous substances onto or from the property, and disclosed any known report, investigation, survey or environmental assessment regarding the subject property. "Release" and "hazardous substance" shall have the meaning as defined under Oregon law.

J. Grantor warrants that there are no underground storage tanks, as defined under Oregon law, presently on or under the subject property.

K. Grantee, by accepting this easement, is not accepting liability for any preexisting release of hazardous substances onto or from the subject property, and Grantor is not attempting to convey any such liability.



CARG002556

IN WITNESS WHEREOF, Cargill Incorporated, a Delaware corporation, pursuant to a resolution of its Board of Directors, duly and legally adopted, has caused these presents to be signed by R. Wayne Teddy (name) as President of GOSCNA (title) and _____ (name) as _____ (title) on this 30TH day of MAY, 2007.

Cargill Incorporated,
A Delaware corporation

By: R Wayne Teddy
R. Wayne Teddy, President GOSCNA

By: _____

STATE OF MINNESOTA

County of HENNEPIN

This instrument was acknowledged before me on MAY 30, 2007, by R. Wayne Teddy (name) as President of GOSCNA (title) and _____ (name) as _____ (title) of Cargill Incorporated, a Delaware corporation.

JOHN J. KASTAN
Notary Public-Minnesota
My Commission Expires Jan 31, 2010

John J. Kastan
Notary Public for the State of MINNESOTA
My Commission expires Jan. 31, 2010

APPROVED AS TO FORM:

_____
City Attorney

APPROVED:

_____
Bureau of Environmental Services Director
or his designee



CARG002557

Burbank

| PRODUCT DESCRIPTION | Model | Network ID | Network Type | Comments | | |
|---|---|---|---|---|---|---|
| Color Printer | HP LaserJet 1100XI | p?ww | WIRELESS | | | |
| CSU/DSU | Adtran | | 10BaseT | | | |
| Desktop PC | Compaq Deskpro 2000 | A1WW | 10BaseT | | | |
| Desktop PC | IBM 300 GL 400 | D4WW | WIRELESS | | | |
| Desktop PC | IBM 300 GL 400 | D18WW | WIRELESS | | | |
| Desktop PC | IBM 300PL 550 | D13WW | WIRELESS | | | |
| Desktop PC | IBM 300PL 550 | D8WW | WIRELESS | | | |
| Desktop PC | IBM 300PL 550 | D3WW | WIRELESS | | | |
| Desktop PC | IBM 300PL 733 | D1WW | WIRELESS | | | |
| Desktop PC | IBM 300PL 733 | D12WW | WIRELESS | | | |
| Desktop PC | IBM 300PL 733 | D7WW | WIRELESS | | | |
| Desktop PC | IBM 300PL 733 | D11WW | WIRELESS | | | |
| Desktop PC | IBM 300PL 733 | D5WW | WIRELESS | | | |
| Desktop PC | IBM 300PL 733 | D10WW | WIRELESS | | | |
| External Print Server | Lantronix EPS-1 | PR1ww | 10BaseT | Used for dump monitor | | |
| Laptop PC | IBM T20 Laptop Computer | | None | | | |
| LaserJet | HP LaserJet 4050T | p?ww | WIRELESS | | | |
| LaserJet | HP LaserJet 4050TN | p?ww | WIRELESS | | | |
| LaserJet | HP LaserJet 4050TN | p?ww | WIRELESS | | | |
| LaserJet | HP LaserJet 4L Printer | p?ww | WIRELESS | | | |
| LaserJet | HP LaserJet 4L Printer | p?ww | WIRELESS | | | |
| Network Hub | Cisco 1912 Switch | h1ww | 10BaseT | | | |
| Patch Panel | Nordx 24 port with BIX style | | | | | |
| PtP Rf Bridge | Cisco BR340 | rf1ww | 10BaseT | Used to connect Pasco to Burbank | | |
| PtP Rf Bridge | Cisco BR340 | rf2ww | 10BaseT | Used to connect Pasco to Burbank | | |
| PtP Rf Bridge | Cisco BR340 | rf3ww | 10BaseT | Used to connect Pasco to Burbank | | |
| Remote Network Probe | Netscout 6010 | n1ww | 10BaseT | | | |
| Router | Cisco 2600 | r1ww | 10BaseT | | | |
| Scale ticket Printer | Brother Dot Matrix Printer | | | | | |
| Scale ticket Printer | Okidata 590 Dot Matrix Printer | | | | | |
| Scale ticket Printer | Okidata 590 Dot Matrix Printer | | | | | |
| Scale ticket Printer | Okidata 590 Dot Matrix Printer | | | | | |

| | | | | |
|---|---|---|---|---|
| Video Monitor | Hp ergo | | | |
| Video Monitor | Hp ergo | | | |
| Video Monitor | Hp ergo | | | |
| Video Monitor | IBM P76 | | | |
| Video Monitor | NEC Multisync E700 | | | |
| Video Monitor | NEC Multisync E700 | | | |
| Video Monitor | NEC Multisync E700 | | | |
| Video Monitor | NEC Multisync E700 | | | |
| Video Monitor | NEC Multisync FE750 | | | |
| Video Monitor | NEC Multisync FE750 | | | |
| Video Monitor | NEC Multisync FE750 | | | |
| Video Monitor | NEC Multisync FE750 | | | |
| Video Monitor | NEC Multisync FE750 | | | |
| Video Monitor | NEC Multisync FE750 | | | |
| Video Monitor | NEC Multisync FE750 | | | |
| Video Monitor | NEC Multisync FE750 | | | |
| Video Monitor | NEC multisync XV17+ | | | |
| Wall Mount Rack | 19" open frame(24" tall) | | | |
| Wireless Access Point | Orinoco AP-1000 | ac1ww | 10BaseT | |
| Wireless Access Point | Orinoco AP-1000 | ac2ww | 10BaseT | Backup, Not hooked up |

Portland - Irving

| PRODUCT DESCRIPTION | Model | Network ID | Network Type | Comments | |
|---|---|---|---|---|---|
| Desktop PC | HP Vctr N2 UG | D8RO | 10BaseT | | |
| Desktop PC | HP Vctr N2 UG | D26RO | 10BaseT | | |
| Desktop PC | HP VL4 5/100 UG | D28RO | 10BaseT | | |
| Desktop PC | HP VL5 5/166 UG | D29RO | 10BaseT | | |
| Desktop PC | HP VL5 5/200 | D25RO | 10BaseT | | |
| Desktop PC | HP VL5 5/200 UG | D21RO | 10BaseT | | |
| Desktop PC | IBM 300PL 733 | D24RO | 10BaseT | | |
| Desktop PC | IBM 300PL 733 | D22RO | 10BaseT | | |
| External Print Server | Lantronix EPS-1 | PR1RO | 10BaseT | Used for dump monitor or printer | |
| Laser Printer | HP LASER JET 4+ | P?RO | 10BaseT | | |
| Network Hub | Cisco 1924 | H3RO | 10BaseT | | |
| Patch Panel | Nordx 24 port with BIX style | | | | |
| PtP Rf Bridge | Cisco BR340 | RF2RO | 10BaseT | Used to connect to office across river at 1750 NW Naito Parkway | |
| Scale ticket printer | OKIDATA 590 DOT MATRIX | | | | |
| Scale ticket printer | OKIDATA 590 DOT MATRIX | | | | |
| Scale ticket printer | OKIDATA 590 DOT MATRIX | | | | |
| Video Monitor | HP Ergo | | | | |
| Video Monitor | HP Ergo | | | | |
| Video Monitor | HP Ergo | | | | |
| Video Monitor | HP Ergo | | | | |
| Video Monitor | HP Ergo | | | | |
| Video Monitor | HP Ergo | | | | |
| Video Monitor | HP Ergo | | | | |
| Video Monitor | IBM P76 | | | | |
| Video Monitor | IBM P76 | | | | |
| Video Monitor | NEC Multisync E700 | | | | |
| Wall Mount Rack | 19" open frame(24" tall) | | | | |

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CARG002560

Lewiston

| PRODUCT DESCRIPTION | Model | Network ID | Network Type | Comments | |
|---|---|---|---|---|---|
| ~~CSU/DSU~~ | ~~Adtran~~ | | ~~10BaseT~~ | | |
| ~~Desktop PC~~ | ~~Compaq Deskpro 2000~~ | ~~a1lewi~~ | ~~10BaseT~~ | | |
| Desktop PC | IBM 300PL 733 | d5lewi | Wireless | | |
| Desktop PC | IBM 300PL 733 | d13lewi | Wireless | | |
| Desktop PC | IBM 300PL 733 | d15lewi | Wireless | | |
| Desktop PC | IBM 300PL 733 | d6lewi | Wireless | | |
| Desktop PC | IBM 300PL 733 | d10lewi | Wireless | | |
| Desktop PC | IBM 300PL 733 | d12lewi | Wireless | | |
| Desktop PC | IBM 300PL 733 | d4lewi | Wireless | | |
| Desktop PC | IBM 300PL 733 | d2lewi | Wireless | | |
| Desktop PC | IBM 300PL 733 | d14lewi | Wireless | | |
| Desktop PC | IBM 300PL 733 | d3lewi | Wireless | | |
| Desktop PC | IBM 300PL 733 | d1lewi | Wireless | | |
| Desktop PC | IBM 300PL 733 | d9lewi | Wireless | | |
| Desktop PC | IBM 300PL 733 | d7lewi | Wireless | | |
| Laser Printer | HP LaserJet 4050TN | p1lewi | Wireless | | |
| Laser Printer | HP LaserJet 4050TN | p2lewi | Wireless | | |
| Laser Printer | HP LaserJet 4050TN | p3lewi | Wireless | | |
| ~~Network Hub~~ | ~~Cisco 1912~~ | ~~h1lewi~~ | ~~10BaseT~~ | | |
| ~~Remote Network Probe~~ | ~~Netscout 6010~~ | ~~n1lewi~~ | ~~10BaseT~~ | | |
| ~~Router~~ | ~~Cisco 2600~~ | ~~r1lewi~~ | ~~10BaseT~~ | | |
| Scale ticket Printer | Brother Dot Matrix Printer | | | | |
| Scale ticket Printer | Brother Dot Matrix Printer | | | | |
| Scale ticket Printer | Okidata 590 Dot Matrix Printer | | | | |
| Scale ticket Printer | Okidata 590 Dot Matrix Printer | | | | |
| Video Monitor | Hp ergo monitor | | | | |
| Video Monitor | Hp ergo monitor | | | | |
| Video Monitor | NEC Multisync XV15+ Monitor | | | | |
| Video Monitor | NEC Multisync XV15+ Monitor | | | | |

| | | | | |
|---|---|---|---|---|
| Video Monitor | NEC Multisync XV15+ Monitor | | | |
| Video Monitor | NEC Multisync XV15+ Monitor | | | |
| Video Monitor | NEC Multisync XV15+ Monitor | | | |
| Video Monitor | NEC Multisync XV15+ Monitor | | | |
| Video Monitor | NEC Multisync XV15+ Monitor | | | |
| Video Monitor | NEC Multisync XV15+ Monitor | | | |
| Video Monitor | NEC Multisync XV15+ Monitor | | | |
| Video Monitor | NEC Multisync XV15+ Monitor | | | |
| Video Monitor | NEC Multisync XV15+ Monitor | | | |
| Wall Mount Rack | 19" open frame(24" tall) | | | |
| ~~Wireless Access Point~~ | ~~Orinoco AP-1000~~ | ~~ac1lewi~~ | ~~10BaseT~~ | |
| ~~Wireless Access Point~~ | ~~Orinoco AP-1000~~ | ~~ac2lewi~~ | ~~10BaseT~~ | |
| ~~Wireless Access Point~~ | ~~Orinoco AP-1000~~ | ~~ac3lewi~~ | ~~10BaseT~~ | Backup- not connected at this time |

CARG002562

The Dalles

| PRODUCT DESCRIPTION | Model | Network ID | Network Type | Comments |
|---|---|---|---|---|
| CSU/DSU | Adtran | | 10BaseT | |
| Desktop PC | HP Vctr N2 UG | D4DAL | 10BaseT | |
| Desktop PC | HP VE4 5/233 UG | D2DAL | 10BaseT | |
| Desktop PC | HP VL5 5/200 | A1DAL | 10BaseT | |
| Desktop PC | IBM 300 GL 400 | D1DAL | 10BaseT | |
| Fiber Optic Cable Run | Siecor-6 Strand/ Gel filled/ 62.5 Micron/Multimode | | | Cable runs from office to scale house |
| Fiber Optic Cable Termination Box | Nordx 12 strand indoor termination box | | | Located in office building |
| Fiber Optic Cable Termination Box | Nordx 12 strand indoor termination box | | | Located in scale house |
| Fiber Optic Media Converter | DIGI/MILAN - 140T (10BaseT to 10BaseFL) | | 10BaseT | |
| Fiber Optic Media Converter | DIGI/MILAN - 140T (10BaseT to 10BaseFL) | | 10BaseT | |
| Laser Printer | HP LaserJet 4+ Printer | | 10BaseT | |
| Network Hub | Cisco 1912 Switch | H1DAL | 10BaseT | |
| Patch Panel | Nordx 24 port with BIX style | | | |
| Remote Network Probe | Netscout 6010 | | 10BaseT | |
| Router | Cisco 2600 | | 10BaseT | |
| Scale ticket Printer | Brother Dot Matrix Printer | | | |
| Scale ticket Printer | Okidata 590 Dot Matrix Printer | | | |
| Video Monitor | Hp ergo monitor | | | |
| Video Monitor | Hp ergo monitor | | | |
| Video Monitor | Hp ergo monitor | | | |
| Video Monitor | NEC Multisync XV15+ Monitor | | | |
| Wall Mount Rack | 19" open frame(24" tall) | | | |

| | |
|---|---|
| | Hp ergo monitor |
| | Hp ergo monitor |
| | Hp ergo monitor |
| | NEC Multisync XV15+ Monitor |
| | HP Vctr N2 UG |
| | HP VE4 5/233 UG |
| | HP VL5 5/200 |
| | IBM 300 GL 400 |

Pasco

| PRODUCT DESCRIPTION | Model | Network ID | Network Type | Comments | | |
|---|---|---|---|---|---|---|
| Desktop PC | IBM 300PL 733 | D16WW | 10BaseT | | | |
| Desktop PC | IBM 300PL 733 | D15WW | 10BaseT | | | |
| Fiber Optic Cable Run | Siecor-6 Strand/ Gel filled/ 62.5 Micron/Multimode | | | Cable runs from office to probe house | | |
| Fiber Optic Cable Termination Box | Siecor 12 strand indoor termination box | | | Located in office building | | |
| Fiber Optic Cable Termination Box | Siecor 12 strand indoor termination box | | | Located in probe house | | |
| Fiber Optic Media Converter | DIGI/MILAN - 140T (10BaseT to 10BaseFL) | | 10BaseT | | | |
| Fiber Optic Media Converter | DIGI/MILAN - 140T (10BaseT to 10BaseFL) | | 10BaseT | | | |
| Network Hub | Cisco 1912 Switch | D2WW | 10BaseT | | | |
| PtP Rf Bridge | Cisco BR340 | rf5ww | 10BaseT | Used to connect Pasco to Burbank | | |
| PtP Rf Bridge | Cisco BR340 | rf6ww | 10BaseT | Used to connect Pasco to Burbank | | |
| PtP Rf Bridge | Cisco BR340 | rf4ww | 10BaseT | Used to connect Pasco to Burbank | | |
| Scale ticket Printer | Brother Dot Matrix Printer | | | | | |
| Scale ticket Printer | Okidata 590 Dot Matrix Printer | | | | | |
| Scale ticket Printer | Okidata 590 Dot Matrix Printer | | | | | |
| Scale ticket Printer | Okidata 590 Dot Matrix Printer | | | | | |
| Video Display | Hp ergo monitor | | | | | |
| Video Display | NEC Multisync FE750 | | | | | |

CARG002565

Boardman

| PRODUCT DESCRIPTION | Model | Network ID | Network Type | Comments | | |
|---|---|---|---|---|---|---|
| CSU/DSU | Adtran | | 10BaseT | | | |
| Desktop PC | IBM 300 GL 400 | D1BRD2 | 10BaseT | | | |
| Desktop PC | IBM 300PL 733 | D2BRD2 | 10BaseT | | | |
| Fiber Optic Cable Run | Siecor-6 Strand/ Gel filled/ 62.5 Micron/Multimode | | | Cable runs from office to scale house | | |
| Fiber Optic Cable Termination Box | Nordx 12 strand indoor termination box | | | Located in office building | | |
| Fiber Optic Cable Termination Box | Nordx 12 strand indoor termination box | | | Located in scale house | | |
| Fiber Optic Media | DIGI/MILAN - 140T (10BaseT to | | 10BaseT | | | |
| Fiber Optic Media Converter | DIGI/MILAN - 140T (10BaseT to 10BaseFL) | | 10BaseT | | | |
| Laser Printer | HP LaserJet 4+ Printer | P1BRD2 | 10BaseT | | | |
| Network Hub | Cisco 1912 Switch | H1BRD2 | 10BaseT | | | |
| Patch Panel | Nordx 24 port with BIX style | | | | | |
| Remote Network Probe | Netscout 6010 | N1BRD2 | 10BaseT | | | |
| Router | Cisco 2600 | R1BRD2 | 10BaseT | | | |
| Scale ticket Printer | Brother Dot Matrix Printer | | | | | |
| Scale ticket Printer | Okidata 590 Dot Matrix Printer | | | | | |
| Video Monitor | NEC Accusync 15" Monitor | | | | | |
| Video Monitor | NEC Accusync 15" Monitor | | | | | |
| Wall Mount Rack | 19" open frame(24" tall) | | | | | |

Arlington

| PRODUCT DESCRIPTION | Model | Network ID | Network Type | Comments | | |
|---|---|---|---|---|---|---|
| CSU/DSU | Adtran | | 10BaseT | | | |
| Desktop PC | IBM 300 GL 400 | D1BRD2 | 10BaseT | | | |
| Desktop PC | IBM 300PL 733 | D2BRD2 | 10BaseT | | | |
| Fiber Optic Cable Run | Siecor-6 Strand/ Gel filled/ 62.5 Micron/Multimode | | | Cable runs from office to scale house | | |
| Fiber Optic Cable Termination Box | Nordx 12 strand indoor termination box | | | Located in office building | | |
| Fiber Optic Cable Termination Box | Nordx 12 strand indoor termination box | | | Located in scale house | | |
| Fiber Optic Media | DIGI/MILAN - 140T (10BaseT to | | 10BaseT | | | |
| Fiber Optic Media Converter | DIGI/MILAN - 140T (10BaseT to 10BaseFL) | | 10BaseT | | | |
| Laser Printer | HP LaserJet 4+ Printer | P1BRD2 | 10BaseT | | | |
| Network Hub | Cisco 1912 Switch | H1BRD2 | 10BaseT | | | |
| Patch Panel | Nordx 24 port with BIX style | | | | | |
| Remote Network Probe | Netscout 6010 | N1BRD2 | 10BaseT | | | |
| Router | Cisco 2600 | R1BRD2 | 10BaseT | | | |
| Scale ticket Printer | Brother Dot Matrix Printer | | | | | |
| Scale ticket Printer | Okidata 590 Dot Matrix Printer | | | | | |
| Video Monitor | NEC Accusync 15" Monitor | | | | | |
| Video Monitor | NEC Accusync 15" Monitor | | | | | |
| Wall Mount Rack | 19" open frame(24" tall) | | | | | |

Irving 0044.PDF

# LEASE AGREEMENT

This **LEASE AGREEMENT** (the "Lease") is made and entered into effective as of the 3rd of December, 2001, by and between **CARGILL, INCORPORATED**, a Delaware corporation with its principal place of business at 15407 McGinty Road West, Wayzata, Minnesota 55391-2399 (hereafter "Lessor") and **CLD PACIFIC GRAIN, LLC**, a Delaware limited liability company with an address of 222 SW Columbia, Suite 1133, Portland, Oregon 97201 (hereafter "Lessee").

**WITNESSETH:**

**WHEREAS,** Lessee has been organized to lease, sublease and operate certain grain facilities for the purpose of originating, merchandising, storing, drying, handling, cleaning, elevating and transporting grain, primarily wheat and barley, in accordance with the Limited Liability Company Agreement between Cargill, Incorporated and Louis Dreyfus Corporation dated as of December 3, 2001 (the "LLC Agreement");

**WHEREAS,** Lessor owns and/or leases various grain facilities at Portland (Terminal 4 and Irving), The Dalles, Arlington and Boardman, Oregon; Burbank and Pasco, Washington; and Lewiston, Idaho; and

**WHEREAS,** Lessor desires to lease and/or sublease, as applicable, to Lessee, and Lessee desires to lease and/or sublease from Lessor, the aforementioned grain facilities;

**NOW, THEREFORE,** for and in consideration of the foregoing and the terms, conditions, covenants and agreements herein contained, the parties hereto agree as follows:

## ARTICLE I
## DEFINITIONS

Section 1.01. Certain Definitions. In this Lease, the following terms have the following meanings:

(a) Assets. "Assets" shall have the meaning set forth in Section 2.01 herein.

(b) Award. "Award" shall mean the amounts recovered as compensation or damages on account of a Taking, including all amounts paid pursuant to any agreement which has been made in settlement or under threat of any such action or proceeding, less the reasonable costs and expenses incurred in collecting such amounts.

(c) Capital Improvement(s). "Capital Improvements" shall have the meaning set forth in Section 11.01 herein.

(d) Cargill Leased Facilities. "Leased Facilities" shall have the meaning set forth in Section 2.01.

(e) Cargill Owned Facilities. "Owned Facilities" shall have the meaning set forth in Section 2.01.

(f) Casualty. "Casualty" shall mean any damage or destruction of the Facilities, or any portion thereof, by fire or other casualty.

(g) Commencement Date. "Commencement Date" shall have the meaning set forth in Section 3.01.

(h) Date of Casualty. "Date of Casualty" shall mean the date on which the Casualty occurs.

(i) Date of Taking. "Date of Taking" shall mean the earlier of the date upon which the use, occupancy or title of the Premises, or any portion thereof, is vested in, or possession thereof is taken by, the entity exercising the power of eminent domain.

(j) Deficiency. "Deficiency" shall have the meaning set forth in Section 14.01(a).

(k) Deficiency Related Losses. "Deficiency Related Losses" shall have the meaning set forth in Section 14.01(a).

(l) Environmental. "Environmental" shall mean anything pertaining to the water (including surface water, groundwater, water vapor, and wetlands), land (including land surface or subsurface), air,

reason for determining the Fair Market Value of the particular asset and based upon the assumption that the asset is capable of being transferred without restriction.

(s) Hazardous Substance. "Hazardous Substance" shall mean, without limitation, any flammable substances, explosives, radon, radioactive materials, asbestos (and any substance or material containing asbestos), urea formaldehyde foam insulation, the group of organic compounds known as polychlorinated biphenyls, lead (and any substance or material containing lead), chemicals known to cause cancer or reproductive toxicity, pollutants, effluents, contaminants, emissions or other materials (including, without limitation, raw materials, final or intermediate products, and wastes) that may cause or pose a present or potential hazard to human health or safety or the Environment when Released or during manufacture, processing, generation, treatment, storage, transportation, disposal, abatement, removal, remediation, or any other use or handling; petroleum and petroleum-based products, including crude oil and any fraction thereof, natural gas or synthetic gas used for fuel; methane, hazardous materials, hazardous wastes, underground storage tanks or storage facilities; and other substances or related materials defined as hazardous or toxic in, or otherwise included within the scope of, any Environmental Law.

(t) Indemnified Taxes. "Indemnified Taxes" shall have the meaning set forth in Section 8.01.

(u) Landlord. "Landlord" shall have the meaning set forth in Section 2.04.

(v) Lease Year. "Lease Year" shall mean each successive twelve (12) month period commencing on the Commencement Date and on the anniversary date thereof.

(w) Legal Requirements. "Legal Requirements" shall have the meaning set forth in Section 18.01.

(x) Lessee. "Lessee" shall mean CLD Pacific Grain, LLC.

(y) Lessee Indemnities. "Lessee Indemnities shall have the meaning set forth in Section 14.01(a).

(z) Lessee Losses. "Lessee Losses" shall have the meaning set forth in Section 14.01(a).

(aa) Lessor. "Lessor" shall mean Cargill, Incorporated.

(bb) Lessor Indemnities. "Lessor Indemnities" shall have the meaning set forth in Section 14.02(a).

(cc) Lessor Losses. "Lessor Losses" shall have the meaning set forth in Section 14.02(a).

(dd) LLC Agreement. "LLC Agreement" shall mean the Limited Liability Company Agreement between Cargill, Incorporated and Louis Dreyfus Corporation dated as of December 3, 2001.

(ee) Members. "Members" shall mean the owners of Lessee who, upon the Commencement Date, shall be Louis Dreyfus Corporation and Cargill, Incorporated, exclusively.

(ff) Net Book Value. "Net Book Value" shall mean, for any particular Capital Improvement, the original cost of such Capital Improvement less its accumulated book depreciation to date. Capitalization, depreciation method and useful lives shall be determined in accordance with generally accepted accounting principles.

(gg) Person. "Person" shall mean any individual, corporation, partnership, joint venture, association, trust, governmental authority or agency or any other entity or organization of any kind or character.

(hh) Permitted Exceptions. "Permitted Exceptions" shall have the meaning set forth in Section 2.03.

(ii) Post-Lease Environmental Evaluation. "Post-Lease Environmental Evaluation" shall have the meaning set forth in Section 14.04.

(jj) Post-Lease Environmental Evaluation Report. "Post Lease Environmental Evaluation Report" shall have the meaning set forth in Section 14.04.

(kk) Preliminary Environmental Evaluation. "Preliminary Environmental Evaluation" shall have the meaning set forth in Section 14.04.

(ll) Preliminary Environmental Evaluation Report. "Preliminary Environmental Evaluation Report" shall have the meaning set forth in Section 14.04.

(mm) Premises. "Premises" shall mean the Cargill Owned Facilities and the Cargill Leased Facilities, collectively.

(nn) Prime Leases. "Prime Leases" shall have the meaning set forth in Section 2.04.

(oo) Property Taxes. "Property Taxes" shall have the meaning set forth in Section 8.01.

(pp) Purpose. "Purpose" shall have the meaning set forth in Section 5.01.

(qq) Release. "Release" has the same meaning as given to that term under CERCLA or any other applicable Environmental Law or under the regulations promulgated under CERCLA or any other applicable Environmental Law and includes, without limitation, any contamination or spillage governed by any Environmental Law.

(rr) Rent. "Rent" shall have the meaning as set forth in Section 4.01.

(ss) Taking. "Taking" shall mean the transfer of the use, occupancy or title of the Premises, or any portion thereof, to an entity exercising the power of eminent domain in any actual or threatened action or proceeding pursuant to any law, general or special; a Taking affecting a "Substantial Portion of the Premises" means a Taking which renders the Premises or the Facility unsuitable or uneconomical for use and occupancy by Lessee for substantially the same purpose as the Premises or the Facility was used immediately prior to the Taking.

(tt) Taxes. "Taxes" shall have the meaning set forth in Section 8.01.

(uu) Technical Information. "Technical Information" shall mean all blueprints, drawings, specifications, operating instructions, and procedures and other technical information owned by Lessor or in Lessor's possession relating to the Facilities or the business conducted at the Facilities.

(vv) Term. "Term" shall have the meaning set forth in Section 3.01.

(ww) Work. "Work" shall have the meaning set forth in Section 17.01.

## ARTICLE II
## DEFINITION OF ASSETS; LEASE OF PREMISES

Section 2.01. Definition of Assets. This Lease relates to the lease of certain assets comprising the Premises owned by Lessor in or near Portland (Irving), Boardman, Oregon, and Lewiston, Idaho (the "Cargill Owned Facilities"), and the sublease of certain assets comprising the Premises leased by Lessor in or near Portland (Terminal 4), The Dalles and Arlington, Oregon, and Burbank and Pasco, Washington (the "Cargill Leased Facilities"), and the license of certain Technical Information, which assets are generally described as follows (the following collectively hereinafter referred to as the "Assets"):

(a) the Cargill Owned Facilities;

(b) the Cargill Leased Facilities; and

(c) the Technical Information.

Section 2.02. Definition of Excluded Assets. The following properties of Lessor are not included in the Assets and are not being leased, subleased or licensed by Lessor to Lessee pursuant to this Lease (the following collectively hereinafter referred to as the "Excluded Assets"):

(a) Cash on hand and in bank deposits;

(b) Contracts and permits (assignable agreements, grain contracts and permits will be assigned by Lessor to Lessee pursuant to an Assignment and Assumption Agreement to be entered into between the parties independent of this Lease);

(c) Accounts receivable; and

(d) Inventory of grain owned by Lessor and located at the Facilities (inventory will be sold by Lessor to Lessee pursuant to a Bill of Sale entered into between the parties independent of this Lease).

Section 2.03. Lease of Cargill Owned Facilities. Upon and subject to the terms, conditions, covenants and agreements set forth in this Lease, Lessor hereby leases to Lessee, and Lessee hereby leases from Lessor, the Cargill Owned Facilities.

Section 2.04. Sublease of Cargill Leased Facilities. Upon and subject to the terms and conditions, covenants and agreements set forth in this Lease, Lessor hereby subleases to Lessee the Cargill Leased Facilities, subject to the Permitted Exceptions. With respect to the Cargill Leased Facilities, this Lease is subject and subordinate to the primary leases between Lessor and Lessor's respective landlord's ("Landlord(s)") under such primary leases (the "Prime Leases"), which are listed on Exhibit A, and copies of which have been provided to Lessee. All the terms, covenants and conditions contained in the Prime Leases shall be applicable to this Lease with respect to the Cargill Leased Facilities with the same force and effect as if Lessor were the Landlord under the Prime Lease and Lessee were the tenant thereunder, including without limitation any rent obligation to the Landlords arising under the Prime Leases. Lessor shall have all rights against Lessee as would be available to the respective Landlords against the tenant under the Prime Leases if such breach were by the tenant thereunder. To the extent that there is any conflict between this Lease and the Prime Leases with respect to the Cargill Leased Facilities, and/or to the extent that the Prime Leases are more stringent than this Lease with respect to the Cargill Leased Facilities, then the applicable Prime Lease shall control with respect to the applicable Cargill Leased Facility(ies). Further, Lessee shall comply with any requirements of Landlords as may be set forth as a condition or requirement of Lessee in any such Landlord's consent to sublease the applicable Prime Lease.

hereunder with regard to the Cargill Leased Facilities are those to which Lessor is entitled under the Prime Leases, and that for all such services and rights, Lessee will look solely to the respective Landlords under the Prime Leases. Lessor will cooperate with Lessee to secure the cooperation of the Landlords under the Prime Leases with respect to any matter arising under the Prime Leases as to which such cooperation is reasonably required.

Section 2.05. License of Technical Information. Lessor grants to Lessee possession of and the right and license to use the Technical Information during the Term of this Lease.

## ARTICLE III
## TERM AND TERMINATION OF LEASE

Section 3.01. Term. The term of this Lease shall commence effective as of December 3, 2001 (the "Commencement Date") and shall be coterminous with the LLC Agreement (the "Term," and the date of expiration of the Term shall be referred to as the "Expiration Date"), unless earlier terminated pursuant to this Lease. Each succeeding Lease Year shall commence upon the anniversary date of the Commencement Date.

Section 3.02. Default. The occurrence of any of the following events shall constitute a default by Lessor or Lessee (hereinafter referred to as "Event of Default"), as the case may be, in the performance of their respective obligations hereunder:

(a) failure of Lessee to pay Rent within thirty (30) days after receiving written notice from Lessor notifying it of its delinquency, or failure of Lessee upon demand to pay any other amount required to be paid herein;

(b) failure of either party to timely comply with any covenant, condition or obligation, other than the payment of Rent, imposed on or required to be performed by such party under this Lease (and such failure shall continue thirty (30) days after written notice has been provided to the breaching party by the non-breaching party);

(c) failure of Lessee to perform or observe any covenant required to be performed or observed by Lessee under Article XIII hereof;

(d) any representation or warranty made by either party herein shall prove to be untrue in any material respect as of the date of issuance or making thereof;

(e) either party shall become insolvent or bankrupt or generally fail to pay, or shall admit in writing its inability to pay, its debts as they come due, or shall make an assignment for the benefit of, or any composition or arrangement with, its creditors, or shall apply for, consent to or acquiesce in the appointment of a trustee, receiver, liquidator or other custodian, for itself, its business or all or a substantial part of its property, or, in the absence of such application, consent or acquiescence, a trustee, receiver, liquidator or other custodian shall be appointed for such party, its business or a substantial part of its property and is not discharged within one hundred and twenty (120) days;

(f) any bankruptcy, reorganization, debt arrangement, or other case or proceeding under any bankruptcy, insolvency or similar law of any applicable jurisdiction, or any dissolution, winding up or liquidation case or proceeding shall be commenced in respect of either party, and, if such case or proceeding is not commenced by such affected party, as it shall be consented to or acquiesced in by such party or remain undismissed for thirty (30) days; or such party shall take any action to authorize, or in furtherance of, any of the events described in subsection (e) or this subsection (f);

(g) either party's business is dissolved, terminated or is discontinued;

(h) either party sells, transfers, or disposes of all or substantially all of its assets or property or a material portion thereof, or merges with any other entity or engages in any form of reorganization or recapitalization without the prior written consent of the other party;

(i) a transfer in the ownership of Lessee's outstanding Member interests or other action (issuance of new interests, etc.) resulting in a change in the controlling interest of Lessee without the prior written consent of Lessor;

(j) Lessee attempts to move, sell, or transfer any substantial personal property being leased to it hereunder, or encumber the Premises or part with possession, or sublet or assign this Lease or any interest herein without Lessor's prior written consent; or

(k) any act or omission by Lessee or Lessor that results in the termination or forfeiture of any rights under any of the Prime Leases.

Section 3.03. Lessor's Remedies. Upon the occurrence of any Event of Default of Lessee and at any time thereafter so long as the same shall be continuing, Lessor may, at its option, declare this Lease to be in default and may do one or more of the following with respect to the Premises as Lessor in its sole discretion shall elect, all of which are hereby authorized by Lessee, to the extent permitted by and subject to compliance with any mandatory requirements of applicable law then in effect:

(a) Lessor may terminate this Lease by giving Lessee written notice of termination, in which event Lessee shall immediately quit and vacate the Premises and deliver and surrender possession of the Premises to Lessor, and this Lease shall be terminated at the time designated by Lessor in its notice of termination to Lessee;

(b) with or without terminating this Lease, Lessor may enter upon and take possession of the Premises and expel or remove Lessee and any other person who may be occupying the Premises, without being liable for prosecution or any claim for damages;

(c) Lessor may re-lease the Premises or any part thereof, on such terms and conditions as Lessor may deem satisfactory, and receive the rent for any such re-leasing, in which event Lessee shall pay Lessor on demand any deficiency that may arise by reason of such re-leasing;

(d) Lessor may collect and sue Lessee, from time to time, for the amount of any annual Rent or other amounts then owing by Lessee to Lessor pursuant to this Lease;

(e) with or without terminating this Lease, Lessor may bring an action against Lessee to recover from Lessee all damages suffered, incurred or sustained by Lessor as a result of, by reason of or in connection with such Event of Default; or

(f) Lessor may do whatever Lessee is obligated to do under the terms of this Lease, in which event Lessee shall reimburse Lessor on demand for any expenses, including, without limitation, reasonable attorneys' fees, which Lessor may incur in effecting satisfaction and performance of or compliance with the Lessee's duties and obligations under this Lease.

Section 3.04. Prime Lease Termination. In the event that any one or more of the Prime Leases is canceled, expires, is not renewed or is otherwise terminated, this Lease shall terminate partially to the extent this Lease relates to the Assets that are the subject of or related to the Prime Lease; provided, however, that (a) if Lessor desires to extend or renew such Prime Lease or enter into a new lease with Landlord, Lessor shall have the right to negotiate such renewal, in good faith consultation with Lessee and subject to Lessee's approval, which shall not be unreasonably withheld; and (b) if Lessor has no desire to extend or renew the Prime Lease or enter into a new lease with the Landlord, then Lessee may in

shall coincide with the termination of the Prime Lease(s). All rent payable will be prorated to the date of termination. Lessor shall use its best efforts to continuously inform Lessee of negotiations pertaining to such a termination. Lessor shall not agree to the early termination of any of the Prime Leases without the prior written consent of the Lessee. To the extent that Lessor has the right under any of the Prime Leases to exercise any one or more options to renew such Prime Leases, Lessee reasonably may require Lessor to exercise, or not to exercise, such option(s), as the case may be.

Section 3.05. Lessee's Remedies. Upon the occurrence of any Event of Default by Lessor and at any time thereafter so long as the same shall be continuing, Lessee may, at its option, terminate partially this Lease with respect to the Facilities that are the subject of or related to the Event of Default, or may terminate the entire Lease in the event that all Facilities are the subject of or related to the Event of Default, by giving Lessor written notice of termination, in which event Lessee shall immediately quit and vacate the Premises which are the subject of the termination and deliver and surrender possession of such Premises to Lessor, and this Lease, and Lessee's obligations under it shall be terminated at the time designated by Lessee in its notice of termination to Lessor, except to the extent of any obligations that have accrued as of the termination date.

Section 3.06. Non-Exclusive Remedy. The right of either party to terminate this Lease as set forth hereinabove shall be in addition to and not in exhaustion of such other rights and remedies as may be available under this Lease, at law or in equity.

## ARTICLE IV
## RENT

Section 4.01. Rent. During the Term of this Lease, Lessee shall pay to Lessor at Lessor's address specified in Section 24.01, an annual rental of ONE MILLION FOUR HUNDRED THOUSAND DOLLARS AND NO/100 ($1,400,000.00) (hereafter "Rent"), payable in equal quarterly installments of THREE HUNDRED AND FIFTY THOUSAND DOLLARS AND NO/100 ($350,000.00) each, payable in advance on the first day of each calendar quarter during each Lease Year, with the first payment being due and payable on the Commencement Date; provided, however, in the event the Term commences or ends other than coincident with the first and last day of a calendar quarter respectively, then Rent for such partial quarter shall be prorated for the number of days of such quarter included in the Term on the basis of a ninety (90) day quarter and payable for such partial quarter in advance of such period. In the event that any installment of Rent is due on any Saturday, Sunday, national or bank holiday, or other day which is not a regular business day, such installment need not be made on such day, but may be made on the next succeeding regular business day which is not a Saturday, Sunday, or national or bank holiday, and no interest shall accrue as a result of any such delay in payment. The annual rental set forth hereinabove is more specifically detailed in Exhibit C attached hereto and the parties agree that the fair portion of the Rent allocated to each Facility is as set forth in such Exhibit. "Rent" as defined herein shall be in addition to Lessee's obligation to pay all rents under the Prime Leases as set forth in Section 2.04.

Section 4.02. Rent Adjustment. Upon the commencement of each successive five (5) year period from the Commencement Date, the Rent shall be increased by an amount equal to the result of the then current Rent multiplied by the increase, if any, in the U.S. Consumer Price Index for the immediately preceding five (5) year period of the Lease Term (as such Consumer Price Index is published in the Money Rates section of the Wall Street Journal on the first and last day,or nearest day thereto, when published).

Section 4.03. Change in Scope of Assets. To the extent the scope of the Assets leased and licensed to Lessee is increased or decreased during the Term hereof by the parties' mutual written agreement, by a Casualty, or by a Taking, the parties recognize that corresponding increases or decreases in Rent may be necessary, depending upon what affect such increase or decrease in scope would have on the value of Lessor's Assets. If the parties mutually determine that the scope of the Assets leased by

Lessor to Lessee should be increased or decreased, or if a Casualty or Taking occurs, as the case may be, the parties will mutually determine what impact, if any, such increase or decrease will have on the Rent to be paid pursuant to this Lease. If the parties cannot agree on the applicable increase or decrease in the scope of the Assets (if any), Casualty or Taking, as the case may be, such determination shall be submitted to an appraisal company mutually acceptable to Lessor and Lessee for a final and binding determination on the impact such increase, decrease, Casualty or Taking shall have on the Rent of Lessor's Assets. Any agreement or determination resulting in a change in the Rent payable under this Lease must be reduced to writing and executed by Lessor and Lessee, and shall be effective from the date on which such increase or decrease in the scope of the Assets, Casualty or Taking occurred. The parties shall equally share the costs of any independent third party appraiser retained pursuant to this Section.

Section 4.04. Interest Charge. Lessee shall pay to Lessor interest on all Rent not paid within thirty (30) days from the due date thereof until paid at a rate equal to one and one-half percent (1½%) per month or the highest lawful rate, whichever is less.

## ARTICLE V
## USE OF PREMISES

Section 5.01. Use of Premises. Lessee may use the Premises leased hereunder solely for the Business Purpose, as defined in the LLC Agreement (the "Purpose"). Notwithstanding the foregoing, Lessee shall not use or occupy the Premises, or permit the Premises to be used or occupied, in violation of any Legal Requirements or in such a way as to invalidate any insurance on the Premises.

## ARTICLE VI
## LESSOR'S REPRESENTATIONS, WARRANTIES AND COVENANTS

Section 6.01. Representations and Warranties. As an inducement to Lessee to enter into this Lease, Lessor represents, warrants and covenants to Lessee that on the date hereof:

(a) No Inconsistent Obligations. Neither the execution and delivery of this Lease, nor the consummation of the transactions contemplated herein, will result in a violation or breach of, or constitute a default under any contract or agreement, deed to secure debt, security agreement, personal property lease or any other commitment or restriction of any nature whatsoever, to which all or any part of the Land or Facilities are subject or bound; nor will such actions result in the creation of any claim, lien, charge or encumbrance on any portion of the Land or Facilities.

(b) Land and Facilities.

(i) With respect to Land and/or Facilities owned by Lessor, Lessor will own the Land and Facilities free and clear of any liens, charges, claims, security interests, encumbrances or other restrictions, whether existing of record or otherwise.

(ii) With respect to Land and/or Facilities not owned by Lessor, Lessor will have secured any required consent of any applicable third parties to sublease any such Land and Facilities, if any, but which will be subleased to Lessee pursuant to this Lease, such Land and Facilities being free and clear of any liens, charges, claims, security interests, encumbrances or other restrictions, whether of record or otherwise, except for the Permitted Exceptions as set forth in Exhibit C attached hereto.

(iii) Lessee shall peaceably hold and enjoy the Land and Facilities with exclusive control and possession thereof during the Term, subject to the terms and conditions of this Lease and the Prime Leases to the extent required in this Lease.

(c) Existence. Lessor is a corporation duly organized and validly existing under the laws of the State of Delaware.

(d) Authority. Lessor has the power and authority to lease the Land and Facilities to Lessee and consummate this Lease, and this Lease and all instruments and agreements contemplated by this Lease to which Lessor is a party or signatory have been duly authorized, executed and delivered by Lessor and constitute the legal, valid and binding obligations of Lessor.

(e) No Claims or Investigations. There is no litigation, action, claim, proceeding, or governmental investigation pending or threatened against Lessor which would have a materially adverse effect on Lessor's ability to fulfill its obligations arising under this Lease.

(f) Condemnation; Taking. Lessor has not received any notice nor is it aware of any pending action to Take all or any portion of the Land, nor has Lessor agreed or committed to dedicate any part of the Land for a Taking or otherwise.

(g) Compliance with Laws. To the best of Lessor's knowledge, Lessor is in substantial compliance with all material laws, rules and regulations applicable to the Facilities.

(h) Full Force and Effect. The Prime Leases are in full force and effect, and to the best of Lessor's knowledge, no default exists under the Prime Leases, and no event has occurred which, with the giving of notice or the passage of time, or both, would constitute a default thereunder.

Section 6.02. DISCLAIMER OF WARRANTIES. EXCEPT AS EXPRESSLY PROVIDED IN SECTION 6.01 ABOVE, LESSOR MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES OF ANY KIND WHATSOEVER RELATING TO THE PREMISES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE; THE DESIGN OR CONDITION OF THE PREMISES; THE QUALITY OR CAPACITY OF THE PREMISES; THE WORKMANSHIP IN THE PREMISES; COMPLIANCE OF THE PREMISES WITH THE REQUIREMENTS OF ANY LAW, RULE OR SPECIFICATION; OR PATENT INFRINGEMENTS OR LATENT DEFECTS, IT BEING UNDERSTOOD AND AGREED THAT THE PREMISES ARE BEING LEASED "AS IS" AND "WITH ALL FAULTS" AND THAT ALL RISKS AS BETWEEN LESSOR AND LESSEE SHALL BE BORNE BY LESSEE. **LESSOR SHALL NOT BE RESPONSIBLE FOR LOSS OF PROFIT OR FINANCIAL LOSS OR INCIDENTAL OR CONSEQUENTIAL DAMAGES HOWSOEVER ARISING, INCLUDING, BUT NOT LIMITED TO, LOSS OR INTERRUPTION OF BUSINESS, EVEN IF DIRECTLY OR INDIRECTLY CAUSED BY OR ATTRIBUTABLE TO THE INADEQUACY OF THE PREMISES.**

## ARTICLE VII
## LESSEE'S REPRESENTATIONS, WARRANTIES AND COVENANTS

Section 7.01. Representations and Warranties. As an inducement to Lessor to enter into this Lease, Lessee represents, warrants and covenants to Lessor that on the date hereof that:

(a) Existence. Lessee is a limited liability company duly organized and validly existing under the laws of the State of Delaware.

(b) Authority. Lessee has the power and authority to lease the Land and Facilities from Lessor and consummate this Lease, and this Lease and all instruments and agreements contemplated by this Lease to which Lessee is a party or signatory have been duly authorized, executed and delivered by Lessee and constitute the legal, valid and binding obligations of Lessee.

(c) No Claims or Investigations. There is no litigation, action, claim, proceeding, or governmental investigation pending or threatened against Lessee which would have a materially adverse effect on Lessee's ability to fulfill its obligations arising under this Lease.

(d) Licenses and Permits. Lessee has obtained all material licenses, permits, tariffs and governmental approvals required by applicable law or governmental regulations necessary or appropriate in connection with the ownership and operation of the Assets except those of which Lessor has been notified by Lessee in writing and to which Lessor has consented. To the knowledge of Lessee, Lessee is in substantial compliance with all material laws, ordinances, rules or regulations applicable to the ownership and operation of the Facilities including, but not limited to, OSHA and EPA regulations or similar regulations (including Environmental Laws) and all zoning, building or use regulations and ordinances.

(e) Prime Leases. Lessee has read and is familiar with the terms of the Prime Leases.

## ARTICLE VIII
## TAXES AND ASSESSMENTS

Section 8.01. Taxes and Assessments on the Premises. Lessee shall pay as and when they become due and payable, and upon demand shall indemnify, defend and hold harmless each Lessor Indemnitee against, all federal, state, local and foreign taxes (including real and personal property taxes, ad valorem taxes, sales and use taxes and assessments (whether general or special, levied, assessed or imposed upon the Premises (and any additions or improvements thereto)), all taxes and assessments levied, assessed or imposed on Lessee's personal property, rental taxes, transfer taxes, excise taxes, registration and recording taxes, license taxes and other government fees, charges, assessments or withholdings, (together with any penalties, interest or additions thereto) ("Taxes") imposed by any governmental authority during the Term with respect to (i) the Premises, (ii) the lease, sublease, operation, ownership, maintenance, improvement, leasing, transfer, disposition or condition of the Premises, or (iii) this Lease, the Prime Leases or the Transactions contemplated hereunder or thereunder or in related documents; excepting only Taxes imposed on the Lessor or Landlord in the nature of net income taxes with respect to Rent paid hereunder (collectively the "Indemnified Taxes"); provided, however, that Lessor shall be responsible for all personal property, real property and other similar Taxes and assessments levied, assessed or imposed upon the Premises ("Property Taxes") with respect to the period of time prior to the Commencement Date regardless of when such taxes and assessments are due and payable.

Section 8.02. Proration of Taxes. Should the Term hereof expire or sooner terminate as herein provided during a fiscal year for the payment of any such Property Taxes, there shall be a proration between the parties hereto of that portion of the Property Taxes allocable to the Land and Facilities for such year. Such proration shall be on the basis of the then most recent tax bills assessed against the Land and Facilities with appropriate adjustment made at the time actual bills are received.

Section 8.03. Contest of Taxes. So long as in the reasonable judgment for the Lessor such contest does not create a material risk of forfeiture or criminal liability and so long as Lessee has agreed, in a manner satisfactory to the Lessor, to pay any costs of such contest and any required indemnity should the contest prove unsuccessful, Lessee may, at its cost and expense and in its own name, contest any Indemnified Taxes and assessments and, in the event of any such contest, may permit the Indemnified Taxes so contested to remain unpaid during the period of such contest and any appeal therefrom. Lessor shall cooperate with Lessee in all such protests and shall provide to Lessee, on request, documentation reasonably requested by Lessee to support any such contest of Indemnified Taxes.

## ARTICLE IX
## UTILITIES AND SERVICES

Section 9.01. Utilities and Services. Lessee shall make all arrangements for, and pay or cause to be paid when due, all charges for utilities and services incurred in the operation, use and occupancy of the Premises, including, but not limited to, electricity, gas, water, sanitary and storm sewer. Lessor shall have no obligation to provide any such utilities and services and in no event shall Lessor have any liability for the interruption of any such utilities and services. All utility charges, including without limitation, gas, oil, electricity, telephone, sewer and water, pertaining to the Facilities shall be prorated between Lessor and Lessee as of the Commencement Date; and accordingly, any invoices for utility charges received following said Commencement Date which have accrued up to and including the Commencement Date shall be for Lessor's account and any invoices for utility charges which accrue after the Commencement Date shall be for Lessee's account.

## ARTICLE X
## MAINTENANCE AND REPAIRS

Section 10.01. Maintenance and Repairs. Lessee shall maintain the Premises in good order, repair and condition, reasonable wear and tear excepted, and shall make all structural and nonstructural, foreseen and unforeseen and ordinary and extraordinary repairs and replacements which may be required to keep the Premises in good order, repair and condition, reasonable wear and tear excepted, and in compliance, in all material respects, with Legal Requirements. All repairs, maintenance, replacements and the like shall be completed in accordance with the provisions of Article XVII hereof.

## ARTICLE XI
## ALTERATIONS, ADDITIONS, ENHANCEMENTS AND CAPITAL IMPROVEMENTS

Section 11.01. Capital Improvements. Except to the extent limited in any of the Prime Leases, Lessee shall have the right, from time to time, to make any additions, alterations, enhancements and improvements to the Premises that Lessee desires to make; provided that such additions, alterations or improvements shall have no material adverse effect on the value of Lessor's Land or Facilities and shall be completed in accordance with the provisions of Article XVII (hereafter "Capital Improvements").

Section 11.02. Title to Capital Improvements. Except as may be otherwise provided in the Prime Leases or as provided herein, title to all Capital Improvements shall transfer to Lessor upon termination of this Lease (or upon partial termination of this Lease with respect to Capital Improvements located at a Facility that is the subject of partial termination of this Lease); provided, however, (i) if Lessee is able to do so without material, unrepaired damage to the Facility(ies), Lessee may remove such Capital Improvements prior to the termination or partial termination of this Lease, or (ii) at the election of Lessor by notice to Lessee prior to the termination (or partial termination as the case may be) Lessor may elect to purchase such Capital Improvements, in which event Lessor shall pay to Lessee the Net Book Value of such Capital Improvements.

## ARTICLE XII
## ACCESS AND INSPECTION

Section 12.01. Access and Inspection. Lessor shall have no duty or obligation to enter or inspect the Premises leased hereunder but shall have the right to do so (i) in order to ensure Lessee's compliance with the terms of this Lease and the Prime Leases, (ii) in the event of Lessee's violation of any Environmental Laws which impact the Land or Facilities, or (iii) any other breach by Lessee of the terms and conditions of this Lease or the Prime Leases. Any such entry and inspection shall be accomplished only after prior arrangement with Lessee and in a manner so as to cause the least interference reasonable with Lessee's business operations and, if required by Lessee, only when accompanied by a designated representative of Lessee. Lessor's agents and representatives shall comply with all Lessee's plant safety

and other rules and regulations while at the Premises. Notwithstanding anything to the contrary in this Section, Lessor reserves the right to enter the Premises without notifying Lessee so long as it does not unreasonably interfere with the operations of Lessee if any Environmental Release occurs, any significant Environmental condition is discovered, or any other significant incident or event occurs on the Premises in which Lessor desires to investigate and monitor the matter.

## ARTICLE XIII
## INSURANCE

Section 13.01. Lessee's Insurance Requirements. Lessee shall maintain in full force and effect, at all times during the Term of this Lease, all insurance in types and amounts reasonably required by Lessor and which are customary to be obtained by tenants under long-term leases of this nature and which are otherwise consistent within the terms of this Lease. Such insurance shall include, without limitation, a minimum of the following types of insurance:

(a) Workers' Compensation insurance, including without limitation Long Shore and Harbor Workers coverage, with statutory limits.

(b) Employer's Liability insurance with limits of One Million Dollars ($1,000,000) on a per occurrence basis.

(c) All Risk Property insurance (or special causes of loss form) insuring the Facilities in an amount equal to the full replacement value of the Facilities, or other amount as mutually agreed by the parties. Such insurance shall include coverage for debris removal and demolition expenses.

(d) Commercial General Liability insurance, including contractual liability, with primary limits of not less than One Million Dollars ($1,000,000) on a per occurrence basis.

(e) Auto Liability insurance with primary limits of not less than One Million Dollars ($1,000,000) on a per occurrence basis.

(f) Umbrella Liability insurance with limits of not less than Five Million Dollars ($5,000,000) on a per occurrence basis.

Section 13.02. Insurance Policies. Any insurance required to be maintained pursuant to Section 13.01 shall be written by companies reasonably acceptable to the parties and legally qualified to issue such insurance. The All Risk Property, Commercial General Liability, Auto Liability and Umbrella Liability insurance policies shall name "Cargill, Incorporated" and the Landlord(s) under the Prime Leases as an additional insured. Each policy shall provide that it will not be canceled, non-renewed or the coverage thereof reduced from the requirements set forth in Section 13.01, except after not less than thirty (30) days written notice to Lessee and Lessor. Prior to the Commencement Date and thereafter upon each policy renewal, Lessee shall deliver to Lessor copies of policies or certificates of insurance, as requested by Lessor, evidencing the existence of all insurance which is required to be maintained by Lessee hereunder.

Section 13.03. Notification of Significant Events to Lessor. In the event any serious personal injury (including death) or property damage occurs at any Facility, Lessee agrees to give Lessor prompt notice and a general description of the occurrence. Lessee agrees to reasonably cooperate with Lessor in the event Lessor has any questions concerning such personal injury or property damage.

## ARTICLE XIV
## INDEMNIFICATION

Section 14.01. Indemnification by Lessor.

(a) Lessor shall defend, indemnify and hold harmless Lessee, its Members (excluding Lessor), its Members' affiliates, and their respective officers, directors, employees, agents and representatives ("Lessee Indemnitees") from and against and in respect of any and all claims, liabilities, losses, damages, fines, penalties, costs or expenses (including reasonable attorneys' fees, expert and consultant fees, investigation costs and response, removal, and corrective action and other remediation or cleanup costs) suffered or incurred by any Lessee Indemnitee (collectively, "Lessee Losses") to the extent such Lessee Losses arise from, by reason of or in connection with (i) any negligent act or omission or the willful misconduct of Lessor or any of its officers, directors, employees, agents or representatives with respect to a duty owed Lessee hereunder, (ii) any misrepresentation, breach of warranty or breach or nonfulfillment of any agreement or covenant of Lessor contained in this Lease, or (iii) the ownership, possession, occupancy or use of the Premises by Lessor prior to the Term of this Lease (including but not limited to Lessee Losses arising out of Lessor's handling, storage, discharge, transport or disposal of Hazardous Substances). Notwithstanding the foregoing, in the absence of fraud and except as otherwise provided in this Lease, Lessee shall be solely responsible for all Lessee Losses that arise from any structural or operational defect, deficiency or failure ("Deficiency") of any of the improvements, machinery and equipment at the Facilities ("Deficiency Related Losses"), regardless of whether any such Deficiency existed prior to the Effective Date.

(b) Lessor's obligations under this Section 14.01 shall survive the expiration or early termination (or partial termination) of this Lease for any reason. Lessee shall notify Lessor within a reasonable time after any claim for indemnification arises and is known to Lessee and shall give Lessor a reasonable opportunity (i) to conduct any proceedings or negotiations in connection therewith necessary or appropriate to defend any Lessee Indemnitee, (ii) to take all other required steps or proceedings to settle or defend any such claim, and (iii) to employ counsel, reasonably acceptable to Lessee, to contest any such claim in the name of any Lessee Indemnitee or otherwise; and all expenses in connection therewith shall be borne by Lessor. If Lessor fails, within a reasonable time (not to exceed sixty (60) days) to take the foregoing actions, Lessee may employ its own counsel and take any or all of the foregoing actions, all at the cost and expense of Lessor.

Section 14.02. Indemnification by Lessee.

(a) Lessee shall defend, indemnify and hold harmless each Lessor Indemnitee from and against and in respect of any and all claims, liabilities, losses, damages, fines, penalties, costs or expenses (including reasonable attorneys' fees, expert and consultant fees, investigation costs and response, removal, and corrective action and other remediation or cleanup costs) suffered or incurred by any Lessor Indemnitee (collectively, "Lessor Losses") to the extent such Lessor Losses arise from, by reason of or in connection with (i) the possession, occupancy or use by Lessee or its employees of the Premises during the Term of this Lease (including but not limited to Lessor Losses arising out of the handling, storage, discharge, transport or disposal of Hazardous Substances), (ii) any negligent act or omission or the willful misconduct of Lessee or any of its officers, directors, employees, agents or representatives, (iii) any misrepresentation, breach of warranty or breach or nonfulfillment of any agreement or covenant of Lessee contained in this Lease, (iv) any Work on the Premises done by or on behalf of Lessee pursuant to Article XVII, or (v) any Deficiency Related Losses. Further, with respect to the Leased Facilities, Lessee shall neither do nor permit anything to be done which would cause any of the Prime Leases to be terminated or forfeited by reason of any right of termination or forfeiture reserved or vested in the Landlords under the Prime Leases, and Lessee shall indemnify and hold Lessor harmless from and against all claims of any kind whatsoever by reason of any breach or default on the part of Lessee by reason of which any one of the Prime Leases may be terminated or forfeited.

(b) Lessee's obligations under this Section 14.02 shall survive the expiration or early termination (or partial termination) of this Lease for any reason. Lessor shall notify Lessee within a reasonable time after any claim for indemnification arises and is known to Lessor and shall give Lessee a reasonable opportunity (i) to conduct any proceedings or negotiations in connection therewith necessary or appropriate to defend any Lessor Indemnitee, (ii) to take all other required steps or proceedings to settle or defend any such claim, and (iii) to employ counsel, reasonably acceptable to Lessor, to contest any such claim in the name of any Lessor Indemnitee or otherwise; and all expenses in connection therewith shall be borne by Lessee. If Lessee fails, within a reasonable time (not to exceed sixty (60) days) to take the foregoing actions, Lessor may employ its own counsel and take any or all of the foregoing actions, all at the cost and expense of Lessee.

Section 14.03. Environmental Notices. Each party shall immediately provide the other party with a copy of all notifications (written or oral), including any form of notice, inquiry, investigation, request for information or records or governmental order or claim, which such party gives or receives after the Commencement Date and which relates to: (i) any actual or alleged non-compliance by Lessor or Lessee with, or obligation or liability of Lessor or Lessee under any Environmental Law to the extent such Environmental Law relates to the Premises or the party's ownership or use of or operations or activities on the Premises, or (ii) any actual or alleged past, present or future Release or threatened Release of any Hazardous Substance on, at, under or from the Land.

Section 14.04. Environmental Assessments. The parties have jointly conducted an Environmental evaluation of the Premises satisfactory to both parties (the "Preliminary Environmental Evaluation"), and each party has received a copy of the reports as to the Environmental condition of the Premises immediately prior to the Commencement Date (the "Preliminary Environmental Evaluation Report"), such Preliminary Lease Environmental Evaluation Report being incorporated herein by this reference. The parties also agree to jointly conduct, immediately prior to or immediately after the Expiration Date or the earlier termination of this Lease, as the case may be, through an environmental firm mutually acceptable to the parties (or through mutually acceptable employees or representatives of Lessor and Lessee), an Environmental evaluation of the Premises satisfactory to both parties (the "Post-Lease Environmental Evaluation"). Each party shall receive a copy of the reports as to the Environmental condition of the Premises as of the date of this Lease's expiration or earlier termination, as applicable (the "Post-Lease Environmental Evaluation Report"). The parties agree that for purposes of this Article XIV, the Preliminary Lease Environmental Evaluation Report shall be used by the parties as evidence of the Environmental condition of the Premises as of the Commencement Date of this Lease and the Post-Lease Environmental Evaluation Report shall be used by the parties as evidence of the Environmental condition of the Premises as of the Expiration Date (or earlier termination date, if applicable) of this Lease. The parties understand that the Preliminary Environmental Evaluation Report and the Post-Lease Environmental Evaluation Report are not intended to be all-inclusive, but shall serve as a general, preliminary baseline as to the Environmental conditions which existed at the Facilities at the time such documents were prepared.

Section 14.05 Structural and Operational Assessments. The parties have jointly conducted structural and operational assessments of the Facilities for the purpose of identifying any structural or operational defect, deficiency or failure that shall not be considered a Deficiency for purposes of this Lease and which are identified on Exhibit D attached hereto, and which shall be resolved in the manner set forth in Exhibit D.

## ARTICLE XV
## FIRE AND CASUALTY

Section 15.01. Casualty Loss. If any Facility leased to Lessee hereunder is substantially damaged or destroyed by a Casualty, to the extent that Lessee cannot continue its normal business operations at such Facility or if the Facility is rendered untenantable or unfit for occupancy as a result

thereof, then and in such event, Lessee may elect to terminate this Lease, but only as applicable to, and to the extent that it relates to, such damaged or destroyed Facility by notice to Lessor within one hundred and eighty (180) days after the occurrence of such damage or destruction. In the event of such a termination, all insurance proceeds received in connection with such damage or destruction, less any portion applied to the cost of repairing, razing, cleanup and environmental restoration of the Facility, shall be paid to Lessor. In the event any portion of this Lease is terminated because of damage or destruction to a particular Facility, the Rent payable under Section 4.01 hereunder shall be recalculated as a result of such termination in accordance with Section 4.02 herein. To the extent a Casualty occurs which causes any Facility (or portion thereof) to be untenantable for Lessee, Lessee's obligation to pay Rent during such period shall be proportionately abated.

## ARTICLE XVI
## CONDEMNATION

Section 16.01. Total Taking. If there occurs a Taking of all or a Substantial Portion of the Premises, other than a Taking for temporary use not exceeding one hundred and eighty (180) days, then this Lease shall terminate effective as of the Date of Taking, and such date shall be the Expiration Date, without prejudice, however, to the rights of Lessor and Lessee to recover an Award.

Section 16.02. Partial Taking. If there occurs a Taking of less than a Substantial Portion of the Premises, then this Lease and all duties and obligations of Lessee under this Lease shall remain unmodified, unaffected and in full force and effect, except that Rent shall be proportionally abated during the reconstruction, restoration and repair of the Facility(ies).

Section 16.03. Temporary Taking. If there occurs a Taking of the Premises or any portion thereof, for temporary use not exceeding one hundred and eighty (180) days, then this Lease shall remain in full force and effect for the remainder of the Term except that Rent shall be proportionally abated during the period of such temporary Taking and, provided that during such time as Lessee shall be out of possession or use of the Premises by reason of such Taking, the failure to keep, observe, perform, satisfy and comply with the terms and conditions of this Lease due to such Taking, shall not be an Event of Default hereunder.

Section 16.04. Awards. Any Award for a Taking, permanent or temporary, of all or any portion of the Premises shall be paid to the Lessor or Lessee, as their interests may appear.

## ARTICLE XVII
## WORK AT THE FACILITIES

Section 17.01. Standards for Performance. Lessee shall cause all work permitted or required to be done at the Premises pursuant to Articles X and XI hereof (the "Work") to be in compliance with all Legal Requirements. Lessee shall be solely responsible for construction means, methods, techniques, sequences and procedures, and for coordinating all activities related to the Work. Lessor shall have no duty or obligation to inspect the Work, but shall have the right to do so.

Section 17.02. Completion of Work. Whenever Lessee elects or is required to perform any Work upon the Premises, Lessee shall promptly commence the Work and, once commenced, diligently and continuously pursue the Work and complete the Work within a reasonable time.

Section 17.03. Liens. Unless required by law, Lessee shall not permit the filing of any liens or other encumbrances against the Land or Facilities whether such liens or encumbrances may be filed by contractors, subcontractors, suppliers or materialmen in connection with the Work or otherwise. Lessee shall use its best commercial efforts to have any liens or encumbrances against the Land or Facilities removed in a timely manner.

## ARTICLE XVIII
## COMPLIANCE WITH LAWS

Section 18.01. Compliance with Laws. Lessee, at its cost and expense, shall during the Term of this Lease comply in all material respects with all federal, state and local laws, rules, regulations, codes, ordinances, orders and other requirements, present or future, that are promulgated by (i) any governmental, administrative, regulatory authority, bureau or agency, or (ii) court, tribunal or administrative body having jurisdiction over the Premises and that are applicable to the Premises or the ownership, lease, use or occupancy thereof by Lessee during the Term of this Lease, including but not limited to, all Environmental Laws (collectively, the "Legal Requirements").

## ARTICLE XIX
## ASSIGNMENT; PLEDGE OF LEASEHOLD INTEREST

Section 19.01. Assignment. Lessee shall neither assign this Lease or any right, interest or obligation hereunder nor sublet all or any part of the Land or Facilities without the prior written consent of Lessor, which may be withheld for any or no reason. Any assignment or sublease consented to by Lessor shall be subject to all of the terms, covenants, conditions, requirements, restrictions and provisions of this Lease, and as applicable, the Prime Leases. No assignment or sublease permitted hereunder shall release Lessee from liability for the performance of any of its duties and obligations hereunder and Lessee shall be and remain primarily liable for the performance of this Lease by its assignee. Any attempted assignment, sublease or transfer of this Lease or any interest herein not complying with the requirements of this Section shall be deemed null and void and of no legal consequence.

Section 19.02. No Mortgage or Pledge. Lessee shall not, without the prior written consent of Lessor, which consent may be withheld for any or no reason, mortgage, pledge, transfer, assign or convey any estate or interest of Lessee under this Lease to secure any indebtedness of Lessee or for any other purpose.

## ARTICLE XX
## EXPIRATION; SURRENDER

Section 20.01. Expiration; Surrender. Except as otherwise provided herein, this Lease shall terminate on the Expiration Date, except with respect to obligations and liabilities of the parties hereunder, actual or contingent, which have arisen on or prior to the Expiration Date. On the Expiration Date, Lessee shall surrender possession of the Assets to Lessor, in good order, safe condition and repair, ordinary wear and tear excepted. Lessee shall have the right, but not the obligation, to remove from the Facility any personal property of any kind or nature owned by Lessee prior to the Expiration Date, provided that the portion of the Premises to which such items may have been affixed shall be restored by Lessee to good order, safe condition and repair. All property of Lessee which is not timely removed by Lessee from the Premises as aforesaid, at the option of Lessor, (i) shall become the property of Lessor on an "as is, where is" basis, or (ii) may be removed from the Premises by Lessor at Lessee's cost and expense and, in neither case, shall Lessee have any claims against Lessor with respect thereto. All machinery, equipment, computer hardware and software, office furniture and furnishings and other tangible personal property which is included within the definition of "Facilities" and originally leased by Lessor to Lessee hereunder shall remain the property of Lessor and shall be surrendered to Lessor upon this Lease's expiration or earlier termination. Lessee shall use commercially reasonable efforts in maintaining adequate records identifying leased personal property as compared to personal property which is purchased and owned by Lessee during its use and occupation of the Premises.

## ARTICLE XXI
## SIGNAGE

Section 21.01. Signage. Lessee shall have the right to designate, and thereafter change, the name of the Premises, and may install signs, sculptures or graphics identifying the Premises by Lessee's (or any permitted successor and assign) name or logo.

Section 21.02. No Proprietary Rights. Lessor shall not have any proprietary rights, under this Lease, in or to the name or logo given to the Premises by Lessee. In addition, Lessor shall not have any right under this Lease to use such name or logo except as a means of identifying the Premises and then only for so long as Lessee occupies the Premises.

## ARTICLE XXII
## CONFIDENTIALITY

Section 22.01. Terms of Lease Confidential. Lessor and Lessee agree that the contents of this Lease and any other agreement entered into between the parties shall be maintained in strict confidence and shall not be disclosed by either party to any third party without the prior written consent of the other party, except as required by law.

## ARTICLE XXIII
## NET LEASE

Section 23.01. Net Lease. It is understood and agreed that the Rent provided for herein shall be absolutely net to Lessor throughout the Term of this Lease, free of any real estate taxes, assessments, insurance premiums, utility costs, repair and maintenance costs and all other operating costs, expenses, liabilities, charges or other deductions whatsoever with respect to the Premises and/or the ownership, leasing, operation, maintenance, repair, use or occupation thereof, or with respect to any interest of Lessor therein, it being the intention of the parties hereto that by the execution of this Lease, Lessee shall, during the Term, assume with respect to the Premises every obligation relating thereto which the ownership thereof would entail and which, but for this Lease, would be borne by Lessor. This Lease is a "triple net lease" and, notwithstanding any law to the contrary, all Rent payable under this Lease by Lessee shall be paid without offset, counterclaim, abatement or defense, and this Lease shall not be subject to termination by Lessee by reason of any cause whatsoever, unless such right to terminate is expressly set forth in this Lease.

## ARTICLE XXIV
## MISCELLANEOUS

Section 24.01. Notices. All rental payments, notices, requests, demands or other communications required or permitted to be given or made under this Lease shall be in writing and delivered personally or sent by overnight courier, telecopy transmission or prepaid, certified or registered U.S. airmail, return receipt requested and duly addressed as set forth below. Any such notice, demand, request or communication shall be deemed to have been duly given (i) immediately if delivered personally or made by a confirmed telecopy, (ii) the day of delivery to the recipient if sent by overnight courier, or (iii) five (5) days after mailing. In proving the same it shall be sufficient to show that the envelope containing the notice, demand, request or communication was duly addressed, stamped and posted or that receipt of a facsimile was confirmed by the recipient. The addressees and telecopy numbers of the parties for purposes of this Lease are as follows:

To Lessor: Cargill, Incorporated
15407 McGinty Road West
Wayzata, Minnesota 55391-2399
Attention: US NAGO BU Leader

Fax: (952) 742-7242

To Lessee: CLD Pacific Grain, LLC
Suite 1133
222 S.W. Columbia
Portland, Oregon 97201
Attention: Arnie Schaufler
Fax: (503) 243-5079

Any party hereto may change its address for the purpose of this Lease by giving written notice to the other party at the address and in the manner provided above.

Section 24.02. Headings. The headings appearing in this Lease were inserted for the purposes of convenience and ready reference. They do not purport to and shall not be deemed to define, limit or extend the scope or intent of the provisions to which they appertain.

Section 24.03. Binding Effect. Subject to the provisions of Section 19.01, all provisions contained in this Lease shall be binding upon, inure to the benefit of, and shall be enforceable by, the respective permitted successors and assigns of Lessor and Lessee to the same extent as if each such permitted successor and assign were named as a party hereto.

Section 24.04. Severability. If any provision of this Lease, or the application thereof to any Person or circumstance, shall be held to be invalid or unenforceable, then in each such event the remainder of this Lease or the application of such provision to any other Person or any other circumstance (other than those as to which it shall be invalid or unenforceable) shall not be thereby affected, and each provision hereof shall remain valid and enforceable to the fullest extent permitted by law.

Section 24.05. Waiver. No failure on the part of any party to exercise, and no delay in exercising any right, power or remedy hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any right, power or remedy by any such party preclude any other or further exercise thereof or the exercise of any other right, power or remedy. No express waiver or assent by any party hereto to any breach of or default in any term or condition of this Lease shall constitute a waiver of or an assent to any succeeding breach of or default of the same or any other term or condition hereof. Any waiver of a provision of this Lease shall be in writing and signed by the waiving party.

Section 24.06. Applicable Law. This Lease shall be governed by, construed under and interpreted and enforced in accordance with the internal laws of the State of Delaware.

Section 24.07. Entire Agreement. This Lease, including Exhibits A through E attached hereto, contains the entire understanding between Lessor and Lessee with respect to the subject matter hereof. No representations, warranties, inducements, understandings, promises or agreements, oral or otherwise, between the parties not embodied in this Lease shall be of any force or effect.

Section 24.08. Modifications. This Lease shall not be modified or amended in any respect except by a written agreement executed by Lessor and Lessee in the same manner as this Lease is executed.

Section 24.09. Holding Over. If Lessee remains in possession of the Premises after the Expiration Date or the termination of this Lease, as the case may be, with Lessor's acquiescence but without any modification of this Lease, Lessee shall be a tenant at will at the annual rental in effect on the Expiration Date and subject to all the other terms and provisions hereof (except as to the Term).

Section 24.10. Counterparts. This Lease may be executed in several counterparts, each of which shall be deemed an original, and all of such counterparts together shall constitute one and the same instrument.

Section 24.11. Memorandum of Lease. Lessor and Lessee, at Lessee's request, will execute a memorandum of this Lease in recordable form, which Lessee may, at its expense, file for record. However, neither Lessor nor Lessee shall record this Lease without the written consent of the other party.

Section 24.12. Dispute Resolution. All disputes arising under this Lease will be resolved by the parties through the dispute resolution procedures described on Exhibit E attached hereto and incorporated herein by this reference.

Section 24.13 Lessor Approval. Where Lessor approval is required in this Agreement, such approval may be withheld for any or no reason whatsover except as otherwise specifically provided in this Agreement.

**IN WITNESS WHEREOF**, the parties have caused this Lease to be duly executed by their duly authorized officers and have delivered this Lease effective as of the day and year first above written.

**CARGILL, INCORPORATED**
(Lessor)

By: _____
Name: DON VOGT
Title: V.P

**CLD PACIFIC GRAIN, LLC**
(Lessee)

By: _____
Name: Arnie Schaeffer
Title: General Manager

**EXHIBIT "A"**

**List of Prime Leases and Legal Descriptions of the Land**

## LEASED FACILITIES

### Portland, OR (T-4)

Lease and Agreement between The Port of Portland and Cargill, Incorporated dated July 1, 1975, as supplemented and amended.

No legal description.

### Boardman, OR

SK Farms, Inc. Submerged Lands and Dock Structures Lease Agreement dated April 1, 1983 between Port of Morrow and SK Farms, Inc. Assigned to Cargill by Big River Farms, Inc., successor to SK Farms, Inc., on June 9, 1992.

Legal Description:

### Burbank, WA

Lease by and between Port of Walla Walla and River Grain Terminal, Inc. dated May 1, 1958, as assigned to Cargill, Incorporated, and as supplemented and extended.
Lease by and between Port of Walla Walla and River Grain Terminal, Inc. dated September 28, 1959, as assigned to Cargill, Incorporated and as supplemented and extended.

Legal Description:

A tract of land in Walla Walla County, State of Washington, in Section 2, Township 8N, Range 30E, Willamette Meridian, described as follows:

Beginning at the Northeast corner of Section 2, Township 8N, Range 30 E, Willamette Meridian; thence S. 89°41'23" W. a distance of 1,255.22 feet to an intersection with the Westerly right of way line of Old State Highway No. 3; thence S. 00°46'51" W. a distance of 300 feet to the True Point of Beginning; thence S. 00°46'51" W. a distance of 1, 134.68 feet along the Westerly right of way line of said Highway to an intersection with the Northerly line of the easement to the Salt Lake Pipeline Company; thence N. 44°23'05" W. along said easement line a distance of 460'± to an intersection with a line running parallel with and 8 feet distance from the outside rail of the Westerly Railroad spur serving grain storage facilities, said parallel line being on the Easterly side of said Railroad spur; thence in a Northerly direction along said parallel line to an intersection with a line that is 80 feet distance and parallel to the Northeasterly wall of the Northeasterly Storage Warehouse; thence in a Northwesterly direction along said parallel line a distance of 520'± to an intersection with the North boundary line of the Port of Walla Walla; thence East along said boundary line to the point of beginning.

Lease by and between Port of Walla Walla and Cargill, Incorporated dated July 25, 1978, as extended.

Legal Description:

Beginning at the NE Corner of Section 2, Township 8N, Range 30 E, Willamette Meridian, and running S 0°30' E. along the East line of said Section 2, a distance of 814.25 feet; thence S 88°35' W., parallel to the North line of Section 2, a distance of 1772.0 feet; thence N 1°25' E., a distance of 42.0 feet to the True Point of Beginning which is the South corner of the building commonly known as Flathouse #2. Thence N 52°35' W., 500 feet along the building line to the Northwest Corner of said building; thence N 37°25' E., a distance of 140 feet to the North Corner of said building; thence S 52°35' E., 500 feet to the Southeast Corner of said building; thence S 37°25' W., 140 feet to the True Point of Beginning.

Lease by and between Port of Walla Walla and Cargill dated January 1, 1993. Need written consent of Port.

Legal Description:

That certain one-story, metal-framed, office complex building consisting of approximately 2,200 square feet, located in the Port of Walla Walla's Burbank Industrial site and situated on the following described real property situated in the County of Walla Walla, State of Washington:

Beginning at the Northeast corner of Section 2, Township 8N, Range 30 E, Willamette Meridian; thence S. 89°41'23" W. a distance of 1,255.22 feet to an intersection with the Westerly right of way line of Old State Highway No. 3; thence S. 00°46'51" W. a distance of 300 feet to the True Point of Beginning; thence S. 00°46'51" W. a distance of 1, 134.68 feet along the Westerly right of way line of said Highway to an intersection with the Northerly line of the easement to the Salt Lake Pipeline Company; thence N. 44°23'05" W. along said easement line a distance of 460'± to an intersection with a line running parallel with and 8 feet distance from the outside rail of the Westerly Railroad spur serving grain storage facilities, said parallel line being on the Easterly side of said Railroad spur; thence in a Northerly direction along said parallel line to an intersection with a line that is 80 feet distance and parallel to the Northeasterly wall of the Northeasterly Storage Warehouse; thence in a Northwesterly direction along said parallel line a distance of 520'± to an intersection with the North boundary line of the Port of Walla Walla; thence East along said boundary line to the point of beginning.

Lease by and between Port of Walla Walla and Cargill dated June 4, 1999.

No legal description. See sketch attached to lease.

**Pasco**

Lease Agreement between Port of Pasco and Cargill, Incorporated dated July 22, 1999.

Legal Description:

Office building (1,605 square feet) located at 720 W. River Street. That portion of Lots 16 to 30 inclusive of River Block, the Riverside Addition to Pasco, Washington, lying northerly of the U.S. Government taking line for McNary Dam Pool, and the south thirty-three (33) feet of vacated River Avenue lying adjacent to said Lots 16 to 30 inclusive, all in the Riverside Addition to the City of Pasco, as recorded in Volume B, page 44, records of county auditor, Franklin County, Washington, EXCEPT that an easement is reserved for an underground pipe line serving the River Terminals Tank Farm, said easement being fifteen (15) feet in width. Also reserved is a five (5) foot easement for an underground water main located at the westerly boundary of the described property on the map attached to the lease. Also a non-exclusive easement 17'x11' adjoining the north boundary of property, as indicated on the map attached to the lease, is granted to the Grain Company for railcar siding.

**The Dalles**

Lease Agreement by and between The Port of The Dalles, successor to Pacific Inland Navigation Company, Inc. and Cargill, Incorporated dated April 1, 1960.

Legal Description:

Beginning at a point, a brass screw set in rock, 2202.7 feet north and 1548.6 feet east from the quarter corner of the south line of Section 33, Township 2 North, Range 13 East Willamette Meridian, in Wasco County, Oregon; thence downstream along the south bank of the Columbia River a distance of 150 feet; thence S 55°05'W a distance 220 feet; thence S 34°55"E a distance of 550 feet; thence N 55°05"E to the south bank of the Columbia River; thence downstream along the south bank of the Columbia River 400 feet more or less to the point of beginning. Said tract contains 2.56 acres more or less.

**Arlington**

Agreement by and between the Port of Arlington and Cargill, Incorporated dated September 1, 1967.

Legal Description:

A tract of land located on property of the Port of Arlington delineated on the drawing marked Exhibit B (1/27/67) attached to the Memorandum of Agreement between

the foregoing agreement; said tract being approximately 420 feet in length, running from the northeasterly corner of the top of the fill, westerly along the river side of the fill to a point, thence at right angles and in a southerly direction approximately 150, thence at right angles and in an easterly direction parallel to the first line above described, a distance of approximately 420 feet, thence at right angles and in a northerly direction a distance of approximately 150 feet to the point of beginning.

**OWNED FACILITIES**

**Lewiston, ID**

**PARCEL 1:** Beginning at the intersection of 4th Avenue North and 15th Street North, in Section 31, Township 36 North, Range 5 West of the Boise Meridian, in the City of Lewiston, Idaho; thence South 88 degrees 15' 18" East a distance of 280 feet; thence South 1 degree C9' 36" West a distance of 10 feet to the Northwest corner of the Lewiston Roundup Association property; thence South degrees 46' 58" West a distance of 79.95 feet; thence North 61 degrees 22' 00" West a distance of 413.16 feet to the True point of Beginning, said point being the Northwest corner of Lewis-Clark Terminal Association, Inc., property; thence from said True Point of Beginning South 28 degrees 38' 05" West distance of 428.91 feet to a point which is North 28 degrees 27' 15" East a distance of 50 feet from the Government Take Line; thence North 61 degrees 32' 45" West a distance of 431.31 feet to a point which is North 26 degrees 27' 15" East a distance of 50 feet from the Government Take Line; thence following a 368.06 foot radius curve to the right, said curve having a delta angle of 57 degrees 46' 57" a distance of 371.19 feet to a point; thence North 3 degrees 45' 48" West a distance of 307.23 feet to a point; thence South 61 degrees 22' 00" East, a distance of 907.85 feet to the True Point of Beginning.

**LESS AND EXCEPT THE FOLLOWING FROM PARCEL 1:**

A parcel of land in Section 31, T. 36 N., K 5 W., B.M., i n the City of Lewiston, County of Nez Perce, State of Idaho, and being more particularly described as follows:
Commencing a City Monument 23-12 at the intersection of 6th Avenue North and 15th Street; thence S 01 ° 11'08" W. for 499.67 feet to City Monument 23-6 at the intersection of 3rd Avenue North and 15th Street; thence S 39°03'53" W for 142.36 feet to the northeast comer of Trustee's Deed recorded as Instrument No. 464905 of County Records; thence N 61°22'00" W along the north line of said deed for 780.98 feet to the True Point of Beginning; thence S 35°43'55" W for 168.39 feet; thence N 03 °45'48" W for 197.90 feet; thence S 61 °22'00" E for 126.84 feet to the Point of Beginning; containing 0.24 acres more or less.

**PARCEL 2:** A non-exclusive easement for ingress and egress granted to Fribourg Investment Company L.P., a Delaware Limited Partnership in Easement Deed recorded May 17, 1984 as Instrument No. 476867, over and across the following described land:

Commencing at the Brass Cap Monument marking the intersection of 15th Street North and 3rd Avenue North; thence North 61 degrees 21'22" West 55.73 feet; thence South 28 degrees 38'05" West 40.00 feet to the South line of 3rd Avenue North and the Point of Beginning; thence continue South 28 degrees 38'05" West 100.00 feet to the North line of the Continental Grain Company property and the Point of Terminus.

**PARCEL 3:** A non-exclusive easement for ingress and egress granted to Fribourg Investment Company, L.P., a Delaware Limited Partnership in Easement Deed recorded May 17, 1984 as Instrument No. 476867, over and across the following described land:

Commencing at the brass cap monument marking the intersection of the centerlines of 16th Street North, 6th Avenue North and 3rd Avenue North; thence South 61 degrees 21'22" East 325.22 feet along the centerline of 3rd Avenue North; thence south 29 degrees 38'38" West 40.01 feet to the South line of 3rd Avenue North and the Point of Beginning; thence continue South 29 degrees 38'38" West 100.01 feet to the North line of the Continental Grain company property and the Point of Terminus.

**PARCEL 4:** An easement for overhead conveyor facility and legs or support structures therefor and granted to Fribourg Investment Company, L.P., a Delaware Limited Liability Partnership in Easement Deed recorded May 17, 1984 as Instrument No. 476868, over and across the following described land:

Commencing at the U.S. Cops of Engineers G.T.L. monument number 520-54-1-5A; thence North 61 degrees 32'45" 229.0 feet along U.S. G.T.L. line to the Point of Beginning; thence North 28 degrees 27'15" East 50 feet to the Point of Terminus

**Boardman, OR**

A tract of land in Sections 2 and 3, Township 4 North, Range 25 West, Willamette Meridian, Morrow County, Rregon, being more particularly described as follows:

Commencing at the one-quarter corner common to Sections 2 and 11, Township 4 North, Range 25 East, Willamette Meridian, as shown on Morrow County Record Survey no. 290-k, dated January 28, 1980; thence South 88°22'10" West a distance of 2,663.94 feet to the southwest corner of said section 21; thence north 1°52'20" west a distance of 1,267.36 feet to the point of beginning, thence North 88'22'10" East a distance of 684.91 feet to a point, thence North 01°52'20" West a distance of 670.96 feet to a point; thence South 88°22'10" West a distance of 728.22 feet to the high water line, as meandered on aforesaid survey; thence southerly along said high water line the following 6 (six) courses and distances:

(1) South 39°41'00" West a distance of 3.22 feet to a point,

(2) South 21°59'30" West a distance of 103.49 feet to a point,

(3) South 07°29'30" West a distance of 105.08 feet to a point,

(4) South 00°37'00" West a distance of 104.43 feet to a point,

(5) South 05°10'30" East a distance of 226.52 feet to a point,

(6) South 06°46,'00" East a distance of 104.49 feet to a point,

Thence North 88°22'10" East a distance of 83.94 feet to the point of beginning,

PORTLAND, OR (IRVING) LEGAL ON FOLLOWING PAGE
SEE page -25- of PRINTED COPY.
-AK

**PARCEL I:** A parcel of land lying in the Southwest quarter of Section 27, Township 1 North, Range 1 East, City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:
Beginning at a point on the Southwesterly line of North River Street, said point being South 50°58'41" East a distance of 235.49 feet from the East corner of River Lot 19, Albina, as conveyed to Dillingham Corporation, by Deed recorded February 13, 1969 in Book 663 Page 196, Deed Records; thence along said Southwesterly line South 50°58'41" East a distance of 179.04 feet to a point; thence leaving said Southwesterly line of North River Street North 88°46'41" West a distance of 13.54 feet to a point; thence South 59°22'30" West 361.2 feet more or less to a point on the Harbor line; thence along said Harbor line North 34°31"31" West 8.0 feet more or less; thence North 50°14'11" West 268.8 feet more or less to a point on the Southwesterly extension of the Southeasterly line of River Lot 19, Albina; thence leaving said Harbor line North 39°01'19" East along said Southwesterly extension and Southeasterly line a distance of 145.9 feet more or less to a point; thence leaving said Southwesterly extension of the Southeasterly line of River Lot 19, Albina, South 52°19'00" East a distance of 93.00 feet to a point; thence North 58°02'25" East a distance of 22.60 feet to a point; thence South 30° 52'05" East a distance of 57.93 feet to a point; thence North 58°44'50" East a distance of 194.39 feet to a point; thence South 50°58'41" East a distance of 15.14 feet to a point; thence North 39°01"19' East a distance of 8.25 feet to the point of beginning.

**EXCEPTING THEREFROM** ownership of the State of Oregon in and to that portion of the premises herein described lying below the line of ordinary high water of the Willamette River.

**PARCEL II:** A tract of land in the William Irving Donation Land Claim and Joshua Delay Donation Land Claim: Also of the Southwest one quarter of Section 27 and the Northwest one quarter of Section 34, Township 1 North, Range 1 East of the Willamette Meridian in the City of Portland, County of Multnomah and State of Oregon; described as follows:

Beginning at a point in the North line of the said William Irving Donation Land Claim, that is North 89°42'45" East 270.89 feet from the Northwest corner of said Claim, which point is the Northwest corner of Third Street extended in the Old City of East Portland, said point is North 89°42'45" East 16.20 feet from the intersection of said Donation Land Claim line with the Southwesterly line of North River Street, also is the intersection of said Donation Land Claim line with the Northerly prolongation of the curve of the Western right of way line of the Oregon-Washington Railway and Navigation Co., as described and recorded March 24, 1882 in Deed Book 54 at Page 77 said Multnomah County; thence Southeasterly along the Westerly line of Third Street and the Westerly right of way line of said O.W.R. & N. CO., 1163.75 feet to a point in the Northerly line of the Northern Pacific Terminal tract recorded December 9, 1882 in Deed Book 62 at Page 139, which point is the intersection with the South line of North Dixon street extended Westerly; thence along the Westerly extension of the South line of North Dixon Street and the Northerly line of the said Northern Pacific Terminal tract, South 51°33'30" West 212.42 feet to the intersection with the harbor line of the Eastern bank of the Willamette River; thence North 36°01.'45" west 1196.00 feet along said Harbor line to the intersection with

1642, at Page 318, said Multnomah County; thence North 57°54'45" East 361.24 feet along said line to a point in the North line of said William Irving Donation Land Claim line; thence North 89°42'45" East along said Donation Land Claim line to the point of beginning.

**EXCEPTING THEREFROM** ownership of the State of Oregon in and to that portion of the premises herein described lying below the line of ordinary high water of the Willamette River.

**EXHIBIT "B"**

**Personal Property**

**SEE ATTACHED.**

# Property Listing

| Location: | Burbank, Washington<br>Description | Acquisition Date |
|---|---|---|
| | **Land Improvements:** | |
| | Access Roads | 6-1983 |
| | **Buildings:** | |
| | Office & Grain Lab | 5-1979 |
| | **Plant Equipment:** | |
| | Grain Elevator & Plant Equip & all associated equipment & tools | 2-1962 |
| | **Office Equipment:** | |
| | Steel Case Lateral File | 12-1981 |
| | Steel Case Vertical File Cabinet | 6-1984 |
| | 2 Drawer File Hon 312 | 6-1987 |
| | 4 Drawer Locking File-Hon 214P | 6-1987 |
| | Nor Star Telephone System | 6-1989 |
| | Upgrade Telephone System | 8-1998 |
| | Compact Shredder | 6-1990 |
| | TV - serial # 655034014 F25-143 | 1-1991 |
| | BPI Workstation & Penninsula T | 4-1995 |
| | BPI Workstation & Mobile File | 4-1995 |
| | Credenza - Jofco | 2-1968 |
| | Credenza | 10-1979 |
| | U Station Desk with Hutch | 4-2000 |
| | Miller Free Standing Table | 1-1981 |
| | Walnut Desk | 1-1982 |
| | File 5-drawer lateral | 6-1982 |
| | 1 Hon 2 Drawer Lateral File | 4-1987 |
| | IBM PC AT 512M Computer Serial # 7237517 Model 2 | 6-1987 |
| | Bookcase ST Stow Davis | 1-1990 |
| | Bookcase ST Stow Davis | 1-1990 |
| | Double Ped 36 x 72 Desk - Mahoganey | 10-1996 |
| | Toshiba 2595 Lap Top - Serail # 69786885A | 7-1999 |

| Location: | Pasco, Washington<br>Description | Acquisition Date |
|---|---|---|
| | **Buildings:** | |
| | Office / Shop | 7-1999 |
| | **Plant Equipment:** | |
| | Grain Elevator & Plant Equip & all associated equipment & tools | 7-1999 |

| | | |
|---|---|---|
| **Office Equipment:** | | |
| 3 Office Desks | 7-1999 | |
| 7 Chairs | 7-1999 | |
| Dell Monitor 8535672 | 7-1999 | |
| Dell Monitor U4105A02588 | 7-1999 | |
| *IBM 4230 Printer* | *7-1999* | still need to |
| 2 Dell computers xm 575's | 7-1999 | |
| *Dell Power Edge 2200* | 7-1999 | still need to |
| Okidata 320 9 pin printer | 7-1999 | |
| Okidata Printer 411B0109592 11992-B | 5-1995 | |
| 9 Telephones | 7-1999 | |
| HP Laser Jeft 4000T Printer | 7-1999 | |

| **Location:** | **Boardman, Oregon** Description | Acquisition Date |
|---|---|---|
| | **Land:** | |
| | 11 Acres Land | 6-1992 |
| | **Land Improvements:** | |
| | Access Road | 6-1992 |
| | **Buildings:** | |
| | Office & Grain Lab | 9-1998 |
| | Truck Office Building | 6-1992 |
| | 24' X 32' Maintence Shop | 6-1998 |
| | **Plant Equipment:** | |
| | Grain Elevator & Plant Equip & all associated equipment & tools | 6-1992 |
| | **Office Equipment:** | |
| | Cannon NP1020 Copy Machine Serial # NTH25973 NP1020 | 9-1993 |
| | Cabling Materials | 11-1998 |
| | Nor Star Plus Phone system | 9-1998 |
| | Desk Workstation | 9-1998 |
| | Laser Jet Printer 384209 SUSBB945570 10539-B | 11-1994 |
| | Okidata Printer 384210 S404A0084638 10540-B | 11-1994 |
| | Okidata Printer 384211 S404A0085003 10541-B | 11-1994 |
| | Laser Jet 4+ Printer USFC312234 12932-B | 8-1995 |
| | Scale pc workstation & monitor | 11-1994 |
| | clerk pc workstation & monitor | 11-1994 |
| | office pc workstation & monitor | 11-1994 |
| | **Autos & Trucks:** | |
| | Skid Steer Loader 1991 | 12-1994 |

| **Location:** | **Arlington, Oregon** Description | Acquisition Date |
|---|---|---|
| | **Land Improvements:** | |

| | |
|---|---|
| Roads, Paved Parking Lot & Asphalt Pad | 6-1992 |
| **Buildings:** | |
| Office & Scale House | 2-1979 |
| **Plant Equipment:** | |
| Grain Elevator & Plant Equip & all associated equipment & tools | 5-1978 |
| **Office Equipment:** | |
| Cannon NP1020 Personal Copier Serial #NTH92302 NP1020 | 8-1995 |
| Norstar Phone System | 4-1996 |
| Desktop Workstation 384097 3432A12619 10496-B | 11-1994 |
| Okidata Printer 384105 S404A0084746 10499-B | 11-1994 |
| Laser Jet 4+ Printer USFC312233 12923-B | 8-1995 |
| Desktop Workstation 3502A04716 12705-B | 7-1995 |
| Scale pc workstation & Monitor | 7-1995 |
| **Autos & Trucks:** | |
| Melroe Bobcat Loader 114014 | 11-1986 |

| Location: | The Dalles, Oregon<br>Description | Acquisition<br>Date |
|---|---|---|
| | **Land Improvements:** | |
| | Access Road | 7-1997 |
| | **Buildings:** | |
| | Office Building | 1-1965 |
| | Scale House | 6-1988 |
| | **Plant Equipment:** | |
| | Grain Elevator & Plant Equip & all associated equipment & tools | 4-1965 |
| | **Office Equipment:** | |
| | Cannon NP1020 Copier NTH26237 NP1020 | 7-1993 |
| | Telephone System | 2-1996 |
| | Scale pc workstation & Monitor | 7-1995 |
| | clerk pc workstation & monitor | 7-1995 |
| | Tempstar Heat Pump | 3-1996 |
| | Office Workstation | 5-1997 |

| Location: | Lewiston, Idaho<br>Description | Acquisition<br>Date |
|---|---|---|
| | **Land:** | |
| | 7.47 acres | 7-1999 |
| | **Land Improvements:** | |
| | 900 FT Railroad Track | 7-1999 |
| | Ground Pile Paving | 7-1999 |

| | |
|---|---|
| **Buildings:** | |
| Office Building | 7-1999 |
| Shop | 7-1999 |
| | |
| **Plant Equipment:** | |
| Grain Elevator & Plant Equip & all associated equipment & tools | 7-1999 |
| | |
| **Office Equipment:** | |
| Phone System | 7-1999 |
| 16 Desks | 7-1999 |
| 45 Chairs | 7-1999 |
| 22 Files | 7-1999 |
| 11 Storage Lockers | 7-1999 |
| 10 Tables | 7-1999 |
| Refridgerator | 7-1999 |
| Microwave | 7-1999 |
| Tv VCR | 7-1999 |
| Mode Workstation Desk | 9-1995 |
| Mode Workstation Desk | 9-1995 |
| Mode Workstation Desk | 9-1995 |
| Mode Workstation Desk | 9-1995 |
| | |
| **Autos & Trucks:** | |
| 3 Fork Lifts | 7-1999 |
| Bobcat with attachments | 7-1999 |
| Kenworth Semi Tractor | 7-1999 |
| Grain Trailer | 7-1999 |
| Container Chasis | 7-1999 |
| Melroe Bobcat Loader | 3-1979 |
| Fiat-Allis Wheel Loader | 9-1980 |

012 CARGILL, INCORPORATED PR

[redacted]020 SU

Irving

| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| CLASS 1000 | LAND | |
| 000000430134 | LAND | 7-1995 |
| CLASS 1500 | LAND IMPROVEMENTS | |
| 000000430135 | ASPHALT-PARKING LOT/DRIVEWAY | 7-1995 |
| 000000430136 | CONCRETE PARKING LOT/DRIVEWAY | 7-1995 |
| 000000430137 | CHAIN LINK FENCE | 7-1995 |
| 000000430138 | UNDERGROUND UTILITY PIPING | 7-1995 |
| 000000430139 | VAPOR TYPE LIGHTING | 7-1995 |
| 000000430140 | CATCH BASINS (6) | 7-1995 |
| 000000430141 | FIRE HYDRANTS | 7-1995 |
| 000000430142 | CONCRETE SIDEWALK | 7-1995 |
| 000000430143 | RETAINING WALLS | 7-1995 |
| 000000430144 | LANDSCAPING | 7-1995 |
| 000000430146 | RAILROAD SIDING | 7-1995 |
| 000000430151 | DOCK | 7-1995 |
| 000000430152 | STEEL DOLPHINS (5) | 7-1995 |
| 000000447818 | STEEL SHIP BREASTING DOLPHIN | 7-1996 |
| 000000484369 | PILINGS/BANK STABILIZATION | 4-1998 |
| 000000563273 | ASPHALT WALKWAY-RIVERBANK | 8-1998 |
| 000000507076 | TAX ONLY CAP. INT.-LAND IMP. | 5-1999 |
| 000000569307 | BACK FLOW PREVENTER | 4-1999 |
| 000000524622 | PILINGS/BANK STABILIZATIN PH2 | 3-2000 |
| 000000524623 | RIVERBANK PH2 LANDSCAPING | 3-2000 |
| [redacted] | | [redacted] |
| CLASS 2000 | BUILDINGS | |
| 000000430145 | MAIN ENTRANCE GUARDHOUSE | 7-1995 |
| 000000430147 | SOUTH GRAIN ELEVATOR | 7-1995 |
| 000000430148 | HEADHOUSE | 7-1995 |
| 000000430149 | NORTH GRAIN ELEVATOR | 7-1995 |
| 000000430150 | MARINE SHIPPING FACILITY | 7-1995 |
| 000000430154 | BARGE UNLOADING FACILITY | 7-1995 |
| 000000430155 | OPERATION CENTER & TRUCK DUMP | 7-1995 |
| 000000430156 | TRUCK SHED | 7-1995 |
| 000000430157 | SHIP CONTROL BUILDING | 7-1995 |
| 000000430158 | MAINTENANCE SHOP | 7-1995 |
| 000000430159 | WAREHOUSE | 7-1995 |
| 000000430160 | AIR COMPRESSOR/GENERATOR BLDG | 7-1995 |
| 000000459479 | ROO FDN STAIRS & OFFICE | 8-1996 |
| 000000448917 | OFFICE REMODEL IRVING OFFICE | 6-1996 |
| 000000478394 | NEW HOUSE CONCRETE BIN UPG | 2-1998 |
| 000000503270 | STAIRWAY MODIFICATION | 9-1998 |

CARG002601

LED 0020 SUB

| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| 000000505271 | SUPERCARGO LEVELING | 9-1998 |
| 000000509305 | CONDUIT & WIRING ELEVATOR | 4-1999 |
| 000000824624 | MAINTENANCE SHOP IMPROVEMENTS | 3-2000 |
| LASS 3000 | PLANT EQUIPMENT | |
| 000000420374 | PLC CONTROLLER | 8-1995 |
| 000000430161 | BELT CONVEYOR 120' C-6 | 7-1995 |
| 000000430162 | BELT CONVEYOR 236' C-3 | 7-1995 |
| 000000430163 | 14"X18" STEEL SPOUTS 15' (19) | 7-1995 |
| 000000430164 | 30"X20" STEE SPOUT 5' (5) | 7-1995 |
| 000000430165 | DUST COLLECTOR DUCT 16" DIA 15 | 7-1995 |
| 000000430166 | DUST COLL DUCT 30" DIA 100' | 7-1995 |
| 000000430167 | DUCT DUST LOT | 7-1995 |
| 000000430168 | DRAG CONVEYOR 130'40000 BU DC- | 7-1995 |
| 000000430169 | STEEL SPOUTS 48"X30"X48" DC-1 | 7-1995 |
| 000000430170 | STEEL SPTS 18"X48"X48" DC-1 | 7-1995 |
| 000000430171 | STEEL SPTING 1"X18" 50FT DC-1 | 7-1995 |
| 000000430172 | SLIDE GATES (2) 18"X18" DC-1 | 7-1995 |
| 000000430173 | DRAG CONVEYOR 62' DC-5 | 7-1995 |
| 000000430174 | DRAG CONVEYOR 56' DC-6 | 7-1995 |
| 000000430175 | SLIDE GATE 36"X36" DC-6 | 7-1995 |
| 000000430176 | SLIDE GATES (2) 30"X30" DC-6 | 7-1995 |
| 000000430177 | SPOUTING 20"X24" 50' DC-6 | 7-1995 |
| 000000430178 | GROUP PLATFORM/CATWALK DC-6 | 7-1995 |
| 000000430179 | 12' DISTRIBUTORDC-6 (2) | 7-1995 |
| 000000430180 | IRON DUCT 24" 225' DC-6 | 7-1995 |
| 000000430181 | IRON DUCT 12" 50' DC-6 | 7-1995 |
| 000000430182 | SMALL DIA. DUCT LOT DC-6 | 7-1995 |
| 000000430183 | 2-TON JIB CRANE DC-6 | 7-1995 |
| [redacted] | | [redacted] |
| 000000430185 | STEEL CHAT DC-6 | 7-1995 |
| 000000430186 | BUCKET ELEV 216" HIGH L-1 | 7-1995 |
| 000000430187 | BUCKET ELEVATOR 184' HIGH L-2 | 7-1995 |
| 000000430188 | BUCKET ELEVATOR 256' HIGH L-5 | 7-1995 |
| 000000430189 | BUCKET ELEVATOR 260' HIGH L-4 | 7-1995 |
| 000000430190 | SPOUTING 48"X18" 26FT L-4 | 7-1995 |
| 000000430191 | SLIDE GATES 48"X18" (3) L-4 | 7-1995 |
| 000000430192 | MISC SPOUTING L-4 | 7-1995 |
| 000000430193 | MISC DUCT L-4 | 7-1995 |
| 000000430194 | GROUP FIRE EXTINGUISHERS L-4 | 7-1995 |
| 000000430195 | MALATHION STORAGE TANK L-4 | 7-1995 |
| 000000430196 | PIPING FOR MALATHION TANK L-4 | 7-1995 |
| 000000430197 | ELECTRIC AUGER L-4 | 7-1995 |
| 000000430198 | H.D. WINCH | 7-1995 |
| 000000430199 | LOT OF SPOUTS/GATES L-4 UPPER | 7-1995 |



| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| 000000430200 | DUCT DUST COLLECTOR L-4 | 7-1995 |
| 000000430201 | STEEL SPOUT 24"X24" 535' L-4 | 7-1995 |
| 000000430202 | 20 HP AIR COMPRESSOR L-4 | 7-1995 |
| 000000430203 | CEA CARTERDAY DUST COLLECTOR | 7-1995 |
| 000000430204 | ELECTRICAL CONDUIT L-4 UPPER | 7-1995 |
| 000000430205 | SAMPLING EQUIPMENT L-4 UPPER | 7-1995 |
| 000000430206 | BARGE SCALE SYS L-4 UPPER | 7-1995 |
| 000000430207 | SHIPPING SCALE SYS L-4 UPPER | 7-1995 |
| 000000430208 | BELT CONVEYOR 240' C-8 TUNNEL | 7-1995 |
| 000000430209 | STEEL SPOUTS 24"X24" 7'(23)C-8 | 7-1995 |
| 000000430210 | IRON DUCT 8" 300FT C-8 | 7-1995 |
| 000000430211 | CONVEYOR MAGNET/TROLLEY RAIL | 7-1995 |
| 000000430212 | FLIGHT CONVEYORS 251' C-8 (2) | 7-1995 |
| 000000430213 | DOUBLE SPOUTS (16) 3-8 BINTOP | 7-1995 |
| 000000430214 | SINGLE SPOUTS (14) C-8 BINTOP | 7-1995 |
| 000000430215 | LADDER C-8 BIN TOP | 7-1995 |
| 000000430216 | HOIST C-8 BIN TOP | 7-1995 |
| 000000430217 | SPOUTING 18"X18" 205' C-8 | 7-1995 |
| 000000430218 | SPOUTING 30"X18" 10' C-8 | 7-1995 |
| 000000430219 | TRUCK DUMP HOPPER 22'X12'X12' | 7-1995 |
| 000000430220 | DRAG CONVEYOR 43' 6" C-8 TUNNE | 7-1995 |
| 000000430221 | ELEC CONTROLS SUBSTATION/CNTL | 7-1995 |
| 000000430223 | TRUCK DUMPER HYDROFLEX | 7-1995 |
| 000000430224 | PROBES SUBSTATION/CONTROL RM | 7-1995 |
| 000000430225 | CLOSED CIRCUIT SECURITY SYS | 7-1995 |
| 000000430226 | MAIN ELEVATOR CONTROL CONSOLE | 7-1995 |
| 000000430227 | STEEL BOLTED HOPPER TUNNEL/TRA | 7-1995 |
| 000000430228 | DUCT DUST COLLECT TRACKSHED | 7-1995 |
| 000000430229 | BELT CONVEYOR 280' C-6 | 7-1995 |
| 000000430230 | 10'X70' TRUCK SCALE 300 TON | 7-1995 |
| 000000430231 | US INSTRU SOUND POWERED TELEPH | 7-1995 |
| 000000430233 | JIB CRANE 1000PD | 7-1995 |
| 000000430234 | HYDRAULIC GATE OPENER MOTION C | 7-1995 |
| 000000430235 | 7.5 HP AIR COMPRESSOR | 7-1995 |
| 000000430236 | ELECTRICAL CONTROLS/COMPRESSOR | 7-1995 |
| 000000430237 | AIR PIPE C-6 1ST STORY | 7-1995 |
| 000000430239 | FIRE EXTINGUISHERS C-6 1ST STO | 7-1995 |
| 000000430240 | GROUP SPOUTS-DOCK LEVEL | 7-1995 |
| 000000430241 | ELECTRICAL WINCHES DOCK LEVEL | 7-1995 |
| 000000430242 | CEA DUST COLLECTOR DOCK LEVEL | 7-1995 |
| 000000430243 | SHIPPING CONVEYOR ENCLOSURES | 7-1995 |
| 000000430244 | BELT CONVEYOR 329' C-2 | 7-1995 |
| 000000430245 | STEEL SPOUTING C-2 | 7-1995 |
| 000000430246 | AIR/WATER PIPING C-2 | 7-1995 |
| 000000430247 | DUCT DUST COLLECTOR C-2 | 7-1995 |
| 000000430248 | FIRE EXTINGUSHERS C-2 | 7-1995 |

| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| [redacted] | | |
| 000000430250 | ELECTRICAL CONDUIT C-2 | 7-1995 |
| 000000430251 | BELT CONVEYOR 324' C-1 | 7-1995 |
| 000000430252 | BELT TRIPPERS C-1 (5) | 7-1995 |
| 000000430253 | DISCHARGE CHUTES | 7-1995 |
| 000000430254 | SHIPPING CHUTES 48' (5) | 7-1995 |
| 000000430255 | WYSONG 12' BRAKE 60TON CAPACIT | 7-1995 |
| 000000430256 | SUMMIT 10' METAL SHEER | 7-1995 |
| 000000430257 | MILLER WIRE FEED WELDER | 7-1995 |
| 000000430258 | MILLER ARC WELDER | 7-1995 |
| 000000430259 | MILLER ARC WELDER "RAMROD" | 7-1995 |
| 000000430260 | HOBART ARC WELDER MDL BM-300 | 7-1995 |
| 000000430261 | JET PORTABLE BAND SAW | 7-1995 |
| 000000430262 | PRESSURE WASHER | 7-1995 |
| 000000430263 | GAS WELDING OUTFITS (2) | 7-1995 |
| 000000430266 | STEEL WELDING TABLE | 7-1995 |
| [redacted] | | |
| 000000430267 | DOUBLE-END GRINDER | 7-1995 |
| 000000430268 | BARGE UNLDR TOWER 28' X25' X66 | 7-1995 |
| 000000430269 | STEEL FRAME BOOM 77' | 7-1995 |
| 000000430270 | CONTROLS (SWITCHES/PANELS).89 | 7-1995 |
| 000000430271 | BUCKET ELEVATOR 60' MARINE LEG | 7-1995 |
| 000000430272 | AIR COMPRESSOR MARINE LEG | 7-1995 |
| 000000430273 | PIPING MARINE LEG | 7-1995 |
| 000000430274 | SPOUTS MARINE LEG | 7-1995 |
| 000000430275 | CARTER DAY DUST COLLECTOR (MAR | 7-1995 |
| 000000430276 | BELT CONVEYOR 450' C-7 | 7-1995 |
| 000000430278 | CARTS (WAREHOUSE) | 7-1995 |
| 000000430280 | HAND TRUCKS (WAREHOUSE) | 7-1995 |
| 000000430281 | ONAN DIESEL GENERATOR "GENSET" | 7-1995 |
| 000000430282 | ROGERS COMPRESSOR MDL QNWC-30A | 7-1995 |
| 000000430283 | ZURN COMPRESSED AIR DRYER | 7-1995 |
| 000000430284 | MITSUBISHI LIFT TRUCK MDL F630 | 7-1995 |
| 000000430285 | ACE.2COMP STORAGE TANK | 7-1995 |
| 000000430286 | CARTER DAY DUST COL (YARD) | 7-1995 |
| 000000430287 | CARTER DAY DUST COLL/RAIL DUMP | 7-1995 |
| 000000430288 | STEEL DUST STORAGE BIN | 7-1995 |
| 000000430289 | TRUCK SCALE 70TON 10'X100' | 7-1995 |
| 000000430290 | PORTABEL STEEL PLATFORMS(YARD) | 7-1995 |
| 000000430291 | SELF DUMPING HOPPERS (YARD) | 7-1995 |
| [redacted] | | |
| 000000439146 | PACO PUMP MODEL #2102 SUBERSIB | 6-1996 |
| 000000439152 | 5 HP 15' BRAKE MOTOR (DOCK WIN | 6-1996 |
| 000000439153 | SHP 15' BRAKE MOTOR(DOCK WINCH | 6-1996 |
| 000000439154 | SHP 25' BRAKE MOTOR(DOCK WINCH | 6-1996 |
| 000000439155 | SHP CRANE CABLE HOIST 11.7 RPM | 6-1996 |



| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| 000000439156 | SHP CRANE CABLE HOIST 11.7 RPM | 6-1996 |
| 000000439157 | SHP CRANE CABLE HOIST 17.5 RPM | 6-1996 |
| 000000447819 | VIOLA PASENGER ELEVATOR | 6-1994 |
| 000000468887 | CROWCON PORTABLE GAS MONITOR | 12-1996 |
| 000000468916 | PERT HAZARD MONITORING SYSTEM | 6-1996 |
| 000000469564 | BIN LEVEL SENSORS | 12-1996 |
| 000000482616 | HA1200T GATE OPENER | 6-1998 |
| [redacted] | | |
| 000000484330 | OIL ADD DUST SUPPRESSION SYSTE | 11-1997 |
| 000000485551 | 8' EXTENSIONS-VESSEL LOAD SPOU | 6-1998 |
| [redacted] | | |
| 000000509284 | PRIMARY HIGH VOLT SWITCH GEAR | 4-1999 |
| 000000509285 | LEG 5 TOWER/CLEANING STRUCTRE | 4-1999 |
| 000000509286 | LOADOUT SPOUT 27 | 4-1999 |
| 000000509287 | BUCKET ELEVATOR 26 | 4-1999 |
| 000000509288 | DRAG CONVEYOR 25 | 4-1999 |
| 000000509289 | DRAG CONVEYOR 24 | 4-1999 |
| 000000509290 | DRAG CONVEYOR 23 | 4-1999 |
| 000000509291 | BUCKET ELEVATOR 22 | 4-1999 |
| 000000509292 | DRAG CONVEYOR 21 | 4-1999 |
| 000000509293 | DRAG CONVEYOR 33 | 4-1999 |
| 000000509294 | DRAG CONVEYOR 34 | 4-1999 |
| 000000509295 | SAMPLER 1 | 4-1999 |
| 000000509296 | SAMPLER 5 | 4-1999 |
| 000000509297 | DAMPLER 22 | 4-1999 |
| 000000509298 | MCI AUTO KICKER | 4-1999 |
| 000000509299 | PROTEIN MACHINE ANALYZER | 4-1999 |
| 000000509300 | CLEANER SPOUTING | 4-1999 |
| 000000509301 | CLEANER GATES | 4-1999 |
| 000000509302 | 1000 KVA TRANFORMER | 4-1999 |
| 000000509303 | PLC MICRON MILENA PENT II 300 | 4-1999 |
| 000000509304 | PLC MICRON MILENA PENT II 300 | 4-1999 |
| 000000509306 | CLEANER HAZ. MONITORING | 4-1999 |
| 000000509308 | MAC AIR FILTER | 4-1999 |
| 000000509309 | CLEANER DUST FAN | 4-1999 |
| 000000509310 | CLEANER TRANSFER BLOWER | 4-1999 |
| 000000509311 | CLEANER-OUTSIDE ENGINEERING | 4-1999 |
| 000000509312 | RAIL MCC | 4-1999 |
| 000000509313 | CLEANER MCC | 4-1999 |
| 000000509314 | PASSENGER ELEVATOR | 4-1999 |
| 000000509315 | BUCKET ELEVATOR 15 | 4-1999 |
| 000000509316 | MEGA CLEANER 1 | 4-1999 |

| ASSET NUMBER | DESCRIPTION | DATE |
|---|---|---|
| 000000509317 | MEGA CLEANER 2 | 4-1999 |
| 000000509318 | MEGA CLEANER 3 | 4-1999 |
| 000000509319 | MEGA CLEANER 4 | 4-1999 |
| 000000509320 | SURGE BIN 8 | 4-1999 |
| 000000509321 | SURGE BIN 9 | 4-1999 |
| 000000509322 | INDENT CYCINDERS 5 | 4-1999 |
| 000000509323 | INDENT CYCINDERS 6 | 4-1999 |
| 000000509324 | INDENT CYCINDER 7 | 4-1999 |
| 000000509325 | SURGE BIN 12 | 4-1999 |
| 000000509326 | SURGE BIN 34 | 4-1999 |
| 000000509327 | SURGE BIN 7 | 4-1999 |
| 000000509328 | SCREENING BIN 1 | 4-1999 |
| 000000509329 | SCREENING BIN 2 | 4-1999 |
| 000000509330 | DRAG CONVEYOR 28 | 4-1999 |
| 000000509331 | LOADOUT SPOUT 28 | 4-1999 |
| [illegible] | DRAG CONVEYOR 27 | 4-1999 |
| [redacted] | | |
| 000000523161 | DUST LOADOUT DRAG D-29 | 2-2000 |
| [redacted] | | |
| 000000524625 | CEA DUST COLLECTOR IMPROVEMENT | 3-2000 |
| [redacted] | | |

CLASS 4000 OFFICE EQUIPMENT

| | | |
|---|---|---|
| 000000417589 | 486 DX COMPUTER 295287 | 9-1995 |
| 000000417590 | PENTIUM 75 SERVER 295286 | 9-1995 |
| 000000430222 | DESKS/SUBSTATION CONTROL RM | 7-1995 |
| 000000430238 | DESK C-6 1ST STORY | 7-1995 |
| 000000430292 | DOUBLE PEDESTAL DISK OP CENTER | 7-1995 |
| 000000430293 | WOOD COUNTER (OP CENTER) | 7-1995 |
| 000000430294 | 2DRAWER FILES (2) OP CENTER | 7-1995 |
| [redacted] | | |
| 000000430297 | STEEL LOCKERS OP CENTER (5) | 7-1995 |
| 000000430298 | STEEL STORAGE CABINET (OP CENT | 7-1995 |

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| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| 000000430299 | STEEL SHELF UNIT )OP CENTER) | 7-1995 |
| 000000430300 | 4 DRAWER FILE )OP CENTER) | 7-1995 |
| 000000430302 | FOLDING TABLES (2) OP CENTER | 7-1995 |
| [redacted] | | |
| 000000430307 | DOUBLE PEDESTAL DESKS (2) | 7-1995 |
| 000000430308 | WOOD BOOKCASE 3 SHELVES | 7-1995 |
| 000000430311 | 4-DRAWER FILES (4) | 7-1995 |
| 000000430313 | DOUBLE PEDESTAL STEEL DESKS | 7-1995 |
| [redacted] | | |
| 000000430315 | 3-DRAWER FILES (5) | 7-1995 |
| 000000430316 | STEEL SHELF W/5 SHELVES | 7-1995 |
| 000000430317 | WOOD COMPUTER DESK | 7-1995 |
| 000000430318 | 2-DRAWER LATERAL FILES (2) | 7-1995 |
| 000000430319 | STEEL OFFICE TABLES (2) | 7-1995 |
| 000000430320 | STEEL SIDE ARMCHAIRS (5) | 7-1995 |
| [redacted] | | |
| 000000430322 | SANYO UNDER COUNTER REFRIGERAT | 7-1995 |
| 000000430323 | METAL STORAGE CABINETS (2) | 7-1995 |
| 000000430324 | POSTURE CHAIR | 7-1995 |
| 000000430325 | WOOD LAB COUNTER | 7-1995 |
| 000000430326 | 2-DRAWERS LETTER FILE | 7-1995 |
| 000000430327 | LAMINATED PLASTIC TABLE | 7-1995 |
| 000000430328 | LAMINATED PLASTIC CONFERENCE T | 7-1995 |
| 000000430329 | STEEL LOCKERS (5) | 7-1995 |
| 000000430330 | BROTHER ELECTRIC TYPEWRITER NA | 7-1995 |
| 000000430331 | 2-DRAWER LEGAL FILE | 7-1995 |
| 000000430332 | 4-DRAWER LEGAL FILE | 7-1995 |
| 000000430333 | QUASAR 20" COLOR TV NA | 7-1995 |
| 000000430335 | IBM SELECTRIC TYPEWRITER NA | 7-1995 |
| [redacted] | | |
| 000000430339 | IBM PS/278 PC 486 23CBNP9 | 7-1995 |
| 000000430340 | IBM PS/278 486 PC 23CBL-4 | 7-1995 |
| 000000430341 | SHARP FAX MACHINE FO-5210 00103209 | 7-1995 |
| 000000430342 | OPTI 386 PERSONAL COMPUTER NA | 7-1995 |
| 000000430344 | SHARP PRINTING CALCULATORS(2) NA | 7-1995 |

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| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| 000000430345 | HP LASERJET PRINTER III<br>3221A2257 | 7-1995 |
| 000000430346 | NEC PRINTER P6300<br>5611261131 | 7-1995 |
| 000000430349 | MAIN LINE SYSTEMS PC<br>NA | 7-1995 |
| 000000430352 | CFR DOCKAGE TESTER | 7-1995 |
| 000000430354 | SAMPLING EQUIP/BALANCES | 7-1995 |
| 000000430355 | STRAND SIZE SHAKER MDL B | 7-1995 |
| 000000430357 | ZIP TUBES PNEUMATIC TUBE SYS | 7-1995 |
| 000000430358 | PENNSYLVANIA SCALE MDL T-701 | 7-1995 |
| 000000430359 | DOUBLE PEDESTAL STEEL DESK(MAI | 7-1995 |
| | NA | |
| 000000430362 | FOLDING TABLE (MAIN SHOP) | 7-1995 |
| 000000430365 | STEEL LOCKERS (4) MAINT SHOP | 7-1995 |
| 000000430366 | PORTABLE HANG PLAN FILE MAINT | 7-1995 |
| 000000430367 | WALL MOUNTED DRAFTING TABLE | 7-1995 |
| 000000430368 | 3-DRAWER LETTER FILE(MAINT) | 7-1995 |
| 000000430369 | 2DRAWER LETTER FILE (MAINT) | 7-1995 |
| 000000432146 | 486 DXZ COMPUTER<br>295228 | 7-1995 |
| 000000438727 | 30"X66" PREMIER DESK/RETURN | 6-1996 |
| 000000448906 | PC SL HAND HELD COMPUTER<br>124012719 | 2-1997 |
| 000000456794 | HP VECTRA VLM PC<br>US64555245 1280 | 12-1996 |
| 000000502968 | HP VECTRA VL7 W/MONITOR<br>88706044 | 6-1998 |
| 000000511056 | WIRELESS BRIDGE<br>00409628EF29 | 6-2000 |
| 000000529475 | NORSTAR PHONE SYSTEM<br>NA | 6-2000 |
| 000000538000 | OFFICE CABILING<br>NA | 4-2001 |
| 900000458380 | GATEWAY 2000 COMPUTER & MONITO<br>DBPPR0266P1A | 6-1998 |
| CLASS 5000 | AUTOS AND TRUCKS | |
| 000000430378 | 1993 FORD F-150 PICKUP<br>212515 | 7-1995 |

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| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| CLASS 2000 | BUILDINGS | |
| 000000427499 | OFFICE REMODEL COASTAL/FGIS LA | 2-1996 |
| CLASS 3000 | PLANT EQUIPMENT | |
| 000000427497 | CARDINAL 738 SCALE - RAIL PIT | 1-1996 |
| CLASS 4000 | OFFICE EQUIPMENT | |
| 000000385458 | OKIDATA PRINTER<br>4D930098617 13232-B | 2-1996 |
| 000000385459 | OKIDATA PRINTER<br>41180108497 13233-B | 2-1996 |
| 000000385460 | OKIDATA PRINTER<br>41180108454 13234-B | 2-1996 |
| 000000388719 | CABLE MATERIALS | 12-1995 |
| 900000384063 | 384063 DESKTOP WORKSTATION<br>3432A12919 10522-B | 11-1994 |
| 900000384065 | 384065 DESKTOP WORKSTATION<br>3432A12754 10521-B | 11-1994 |
| 910000437779 | VECTRA VL4<br>SUS62651497 CGD-1348 | 1-1997 |

| ASSET NUMBER | DESCRIPTION | ACQ DATE | D H |
|---|---|---|---|
| CLASS 4000 | OFFICE EQUIPMENT | | |
| 000000511052 | WIRELESS BRIDGE | 6-2000 | |
| | 00409627C9B8 | | |
| 000000511054 | WIRELESS BRIDGE | 6-2000 | |
| | 00409627E27C | | |
| 000000511057 | LABOR CABLE | 6-2000 | |
| 000000526218 | GTE PHONE SYSTEM OFFICE | 5-2000 | |
| 000000526384 | FORWARDER WORK STATION 2000 | 2-2000 | |
| [redacted] | | | |
| 000000537785 | WIRELESS BRIDGE | 6-2000 | |
| | 00409628E016 | | |
| 900000045826 | STORAGE CABINET | 11-1970 | |
| 900000256342 | OKIDATA MICROLINE PRINTER | 11-1988 | |
| | 803A0016444 320 | | |
| 900000256954 | SC 42" 4/DRAWER FILE CABINET | 1-1989 | |
| 900000259771 | SC 20X72 UNIT W/4 LAT FILE CAB | 1-1989 | |
| 900000282335 | 4 DR LATERAL FILE CABINET 42" | 6-1990 | |
| [redacted] | | | |
| 900000425529 | MODE WORK STATION FORWARDER | 9-1995 | |
| [redacted] | | | |
| 900000425532 | MODE WORK STATION CLERK | 9-1995 | |
| 900000425533 | MODE WORKSTATION FORWARDER | 9-1995 | |
| 900000425534 | MODE WORKSTATION CLERK | 9-1995 | |
| 910000261878 | SC DESIGN IN WOOD BOOKCASE | 5-1989 | |
| [redacted] | | | |



| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| CLASS 1500 | LAND IMPROVEMENTS | |
| 000000144547 | RAIL TRACKAGE | 3-1982 |
| 000000212205 | #9 TURNOUT-TRACK SWITCH | 7-1986 |
| 000000269432 | RAILWORK 2ND PIT | 8-1989 |
| 000000320481 | T-Y ASPHALT ISLAND | 10-1991 |
| 000000357191 | UPGRADE T4 RAIL TRACKS | 5-1993 |
| 000000378524 | RAIL SPUR | 11-1993 |
| 000000422717 | 14 WOOD FENDER PICINGS | 8-1995 |
| 000000422718 | 28" PIPE PILE | 8-1995 |
| 000000422719 | 16" PIPE PILE | 8-1995 |
| 000000446285 | PAVING AREA A | 8-1996 |
| 000000446286 | PAVING AREA 3 | 8-1996 |
| 000000522072 | MCC UNDERGROUND WIRING | 8-1999 |
| CLASS 2000 | BUILDINGS | |
| [redacted] | | |
| 000000132115 | MCC BLDG.-CONCRETE BLOCK | 12-1980 |
| 000000222702 | OFFICE REMODELING | 2-1987 |
| 000000249303 | LIGHTING-HEAD HOUSE | 7-1987 |
| 000000269388 | 2 OFFICES IN LAB. | 9-1989 |
| 000000353585 | REMODEL OFFICE T4 | 6-1992 |
| 000000370441 | CHEMICAL STORAGE BLDG | 11-1993 |
| 000000392356 | RAILSHED ROOF | 10-1994 |
| 000000411434 | ELECTRICAL ROOM | 1-1995 |
| 000000427498 | RESTROOM REMODEL HEADHOUSE | 1-1996 |
| 000000434470 | CONCRETE PAD | 3-1996 |
| [redacted] | | |
| CLASS 3000 | PLANT EQUIPMENT | |
| 000000015902 | TRUCK DUMP | 12-1956 |
| 000000015908 | CHICAGO BRAKE #812 | 3-1955 |
| 000000015909 | SLIP ROLL NIAGARA #351 | 3-1955 |
| 000000015910 | DOCKAGE TESTER CARTER 192 | 2-1957 |
| 000000015913 | SIEVE SHAKER | 7-1962 |
| 000000015918 | GRN SAMPLER PROBE & VAC 157 | 2-1963 |
| [redacted] | | |
| 000000043220 | HOPPER CAR PIT | 2-1970 |
| 000000043221 | ADD TO PROP NO.43220 IRC 179 | 2-1970 |
| 000000057071 | SPOUTING & CONVEYORS | 5-1969 |
| 000000082704 | DUST COLLECTION STORAGE TANK | 5-1977 |
| 000000086200 | ABARGE RECEIVING SYSTEM | 11-1977 |
| 000000090676 | AIR POLLUTION SYSTEM | 5-1978 |

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| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| 000000121102 | SPRINKLER SYSTEM | 6-1980 |
| 000000122746 | INGERSOLL RAND HU AIR WINCH | 9-1980 |
| 000000132116 | CONTROL PANEL | 12-1980 |
| 000000132117 | MOTOR CONTROL CENTER #1 | 12-1980 |
| 000000132118 | MOTOR CONTROL CENTER #2 | 12-1980 |
| 000000132119 | POWER & CONTROL WIRING | 12-1980 |
| 000000135579 | BIN TOP CROSS BUHLER | 3-1981 |
| 000000144546 | NOLAN CAR MOVER-MCM-52 | 3-1982 |
| 000000174378 | SHIP LOADING SPOON-PECOS | 6-1984 |
| 000000215521 | RAIL CAR OPENER | 11-1986 |
| 000000220155 | 140' OF 24" AUGER | 11-1986 |
| 000000220156 | 10 HYDRAULIC GATES | 11-1986 |
| 000000249919 | TANK 1 FILL VALVE | 5-1988 |
| 000000249920 | ELEC. CONTROL WIRING | 5-1988 |
| 000000249921 | TANK I DIST AUGER | 5-1988 |
| 000000249922 | BIN TOP VIDEO SYSTEM | 5-1988 |
| 000000249923 | BIN EMPTY SENSOR SYSTEM | 5-1988 |
| 000000249924 | BIN TOP MONITOR SYSTEM | 5-1988 |
| 000000249925 | POWER WIRING | 5-1988 |
| 000000249926 | BIN MEASURING SYSTEM | 5-1988 |
| 000000252542 | ADD TO ASST #249926 | 6-1988 |
| 000000255958 | 520 GALLON STORAGE FUEL TANK | 9-1988 |
| [redacted] | | |
| 000000255165 | MARTIN VIBRATOR W/BRACKET | 10-1988 |
| 000000259753 | 2500 LB CAST IRON CLASS "F" TE | 1-1989 |
| 000000259754 | 1000 LB CASTIRON CLASS "F" TES | 1-1989 |
| 000000259755 | 1000 LB CASTIRON CLASS "F" TES | 1-1989 |
| 000000259756 | 1000 LB CAST IRON CLASS "F" TE | 1-1989 |
| 000000259757 | 1000 LB CAST IRON CLASS "F" TE | 1-1989 |
| 000000259758 | 2500 LB CAST IRON CLASS "F" TE | 1-1989 |
| 000000259759 | 2500 LB CAST IRON CLASS "F" TE | 1-1989 |
| 000000259760 | 2500 LB CAST IRON CLASS "F" TE | 1-1989 |
| 000000259761 | 2500 LB CAST IRON CLASS "F" TE | 1-1989 |
| 000000259762 | 2500 LB CAST IRON CLASS "F" TE | 1-1989 |
| 000000259763 | 2500 LB CAST IRON CLASS "F" TE | 1-1989 |
| 000000259764 | 2500 LB CAST IRON CLASS "F" TE | 1-1989 |
| 000000259765 | 2500 LB CAST IRON CLASS "F" TE | 1-1989 |
| 000000259766 | 2500 LB CAST IRON CLASS "F" TE | 1-1989 |
| 000000259767 | 2500 LB CAST IRON CLASS "F" TE | 1-1989 |
| 000000259768 | 2500 LB CAST IRON CLASS "F" TE | 1-1989 |
| 000000259780 | COMPUDRAFT WEIGHING CONSOLE | 1-1989 |
| 000000259781 | OPTICAL ISOLATION RELAY BOX | 1-1989 |
| 000000261348 | CCTV CAMERA & MONITOR | 1-1989 |
| 000000261349 | 6 CAST IRON TEST WEIGHTS | 1-1989 |
| 000000261350 | MISC ELEC WIRE & CABLE | 1-1989 |
| 000000261351 | ALLEN BRADLEY PLC EQUIP | 1-1989 |

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| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| 000000261352 | ELEC PANEL ENCLOSURES | 1-1989 |
| 000000261355 | ISOLATION TRANSFORMERS | 1-1989 |
| 000000262016 | CAR60 DIVIDER | 5-1989 |
| 000000262017 | STAND SIZER | 5-1989 |
| 000000262021 | SEEDBURO TW SCALE & HOPPER | 3-1989 |
| 000000262022 | TORSION BALANCE SCALE | 3-1989 |
| 000000262770 | TRUCK SCALE INSTRUMENT | 1-1989 |
| 000000266338 | 2500 CFM PRESSURIZATION FAN | 6-1989 |
| 000000266529 | DETACHED 12 IN MONITOR | 6-1989 |
| 000000269075 | RHEEM M#RPN00 13 PKGD HEAT PUM | 9-1989 |
| 000000269423 | HOPPER SCALE SYSTEM 7 | 8-1989 |
| 000000269424 | VIDEO MONITOR 2ND PIT | 8-1989 |
| 000000269425 | RAIL REC LEG SYSTEM 7 | 8-1989 |
| 000000269426 | DRAG CONVEYOR #72 | 8-1989 |
| 000000269427 | DRAG CONVEYOR #74 | 8-1989 |
| 000000269428 | CAR PROGRESSOR-SER WH25622 | 8-1989 |
| 000000269429 | CAR OPENER--SER 2034 | 8-1989 |
| 000000269430 | ELECTRICAL POWER WIRING | 8-1989 |
| 000000269431 | SPOUTING SYSTEM 7 | 8-1989 |
| 000000269433 | RAIL REC PIT SYSTEM 7 | 8-1989 |
| 000000272115 | SCREW CONVEYOR-RAIL DUST LDOUT | 11-1989 |
| 000000280891 | COMPUWEIGH 2000 BATCH W&HT INS | 3-1990 |
| 000000299287 | ALLEN BRADLEY PLC EQ | 1-1991 |
| 000000308947 | SCANCENTER HAZARD MONITOR | 1-1991 |
| 000000307637 | COMPUWEIGH SCALE W/PRINTER | 3-1991 |
| 000000307638 | COMPUWEIGH SCALE W/PRINTER | 4-1991 |
| 000000307933 | SAFTRONICS 7.546 DRIVE 7.5HP | 3-1991 |
| 000000307948 | STAR PRNTR GATE BOARD | 1-1991 |
| 000000317053 | T4 STORAGE CONTAINER-60' STEEL | 8-1991 |
| 000000330969 | BARGE MONITOR-CAMERA | 1-1992 |
| 000000336645 | 2-50KVA DRY TYPE TRANSFORMERS | 7-1992 |
| 000000336646 | 2-2000 KVA DRY TYPE TRANSFORME | 7-1992 |
| 000000342608 | COMPUWEIGH 2000 BARGE SCALE | 12-1992 |
| 000000342610 | 500 GAL DIKE TANK | 11-1992 |
| 000000346409 | ALLEN BRADLEY PLC EQUIP | 2-1993 |
| 000000357188 | UPGRADE 7 STORAGE TANK TOPS | 5-1993 |
| 000000357189 | UPGRADE 6 STORAGE TANK BOTTOMS | 5-1993 |
| 000000357190 | UPGRADE T4 STORAGE TANK DRAGS | 5-1993 |
| 000000370422 | DUST LOAD OUT SYSTEM | 11-1993 |
| 000000370423 | ELECTRICAL FOR DUST LOAD OUT | 11-1993 |
| 000000411422 | DUST SEPARATOR (BUHLER) | 1-1995 |
| 000000411425 | CONVEYOR TRAMCO #7 30000BHP | 1-1995 |
| 000000411424 | CONVEYOR TRAMCO #10 10000BHP | 1-1995 |
| 000000411425 | CONVEYOR TRAMCO #65 1600BPH | 1-1995 |
| 000000411426 | CONVEYOR TRAMCO #17 1,600BPH | 1-1995 |
| 000000411427 | CONVEYOR TRAMCO #66 1,600BPH | 1-1995 |

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| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| 000000411428 | CONVEYOR SCREW #8 | 1-1995 |
| 000000411429 | SCREW CONVEYOR #16 | 1-1995 |
| 000000411430 | SCREW CONVEYOR #18 | 1-1995 |
| 000000419493 | ROOF FRONT BIN TOPS | 8-1995 |
| 000000419503 | PIGEON SCREENING | 9-1995 |
| 000000425527 | CLEANER 3 DRIVE | 12-1995 |
| 000000426275 | 63 SODIUM EXPLOSION PROOF LIGH | 1-1996 |
| 000000427502 | TANK ROOFING | 1-1996 |
| 000000434438 | HAZARD MONITORING SYSTEM | 3-1996 |
| 000000434469 | BELT CLEANER | 1-1996 |
| 000000439143 | SLIDE GATE 1 & CONTROLS | 6-1996 |
| 000000439144 | SLIDE GATE 2 & CONTROLS | 6-1996 |
| 000000439145 | SLIDE GATE #3 & CONTROLS | 6-1996 |
| 000000446288 | 40' H C CONTAINER(STORAGE) | 11-1996 |
| 000000446290 | TANK #7 UPGRADE | 8-1996 |
| 000000447805 | HEAD PULLEY WIRING & CONTROLS | 8-1996 |
| 000000448886 | CROVCON PORTABLE GAS MONITOR | 12-1996 |
| 000000448907 | RAILYARD CAMERA & MONITOR | 1-1997 |
| 000000458466 | TANK PULL STATION (1) | 6-1997 |
| 000000458467 | GANTRY RADIO REMOTE CONTROL | 6-1997 |
| 000000458468 | GANTRY RADIO REMOTE CONTROL | 6-1997 |
| 000000458729 | 40' STEEL HIGH CUBE CONTAINER | 7-1997 |
| 000000478557 | TANK PULL STATION #7 | 3-1998 |
| 000000493765 | N PECO DUST REDUCER NOZZLE | 7-1998 |
| 000000504862 | ELEVATED PULL STATION TANK1 | 3-1999 |
| 000000504863 | ELEVATED PULL STATION ON TANK5 | 3-1999 |
| 000000504864 | S. PECO DUST REDUCING NOZZEL | 3-1999 |
| 000000522070 | HIGH VOLT PWR FRM MCC TO DOCK | 8-1999 |
| [redacted] | | |
| 000000522073 | MCC NEW PLC 1999 | [redacted] |
| 000000522074 | 2 TRANSFORMERS SWITCH GEAR | 8-1999 |
| 000000522075 | MCC CONTROL CENTER DOCK | 8-1999 |
| 900000261347 | BATCH WEIGHING SCALE INST | 1-1989 |
| 900000427203 | CLEANER 2 UPGRADE | 1-1996 |
| CLASS 4000 | OFFICE EQUIPMENT | |
| 000000036908 | SAFE | |
| 000000036911 | DESK W/CABINETS | 2-1968 |
| 000000036918 | CONFERENCE DESK-JOFCO | 2-1968 |
| 000000036928 | EXEC DESK-JOFCO | 2-1968 |
| 000000082869 | LUNCHROOM TABLE | 2-1968 |
| 000000136246 | STORAGE SHELVING | 5-1977 |
| 000000189737 | REFRIGERATOR | 8-1981 |
| 000000248746 | TOSHIBA P351 3 IN 1 PRINTER ZA 36462 P 351 | 6-1985 6-1987 |

T4

012 CARGILL, INCORPORATED

PRD

LED 0020 SUB

| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| [redacted] | | [redacted] |
| 000000256953 | SC LATERAL FILE | 1-1989 |
| 000000259775 | UNIDEN REPEATER & ANTENNA N/A ARU251KT | 12-1988 |
| 000000266324 | FALLING HBR LAB CABINETRY | 6-1989 |
| 000000266327 | TELEX 4320 CARAMATE SLIDE PROJ N/A | 6-1989 |
| 000000288537 | MOTOROLA UHF EXPO PORTABLE RAD 446AKJ1152 | 6-1990 |
| 000000307947 | MAINT MGMT SOFTWARE PROGRAM N/A MMP2000 | 12-1990 |
| 000000307949 | VIDEO CAMERA-CCTV SYSTEM 35107492 3825 | 12-1990 |
| 000000355581 | SHIP MONITOR CARGILL 8006233 | 12-1992 |
| 000000355582 | SHIP MONITOR FGIS 8002238 | 12-1992 |
| 000000355583 | SHIP CAMERA NORTH 62201358 | 12-1992 |
| 000000355584 | SHIP CAMERA SOUTH 62201360 | 12-1992 |
| 000000376338 | PRINTER HP4-LASERJET JPBJ075727 | 4-1994 |
| 000000388720 | CABLING LABOR & MATERIALS NA | 12-1995 |
| 000000394547 | HP VECTRA M2 4/66 PC 16M/340MB 3430A02080 | 8-1994 |
| 000000413910 | 486 DX2 COMPUTER 295083 | 6-1995 |
| 000000413911 | 486 DX2 66 COMPUTER 295081 | 6-1995 |
| 000000419673 | PENTIUM COMPUTER-RAIL DSK SERV 295301 | 9-1995 |
| 000000422649 | 486 DX2 COMPUTER 295204 | 7-1995 |
| 000000426274 | NORSTAR PHONE & VOICEMAIL SYST NA | 10-1995 |
| 000000448908 | PC52 HANDHELD RAIL COMPUTER 1240127537 | 1-1997 |
| 000000477921 | MAIN OFFICE DESK/SHELVING SYS | 6-1997 |
| [redacted] | | |
| 000000065613 | GE LOCOMOTIVE UNIT 102478 102461 | 12-1974 |

| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| D00000411445 | FRONT ENDLOADER WALDON 8500C 211644 | 2-1995 |

[redacted]

T4



| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| CLASS 1500 | LAND IMPROVEMENTS | |
| 900000370413 | ADDITION TO PIER 1 | 6-1993 |
| 900000370415 | BARGE FACILITY | 6-1993 |
| 900000370419 | RAILROAD TRACKS | 6-1993 |
| CLASS 2000 | BUILDINGS | |
| 900000370417 | OFFICE BUILDING | 6-1993 |
| CLASS 3000 | PLANT EQUIPMENT | |
| 900000370414 | MOVABLE GANTRIES & SPOUTING | 6-1993 |
| 900000370416 | REVISION OF WORKHOUSE SYSTEMS | 6-1993 |
| 900000370418 | AIR/WATER POLLUTION CTL EQUIP | 6-1993 |
| 900000370420 | PASSENGER ELEVATOR | 6-1993 |

[redacted]

| ASSET NUMBER | DESCRIPTION | ACQ DATE |
|---|---|---|
| CLASS 2000 | BUILDINGS | |
| 900000411437 | BEET PULP PELLET BUILDING | 1-1995 |
| CLASS 3000 | PLANT EQUIPMENT | |
| 900000411417 | PELLET MILL #1 | 1-1995 |
| 900000411418 | PELLET MILL #2 | 1-1995 |
| 900000411419 | PELLET CLEANER #1 (BAUSCH) | 1-1995 |
| 900000411420 | PELLET CLEANER #2 (BAUSCH) | 1-1995 |
| 900000411421 | PELLET COOLER (GEELEN) | 1-1995 |
| 900000411431 | BIN BOTTOMS 341 | 1-1995 |
| 900000411432 | BIN BOTTOMS 383 | 1-1995 |
| 900000411433 | SCREENINGS BIN | 1-1995 |
| 900000411435 | REPETE PELLET MILL CONTROLS | 1-1995 |
| 900000411436 | TANK TEMPERATURE MONITORING | 1-1995 |

[redacted]

T4

**EXHIBIT "C"**

**Rent**

The following is the annual rental breakdown by location:

| | |
|---|---|
| Irving | $1,000,000.00 |
| T4 | -0- |
| Arlington | $ 40,000.00 |
| Boardman | $ 110,000.00 |
| Burbank | $ 80,000.00 |
| Pasco | $ 30,000.00 |
| Dalles | $ 25,000.00 |
| Lewiston | $ 115,000.00 |

$ 6,900.00 taxable personal property
$108,100.00 nontaxable real estate

**TOTAL RENT: $1,400,000.00**

# EXHIBIT D

## Structural and Operational Assessments for Each Cargill Facility

All issues shall be resolved by the responsible party in a reasonable time period except as specifically set forth below:

**Arlington, OR**

| Issue | Party Responsible |
|---|---|
| Headhouse handrail brought to code | Lessor (within 5 years) |
| Hard wire aeration fans | Lessor (within 5 years) |
| Mineral oil add system | Lessor (within 5 years) |

**Boardman, OR**

| Issue | Party Responsible |
|---|---|
| Various guarding issues | Lessor |
| Replace South leg drive reducer | Lessor |
| Add screw take ups on legs | Lessor |
| Mineral oil add system | Lessor (within 5 years) |
| Test well | Lessor |

**Burbank, WA**

| Issue | Party Responsible |
|---|---|
| Bend pulleys on legs need rub blocks | Lessor |
| Bin top hand rails not to code | Lessor (within 5 years) |
| Tank #7 repairs around door | Lessor |
| Big flat storage building repairs | Lessor |
| Hard wire aeration fans | Lessor (within 5 years) |
| Mineral oil add system | Lessor (within 5 years) |
| Test well | Lessor |

**Lewiston, ID**

| Issue | Party Responsible |
|---|---|
| Toe boards, railings, etc. | Lessor |
| Oil leak main leg drive | Lessor |
| Rail fall protection | Lessor (within 5 years) |
| Walkway along bin top screw conveyor or engineered fall-protection | Lessor |

**Pasco, WA**

| Issue | Party Responsible |
|---|---|
| Hazard monitoring , 2 belts not covered in system | Lessor (if facility operates) |
| Handrails guards | Lessor |
| Bank stabilization | Port of Pasco |
| Mineral oil add system | Lessor (within 5 years) |

**Portland, OR (Terminal 4)**

| Issue | Party Responsible |
|---|---|
| Railing on car shed roof | Lessor (within 5 years) |
| Various electrical issues-old wire/conduits | Lessor (within 5 years) |
| Office fire alarm panel - replacement | Lessor (within 5 years) |
| Leg #7 venting | Lessor (within 5 years) |
| All dust system main fans need guards over outlets | Lessor (within 5 years) |
| Rail fall protection | Lessor (within 5 years) |
| Hazard monitoring to Cargill specifications | Lessor (if facility operates) |
| Concrete spalling | Lessor (within 5 years) |
| Dust system high pressure line repairs | Lessor (within 5 years) |
| Paint on steel tanks (lead paint?) | Lessor (within 5 years) |
| Clean up hydraulic leak C-10 motor building + rock | Lessor |

**Portland, OR (Irving)**

| Issue | Party Responsible |
|---|---|
| Truck dump dust returns to leg, needs changed | Lessor |
| Dredging | Lessor $250M if needed and used by 12/31/02. Will be extended if permiting is delayed by regulatory agencies |
| Bioaccumulation testing of dredge spoils | Lessor |

**The Dalles, OR**

| Issue | Party Responsible |
|---|---|
| Guarding issues, mainly handrails | Lessor |
| Minor electrical items | Lessor |
| Load limit on truck trestle, some planks need replaced | Lessor |
| Mineral oil add system | Lessor (within 5 years) |

# EXHIBIT "E"

## Dispute Resolution

1. **Mediation.** If a dispute or disagreement arising out of, or relating to, the formation, interpretation, performance or breach of this Lease or any amendment hereto, exists (a "Dispute"), either party may require the other party to submit the reasons for its position, in writing, and to then enter into good faith negotiations to attempt to resolve the Dispute. If such Dispute cannot be settled by good faith negotiation among the parties within thirty (30) days, either party may require that the Dispute be submitted in writing for resolution to senior management representative of both parties ("Senior Representative"). If such Dispute is not resolved within sixty (60) days of having been submitted to the Senior Representatives, either party may require that the Dispute be resolved in accordance with Section 2 hereinbelow. All negotiations and written statements pursuant to this Exhibit E are confidential and shall be treated as compromise and settlement negotiations for purposes of the U.S. Federal Rules of Evidence and state rules of evidence. If the parties reach agreement pertaining to any Dispute pursuant to the procedures set forth in this Exhibit E, such agreement shall be reduced to writing, signed by the parties and shall be final and binding upon them.

2. **Arbitration.**

(a) If the Dispute cannot be resolved as a result of the negotiations generally described in Section 1 hereinabove above or within such additional time frame as the parties may mutually agree to, the Dispute shall be settled by final and binding arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("AAA"); provided, however, that if such rules are inconsistent with any of the provisions of this Agreement, the terms and conditions of this Agreement shall control. Any such arbitration shall be conducted in Portland, Oregon at a place and time agreed upon by the parties or, failing agreement, selected by the arbitrators.

(b) Any arbitration shall be conducted before a panel of three (3) arbitrators who shall be compensated for their services at a rate to be determined by the AAA in the event the parties are not able to agree on their rate of compensation, but based upon hourly or daily consulting rates for the neutral arbitrator reasonably consistent with such arbitrator's normal charges for fees. Within fifteen (15) business days after notice by any party seeking arbitration under this provision, the party requesting arbitration shall appoint one (1) arbitrator and within fifteen (15) business days thereafter the other party shall appoint the second arbitrator. The persons so appointed shall meet the qualification requirements set forth in Section 2(c) hereinbelow. Within fifteen (15) business days after the appointment of the second arbitrator, the two arbitrators so chosen shall mutually agree upon the selection of the third, impartial and neutral arbitrator who must have knowledge of lease agreements similar to the Lease. In the event the arbitrators cannot agree upon the selection of the third arbitrator, the AAA rules for selection of such an arbitrator shall be followed, provided that the selection is from among such persons who meet the above-stated requirements. Notwithstanding anything to the contrary in the foregoing, for any Dispute for which the amount in controversy is less than $50,000, only one (1) arbitrator shall be used, and shall be selected by written agreement of the parties(or if agreement cannot be reached by the parties, by the AAA).

(c) Each arbitrator so appointed shall have substantial experience and familiarity with the type of business to be conducted by the Company as contemplated by the Business Purpose and lease agreements similar to the Lease.

(d) Each party shall bear its own costs and expenses of arbitration including, but not limited to, filing fees and attorneys' fees and each party hereby agrees to pay its pro rata share of the administrative fees of the AAA and of the compensation to be paid to the arbitrators in any such arbitration and its pro rata share of the of the costs of transcripts and other expenses of the arbitration

proceedings, subject, however, to allocation of costs and expenses (excluding attorneys' fees) by the arbitrators consistent with the award.

(e) The parties shall make available to the arbitrator(s) all non-privileged books, records, schedules and other information reasonably requested by them. Such materials are to be made available to the arbitrator(s) at such times as are deemed necessary by them to make their decision as herein provided.

(f) The arbitrator(s) may conduct any pre-trial proceedings by telephonic conference call rather than by a face-to-face meeting.

(g) The arbitrator(s) shall, prior to rendering their decision on the arbitration matter, afford each party an opportunity, both orally and in writing, to present any relevant evidence (the formal rules of evidence applicable to judicial proceedings shall not apply) and to express, orally and/or in writing that party's point of view and arguments as to the proper determination of the arbitration matter; provided, however, that any party submitting written material shall be required to deliver a copy of such written material to the other party concurrently with the delivery thereof to the arbitrator(s) and such other party shall have the opportunity to submit a written reply, a copy of which shall also be delivered to the other party concurrently with the delivery thereof to the arbitrator(s). Oral arguments shall take place only at a hearing before the arbitrator(s) at which all parties are afforded a reasonable opportunity to be present and be heard.

(h) In the event of a willful default by any of the parties in appearing before the arbitrator(s) after due written notice shall have been given, the arbitrator(s) are hereby authorized to render a decision upon the testimony of the party(ies) appearing before the arbitrator(s).

(i) The arbitrator(s) shall make a decision and award resolving the dispute within forty-five (45) calendar days after the selection of the last arbitrator, or the first arbitrator if only one arbitrator is to decide the dispute; and within fifteen (15) days of the last hearing held concerning such dispute(s).

(j) Any judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof.

(k) Except in the case of Disputes in which the amount in controversy is less than $50,000, within thirty (30) days after the arbitrators make their decision and award, the arbitrators shall render findings of fact and conclusions of law and a written opinion setting forth the basis and reasons for any decision and award rendered by them and deliver such documents to all parties along with a signed copy of the award. For Disputes in which the amount in controversy is less than $50,000, the arbitrator shall, within thirty (30) days after his decision and award, render only a brief opinion in support of the award.

(l) The arbitrator(s) shall have the authority to grant any equitable and legal remedies that would be available in any judicial proceeding instituted to resolve a Dispute, including the award of interim or preliminary relief; provided, however, the arbitrator(s) shall not have the authority to award punitive damages.

(m) The arbitrator(s) chosen in accordance with these provisions shall not have the power to alter, amend or otherwise affect the terms of these arbitration provisions in this Lease or any other agreement entered into between the parties, and shall take into effect to the extent possible the intentions of the parties prior to entering into such agreements.

3. Provisional Remedies. The procedures specified in this Exhibit shall be the sole and exclusive procedures for the resolution of Disputes; provided a party, without prejudice to the mandatory procedures of this Exhibit, may file a complaint for tolling of the statute of limitations, or seek a preliminary injunction or other provisional judicial relief, if in its sole judgment such action is necessary to avoid irreparable damage or to preserve the status quo. Notwithstanding such action, the parties will continue to participate in good faith in the procedures specified in this Exhibit.

4. Tolling Statute of Limitations. All applicable statutes of limitation and defenses based upon the passage of time shall be tolled while the procedures specified in this Exhibit are in process. The parties will take such action, if any, required to effectuate such tolling.

5. Consent to Jurisdiction; Service of Process. SUBJECT TO SECTIONS A AND B SET FORTH HEREINABOVE, EACH PARTY HEREBY IRREVOCABLY AND UNCONDITIONALLY:

(a) AGREES THAT ANY ACTION, SUIT OR PROCEEDING BY EITHER PARTY ARISING FROM OR RELATING TO ANY DISPUTE MAY BE BROUGHT IN ANY STATE OR FEDERAL COURT OF COMPETENT JURISDICTION SITTING IN THE STATE OF OREGON, TO THE EXCLUSION OF ANY OTHER POTENTIAL STATES HAVING JURISDICTION, AND SUBMITS TO THE JURISDICTION OF SUCH COURTS SOLELY FOR SUCH PURPOSE;

(b) WAIVES ANY OBJECTION WHICH IT MAY HAVE AT ANY TIME TO THE LAYING OF VENUE OF ANY SUCH LITIGATION BROUGHT IN ANY SUCH COURT, WAIVES ANY CLAIM THAT ANY SUCH LITIGATION HAS BEEN BROUGHT IN AN INCONVENIENT FORUM, AND WAIVES ANY RIGHT TO OBJECT, WITH RESPECT TO ANY SUCH LITIGATION BROUGHT IN ANY SUCH COURT, THAT SUCH COURT DOES NOT HAVE JURISDICTION OVER SUCH PARTY; AND

(c) CONSENTS AND AGREES TO SERVICE OF ANY SUMMONS, COMPLAINT OR OTHER LEGAL PROCESS IN ANY SUCH LITIGATION BY REGISTERED OR CERTIFIED U.S. MAIL, POSTAGE PREPAID, TO SUCH PARTY AT THE ADDRESS FOR NOTICES SET FORTH IN THE LEASE, AND CONSENTS AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE IN EVERY RESPECT VALID AND EFFECTIVE SERVICE (BUT NOTHING HEREIN SHALL AFFECT THE VALIDITY OR EFFECTIVENESS OF PROCESS SERVED IN ANY OTHER MANNER PERMITTED BY LAW).

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Form Approved, AVP-Law

Form 5

Folder No.: 714-53

ASSIGNMENT

CARGILL, INC. a Delaware corporation to be addressed at P.O. Box 5624 ("Assignor"), and UNION PACIFIC RAILROAD COMPANY, a Delaware corporation, ("Railroad"), or their predecessors in interest, have heretofore entered into an agreement dated ~~February 1, 1996~~ January 10, 1977 HBC, bearing Railroad's Audit Number 125926 (hereinafter "Basic Agreement") covering trackage located at Portland (Albina), Oregon.

Effective as of December 3, 2001, the Assignor does hereby sell, assign, transfer and set over, unto CLD PACIFIC GRAIN, LLC, to be addressed at 222 SW Columbia, Suite 1133, Portland, OR 97201 ("Assignee") all of Assignor's right, title and interest in and to the Basic Agreement including any supplement or amendment thereto (if any).

The Assignee hereby accepts the above assignment and agrees to be bound by and to perform and observe fully and faithfully all of the covenants, stipulations and conditions contained in the Basic Agreement and any supplement or amendment thereto (if any) to be performed and observed by the Assignor and assumes all liabilities and obligations mentioned in the Basic Agreement and any supplement or amendment thereto (if any) to be assumed by the Assignor.

The Railroad, in consideration of the covenants and agreements of the Assignor and the Assignee herein contained, gives its consent to the aforesaid assignment; PROVIDED, however, that such consent shall not be deemed or construed to authorize any further assignment of the Basic Agreement, whether voluntary, by operation of law, or otherwise, without the prior consent in writing of the Railroad; and PROVIDED, FURTHER, that, as between the Assignor and the Railroad, Railroad agrees that Assignor is released and discharged from the performance of the obligations of Assignor under the Basic Agreement insofar as they relate to the period from and after December 3, 2001, provided, however, that in no event shall Assignor be released and discharged from any obligations under the Basic Agreement arising prior to December 3, 2001.

The Assignee, when returning this agreement signed by the Assignor and Assignee, shall pay to Railroad an administrative handling charge of $500.00.

Executed this 9th day of January, 2002.

UNION PACIFIC RAILROAD COMPANY,

By Gary B. Collins
Director – Real Estate

CARGILL, INCORPORATED

X _____ - Assignor

CLD PACIFIC GRAIN, LLC,

X _____ - Assignee

# CARGILL, INCORPORATED
## LAW DEPARTMENT

Mailing Address:
P.O. Box 5624
Minneapolis, MN 55440-5624

Location/Shipping Address:
15407 McGinty Road West
Wayzata, MN 55391-5624

Facsimile:
(952) 742-6349
or (952) 742-7503

**Marilynn W. Paulson**
**Senior Paralegal**
Phone: (952) 742-6276

Marilynn_Paulson@cargill.com


February 11, 2002

Mr. Arnie Schaufler
CLD Pacific Grain, LLC
222 SW Columbia, Suite 1133
Portland, OR 97201

RE: Cargill/Louis Dreyfus

Dear Arnie:

Enclosed for your file is an original, fully executed Consent to Assignment from Union Pacific for the roadbed encroachment at Portland.

If you have any questions, please contact me.

Very truly yours,

Marilynn

Marilynn W. Paulson
Senior Paralegal

MWP
Enclosure
260522
cc: C. W. Putnam/Law/24
Ms. Ruby H. Melton
Assistant General Counsel
Louis Dreyfus Holding Company, Inc.
Ten Westport Road
Wilton, CT 06897-0810 (w/encl.)

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Folder No: 714-53
Audit No: 125926

# ASSIGNMENT

THIS AGREEMENT is entered into on February 1, 1996, between UNION PACIFIC RAILROAD COMPANY("Lessor") and BUNGE CORPORATION, a New York corporation ("Assignor").

RECITALS:

By instrument dated January 10, 1977, Lessor and Assignor, or their predecessors in interest, entered into an agreement ("Basic Agreement"), identified as Audit No. 125926, at Portland (Albina), Oregon.

AGREEMENT:

Effective July 14, 1995, Assignor assigns all of Assignor's right, title and interest in and to the Basic Agreement, including any supplement or amendment (if any) to CARGILL, INC., a Delaware corporation ("Assignee") whose address is P. O. Box ~~5624~~ 5606 Minneapolis, MN 55440-5606.
CARGILL GRAIN DIVISION

Assignee accepts the above assignment and agrees to be bound by all of the terms and conditions contained in the Basic Agreement and any supplement or amendment (if any).

Lessor gives its consent to this assignment. This consent does not authorize any further assignment of the Basic Agreement, whether voluntary, or otherwise, without the prior written consent of Lessor. In the event of default by Assignee, Assignor shall be bound by and shall perform all of the obligations of the Basic Agreement.

ADMINISTRATIVE HANDLING CHARGE:

Upon execution of this Assignment, Assignor shall pay Lessor an administrative handling charge of One Hundred Dollars ($100.00).

IN WITNESS WHEREOF, the parties have executed this Assignment as of the day and year first herein written.

UNION PACIFIC RAILROAD COMPANY

By: _____
Manager - Real Estate

BUNGE CORPORATION

By: _____
Assignor

CARGILL, INCORPORATED

By: _____
~~Sr. Legal Assistant~~
Assignee
Don Vogt, Vice President
Cargill Grain Division

Portland, OR
510.0002

CARG002622

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Bc 15247 $203,335.00
6-77

RAIL AD'S COUNTERPART

WO 72063

INDUSTRY TRACK CONTRACT
covering construction,
maintenance and operation,
Portland (Albina), Oregon
PLD 9005-34-1.2

U. P. R. R. Co.
Agreement
Audit No. 125926

THIS AGREEMENT is made and entered into this 10th day of January, 1977, by and between OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, an Oregon corporation, and its lessee, UNION PACIFIC RAILROAD COMPANY, a Utah corporation (hereinafter collectively called "Railroad Company"), and BUNGE CORPORATION, a New York corporation (hereinafter called "Industry").

RECITALS:

The Industry desires the construction of new trackage, relocation of certain existing trackage, and maintenance and operation of industry spur trackage totaling 5,343.7 feet in length (hereinafter called "Track") at Portland (Albina), in Multnomah County, Oregon, in the locations indicated on the two prints dated December 9, 1976, marked Exhibit "A", attached hereto and by this reference made a part hereof, which Track the Railroad Company is willing to construct, relocate, maintain and operate upon the terms and conditions hereinafter set forth. The Industry also desires to acquire a salvage interest in portions of trackage owned by the Railroad Company no longer required by the Railroad Company for railroad purposes.

NOW, THEREFORE, IT IS MUTUALLY AGREED by and between the parties hereto as follows:

Section 1. PAYMENT OF BILLS.

The Industry shall pay the Railroad Company the sum of TWO HUNDRED THREE THOUSAND THREE HUNDRED THIRTY-FIVE AND NO/100 DOLLARS ($203,335.00), being the firm amount of that portion of the cost incident to the construction and relocation of the Track by the Railroad Company and the acquisition of salvage interest which the Industry is to bear as herein provided. If construction is completed in one (1) month or less, the Railroad Company shall bill the Industry for the entire sum. If construction is not completed in one (1) month or less, the Railroad Company shall bill the Industry in installments based on the percentage of completion for each month during the construction period. Bills for expense properly chargeable to the Industry shall be paid by the Industry within thirty (30) days after presentation by the Railroad Company.



ENTERED
1-13-88

CARG002624

Section 2. CONSTRUCTION, MAINTENANCE AND OPERATION.

The Railroad Company has constructed, at its own expense, that portion of the Track between points "A" and "B", being a distance of 126.7 feet, as indicated by yellow line on Exhibit "A".

The Railroad Company shall relocate, relay, or construct, as shown on Exhibit "A", at the cost of the Industry, those portions of the Track lying beyond point "B" as indicated by green, pink, orange, dashed red and orange, dashed red and yellow, red and orange, and dashed black lines on Exhibit "A", except the grading therefor, which grading shall be performed by and at the expense of the Industry. The work to be performed by the Railroad Company, at the expense of the Industry, is set forth in more detail, with cost figures, in Section 17 of this agreement.

The Industry shall also bear the cost of such incidental work (including changes in, or additions to, the Railroad Company's existing tracks and structures, other than track changes connected with the turnout) as may be necessitated by the construction and operation of the Track.

The Railroad Company shall, at its own expense, maintain the Track, except such portion thereof (if any) as may be used for intraplant switching, which portion shall be maintained at the expense of the Industry; PROVIDED, however, that the expense to be borne by the Railroad Company for the maintenance of that part of the Track not owned by it shall be limited strictly to expense incurred in the maintenance of the track structure only, and all other expense for the Industry-owned portion of the Track and its appurtenances, such as, but not limited to, expense for installation, maintenance, removal or replacement of paving, walkways, gates, fences, grading, drainage, signs and other protection, and the cost of a major relay and of a major tie renewal shall be borne by the Industry. For the purposes of this agreement, the term "major rail relay" shall be understood to mean rail renewals requiring replacement of ten (10) or more rails in any one track, and the term "major tie renewal" shall be understood to mean the tie renewals requiring replacement of four (4) or more ties in any thirty-nine (39) consecutive feet of track.



CARG002625

Upon completion of the construction of the Track, the Railroad Company shall operate the same for the term of this agreement, subject to, and to the extent as contemplated by, lawful tariffs applicable thereto, with the understanding, however, that the Railroad Company shall not be obligated to operate the Track if it shall be prevented or hindered from so doing by acts of God, public authority, strikes, riots, labor disputes, or by any cause beyond its control.

Section 3. RIGHT OF WAY.

The Industry shall first procure and furnish, without expense to the Railroad Company, all public authority and permission and an easement for all right of way outside the limits of the property of the Railroad Company which are necessary for the construction, maintenance or operation of the Track.

Section 4. DEFINITION OF COST.

Except where "firm cost" has been agreed upon, "cost" for the purpose of this agreement shall be all assignable costs. Material shall be charged at its current value when and where used.

Section 5. EXPENSE FOR PRIVILEGE.

The Industry shall pay all compensation and assessments required at any time by any municipality, public authority, corporation, firm or person for the privilege of constructing, maintaining and operating the Track.

Section 6. OWNERSHIP OF TRACK.

The Railroad Company shall own all that portion of the Track located within the limits of its right of way and within the limits of any public streets and/or alleys where the strip of land occupied by the Track in such streets and/or alleys forms one continuous area with the right of way of the Railroad Company; but, upon the discontinuance of the use of the Track for handling shipments to and from the Industry, if that event shall occur subsequent to the date of the completion of the payment(s) to be made by the Industry under the provisions of Section 1 hereof, the Railroad Company shall pay to the Industry the then salvage value of the usable material originally paid for by the Industry or its predecessors in interest contained in that



CARG002626

part of the Track owned by the Railroad Company beyond the clearance point (if any), less the cost of recovering it.

The portion of the Track to be owned by the Railroad Company is shown on Exhibit "A".

The remainder of the Track (if any) shall be owned by the Industry.

Section 7. RIGHT OF RAILROAD COMPANY TO USE.

The Railroad Company shall have the right to use the Track when not to the detriment of the Industry. The Industry shall have the right to use the Industry's car puller on the Track in such manner as will not interfere with or endanger the operations of the Railroad Company on the Track or in the vicinity of the Track. The car puller shall be an "impairment" for purposes of Section 8 of this agreement.

Section 8. CLEARANCES; INDEMNITY FOR IMPAIRED CLEARANCES.

No building, platform or other structure shall be erected or maintained and no material or obstruction of any kind or character shall be placed, piled, stored, stacked or maintained closer than eight (8) feet six (6) inches to the center line of the Track; PROVIDED, however, that in the case of platforms not higher than four (4) feet above the top of the rail, a minimum clearance of seven (7) feet three (3) inches from the center line of the Track will be permitted; and PROVIDED further that along and adjacent to and for one car length beyond all portions of the Track having a curvature greater than ten (10) degrees, the clearances hereinbefore provided shall, with reference to platforms four (4) feet or less in height, be increased horizontally six (6) inches, and, with reference to all buildings, platforms, structures and other obstructions greater than four (4) feet in height, shall be increased horizontally one (1) foot; and PROVIDED further that if by statute or order of competent public authority greater clearances shall be required than those provided for in this Section 8, then the Industry shall strictly comply with such statute or order. All doors, windows or gates shall be of the sliding type or shall open toward the inside of the building or enclosure when such building or enclosure is so located that such doors, windows or gates, if opening outward, would, when opened, impair the clearances in this section prescribed.



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The Railroad Company shall consider requests of the Industry to impair clearances which are necessitated by the operational requirements of the Industry, but the Railroad Company shall not be obligated to consent to any impairment. Any necessary permission to impair clearances to which the Railroad Company has consented must be secured by the Industry at the Industry's own expense, in advance of any impairment; and the Industry shall comply promptly and strictly with all requirements or orders issued by appropriate statute or other public authority relating to such impairments. Subject to the foregoing provisions of this section, the Railroad Company hereby consents that the Industry may maintain certain facilities with clearances less than above specified, as shown on cross-sectional detail drawing "A-A" on Exhibit "A".

The Industry assumes the risk of and shall indemnify and hold harmless the Railroad Company, its officers, agents and employees, against and from all loss, damage and injury to the person or property of the parties hereto and their employees and agents, and to the person or property of any other person or corporation, resulting from the Industry's noncompliance with the provisions of this Section 8, or resulting directly or indirectly from any impairment of the clearances described in this Section 8, whether the Railroad Company had notice thereof or consented thereto, whether caused or contributed to in whole or in part by the negligence of the Railroad Company, its officers, agents or employees, and whether authorized by applicable state or other public authority pursuant hereto, or existing without compliance with the provisions of this Section 8.

The Industry shall not locate or permit the location or erection of any beams, pipes, wires or other obstructions over or under the Track without the written consent of the Railroad Company.

Section 9. LIABILITY.

It is understood that the movement of railroad locomotives involves some risk of fire, and the Industry assumes all responsibility for and agrees to indemnify the Railroad Company, its officers, agents and employees, against loss or damage to property of the Industry or to property upon the Industry's premises, regardless of the negligence of the Railroad Company, its officers, agents or employees, arising from fire caused by locomotives operated by the Railroad Company on the Track, or in its vicinity, for the



CARG002628

purpose of serving the Industry, except to the premises of the Railroad Company and to rolling stock belonging to the Railroad Company or to others, and to shipments in the course of transportation.

The Industry also agrees to indemnify and hold harmless the Railroad Company, its officers, agents and employees, for loss, damage or injury from any act or omission of the Industry, its employees or agents, to the person or property of the parties hereto and their employees and agents, and to the person or property of any other person or corporation, while on or about the Track; and if any claim or liability other than from fire shall arise from the joint or concurring negligence of the parties hereto (or of any two or more of them if there be more than two), it shall be borne equally by the parties at fault, except as provided in Section 8 hereof.

Section 10. REARRANGEMENT OF TRACK; ADDITIONAL TRACKAGE.

The Railroad Company may rearrange or reconstruct the Track or modify the elevation thereof whenever necessary or desirable in connection with the improvement of its property or changes in its tracks at or near the location of the Track, provided that the Industry shall continue to have similar trackage without additional cost to the Industry. In the event, however, that a change, rearrangement, reconstruction or modification of the Track, or its appurtenances, is required by reason of or as a result of any law, ordinance or other public enactment or regulation, or by reason of the happening of any contingency over which the Railroad Company has no control, then the Industry shall bear the cost thereof. Nothing in this section contained shall in any way affect the right of the Railroad Company to terminate this agreement under the conditions set forth in subparagraph (c) of Section 12 hereof.

In the event the Track is rearranged, altered or extended, or additional trackage is constructed to serve the Industry, the rearranged, altered, extended or additional trackage shall be subject to all the terms and conditions of this agreement, and all references to the Track shall include and be deemed to apply thereto.



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Section 11. GOVERNMENTAL RESTRICTIONS.

This agreement is made in full contemplation of all applicable restrictive orders and regulations of the United States Government now or hereafter in effect, and, accordingly, it is expressly conditioned upon the ability of the Railroad Company to secure and furnish labor and materials and to secure any necessary authority to perform the work.

Section 12. TERMINATION.

The Railroad Company, after giving sixty (60) days' written notice to the Industry of its intention so to do, may terminate this agreement and take up and remove that portion of the Track owned by it, if

(a) the Industry ceases for a continuous period of one year the doing of business in an active and substantial way over the Track;

(b) the Industry shall fail to keep each and every obligation, condition and stipulation stated in or resulting under this agreement; or

(c) the Railroad Company is required by law, ordinance or police regulations, or changed conditions, to elevate or depress or otherwise change its tracks at or near the location of the Track, so as to make it impracticable, in the judgment of the Railroad Company, to continue the operation of the Track.

Section 13. ASSIGNMENT; USE BY THIRD PARTIES.

The Industry shall not assign this agreement or any interest therein or permit use of the Track by anyone other than the Industry without the written consent of the Railroad Company, and for any departure in this respect, the Railroad Company may terminate this agreement. Such consent shall not be unreasonably withheld.

Section 14. SUCCESSORS AND ASSIGNS.

Subject to the provisions of Section 13 hereof, this agreement shall be binding upon and inure to the benefit of the parties thereto, their successors and assigns.



CARG002630

Section 15. WALKWAYS.

The Industry at all times shall construct, maintain and keep in in a clear and safe condition, walkways along both sides of the Track (except the portion of the Track between the switch point and clearance point, which shall be the responsibility of the Railroad Company). Said walkways shall in all respects conform to standards prescribed by the Public Utility Commissioner of Oregon ("Commissioner"). The Industry assumes the risk of and shall indemnify and hold harmless the Railroad Company, its officers, agents and employees, against and from all loss, damage and injury to the person or property of the parties hereto and their employees and agents, and to the person or property of any other person or corporation resulting from the Industry's failure to construct, maintain or keep said walkways in a clear and safe condition or resulting from the Industry's noncompliance with rules, regulations or orders of or standards prescribed by the Commissioner relating to walkways for which the Industry is responsible pursuant hereto, whether or not the Railroad Company had notice of the Industry's said default or of any defect in said walkways.

Section 16. TERMINATION OF PRIOR AGREEMENT.

This agreement supersedes and replaces Industry Track Contract C.D. No. 38943-5, Audit No. 106473, dated January 3, 1963, between the Railroad Company and Peavey Company (predecessor in interest to the "Industry" herein), and said agreement dated January 3, 1963 is terminated as of the date hereof; PROVIDED, however, that such termination shall not affect any of the rights or obligations of the parties to said agreement which may have accrued, or liabilities, accrued or otherwise, which may have arisen prior thereto.

Section 17. ADDITIONAL PROVISIONS REGARDING WORK AND PAYMENT THEREFOR.

It is understood by the parties that Exhibit "A" attached hereto is a preliminary drawing of the track work and track ownership contemplated by this agreement, and that upon completion of the track work, the Railroad Company shall prepare a final Exhibit "A" representing the actual track work as constructed.



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The Railroad Company shall undertake to construct those portions of Tracks Nos. A-305 and A-306 shown on Exhibit "A" located on the Industry's property as close to the eastern boundary of the Industry's property as is feasible for safe and efficient operation. If the construction of these tracks in this manner increases the actual cost of the work to be performed by the Railroad Company, the Industry agrees to pay the additional expense.

The Railroad Company shall undertake, to the extent it is feasible for safe and efficient operation, to relay Track No. 224 in such a manner that there will be no clearance impairment created by the new silos which the Industry has recently constructed. If construction in this manner increases the actual cost of the work to be performed by the Railroad Company, the Industry agrees to pay the additional expense.

For purposes of Section 1 of this agreement, "firm amount" or "firm cost" shall be broken down as follows, with the adjustments discussed in this Section 17:

(Grading and asphaltic concrete by the Industry)

| | |
|---|---|
| 75' incl #7 TO on R/W (paving type) L-1212 W-15848 | $ 17,060 |
| 75' incl #7 TO on R/W 5 ea at 9,120 | 45,600 |
| 89' incl #9 TO on R/W 1 ea at 10,534 | 10,534 |
| Track on R/W 656' at 26.57 | 17,430 |
| 75' incl #7 TO off R/W 1 ea at 9,366 | 9,366 |
| Track off R/W 1515' at 28.13 | 42,617 |
| Shift track 50' L-135 M-11 | 146 |
| Relocate track 221' L-1722 M-1023 | 2,745 |
| Relay 780 TF L-4467 M-5546 | 10,015 |
| Relocate #7 TO L-1245 M-1193 | 2,438 |
| Reballast 600 CY L-1620 M-1050 | 2,670 |
| Relay 431 TF thru 4 TOs at 23.17 | 9,986 |
| Replace crossties 400 ea L-1200 M-5000 | 6,200 |
| Comp. Jt 133#/90# 2 ea M-280 | 280 |
| Labor additives 45% | 5,221 |
| Contingencies | 3,097 |
| TOTAL | $185,405 |
| Current market value of track ED-224 824.3' and ED-225, 910.8' incl 2 TOs | 17,930 |
| GRAND TOTAL TO BE PAID BY INDUSTRY | $203,335 |



CARG002632

The parties contemplate that adjustments in the "firm amount" or "firm cost" shall be necessary in the following areas:

(1) to construct or relay Tracks Nos. A-305, A-306 and 224 as hereinabove provided in this Section 17, which changes are likely to increase the length of said tracks over the lengths shown on Exhibit "A" and quoted in the breakdown above;

(2) to allow the Industry a deduction related to the approximately 155 feet of Track No. 224 located inside the car shaker and car tipper, which 155 feet is shown on Exhibit "A" and in the above breakdown as track to be relayed by the Railroad Company, but which will be relayed by the Industry at the Industry's expense; and

(3) to allow the Railroad Company additional sums for the cost of eight connecting joints, which cost approximately $140 apiece, which joints will be required due to the use of rails of different heights inside the car shaker and car tipper.

The Railroad Company shall proceed as expeditiously as possible after execution of this agreement by the Industry to assemble materials and ship them to the construction site. The track work contemplated by this agreement shall be completed in approximately 90 days after execution of this agreement by the Industry, it being the understanding of the Railroad Company that the Industry needs the work completed as expeditiously as possible for the Industry's operations, and it being the understanding of the Industry that the Railroad Company shall not be held responsible under this agreement for any delays which arise from events over which the Railroad Company has no control, including, but not limited to, strikes, material shortages, and acts of God.



CARG002633

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed, in duplicate, as of the date first herein written.

OREGON-WASHINGTON RAILROAD
& NAVIGATION COMPANY
UNION PACIFIC RAILROAD COMPANY

By _____
Assistant Vice President

ATTEST: (Seal)

BUNGE CORPORATION

_____
Notary Public

By _____
Vice-President



CARG002634

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AR 861215
Form Approved, AVP-Law

Form 5

Folder No.: 714-52

ASSIGNMENT

CARGILL, INC. a Delaware corporation to be addressed at P.O. Box 5624 ("Assignor"), and UNION PACIFIC RAILROAD COMPANY, a Delaware corporation, ("Railroad"), or their predecessors in interest, have heretofore entered into an agreement dated ~~February 1, 1996,~~ bearing Railroad's Audit Number 135193 (hereinafter "Basic Agreement") covering trackage located at Albina, Oregon April 14, 1983 HBC

Effective as of December 3, 2001, the Assignor does hereby sell, assign, transfer and set over, unto CLD PACIFIC GRAIN, LLC, to be addressed at 222 SW Columbia, Suite 1133, Portland, OR 97201 ("Assignee") all of Assignor's right, title and interest in and to the Basic Agreement including any supplement or amendment thereto (if any).

The Assignee hereby accepts the above assignment and agrees to be bound by and to perform and observe fully and faithfully all of the covenants, stipulations and conditions contained in the Basic Agreement and any supplement or amendment thereto (if any) to be performed and observed by the Assignor and assumes all liabilities and obligations mentioned in the Basic Agreement and any supplement or amendment thereto (if any) to be assumed by the Assignor.

The Railroad, in consideration of the covenants and agreements of the Assignor and the Assignee herein contained, gives its consent to the aforesaid assignment; PROVIDED, however, that such consent shall not be deemed or construed to authorize any further assignment of the Basic Agreement, whether voluntary, by operation of law, or otherwise, without the prior consent in writing of the Railroad; and PROVIDED, FURTHER, that, as between the Assignor and the Railroad, Railroad agrees that Assignor is released and discharged from the performance of the obligations of Assignor under the Basic Agreement insofar as they relate to the period from and after December 3, 2001, provided, however, that in no event shall Assignor be released and discharged from any obligations under the Basic Agreement arising prior to December 3, 2001.

The Assignee, when returning this agreement signed by the Assignor and Assignee, shall pay to Railroad an administrative handling charge of $500.00.

Executed this 9th day of January, 2002

UNION PACIFIC RAILROAD COMPANY,

By Gary B. Collins
Director – Real Estate

CARGILL, INCORPORATED

X _____ - Assignor

CLD PACIFIC GRAIN, LLC,

X _____ - Assignee

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# ASSIGNMENT AND ASSUMPTION AGREEMENT

This ASSIGNMENT AND ASSUMPTION AGREEMENT (the "Assignment"), is entered into and made effective as of the 3rd day of December, 2001 (the "Effective Date") by and between Cargill, Incorporated, a Delaware corporation ("Assignor"), and CLD Pacific Grain, LLC, a Delaware limited liability company (the "Assignee").

WHEREAS, Assignor and Louis Dreyfus Corporation, a Delaware corporation ("LDC"), have entered into that Limited Liability Company Agreement dated December 3, 2001 (which together with the exhibit and schedules thereto is hereinafter referred to as the "Agreement") under which Assignor and LDC are members of Assignee;

WHEREAS, in connection with the Agreement, Assignor and LDC desire that Assignor assign the assignable agreements, permits and open contracts identified on the Exhibits attached hereto which are incorporated herein (hereinafter the "Assignable Agreements", the "Permits" and the "Open Contracts"), and that the Assignee assume from Assignor all rights and obligations relating to the Assignable Agreements, Permits and Open Contracts identified on the Exhibits attached hereto.

NOW, THEREFORE, in consideration of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Assignor does hereby assign to Assignee all of Assignors' right title and interest in, to and under the Assignable Agreements described in Exhibit A attached hereto, the Permits described in Exhibit B attached hereto, and the Open Contracts described in Exhibit C attached hereto (collectively, the "Assumed Obligations"):

2. Assignee hereby assumes the Assumed Obligations and agrees to pay, perform, fulfill and discharge the Assumed Obligations from and after the Effective Date.

3. Payment obligations under the Assignable Agreements shall be prorated between Assignor and Assignee as of the Effective Date.

4. Assignee acknowledges that as of the Effective Date Assignor has not received consents to assignment for certain agreements requiring such consent. Assignor hereby agrees to diligently pursue receipt of all required consents.

5. This Assignment shall bind and shall inure to the benefit of Assignors and Assignees and their respective successors and permitted assigns.

6. This Assignment may be executed in several counterparts, each of which shall be deemed an original, and all of such counterparts together shall constitute one and the same instrument.

**IN WITNESS WHEREOF**, the parties hereto have executed this Assignment and Assumption Agreement on the date first above written.

**ASSIGNOR:** **CARGILL, INCORPORATED**

**By:**_____
**Name: Don Vogt**
**Its: Vice President, U. S. Ag Producer Services Business Unit**

**ASSIGNEE:** **CLD PACIFIC GRAIN, LLC**

**By:**_____
**Name: Arnie Schaufler**
**Its: General Manager**

# EXHIBIT A

## Assignable Agreements

### Portland

1. Private Roadway Encroachment Audit No. 105268 (A-92381) – Union Pacific and Bunge dated October 17, 1977.
2. Industry Track Agreement Audit No. 125926 dated January 10, 1977 between Oregon-Washington Railroad & Navigation Company, UP and Bunge.
3. Industry Track Agreement No. 135193 dated October 19, 1983 between Oregon-Washington Railroad & Navigation Company, UP and Bunge.
4. License Agreement between Cargill as Lessor and Terminal Flour Mills dated September 6, 1957.
5. Tug Services Agreement with Shaver Transportation dated July 28, 2000.
6. Serv U-1st Cleaning Purchase/Work Order
7. Uniform Rental Agreement with Cintas.
8. Locomotive Lease with Samuel Investment Properties, LLC.

### Burbank

9. Berthage Agreement by and between Port of Walla Walla and Cargill.
10. Agreement for Funding Grain Terminal and Barge Dock Improvements with Shaver Transportation
11. Renewed Barge Freight Agreement with Shaver.
12. Letter of Understanding with Shaver.
13. Grain Barging Agreement with Foss Maritime.
14. Grading Services Contract with Inspectorate.
15. Federal Grain Inspection Service Contract with US Dept. of Agriculture.
16. GTE/Verizon Maintenance Agreement and phone system.
17. Pitney Bowes Credit Corporation – copier rental.
18. Pitney Bowes Credit Corporation – Panasonic fax machine.
19. Pitney Bowes Credit Corporation – postage meter.

### Lewiston/Burbank/Pasco

20. Incremental Volume Incentive Agreement with Schultz Grain & Trading Co., Inc.
21. Volume Incentives Agreement with Alomoto Elevator.
22. Xerox Copier Service Agreement.

### Lewiston

23. Xerox – copier.
24. Black & Vails – fax machine rental.
25. Pitney Bowes Credit Corporation – postage meter.

# EXHIBIT B

## Permits

### Burbank

1. WA Dept. of Labor and Industries Operating Permit for elevator – 095201
2. FCC Radio License WPAX927

### Boardman

1. US Dept. of Labor – OSHA – Certificate of Unit Test and/or Examination of Crane, Derrick or other Material – for bulk loading spout – Cert.# 16819
2. WA Dept. of Agriculture License – Scale Type – 71361
3. State of OR Permits to Operate Elevator – 8215, 8216
4. FCC Radio License KB77404

### The Dalles

1. FCC Wireless Telecommunication Bureau – License KB78178
2. City of The Dalles Alarm Permit 0246
3. OR Dept. of Agriculture – Device License – Scale Type – 100632 103710
4. OR Dept. of Environmental Quality – Annual Air Contamination Discharge Permit – 33-0027

### Arlington

1. Dept. of Consumer and Business Services – Elevator Inspection
2. OR Dept. of Agriculture – Device License – Scale Type – 71363
3. OR Dept. of Environmental Quality – Annual Air Contamination Discharge Permit – 016602
4. US Dept. of Labor – OSHA – Certificate of Unit Test and/or Examination of Crane, Derrick or other Material – for bulk loading spout – 16821
5. FCC Radio License KB77404

### Lewiston

1. State of Idaho Dept. of Environmental Quality – Permit to Operate – PTC 069-00011 – also includes Permit to Construct regarding air pollution emitting source
2. WA Department of Labor and Industries – Elevator Section – Elevator Five Year Safety Test Report for barge tower (x2) and for main building
3. ID Department of Agriculture – Bureau of Weights and Measures – for two scales
4. FCC Radio License KB34621

5. US Dept. of Labor – OSHA – Certificate of Unit Test and/or Examination of Crane, Derrick or other Material – for bulk loading spout – Cert.# 1026-01
6. Western States Fire Protection annual inspection of dry standpipes

**Portland**

1. Alarm Permit
2. Hazardous Substance Permit
3. Air Discharge Permit
4. Pressure Vessel Permit
5. 3 FCC Radio Licenses – KA96089; KZT964; and WQX399
6. Dredging Permit
7. Scale Permit
8. Dust Emissions Permit
9. Ship Spouts Permit
10. Barge Leg Boom Permit
11. Elevator Permit
12. Storm Water Discharge Permit

**Pasco**

None

December 1, 2001

Sold To:
CLD Pacific Grain, LLC
222 S.W. Columbia St. Ste 1133
Portland, OR 97201

| Physcial Inventory | Total Bushels | Total Amount |
|---|---|---|
| Dark Northern Spring Wheat | 1,626,128 | $6,549,095.25 |
| Hard Red Winter Wheat | 547,322 | $1,986,585.80 |
| Durum | 13,268 | $46,438.00 |
| Soft White Wheat | 2,613,954 | $9,210,105.87 |
| White Club Wheat | 165,057 | $596,524.00 |
| Barley | 40,475 | $85,934.30 |
| Yellow Corn | 383,718 | $952,482.53 |
| Total Inventory | 5,389,922 | $19,427,165.75 |
| | | |
| Unpaid/Uncollected Inventory | | |
| Dark Northern Spring Wheat | -134,462 | ($452,175.28) |
| Hard Red Winter Wheat | -115,214 | ($409,705.36) |
| Soft White Wheat | -2,171,038 | ($7,643,208.93) |
| White Club Wheat | -74,090 | ($270,002.92) |
| Barley | -12,000 | ($26,681.72) |
| Grain Dust | 2,159 | $43.00 |
| Wheat Screenings | 3,471 | $9,824.56 |
| Yellow Corn | -165,245 | ($392,182.13) |
| Total Unpaid/Uncollected | -2,666,420 | ($9,184,088.79) |
| | | |
| **Paid Stocks** | | |
| Dark Northern Spring Wheat | 1,491,666 | $6,096,919.97 |
| Hard Red Winter Wheat | 432,108 | $1,576,880.44 |
| Durum | 13,268 | $46,438.00 |
| Soft White Wheat | 442,916 | $1,566,896.94 |
| White Club Wheat | 90,967 | $326,521.08 |
| Barley | 28,475 | $59,252.58 |
| Grain Dust | 2,159 | $43.00 |
| Wheat Screenings | 3,471 | $9,824.56 |
| Yellow Corn | 218,473 | $560,300.39 |
| Total Paid | 2,723,502 | $10,243,076.96 |
| | | |
| **Contracts** | | |
| Open Purchase Contracts | | |
| Dark Northern Spring Wheat | 1,943,286 | ($14,856.07) |
| Hard Red Winter Wheat | 1,837,257 | ($2,173.99) |
| Durum | 13,200 | $2,640.00 |
| Soft White Wheat | 5,149,458 | $755,472.45 |
| White Club Wheat | 245,066 | $6,081.15 |
| Barley | 0 | $0.00 |
| Yellow Corn | 107,863 | $12,209.96 |
| Total Purchase Contracts | 9,296,132 | $759,373.50 |
| | | |
| Open Sale Contracts | | |
| Dark Northern Spring Wheat | -2,809,364 | $376,905.28 |
| Hard Red Winter Wheat | -1,865,193 | $186,715.57 |
| Soft White Wheat | -1,768,697 | $140,392.40 |
| Western White Wheat | -2,020,883 | $258,856.78 |
| White Club Wheat | -83,796 | $2,094.90 |
| Barley | 0 | $0.00 |
| Yellow Corn | -206,184 | ($4,439.54) |
| Total Sales Contracts | -8,754,117 | $960,525.39 |
| Total Contracts | 542,015 | $1,719,898.89 |
| | | |
| **Balance Sheet Accounts** | | |
| Prepaid Freight | | $152,315.94 |
| Unpaid Freight | | ($37,052.66) |
| Purchase Advances | | $2,889,972.80 |
| Sales Advances | | ($2,253,418.00) |
| NPE/Storage Amounts | | $445,332.26 |
| Prepaid Income | | ($201,823.23) |
| | | |
| Total Balance Sheet Accounts | | $995,327.11 |
| | | |
| ***Total Closing Amount*** | | $12,958,302.96 |
| Due Cargill, Inc | | |

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Z 3800 9 Portland OR
510.0002 (F)

# UNION PACIFIC RAILROAD COMPANY

MARKETING & SALES

1416 DODGE STREET
OMAHA, NEBRASKA 68179

September 12, 2001

assigned to CLD

Ms. Denise Clarke
Cargill, Incorporated
Law Department
P.O. Box 5624
Minneapolis, MN 55440-5624

Re: Industry Track Contract between UP and Cargill at Portland, Oregon

Dear Denise:

On August 2, 2001, I faxed you a copy of Agreement Audit Number 135193 between Union Pacific and Cargill covering industrial trackage at Portland, Oregon. Enclosed is a photocopy of that same agreement along with the full-size exhibits attached. If you need further assistance with track agreements, please don't hesitate to contact me any time.

Sincerely yours,

Milli Scheer

MILLI M. SCHEER
Senior Product Manager-Industrial Development
Telephone (402) 271-4621 Fax Number (402) 271-4890
E-mail address: mmscheer@up.com

Folder No: 714-52
Audit No: 135193

ASSIGNMENT

THIS AGREEMENT is entered into on February 1, 1996, between UNION PACIFIC RAILROAD COMPANY("Lessor") and BUNGE CORPORATION, a New York corporation ("Assignor").

RECITALS:

By instrument dated October 19, 1983 Lessor and Assignor, or their predecessors in interest, entered into an agreement ("Basic Agreement"), identified as Audit No. 135193, at Portland (Albina), Oregon.

AGREEMENT:

Effective July 14, 1995, Assignor assigns all of Assignor's right, title and interest in and to the Basic Agreement, including any supplement or amendment (if any) to CARGILL, INC., a Delaware corporation ("Assignee") whose address is P. O. Box ~~5624~~ 5606 Minneapolis, MN 55440-5606.
CARGILL GRAIN DIVISION

Assignee accepts the above assignment and agrees to be bound by all of the terms and conditions contained in the Basic Agreement and any supplement or amendment (if any).

Lessor gives its consent to this assignment. This consent does not authorize any further assignment of the Basic Agreement, whether voluntary, or otherwise, without the prior written consent of Lessor. In the event of default by Assignee, Assignor shall be bound by and shall perform all of the obligations of the Basic Agreement.

ADMINISTRATIVE HANDLING CHARGE:

Upon execution of this Assignment, Assignor shall pay Lessor an administrative handling charge of One Hundred Dollars ($100.00).

IN WITNESS WHEREOF, the parties have executed this Assignment as of the day and year first herein written.

UNION PACIFIC RAILROAD COMPANY

By: _____
Manager - Real Estate

BUNGE CORPORATION

By: _____
Assignor

CARGILL, INCORPORATED

By: _____
~~Sr. Legal Assistant~~
Assignee
Don Vogt, Vice President
Cargill Grain Division

SUPPLEMENTAL AGREEMENT to agreement dated April 14, 1983 covering construction, maintenance and operation of industry spur track at Portland (Albina), OR
PLD 9005-34-1.2
(8307)

RECEIVED 1 3 1983
U. P. R. R. Co.
Agreement
Agr. No. 135193

THIS SUPPLEMENTAL AGREEMENT is made and entered into as of the 19TH day of OCTOBER, 1983, by and between OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, an Oregon corporation, and its lessee UNION PACIFIC RAILROAD COMPANY, a Utah corporation (herein the "Railroad Company"), and BUNGE CORPORATION, a New York corporation (herein the "Industry").

RECITALS:

On April 14, 1983, the parties entered into an agreement (hereinafter referred to as "original agreement") covering construction, maintenance and operation of private industry trackage (herein "Track") at Portland, Multnomah County, Oregon.

The parties now desire to revise Exhibit C of said original agreement to reflect the true costs of the industry track construction project.

NOW, THEREFORE, IT IS MUTUALLY AGREED by and between the parties hereto as follows:

(1) Exhibit C-1, attached hereto and by this reference made a part hereof, shall be and hereby is substituted for Exhibit C attached to said original agreement.

(2) Article II(A) of said original agreement is hereby revised to provide for a construction cost to the Industry of $314,608 as opposed to the original cost of $288,265.

(3) This agreement is supplemental to the original agreement, and nothing herein contained shall be construed as amending or modifying the same except as herein specifically provided; and said original agreement, as hereby amended, shall remain in full force and effect until terminated as provided therein.



CARG002647

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Agreement to be executed, in duplicate, as of the day and year first above written.

OREGON-WASHINGTON RAILROAD
& NAVIGATION COMPANY
UNION PACIFIC RAILROAD COMPANY

By _____
General Manager

BUNGE CORPORATION

Attest: (Seal)

_____
Secretary

By _____
Vice President



CARG002648

Exhibit C-1

Form 30-2

# WORK ORDER AUTHORITY

## DETAIL OF ESTIMATED CREDITS

Sheet _____ of _____ Sheets

O.W.R. & N. CO.

Department ENGINEERING Division OREGON W.O. No. _____

State OREGON

Location: PORTLAND (ALBINA), OREGON - MAIN LINE Valuation Section No. _____

Description: ESTIMATE FOR COST TO BE PAID BY: BUNGE CORPORATION

| Job No. | Acct. No. | Item | | | | |
|---|---|---|---|---|---|---|
| | | TRK NO. 109, CONST. 988 TF EXT., INST. H.O. BUMPER | | | | |
| | | TRK NO. 33, INST. D.P.S.S. DERAIL, RELAY 188 TF | | | | |
| | | TRK A-305, CONST. 1280 TF, SHIFT 158 TF, RELOC. 91 TF INCL. NO. 9 T.O. | | | | |
| | | TRK A-22A, CONST. 364 TF, SHIFT & RELOCATE TRK | | | | |
| | | TRK A-317, CONST. 200 TF INCL. 2 NO. 9 T.O. | | | | |
| | | TRK A-316, CONST. 110 TF INCL. NO. 9 T.O., RELOC. 91 TF INCL. NO. 9 T.O. | | | | |
| | | TRK NO. 254, RETIRE 221 TF INCL. NO. 7 T.O. | | | | |
| | | GRADING, REMOVE & REPLACE A.C. PAVING, RELOCATE | | | | |
| | | POWER POLE & PROTECT UTILITIES - BY INDUSTRY | | | | |
| | | CONST. NO. 9 ONE-WAY T.O. - 2 EA | 41252 | | | |
| | | CONST. NO. 9 TWO-WAY T.O. - 2 EA | 44784 | | | |
| | | CONST. TRK - 2408 TF | 109901 | | | |
| | | INST. D.P.S.S. DERAIL - 1 EA | 10454 | | | |
| | | INST. H.O. BUMPER - 1 EA | 2043 | | | |
| | | INST. PREFAB ROXING - 120 FT | 98536 | | | |
| | | INST. O.P.U.C. WALKWAYS | 21693 | | | |
| | | SHIFT TRK - 258 TF | 2223 | | | |
| | | INST. RELAID TRK - 188 TF | 5097 | | | |
| | | COMP JTS 133#/131# - 4 EA | 487 | | | |
| | | INST. TRK ELEMS NO. 9 - 1 EA | 745 | | | |
| | | INST. TRK ELEMS NO. 10 - 1 EA | 899 | | | |
| | | INST. RELOC. TRK (50% TIE RENEWAL) - 62 TF | 1791 | | | |
| | | INST. RELOC. NO. 9 T.O. (NEW TIES) - 1 EA | 7546 | | | |
| | | REMOVE RETIRED TRK - 39.1 TF | 3974 | | | |
| | | REMOVE RET. REC NO. 7 T.O. - 1 EA | 956 | | | |
| | | REMOVE RETIRED NO. 10 T.O. - 1 EA | 1053 | | | |

Estimated credit to "Reserve for Road Property to be retired and replaced" . . . . . $ _____

Estimated credit to "Road Property retired and not to be replaced" . . . . . $ _____

Estimated credit to "Equipment Retired" . . . . . $ _____

Estimated credit to _____ $ _____

Exhibit C-1

Estimated by _____ Approved _____ Approved _____

Date REVISED 19 ____

CARG002649

Exhibit C-1

Form 30-2

# WORK ORDER AUTHORITY

## DETAIL OF ESTIMATED CREDITS

Sheet _____ of _____ Sheets

O.W.R.&N. CO.

Department ENGINEERING Division OREGON W.O. No. _____

State OREGON

Location: PORTLAND (ALBINA), OREGON - MAIN LINE Valuation Section No. 1

Description:

| Job No. | Acct. No. | Item | | | | |
|---|---|---|---|---|---|---|
| | | REMOVE RELAID TRK - 188 TF | 1035 | | | |
| | | REMOVE RELOC. TRK - 62 TF | 480 | | | |
| | | REMOVE RELOC. NO. 9 T.O. - 1 EA | 980 | | | |
| | | REMOVE RELOC. TRK ELEMS NO. 9 - 1 EA | 705 | | | |
| | | RELOC. SIGNAL | 11345 | | | |
| | | INST. INSUL. JTS - 12 EA | 4223 | | | |
| | | RELOC. CAMERA | 9408 | | | |
| | | DISCONNECT & REINSTALL POWER FOR CAMERA | 950 | | | |
| | | INST. TRANSDUCERS & CABLE | 14007 | | | |
| | | CAMERA BUILDING & TRK CIRCUIT ELECTRONICS | 7418 | 315290 | | |
| | | SALVAGE CREDIT ALLOWED INDUSTRY FOR MATERIAL RELEASED | 682 | 682 | | |
| | | TOTAL | | $314,608 | | |

Estimated credit to "Reserve for Road Property to be retired and replaced" . . . . . $ _____

Estimated credit to "Road Property retired and not to be replaced" . . . . . $ _____

Estimated credit to "Equipment Retired" . . . . . $ _____

Estimated credit to _____ $ _____

Exhibit C-1

Estimated by [illegible]

Date REVISED 19 ___ Approved _____ Approved _____

CARG002650

W 0-341.50

CONSTRUCTION, MAINTENANCE AND OPERATION
Portland (Albina), OR
PLD 9005-34-1.2

# INDUSTRY TRACK CONTRACT

THIS AGREEMENT is made and entered into by and between OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, an Oregon corporation, and its lessee UNION PACIFIC RAILROAD COMPANY, a Utah corporation (herein the Railroad Company), and BUNGE CORPORATION, a New York corporation (herein the Industry).

RECITALS:

The Industry desires the construction, maintenance and operation of private industry trackage (herein Track) at or near Portland, Oregon, located as shown on the attached prints dated April 6, 1983 (Exhibit A) and December 7, 1982 (Exhibit B).

The construction work to be performed by the Railroad Company and Industry is indicated on Exhibit B and detailed in the attached "Basis for Payment", marked Exhibit C.

After construction of the Track, the Railroad Company is willing to maintain and operate the Track upon the terms and conditions hereinafter set forth.

IT IS AGREED as follows:

Article I. CONSTRUCTION, MAINTENANCE AND OPERATION. als

A. The Railroad Company ~~and the Industry~~ will perform the construction work as indicated on Exhibit B and the Industry will bear the expense thereof as indicated on Exhibit C. The Industry will acquire a salvage interest in a portion of the Track as shown on Exhibit B.

B. The Industry, at its own expense, shall perform all grading and design and install all necessary drainage facilities required in connection with the construction of the Track to the standards and satisfaction of the Railroad Company, unless otherwise shown on Exhibit B.



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C. The Track will be maintained and operated upon the terms set forth in Exhibit "D", hereto attached.

Article II. COST TO INDUSTRY.

A. The firm cost to the Industry for construction of that portion of the Track to be constructed by the Railroad Company is $288,265.00.

B. The Railroad Company reserves the right to change and update construction costs of the Track (which shall include any decreases, if applicable) on the basis of prices in effect at the time of construction of the Track, if construction is not started by the Railroad Company within six (6) months of the date of this Agreement due to delays imposed by the Industry or any public body from which permission for the construction project is required. The Railroad Company expects to complete the construction within six months after securing the necessary permits, provided the work is not interrupted by the operational needs of the Industry.

C. Except as otherwise provided, bills for expense properly chargeable to the Industry pursuant to this Agreement shall be paid by the Industry within thirty (30) days after presentation by the Railroad Company.

D. Except where "firm cost" has been agreed upon, "cost" for the purpose of this Agreement shall be all assignable costs. Material shall be charged at its current value when and where used.

Article III. METHOD OF PAYMENT.

The Industry shall pay the firm cost quoted in Article II either (1) by depositing such sum with the Railroad Company before construction begins, or (2) by paying such sum to the Railroad Company based on the percentage of work completed by the Railroad Company for each thirty-day period involving construction, with the balance to be paid upon completion of work.



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Article IV. CONSENT OF RAILROAD COMPANY TO CERTAIN FACILITIES OR OPERATIONS.

The Railroad Company hereby consents to (a) the impairment of the Railroad Company's standard clearance requirements in the location and as specified on Exhibit "A", (b) the performance by the Industry of intraplant switching on the Track, subject to the terms, provisions and conditions set forth in this Agreement.

Article V. TERMINATION OF PRIOR AGREEMENT.

It is understood and agreed that the agreement dated January 10, 1977, assigned Audit No. 125926, between the parties hereto is hereby terminated as of the effective date hereof; Provided that such termination shall not affect any of the rights or obligations of the parties to said agreement which may have accrued, or liabilities which may have arisen prior hereto.

DATED this 14 day of April, 1983.

OREGON-WASHINGTON RAILROAD
& NAVIGATION COMPANY
UNION PACIFIC RAILROAD COMPANY

By A L Shoen
General Manager

BUNGE CORPORATION

Attest: (Seal)

Secretary

By John Hansen
Title: Vice President



CARG002653

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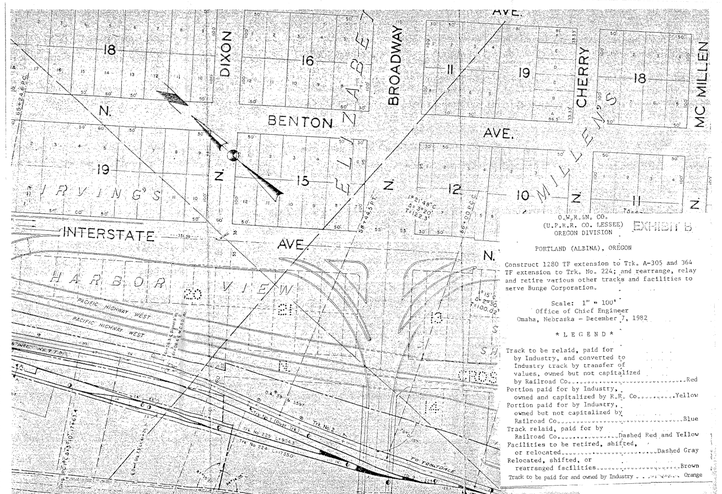



O.W.R.N. CO.
(U.P.R.R. CO. LESSEE)
OREGON DIVISION

EXHIBIT B

PORTLAND (ALBINA), OREGON

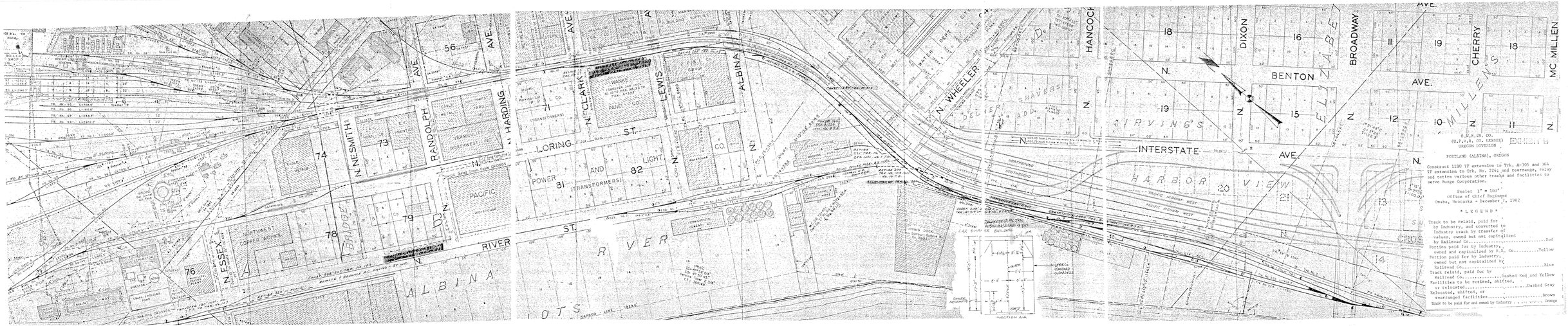
Construct 1280 TF extension to Trk. A-305 and 364 TF extension to Trk. No. 224; and rearrange, relay and retire various other tracks and facilities to serve Bunge Corporation.

Scale: 1" = 100'
Office of Chief Engineer
Omaha, Nebraska - December 7, 1982

* L E G E N D *

Track to be relaid, paid for by Industry, and converted to Industry track by transfer of values, owned but not capitalized by Railroad Co. ..... Red
Portion paid for by Industry, owned and capitalized by R.R. Co. ..... Yellow
Portion paid for by Industry, owned but not capitalized by Railroad Co. ..... Blue
Track relaid, paid for by Railroad Co. ..... Dashed Red and Yellow
Facilities to be retired, shifted, or relocated ..... Dashed Gray
Relocated, shifted, or rearranged facilities ..... Brown
Track to be paid for and owned by Industry ..... Orange

CARG002655


N. HARDING AVE.
N. RANDOLPH AVE.
N. NESMITH
N. ESSEX
BRIDGE
NORTHWEST COPPER WORKS
PACIFIC
RIVER
ALBINA
N. CLARK
N. LEWIS
N. ALBINA
N. WHEELER
LORING ST.
POWER AND LIGHT CO.
(TRANSFORMERS)
WANKE
PANEL CO.
ST.
RIVER
LOTS
HANCOCK
DIXON
BENTON
BROADWAY
CHERRY
MC MILLEN
MILLEN'S
IRVING'S
HARBOR VIEW
INTERSTATE AVE.
N. ELBERT
N. ABBE
PACIFIC HIGHWAY WEST
NORTHBOUND
SOUTHBOUND
CONCRETE OVER CONCRETE
SECTION A-A
O.W.R.&N. CO.
(U.P.R.R. CO. LESSEE)
OREGON DIVISION
EXHIBIT B
PORTLAND (ALBINA), OREGON
Construct 1280 TF extension to Trk. A-305 and 144 TF extension to Trk. No. 224; and rearrange, relay and retire various other tracks and facilities to serve Bunge Corporation.
Scale: 1" = 100'
Office of Chief Engineer
Omaha, Nebraska - December 1, 1982
* LEGEND *
Track to be relaid, paid for by Industry, and converted to Industry track by transfer of values, owned but not capitalized by Railroad Co. ..... Red
Portion paid for by Industry, owned and capitalized by R.R. Co. ..... Yellow
Portion paid for by Industry, owned but not capitalized by Railroad Co. ..... Blue
Track relaid, paid for by Railroad Co. ..... Dashed Red and Yellow
Facilities to be retired, shifted, or relocated ..... Dashed Gray
Relocated, shifted, or rearranged facilities ..... Brown
Track to be paid for and owned by Industry ..... Orange

CARG002856

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Form 30-2

EXHIBIT C

**WORK ORDER AUTHORITY**

**DETAIL OF ESTIMATED CREDITS**

Sheet _____ of _____ Sheets

O.W.R. & N. CO.

Department ENGINEERING Division OREGON W.O. No. _____

State OREGON

Location: PORTLAND (ALBINA), OREGON - MAIN LINE Valuation Section No. 1

Description: BASIS FOR COST TO BE PAID BY BUNGE CORPORATION

| Job No. | Acct. No. | Item | | | | |
|---|---|---|---|---|---|---|
| | | TRK NO. 109, CONST. 985 TF EXT., INST. H.D. BUMPER | | | | |
| | | TRK NO. 53, INST. D.P.S.S. DERAIL, RELAY 188 TF | | | | |
| | | TRK A-305, CONST. 1280 TF, SHIFT 158 TF, RELOC. 91 TF INCL. NO. 9 T.O. | | | | |
| | | TRK A-224, CONST. 364 TF, SHIFT & RELOCATE TRK | | | | |
| | | TRK A-317, CONST. 200 TF INCL. 2-NO. 9 T.O. | | | | |
| | | TRK A-316, CONST. 110 TF INCL. NO. 9 T.O., INST. RELOC. 91 TF INCL. NO. 9 T.O. | | | | |
| | | TRK NO. 254, RETIRE 221 TF INCL. NO. 7 T.O. | | | | |
| | | GRADING, REMOVE & REPLACE A.C. PAVING, RELOCATE | | | | |
| | | POWER POLE & PROTECT UTILITIES - BY INDUSTRY | | | | |
| | | CONST. NO. 9 ONE-WAY T.O. - 2 EA | 41252 | | | |
| | | CONST. NO. 9 TWO-WAY T.O. - 2 EA | 44784 | | | |
| | | CONST. TRK - 2408 TF | 109901 | | | |
| | | INST. D.P.S.S. DERAIL - 1 EA | 10454 | | | |
| | | INST. H.D. BUMPER - 1 EA | 3043 | | | |
| | | INST. PREFAB RD XING - 60 FT | 4918 | | | |
| | | INST. O.P.U.C. WALKWAYS | 21693 | | | |
| | | SHIFT TRK - 258 TF | 2223 | | | |
| | | INST. RELAID TRK - 188 TF | 5097 | | | |
| | | COMP JTS 133#/131# - 4 EA | 487 | | | |
| | | INST. TRK ELEMS NO. 9 - 1 EA | 745 | | | |
| | | INST. TRK ELEMS NO. 10 - 1 EA | 899 | | | |
| | | INST. RELOC. TRK (50% TIE RENEWAL) - 62 TF | 1791 | | | |
| | | INST. RELOC. NO. 9 T.O. (NEW TIES) - 1 EA | 7546 | | | |
| | | REMOVE RETIRED TRK - 591 TF | 3974 | | | |
| | | REMOVE RETIRED NO. 7 T.O. - 1 EA | 956 | | | |
| | | REMOVE RETIRED NO. 10 T.O. - 1 EA | 1053 | | | |

Estimated credit to "Reserve for Road Property to be retired and replaced" . . . . . $ _____

Estimated credit to "Road Property retired and not to be replaced" . . . . . $ _____

Estimated credit to "Equipment Retired" . . . . . $ _____

Estimated credit to _____ $ _____

Estimated by _____

Date REVISED 19 ____ Approved _____ Approved _____

CARG002658

EXHIBIT C

Form 30-2

# WORK ORDER AUTHORITY

## DETAIL OF ESTIMATED CREDITS

Sheet _____ of _____ Sheets

O.W.R. & N. CO.

Department ENGINEERING Division OREGON W.O. No. _____

State OREGON

Location: PORTLAND (ALBINA), OREGON - MAIN LINE Valuation Section No. 1

Description:

| Job No. | Acct. No. | Item | | | | |
|---|---|---|---|---|---|---|
| | | REMOVE RELAID TRK - 188 TF | 1055 | | | |
| | | REMOVE RELOC. TRK - 62 TF | 480 | | | |
| | | REMOVE RELOC. NO. 9 T.O. - 1EA | 980 | | | |
| | | REMOVE RELOC. TRK ELEMS NO. 9 - 1EA | 705 | | | |
| | | RELOC. SIGNAL | 11345 | | | |
| | | INST. INSUL. JTS - 12 EA | 4228 | | | |
| | | RELOC. CAMERA | 9408 | | | |
| | | DISCONNECT & REINSTALL POWER FOR CAMERA | 950 | 288947 | | |
| | | SALVAGE CREDIT ALLOWED INDUSTRY FOR MATERIAL RELEASED | 682 | 682 | | |
| | | TOTAL | | $288,265 | | |

Estimated credit to "Reserve for Road Property to be retired and replaced" . . . . . $ _____

Estimated credit to "Road Property retired and not to be replaced" . . . . . $ _____

Estimated credit to "Equipment Retired" . . . . . $ _____

Estimated credit to _____ $ _____

Estimated by [illegible]

Date REVISED 19 ____ Approved _____ Approved _____

CARG002659

EXHIBIT D

INDUSTRY TRACK CONTRACT

Section 1. RIGHT OF WAY AND PRIVILEGE.

The Railroad Company shall secure all necessary permits for constructing, maintaining and operating the Track. The Industry shall procure any needed right of way for Track construction, maintenance and operation outside the limits of the property of the Railroad Company. The Industry shall pay all compensation or assessments required by or costs attributable to requirements imposed by any public authority or person for the privilege of constructing, maintaining and operating the Track.

Section 2. OPERATION AND MAINTENANCE.

(a) The Railroad Company shall operate the Track subject to, and to the extent contemplated by, lawful tariffs and the terms of this Agreement. However, the Railroad Company shall not be obligated to operate or maintain the Track if it is prevented or hindered from so doing by the Industry's breach of any term of this Agreement or by acts of God, public authority, strikes, riots, labor disputes, or other cause beyond its control.

(b) Maintenance of track structure.

(1) The Railroad Company shall perform all maintenance on the portions of the Track that it owns except as provided in subsection (c)(2). The Railroad Company will maintain the initial switch connection(s) to the clearance point and perform minor maintenance at its own expense on the portion of the Track it owns that is not used for intraplant switching. The Railroad Company will perform all remaining maintenance (other than minor maintenance) on the portion of the Track it owns at the Industry's expense.

(2) Except as provided in subsection (b)(3), the Industry shall perform all maintenance on the portions of the Track that it owns at its own expense. Maintenance and track construction performed by the Industry must conform with the Railroad Company's standards. If the Railroad Company's Chief Engineer declares that any portion of the Track is nonconforming and/or unsafe for railroad operations, the Railroad Company shall not be obligated to operate over the Track.



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(3) The Railroad Company shall have the right to perform maintenance on the portions of the Track (if any) owned by the Industry, when necessary for railroad operations. The Industry will bear the cost of all maintenance performed by the Railroad Company on any portion of the Track owned by the Industry, except minor maintenance on Industry-owned portions of the Track that have been constructed in conformance with the Railroad Company standards and are not used for intraplant switching.

(4) As used in this Agreement:

(i) "Intraplant switching" means the movement of, or the preparation for moving, rail cars on the Track by the Industry by trackmobile, switch engine, tractor or other vehicle, by winch, cable or other car puller device, by allowing cars to roll, or by any other method.

(ii) "Minor Maintenance" means the replacement of three (3) or fewer ties at any one time in any thirty-nine (39) consecutive feet of track; the replacement of less than ten percent (10%) of the rails or not more than nine (9) rails, whichever is less, at any one time in any one track, and such routine tasks as bolt tightening or tapping down spikes. Expenses borne by the Railroad Company for minor maintenance shall not include the cost of grading or of removing and replacing ballast, paving or planking, which will be borne by the Industry. "Rehabilitation" means any maintenance which requires the replacement of more ties or rails than specified as minor maintenance. The Railroad Company shall not bear any portion of the cost of Rehabilitation.

(c) Maintenance of right of way and track appurtenances.

(1) The Railroad Company shall maintain the area around the Track between its common carrier trackage and the clearance point of the Track at its own expense. The Railroad Company shall maintain railroad right of way fences at its own expense and shall maintain any automatic signal system activated by rail operations on the Track at the Industry's expense.

(2) The Industry shall keep a clear and safe pathway for Railroad Company employees along both sides of the Track beyond the clearance point. If walkways are required by statute or regulation, they shall conform with all applicable specifications. The



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Industry shall remove snow, ice, sand and other substances and maintain drainage and grading beyond the clearance point as needed to permit the safe operation of the Track. Except as provided in subsection (c)(1), the Industry shall maintain all appurtenances to the Track, including without limitation gates, fences, bridges, undertrack unloading pits, loading or unloading devices and warning signs above, below or beside the Track. The Industry shall perform the work described in this subsection at its own expense.

(d) The Industry shall bear the cost of any modifications to the Railroad Company's existing tracks and structures, other than track changes connected with the turnout, that are necessitated by the construction, reconstruction or operation of the Track. The modification costs which are a part of the project detailed on Exhibit C are included in the firm cost of $288,265.00. The Industry shall bear the cost of any future modifications which are not a part of the project detailed on Exhibit C.

Section 3. OWNERSHIP OF TRACK.

(a) The Railroad Company shall own the portion of the Track located within the limits of the Railroad Company's right of way and within the limits of any public streets or alleys that are contiguous to the right of way.

(b) The remainder of the Track (if any) shall be owned by the Industry.

Section 4. RIGHT OF RAILROAD COMPANY TO USE.

The Railroad Company shall have the right to use the Track when not to the detriment of the Industry.

Section 5. CLEARANCES; INDEMNITY.

(a) For the safety of Railroad Company employees and railroad operations, the Industry shall keep the Track area clear from obstructions and shall not install facilities or permit activities around the Track that could interfere with the Railroad Company's operation of the Track unless it has the Railroad Company's written permission. Specifically:

(1) Impairments. The Industry shall not permit, erect, place, pile, store, stack or maintain any building, platform, or other structure, obstructions or material, of any kind closer to the Track than the minimum clearances shown on the Section 6 clearance chart without the written consent of the Railroad Company. All doors, windows and gates shall be of the sliding type or open away from the Track if



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opening them toward the Track would impair clearances. If greater clearances than those shown on the Section 6 clearance chart are required by statute or competent public authority, the Industry shall comply with the statute, regulation or order. Any structure or material which is closer to the Track than permitted by either the Section 6 clearance chart or applicable public authority shall be considered an impairment.

The Railroad Company shall consider requests of the Industry to construct or maintain impairments that are necessitated by the operational requirements of the Industry, but the Railroad Company shall not be obligated to consent to any impairment. The Industry shall obtain any necessary public authority to impair clearances before creating an impairment and shall comply with the terms of any public authorization which is granted.

(2) Facilities. The Industry shall not construct, locate, maintain or permit the construction, location, maintenance or erection of any pits, loadout facilities, buildings, private crossing, beams, pipes, wires or other obstructions or installations of any kind or character (hereinafter "Facilities") over or under the Track without the written consent of the Railroad Company.

(b) With respect to Section 5(a) hereof, the Industry assumes the risk of, releases, and agrees to indemnify and defend the Railroad Company, its officers, agents and employees, from and against, and bear expenses and attorney's fees associated with, all claims for property damage and personal injury or death suffered by anyone, resulting directly or indirectly from (1) any impairment of the minimum clearances outlined on the Section 6 clearance chart or required by applicable public authority; (2) the existence or use of any Facilities; (3) the performance by the Industry of intraplant switching; or (4) the Industry's failure to construct or adequately maintain pathways or walkways as required by Section 2(c)(2). The terms of this subsection shall apply regardless of whether the Railroad Company had notice of or consented to the impairment, Facilities, intraplant switching or inadequate pathways or walkways; regardless of whether the impairment was authorized by applicable public authority; unless the loss was caused by the sole negligence of the Railroad Company. Any knowledge



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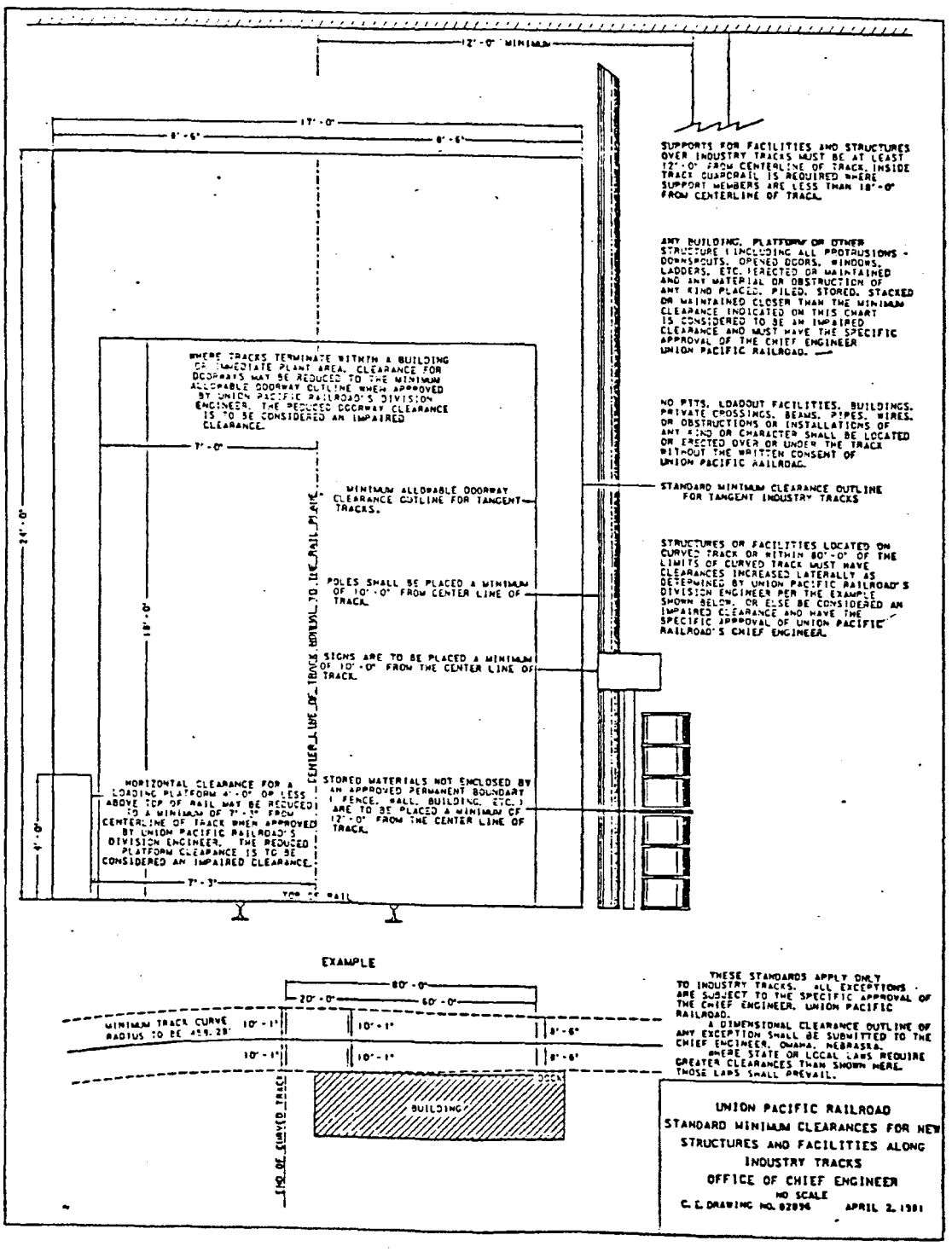
on the part of the Railroad Company of a violation of the clearance requirements of Section 5 or Section 6 hereof, whether such knowledge is actual or implied, shall not constitute a waiver and shall not relieve the Industry of its obligation to indemnify the Railroad Company, its officers, agents and employees, for losses and claims resulting from such violation. However, the terms of this subsection shall not apply to losses resulting from impairments or Facilities created or constructed by the Railroad Company that have not been requested by the Industry.



CARG002664

Section 6. STANDARD MINIMUM CLEARANCE CHART.






CARG002665

Section 7. LIABILITY.

(a) Fire. The Industry assumes all responsibility for and shall indemnify, hold harmless and defend the Railroad Company, its officers, agents and employees, from and against loss or damage to property of the Industry or to property upon the premises of the Industry or upon the Track, arising from fire caused by the mechanical operation of locomotives or the movement of rolling stock while serving Industry, including expenses and attorneys' fees, regardless of whether or not such loss or damage is caused, in whole or in part, by the negligence of the Railroad Company, its officers, agents or employees; provided, however, that the Industry shall have no responsibility to indemnify the Railroad Company for loss or damage by fire as aforesaid to the property of the Railroad Company, or to locomotives and rolling stock belonging to the Railroad Company or to third parties, or to shipments then in the common carrier custody of the Railroad Company, unless such loss or damage is caused by negligence on the part of the Industry, its officers, agents or employees.

(b) Other Liability. Except as provided in Section 5 or Section 7(a), with respect to all loss or damage to the property of the parties hereto and their respective officers, agents and employees and the property of any other person or corporation, and/or injury to or death of officers, agents or employees of the parties hereto or any other person (hereinafter collectively Loss) caused by or in connection with the construction, operation, maintenance, use, presence or removal of the Track, as between the parties hereto:

(1) The Railroad Company shall assume responsibility for and hold harmless and defend the Industry from Loss, expenses, attorneys' fees, court costs, damages, claims and judgments arising from or growing out of the negligence of the Railroad Company, its officers, agents or employees, solely or in conjunction with a third person;

(2) The Industry shall assume responsibility for and hold the Railroad Company harmless and defend the Railroad Company from Loss, expenses, attorneys' fees, court costs, damages, claims and judgments arising from or growing out of the negligence of the Industry, its officers, agents or employees, solely or in conjunction with a third person; and,



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(3) The parties hereto shall equally bear all Loss, expenses, attorneys' fees, court costs, damages, claims and judgments arising from or growing out of the joint or concurring negligence of both parties hereto (or of any two or more of them if there be more than two), their respective officers, agents or employees.

Section 8. REARRANGEMENT OF TRACK; ADDITIONAL TRACKAGE.

(a) The Railroad Company may rearrange or reconstruct the Track or modify its elevation in order to develop or change nearby Railroad Company property or tracks, provided that the Industry shall continue to have similar trackage without additional cost to the Industry. However, if the change in the Track, or its appurtenances, is required by or as a result of any law, ordinance, regulation, or other contingency over which the Railroad Company has no control, the Industry shall bear the cost of the change. Nothing in this section shall affect the Railroad Company's right to terminate this Agreement under Section 10(a)(3).

(b) All references in this Agreement to Track shall apply to the Track as constructed, even if it differs from its depiction on Exhibit A. References in this Agreement to Track shall also apply to rearrangements, reconstructions, extensions or additions to the Track.

Section 9. GOVERNMENTAL RESTRICTIONS.

This Agreement is made in full contemplation of all applicable restrictive orders and regulations of the United States Government now or hereafter in effect and, accordingly, it is expressly conditioned upon the ability of the Railroad Company to secure and furnish labor and materials and to secure any necessary authority to perform the work.

Section 10. TERMINATION.

(a) After giving the Industry sixty (60) days' written notice, the Railroad Company may terminate this Agreement and remove the portion of the Track it owns, if:

(1) the Industry ceases doing business in an active and substantial way over the Track for a continuous period of one (1) year;



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(2) the Industry breaches any term of this Agreement; or

(3) the Railroad Company is required by law, ordinance, police regulations, or changed conditions, to elevate, depress or otherwise change the Railroad Company's tracks near the Track, making it impracticable, in the Railroad Company's judgment, to continue the operation of the Track.

(b) Upon termination of this Agreement and (1) if the Track is removed as provided in Section 10(a), the Industry will be billed any removal costs incurred by the Railroad Company less the salvage value of the portion of the Track owned by the Railroad Company and paid for by the Industry, or (2) in the event the Track is not removed, the Railroad Company will pay the aforesaid salvage value to the Industry.

(c) Termination of this Agreement for any reason whatsoever shall not affect any of the rights or obligations of the parties hereto which may have accrued, or liabilities, accrued or otherwise, which may have arisen prior thereto.

Section 11. ASSIGNMENT; USE BY THIRD PARTIES.

The Industry shall not assign this Agreement or permit use of the Track by anyone other than the Industry without the written consent of the Railroad Company. For any departure in this respect, the Railroad Company may terminate this Agreement. The Railroad Company shall not unreasonably withhold its consent to an assignment of this Agreement.

Section 12. SUCCESSORS AND ASSIGNS.

Subject to the provisions of Section 11, the rights and obligations contained in this Agreement shall pass to and be binding upon heirs, executors, administrators, successors and assigns of the parties to this Agreement.

Section 13. SEVERABILITY.

A finding that a portion of this Agreement is invalid, void or illegal will not render the entire Agreement void and will not affect or impair the enforceability of other provisions. However, such a finding will entitle either party to terminate the Agreement by giving written notice to the other party effective on date of receipt or any later date stated in the notice.



CARG002668

Irving 0057.PDF

SUPPLEMENTAL AGREEMENT to agreement dated April 14, 1983 covering construction, maintenance and operation of industry spur track at Portland (Albina), OR
PLD 9005-34-1.2
(8307)

RECEIVED NOV 16 1983
U. P. R. R. Co.
Agreement
Audit No. 135193

THIS SUPPLEMENTAL AGREEMENT is made and entered into as of the 19TH day of OCTOBER, 1983, by and between OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, an Oregon corporation, and its lessee UNION PACIFIC RAILROAD COMPANY, a Utah corporation (herein the "Railroad Company"), and BUNGE CORPORATION, a New York corporation (herein the "Industry").

RECITALS:

On April 14, 1983, the parties entered into an agreement (hereinafter referred to as "original agreement") covering construction, maintenance and operation of private industry trackage (herein "Track") at Portland, Multnomah County, Oregon.

The parties now desire to revise Exhibit C of said original agreement to reflect the true costs of the industry track construction project.

NOW, THEREFORE, IT IS MUTUALLY AGREED by and between the parties hereto as follows:

(1) Exhibit C-1, attached hereto and by this reference made a part hereof, shall be and hereby is substituted for Exhibit C attached to said original agreement.

(2) Article II(A) of said original agreement is hereby revised to provide for a construction cost to the Industry of $314,608 as opposed to the original cost of $288,265.

(3) This agreement is supplemental to the original agreement, and nothing herein contained shall be construed as amending or modifying the same except as herein specifically provided; and said original agreement, as hereby amended, shall remain in full force and effect until terminated as provided therein.



CARG002670

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Agreement to be executed, in duplicate, as of the day and year first above written.

OREGON-WASHINGTON RAILROAD
& NAVIGATION COMPANY
UNION PACIFIC RAILROAD COMPANY

By _____
General Manager

BUNGE CORPORATION

Attest: (Seal)

_____
Secretary

By _____
Vice President

Exhibit C-1

Form 30-2

**WORK ORDER AUTHORITY**
**DETAIL OF ESTIMATED CREDITS**

Sheet _____ of _____ Sheets

O.W.R. & N. CO.

Department ENGINEERING Division OREGON W.O. No. _____
State OREGON
Location: PORTLAND (ALBINA), OREGON - MAIN LINE Valuation Section No. 1
Description: BASIS FOR COST TO BE PAID BY: BUNGE CORPORATION

| Job No. | Acct. No. | Item | | | | |
|---|---|---|---|---|---|---|
| | | TRK NO. 109, CONST. 968 TF EXT., INST. H.D. BUMPER | | | | |
| | | TRK NO. 33, INST. D.P.S.S. DERAIL, RELAY 188 TF | | | | |
| | | TRK A-305, CONST. 1280 TF, SHIFT 158 TF, RELOC. 91 TF INCL. NO. 9 T.O. | | | | |
| | | TRK A-224, CONST. 364 TF, SHIFT & RELOCATE TRK | | | | |
| | | TRK A-317, CONST. 200 TF INCL. 2 NO. 9 T.O. | | | | |
| | | TRK A-316, CONST. 110 TF INCL. NO. 9 T.O., RELOC. 91 TF INCL. NO. 9 T.O. | | | | |
| | | TRK NO. 254, RETIRE 221 TF INCL. NO. 7 T.O. | | | | |
| | | GRADING, REMOVE & REPLACE A.C. PAVING, RELOCATE | | | | |
| | | POWER POLE & PROTECT UTILITIES - BY INDUSTRY | | | | |
| | | CONST. NO. 9 ONE-WAY T.O. - 2 EA | 41252 | | | |
| | | CONST. NO. 9 TWO-WAY T.O. - 2 EA | 44784 | | | |
| | | CONST. TRK - 2408 TF | 109901 | | | |
| | | INST. D.P.S.S. DERAIL - 1 EA | 10454 | | | |
| | | INST. H.D. BUMPER - 1 EA | 2043 | | | |
| | | INST. PREPAB RD XING - 120 FT | 9836 | | | |
| | | INST. O.P.U.C. WALKWAYS | 21693 | | | |
| | | SHIFT TRK - 253 TF | 2223 | | | |
| | | INST. RELAID TRK - 168 TF | 5097 | | | |
| | | COMP. JTS 133#/131# - 4 EA | 487 | | | |
| | | INST. TRK ELEMS NO. 9 - 1 EA | 745 | | | |
| | | INST. TRK ELEMS NO. 10 - 1 EA | 899 | | | |
| | | INST. RELOC. TRK (50% TIE RENEWAL) - 62 TF | 1791 | | | |
| | | INST. RELOC. NO. 9 T.O. (NEW TIES) - 1 EA | 7546 | | | |
| | | REMOVE RETIRED TRK - 391 TF | 3974 | | | |
| | | REMOVE RETIRED NO. 7 T.O. - 1 EA | 956 | | | |
| | | REMOVE RETIRED NO. 10 T.O. - 1 EA | 1053 | | | |

Estimated credit to "Reserve for Road Property to be retired and replaced" ..... $ _____
Estimated credit to "Road Property retired and not to be replaced" ..... $ _____
Estimated credit to "Equipment Retired" ..... $ _____
Estimated credit to _____ $ _____

Exhibit C-1

Estimated by _____ Approved _____ Approved _____
Date REVISED 19__
OCT 4 1983

Exhibit C-1

Form 30-2

**WORK ORDER AUTHORITY**

**DETAIL OF ESTIMATED CREDITS**

Sheet ____ of ____ Sheets

O.W.R.&N. CO.

Department ENGINEERING Division OREGON W.O. No. ____

State OREGON

Location: PORTLAND (ALBINA), OREGON - MAIN LINE Valuation Section No. 1

Description:

| Job No. | Acct. No. | Item | | | | |
|---|---|---|---|---|---|---|
| | | REMOVE RELAID TRK-188TF | 1035 | | | |
| | | REMOVE RELOC. TRK-62TF | 480 | | | |
| | | REMOVE RELOC. NO. 9 T.O.-1EA | 980 | | | |
| | | REMOVE RELOC. TRK. E. EMS NO. 9-1EA | 705 | | | |
| | | RELOC. SIGNAL | 11345 | | | |
| | | INST. INSUL. JTS-12EA | 4228 | | | |
| | | RELOC. CAMERA | 9408 | | | |
| | | DISCONNECT & REINSTALL POWER FOR CAMERA | 950 | | | |
| | | INST. TRANSDUCERS & CABLE | 14007 | | | |
| | | CAMERA BUILDING & TRK CIRCUIT ELECTRONICS | 7418 | 315290 | | |
| | | SALVAGE CREDIT ALLOWED INDUSTRY TRK MATERIAL RELEASED | 682 | 682 | | |
| | | TOTAL | | $314,608 | | |

Estimated credit to "Reserve for Road Property to be retired and replaced" . . . . . $ ____

Estimated credit to "Road Property retired and not to be replaced" . . . . . $ ____

Estimated credit to "Equipment Retired" . . . . . $ ____

Estimated credit to ____ $ ____

Exhibit C-1

Estimated by ____

Date ____ 19____ Approved ____ Approved ____

CARG002673

W 0-34150

CONSTRUCTION, MAINTENANCE AND OPERATION
Portland (Albina), OR
PLD 9005-34-1.2

INDUSTRY TRACK CONTRACT

THIS AGREEMENT is made and entered into by and between OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, an Oregon corporation, and its lessee UNION PACIFIC RAILROAD COMPANY, a Utah corporation (herein the Railroad Company), and BUNGE CORPORATION, a New York corporation (herein the Industry).

U.P. R. R. Co.
Agreement
135123
Audit No.

RECITALS:

The Industry desires the construction, maintenance and operation of private industry trackage (herein Track) at or near Portland, Oregon, located as shown on the attached prints dated April 6, 1983 (Exhibit A) and December 7, 1982 (Exhibit B).

The construction work to be performed by the Railroad Company and Industry is indicated on Exhibit B and detailed in the attached "Basis for Payment", marked Exhibit C.

After construction of the Track, the Railroad Company is willing to maintain and operate the Track upon the terms and conditions hereinafter set forth.

IT IS AGREED as follows:

Article I. CONSTRUCTION, MAINTENANCE AND OPERATION.

A. The Railroad Company ~~and the Industry~~ will perform the construction work as indicated on Exhibit B and the Industry will bear the expense thereof as indicated on Exhibit C. The Industry will acquire a salvage interest in a portion of the Track as shown on Exhibit B.

B. The Industry, at its own expense, shall perform all grading and design and install all necessary drainage facilities required in connection with the construction of the Track to the standards and satisfaction of the Railroad Company, unless otherwise shown on Exhibit B.



ORIGINAL STORED IN ENVELOPE
AT REAR OF BATCH

CARG002674

C. The Track will be maintained and operated upon the terms set forth in Exhibit "D", hereto attached.

Article II. COST TO INDUSTRY.

A. The firm cost to the Industry for construction of that portion of the Track to be constructed by the Railroad Company is $288,265.00.

B. The Railroad Company reserves the right to change and update construction costs of the Track (which shall include any decreases, if applicable) on the basis of prices in effect at the time of construction of the Track, if construction is not started by the Railroad Company within six (6) months of the date of this Agreement due to delays imposed by the Industry or any public body from which permission for the construction project is required. The Railroad Company expects to complete the construction within six months after securing the necessary permits, provided the work is not interrupted by the operational needs of the Industry.

C. Except as otherwise provided, bills for expense properly chargeable to the Industry pursuant to this Agreement shall be paid by the Industry within thirty (30) days after presentation by the Railroad Company.

D. Except where "firm cost" has been agreed upon, "cost" for the purpose of this Agreement shall be all assignable costs. Material shall be charged at its current value when and where used.

Article III. METHOD OF PAYMENT.

The Industry shall pay the firm cost quoted in Article II either (1) by depositing such sum with the Railroad Company before construction begins, or (2) by paying such sum to the Railroad Company based on the percentage of work completed by the Railroad Company for each thirty-day period involving construction, with the balance to be paid upon completion of work.



ORIGINAL STORED IN ENVELOPE AT REAR OF BATCH

CARG002675

Article IV. CONSENT OF RAILROAD COMPANY TO CERTAIN FACILITIES OR OPERATIONS.

The Railroad Company hereby consents to (a) the impairment of the Railroad Company's standard clearance requirements in the location and as specified on Exhibit "A", (b) the performance by the Industry of intraplant switching on the Track, subject to the terms, provisions and conditions set forth in this Agreement.

Article V. TERMINATION OF PRIOR AGREEMENT.

It is understood and agreed that the agreement dated January 10, 1977, assigned Audit No. 125926, between the parties hereto is hereby terminated as of the effective date hereof; Provided that such termination shall not affect any of the rights or obligations of the parties to said agreement which may have accrued, or liabilities which may have arisen prior hereto.

DATED this 14 day of April, 1983.

OREGON-WASHINGTON RAILROAD
& NAVIGATION COMPANY
UNION PACIFIC RAILROAD COMPANY

By A L Shoen
General Manager

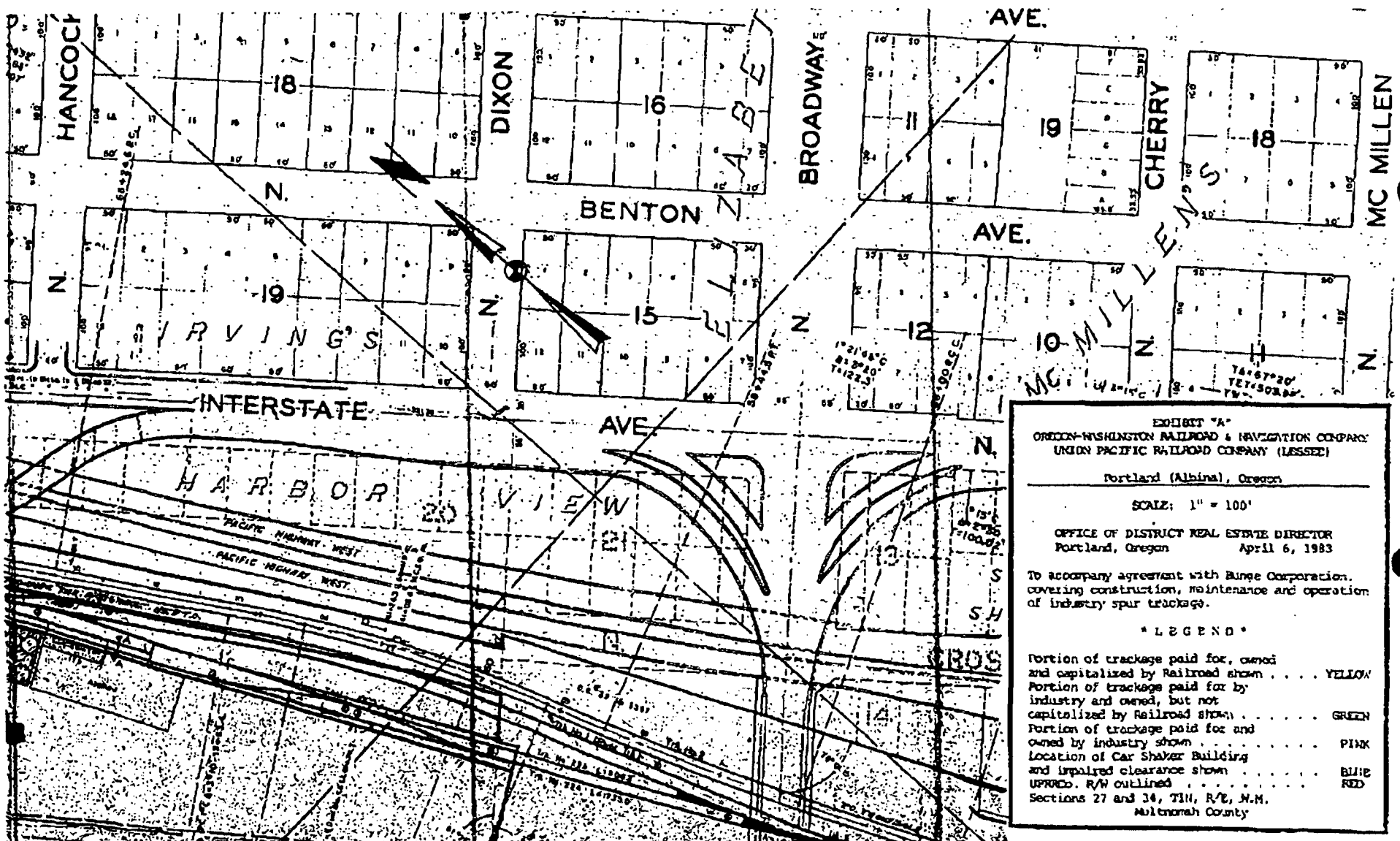
BUNGE CORPORATION

Attest: (Seal)

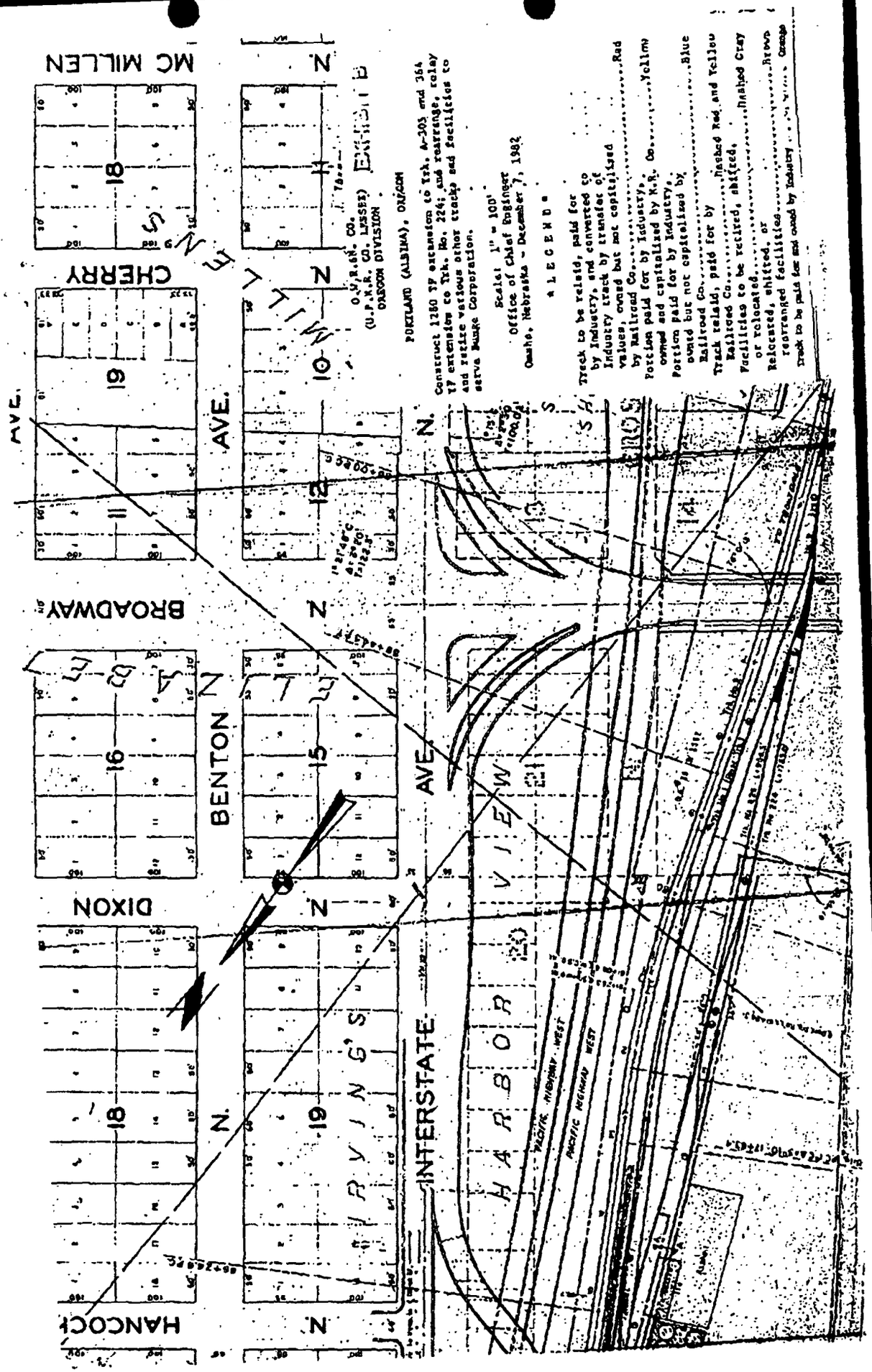
By John Hansen
Secretary Title Vice President

ORIGINAL STORED IN ENVELOPE
AT REAR OF BATCH

ORIGINAL STORED IN ENVELOPE
AT REAR OF BATCH



ORIGINAL STORED IN ENVELOPE
AT REAR OF BATCH




CARG002678

Form 30-2

EXHIBIT C

**WORK ORDER AUTHORITY**

**DETAIL OF ESTIMATED CREDITS**

Sheet _____ of _____ Sheets

O.W.R. & N. CO.

Department ENGINEERING Division OREGON W.O. No. _____

State OREGON

Location: PORTLAND (ALBINA), OREGON - MAIN LINE Valuation Section No. 1

Description: BASIS FOR COST TO BE PAID BY BUNGE CORPORATION

| Job No. | Acct. No. | Item | | | | |
|---|---|---|---|---|---|---|
| | | TRK NO. 109, CONST. 988 TF EXT., INST. H.D. BUMPER | | | | |
| | | TRK NO. 53, INST. D.P.S.S. DERAIL, RELAY 188 TF | | | | |
| | | TRK A-305, CONST. 1280 TF, SHIFT 158 TF, RELOC. 91 TF INCL. NO. 9 T.O. | | | | |
| | | TRK A-224, CONST. 364 TF, SHIFT & RELOCATE TRK | | | | |
| | | TRK A-317, CONST. 200 TF INCL. 2-NO. 9 T.O. | | | | |
| | | TRK A-316, CONST. 110 TF INCL. NO. 9 T.O., INST. RELOC. 91 TF INCL. NO. 9 T.O. | | | | |
| | | TRK NO. 254, RETIRE 221 TF INCL. NO. 7 T.O. | | | | |
| | | GRADING, REMOVE & REPLACE A.C. PAVING, RELOCATE TOWER POLE & PROTECT UTILITIES - BY INDUSTRY | | | | |
| | | CONST. NO. 9 ONE WAY T.O. - 2 EA | 41252 | | | |
| | | CONST. NO. 9 TWO WAY T.O. - 2 EA | 44784 | | | |
| | | CONST. TRK - 2408 TF | 109901 | | | |
| | | INST. D.P.S.S. DERAIL - 1 EA | 10454 | | | |
| | | INST. H.D. BUMPER - 1 EA | 2043 | | | |
| | | INST. PREFAB RD XING - 60 FT | 4918 | | | |
| | | INST. 9 F.U.C. WALKWAYS | 21693 | | | |
| | | SHIFT TRK - 258 TF | 2223 | | | |
| | | INST. RELAID TRK - 188 TF | 5097 | | | |
| | | COMP JTS 133#/131# - 4 EA | 487 | | | |
| | | INST. TRK ELEMS NO. 9 - 1 EA | 745 | | | |
| | | INST. TRK ELEMS NO. 10 - 1 EA | 899 | | | |
| | | INST. RELOC. TRK (50% TIE RENEWAL) - 62 TF | 1791 | | | |
| | | INST. RELOC. NO. 9 T.O. (NEW TIES) - 1 EA | 7546 | | | |
| | | REMOVE RETIRED TRK - 591 TF | 3974 | | | |
| | | REMOVE RETIRED NO. 7 T.O. - 1 EA | 956 | | | |
| | | REMOVE RETIRED NO. 10 T.O. - 1 EA | 1053 | | | |

Estimated credit to "Reserve for Road Property to be retired and replaced" . . . . . $ _____

Estimated credit to "Road Property retired and not to be replaced" . . . . . $ _____

Estimated credit to "Equipment Retired" . . . . . $ _____

Estimated credit to _____

ORIGINAL STORED IN ENVELOPE AT REAR OF BATCH

Estimated by _____

Date REVISED 19 ____ Approved _____ Approved _____

CARG002679

EXHIBIT C

Form 30-2

**WORK ORDER AUTHORITY**
**DETAIL OF ESTIMATED CREDITS**

Sheet _____ of _____ Sheets

O.W.R. & N. CO.

Department ENGINEERING Division OREGON W.O. No. _____
State OREGON
Location: PORTLAND (ALBINA), OREGON - MAIN LINE Valuation Section No. 1

Description:

| Job No. | Acct. No. | Item | | | | |
|---|---|---|---|---|---|---|
| | | REMOVE RELAID TRK - 188 TF | 1035 | | | |
| | | REMOVE RELOC. TRK - 62 TF | 480 | | | |
| | | REMOVE RELOC. NO. 9 T.O. - 1EA | 980 | | | |
| | | REMOVE RELOC. TRK ELEMS NO. 9 - 1EA | 705 | | | |
| | | RELOC. SIGNAL | 11345 | | | |
| | | INST. INSUL. JTS - 12 EA | 4228 | | | |
| | | RELOC. CAMERA | 9408 | | | |
| | | DISCONNECT + REINSTALL POWER FOR CAMERA | 950 | 288947 | | |
| | | SALVAGE CREDIT ALLOWED INDUSTRY FOR MATERIAL RELEASED | 682 | 682 | | |
| | | TOTAL | | $288,265 | | |

Estimated credit to "Reserve for Road Property to be retired and replaced" ..... $ _____
Estimated credit to "Road Property retired and not to be replaced" ..... $ _____
Estimated credit to "Equipment Retired" ..... $ _____
Estimated credit to _____ $ _____

ORIGINAL STORED N NVELOPE AT REAR OF BATCH

Estimated by [illegible]
Date REVISED 19__ Approved _____ Approved _____

EXHIBIT D

INDUSTRY TRACK CONTRACT

Section 1. RIGHT OF WAY AND PRIVILEGE.

The Railroad Company shall secure all necessary permits for constructing, maintaining and operating the Track. The Industry shall procure any needed right of way for Track construction, maintenance and operation outside the limits of the property of the Railroad Company. The Industry shall pay all compensation or assessments required by or costs attributable to requirements imposed by any public authority or person for the privilege of constructing, maintaining and operating the Track.

Section 2. OPERATION AND MAINTENANCE.

(a) The Railroad Company shall operate the Track subject to, and to the extent contemplated by, lawful tariffs and the terms of this Agreement. However, the Railroad Company shall not be obligated to operate or maintain the Track if it is prevented or hindered from so doing by the Industry's breach of any term of this Agreement or by acts of God, public authority, strikes, riots, labor disputes, or other cause beyond its control.

(b) Maintenance of track structure.

(1) The Railroad Company shall perform all maintenance on the portions of the Track that it owns except as provided in subsection (c)(2). The Railroad Company will maintain the initial switch connection(s) to the clearance point and perform minor maintenance at its own expense on the portion of the Track it owns that is not used for intraplant switching. The Railroad Company will perform all remaining maintenance (other than minor maintenance) on the portion of the Track it owns at the Industry's expense.

(2) Except as provided in subsection (b)(3), the Industry shall perform all maintenance on the portions of the Track that it owns at its own expense. Maintenance and track construction performed by the Industry must conform with the Railroad Company's standards. If the Railroad Company's Chief Engineer declares that any portion of the Track is nonconforming and/or unsafe for railroad operations, the Railroad Company shall not be obligated to operate over the Track.

ORIGINAL STORED IN ENVELOPE
AT REAR OF BATCH

(3) The Railroad Company shall have the right to perform maintenance on the portions of the Track (if any) owned by the Industry, when necessary for railroad operations. The Industry will bear the cost of all maintenance performed by the Railroad Company on any portion of the Track owned by the Industry, except minor maintenance on Industry-owned portions of the Track that have been constructed in conformance with the Railroad Company standards and are not used for intraplant switching.

(4) As used in this Agreement:

(i) "Intraplant switching" means the movement of, or the preparation for moving, rail cars on the Track by the Industry by trackmobile, switch engine, tractor or other vehicle, by winch, cable or other car puller device, by allowing cars to roll, or by any other method.

(ii) "Minor Maintenance" means the replacement of three (3) or fewer ties at any one time in any thirty-nine (39) consecutive feet of track; the replacement of less than ten percent (10%) of the rails or not more than nine (9) rails, whichever is less, at any one time in any one track, and such routine tasks as bolt tightening or tapping down spikes. Expenses borne by the Railroad Company for minor maintenance shall not include the cost of grading or of removing and replacing ballast, paving or planking, which will be borne by the Industry. "Rehabilitation" means any maintenance which requires the replacement of more ties or rails than specified as minor maintenance. The Railroad Company shall not bear any portion of the cost of Rehabilitation.

(c) Maintenance of right of way and track appurtenances.

(1) The Railroad Company shall maintain the area around the Track between its common carrier trackage and the clearance point of the Track at its own expense. The Railroad Company shall maintain railroad right of way fences at its own expense and shall maintain any automatic signal system activated by rail operations on the Track at the Industry's expense.

(2) The Industry shall keep a clear and safe pathway for Railroad Company employees along both sides of the Track beyond the clearance point. If walkways are required by statute or regulation, they shall conform with all applicable specifications. The

ORIGINAL STORED IN ENVELOPE
AT REAR OF BATCH

Industry shall remove snow, ice, sand and other substances and maintain drainage and grading beyond the clearance point as needed to permit the safe operation of the Track. Except as provided in subsection (c)(1), the Industry shall maintain all appurtenances to the Track, including without limitation gates, fences, bridges, undertrack unloading pits, loading or unloading devices and warning signs above, below or beside the Track. The Industry shall perform the work described in this subsection at its own expense.

(d) The Industry shall bear the cost of any modifications to the Railroad Company's existing tracks and structures, other than track changes connected with the turnout, that are necessitated by the construction, reconstruction or operation of the Track. The modification costs which are a part of the project detailed on Exhibit C are included in the firm cost of $288,265.00. The Industry shall bear the cost of any future modifications which are not a part of the project detailed on Exhibit C.

Section 3. OWNERSHIP OF TRACK.

(a) The Railroad Company shall own the portion of the Track located within the limits of the Railroad Company's right of way and within the limits of any public streets or alleys that are contiguous to the right of way.

(b) The remainder of the Track (if any) shall be owned by the Industry.

Section 4. RIGHT OF RAILROAD COMPANY TO USE.

The Railroad Company shall have the right to use the Track when not to the detriment of the Industry.

Section 5. CLEARANCES; INDEMNITY.

(a) For the safety of Railroad Company employees and railroad operations, the Industry shall keep the Track area clear from obstructions and shall not install facilities or permit activities around the Track that could interfere with the Railroad Company's operation of the Track unless it has the Railroad Company's written permission. Specifically:

(1) Impairments. The Industry shall not permit, erect, place, pile, store, stack or maintain any building, platform, or other structure, obstructions or material, of any kind closer to the Track than the minimum clearances shown on the Section 6 clearance chart without the written consent of the Railroad Company. All doors, windows and gates shall be of the sliding type or open away from the Track if



ORIGINAL STORED IN ENVELOPE
AT REAR OF BATCH

opening them toward the Track would impair clearances. If greater clearances than those shown on the Section 6 clearance chart are required by statute or competent public authority, the Industry shall comply with the statute, regulation or order. Any structure or material which is closer to the Track than permitted by either the Section 6 clearance chart or applicable public authority shall be considered an impairment.

The Railroad Company shall consider requests of the Industry to construct or maintain impairments that are necessitated by the operational requirements of the Industry, but the Railroad Company shall not be obligated to consent to any impairment. The Industry shall obtain any necessary public authority to impair clearances before creating an impairment and shall comply with the terms of any public authorization which is granted.

(2) Facilities. The Industry shall not construct, locate, maintain or permit the construction, location, maintenance or erection of any pits, loadout facilities, buildings, private crossing, beams, pipes, wires or other obstructions or installations of any kind or character (hereinafter "Facilities") over or under the Track without the written consent of the Railroad Company.

(b) With respect to Section 5(a) hereof, the Industry assumes the risk of, releases, and agrees to indemnify and defend the Railroad Company, its officers, agents and employees, from and against, and bear expenses and attorney's fees associated with, all claims for property damage and personal injury or death suffered by anyone, resulting directly or indirectly from (1) any impairment of the minimum clearances outlined on the Section 6 clearance chart or required by applicable public authority; (2) the existence or use of any Facilities; (3) the performance by the Industry of intraplant switching; or (4) the Industry's failure to construct or adequately maintain pathways or walkways as required by Section 2(c)(2). The terms of this subsection shall apply regardless of whether the Railroad Company had notice of or consented to the impairment, Facilities, intraplant switching or inadequate pathways or walkways; regardless of whether the impairment was authorized by applicable public authority; unless the loss was caused by the sole negligence of the Railroad Company. Any knowledge

ORIGINAL STORED IN ENVELOPE
AT REAR OF BATCH

on the part of the Railroad Company of a violation of the clearance requirements of Section 5 or Section 6 hereof, whether such knowledge is actual or implied, shall not constitute a waiver and shall not relieve the Industry of its obligation to indemnify the Railroad Company, its officers, agents and employees, for losses and claims resulting from such violation. However, the terms of this subsection shall not apply to losses resulting from impairments or Facilities created or constructed by the Railroad Company that have not been requested by the Industry.

ORIGINAL STORED IN ENVELOPE
AT REAR OF BATCH

Section 6. STANDARD MINIMUM CLEARANCE CHART.

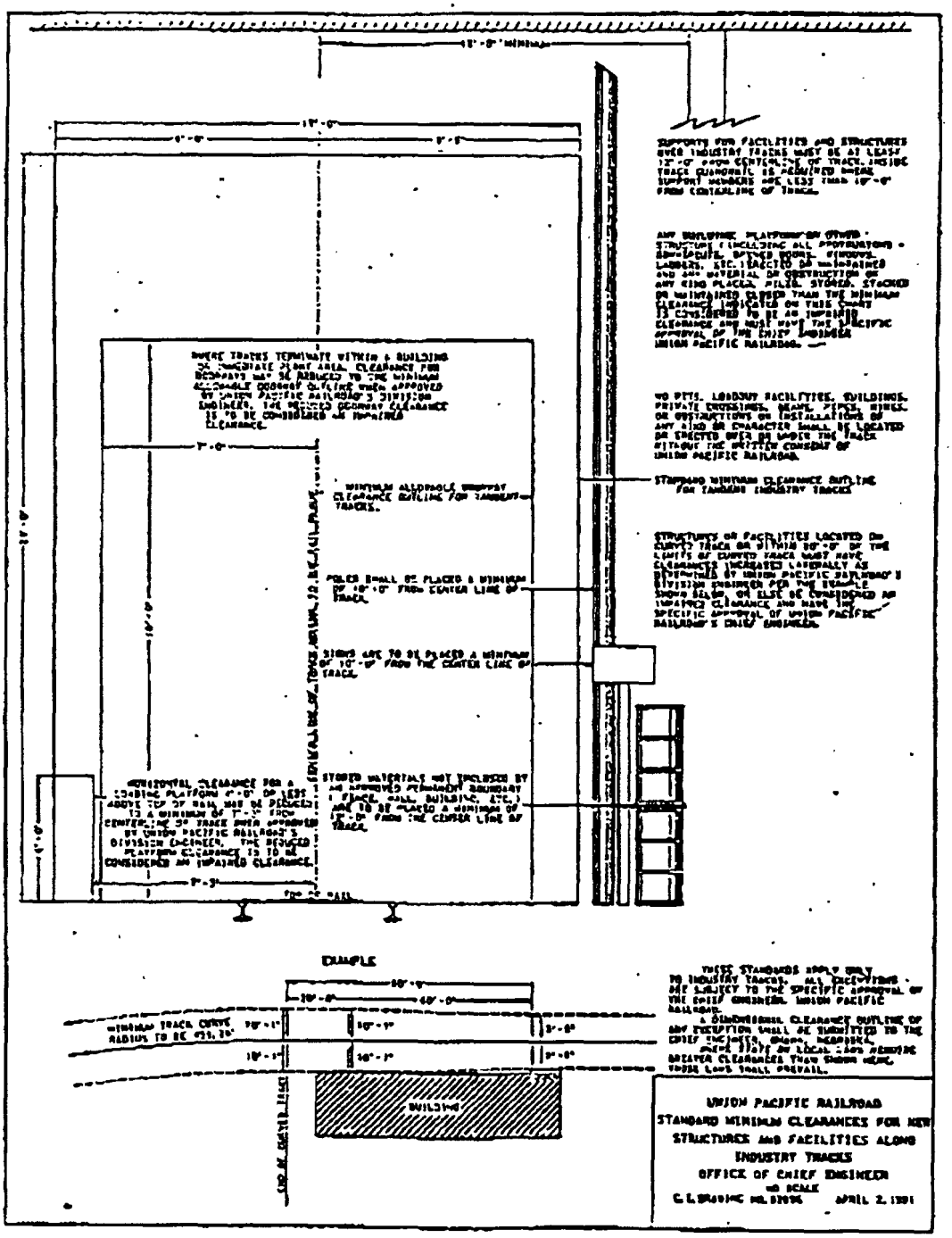



EXHIBIT D
Page 6 of 9
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ORIGINAL STORED IN ENVELOPE
AT REAR OF BATCH

Section 7. LIABILITY.

(a) Fire. The Industry assumes all responsibility for and shall indemnify, hold harmless and defend the Railroad Company, its officers, agents and employees, from and against loss or damage to property of the Industry or to property upon the premises of the Industry or upon the Track, arising from fire caused by the mechanical operation of locomotives or the movement of rolling stock while serving Industry, including expenses and attorneys' fees, regardless of whether or not such loss or damage is caused, in whole or in part, by the negligence of the Railroad Company, its officers, agents or employees; provided, however, that the Industry shall have no responsibility to indemnify the Railroad Company for loss or damage by fire as aforesaid to the property of the Railroad Company, or to locomotives and rolling stock belonging to the Railroad Company or to third parties, or to shipments then in the common carrier custody of the Railroad Company, unless such loss or damage is caused by negligence on the part of the Industry, its officers, agents or employees.

(b) Other Liability. Except as provided in Section 5 or Section 7(a), with respect to all loss or damage to the property of the parties hereto and their respective officers, agents and employees and the property of any other person or corporation, and/or injury to or death of officers, agents or employees of the parties hereto or any other person (hereinafter collectively Loss) caused by or in connection with the construction, operation, maintenance, use, presence or removal of the Track, as between the parties hereto:

(1) The Railroad Company shall assume responsibility for and hold harmless and defend the Industry from Loss, expenses, attorneys' fees, court costs, damages, claims and judgments arising from or growing out of the negligence of the Railroad Company, its officers, agents or employees, solely or in conjunction with a third person;

(2) The Industry shall assume responsibility for and hold the Railroad Company harmless and defend the Railroad Company from Loss, expenses, attorneys' fees, court costs, damages, claims and judgments arising from or growing out of the negligence of the Industry, its officers, agents or employees, solely or in conjunction with a third person; and,

ORIGINAL STORED IN ENVELOPE
AT REAR OF BATCH

(3) The parties hereto shall equally bear all Loss, expenses, attorneys' fees, court costs, damages, claims and judgments arising from or growing out of the joint or concurring negligence of both parties hereto (or of any two or more of them if there be more than two), their respective officers, agents or employees.

Section 8. REARRANGEMENT OF TRACK; ADDITIONAL TRACKAGE.

(a) The Railroad Company may rearrange or reconstruct the Track or modify its elevation in order to develop or change nearby Railroad Company property or tracks, provided that the Industry shall continue to have similar trackage without additional cost to the Industry. However, if the change in the Track, or its appurtenances, is required by or as a result of any law, ordinance, regulation, or other contingency over which the Railroad Company has no control, the Industry shall bear the cost of the change. Nothing in this section shall affect the Railroad Company's right to terminate this Agreement under Section 10(a)(3).

(b) All references in this Agreement to Track shall apply to the Track as constructed, even if it differs from its depiction on Exhibit A. References in this Agreement to Track shall also apply to rearrangements, reconstructions, extensions or additions to the Track.

Section 9. GOVERNMENTAL RESTRICTIONS.

This Agreement is made in full contemplation of all applicable restrictive orders and regulations of the United States Government now or hereafter in effect and, accordingly, it is expressly conditioned upon the ability of the Railroad Company to secure and furnish labor and materials and to secure any necessary authority to perform the work.

Section 10. TERMINATION.

(a) After giving the Industry sixty (60) days' written notice, the Railroad Company may terminate this Agreement and remove the portion of the Track it owns, if:

(1) the Industry ceases doing business in an active and substantial way over the Track for a continuous period of one (1) year;

ORIGINAL STORED IN ENVELOPE
AT REAR OF BATCH

(2) the Industry breaches any term of this Agreement; or

(3) the Railroad Company is required by law, ordinance, police regulations, or changed conditions, to elevate, depress or otherwise change the Railroad Company's tracks near the Track, making it impracticable, in the Railroad Company's judgment, to continue the operation of the Track.

(b) Upon termination of this Agreement and (1) if the Track is removed as provided in Section 10(a), the Industry will be billed any removal costs incurred by the Railroad Company less the salvage value of the portion of the Track owned by the Railroad Company and paid for by the Industry, or (2) in the event the Track is not removed, the Railroad Company will pay the aforesaid salvage value to the Industry.

(c) Termination of this Agreement for any reason whatsoever shall not affect any of the rights or obligations of the parties hereto which may have accrued, or liabilities, accrued or otherwise, which may have arisen prior thereto.

Section 11. ASSIGNMENT; USE BY THIRD PARTIES.

The Industry shall not assign this Agreement or permit use of the Track by anyone other than the Industry without the written consent of the Railroad Company. For any departure in this respect, the Railroad Company may terminate this Agreement. The Railroad Company shall not unreasonably withhold its consent to an assignment of this Agreement.

Section 12. SUCCESSORS AND ASSIGNS.

Subject to the provisions of Section 11, the rights and obligations contained in this Agreement shall pass to and be binding upon heirs, executors, administrators, successors and assigns of the parties to this Agreement.

Section 13. SEVERABILITY.

A finding that a portion of this Agreement is invalid, void or illegal will not render the entire Agreement void and will not affect or impair the enforceability of other provisions. However, such a finding will entitle either party to terminate the Agreement by giving written notice to the other party effective on date of receipt or any later date stated in the notice.

ORIGINAL STORED IN ENVELOPE AT REAR OF BATCH

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Folder No: 714-52
Audit No: 135193

# ASSIGNMENT

THIS AGREEMENT is entered into on January 1, 1996, between UNION PACIFIC RAILROAD COMPANY("Lessor") and BUNGE CORPORATION, a New York corporation ("Assignor").

RECITALS:

By instrument dated October 19, 1983 Lessor and Assignor, or their predecessors in interest, entered into an agreement ("Basic Agreement"), identified as Audit No. 135193, at Portland (Albina), Oregon.

AGREEMENT:

Effective July 14, 1995, Assignor assigns all of Assignor's right, title and interest in and to the Basic Agreement, including any supplement or amendment (if any) to CARGILL, INC., a Delaware corporation ("Assignee") whose address is P. O. Box ~~5624~~ 5606 Minneapolis, MN 55440-5606.
CARGILL GRAIN DIVISION

Assignee accepts the above assignment and agrees to be bound by all of the terms and conditions contained in the Basic Agreement and any supplement or amendment (if any).

Lessor gives its consent to this assignment. This consent does not authorize any further assignment of the Basic Agreement, whether voluntary, or otherwise, without the prior written consent of Lessor. In the event of default by Assignee, Assignor shall be bound by and shall perform all of the obligations of the Basic Agreement.

ADMINISTRATIVE HANDLING CHARGE:

Upon execution of this Assignment, Assignor shall pay Lessor an administrative handling charge of One Hundred Dollars ($100.00).

IN WITNESS WHEREOF, the parties have executed this Assignment as of the day and year first herein written.

UNION PACIFIC RAILROAD COMPANY

By: _____
Manager - Real Estate

BUNGE CORPORATION

By: _____
Assignor

CARGILL, INCORPORATED

By: _____
~~Sr. Legal Assistant~~
Assignee
Don Vogt, Vice President
Cargill Grain Division

510.0002
Portland, OR

Irving 0059.PDF

## ASSIGNMENT OF AGREEMENTS

THIS AGREEMENT, made and entered into this 14th day of July, 1995, by and between CARGILL, INCORPORATED, a Delaware corporation to be addressed at 15407 McGinty Road West, Wayzata, Minnesota 55391 ("Assignee") and BUNGE CORPORATION, a New York corporation to be addressed at 11720 Borman Drive, St. Louis, Missouri 63146 ("Assignor").

WITNESSETH:

RECITALS:

WHEREAS, Assignor is presently a party to those certain leases, licenses and other agreements set forth on Exhibit A attached hereto and made a part hereof (collectively referred to as the "Agreements"); and

WHEREAS, Assignor is transferring its interest in that certain real property located in the Town of Portland, County of Multnomah, State of Oregon, to Assignee which is more specifically described on Exhibit B attached hereto and made a part hereof;

WHEREAS, Assignor and Assignee desire that all of Assignor's interest in and to the Agreements be assigned to Assignee.

AGREEMENT:

NOW THEREFORE, the parties hereto mutually agree as follows:

1. For and in consideration of One Dollar ($1.00) and other good and valuable consideration, the receipt of which the Assignee does hereby acknowledge, Assignor hereby sells, assigns, transfers, conveys and sets over to the Assignee all of Assignor's right, title and interest in and to the Agreements, as the same may have heretofore been amended or modified.

2. For and in consideration of the above Assignment, the Assignee hereby accepts and assumes the Assignment and agrees to be bound by and to abide by each and every one of the terms and conditions of the Agreements and hereby expressly assumes any and all liability for, and agrees to promptly make, any and all payments due thereunder and to perform all of the covenants and agreements contained in the Agreements from the effective date of this Assignment.

3. Any prepaid payments due under the Agreements shall be prorated between the parties as of the effective date of this Assignment.

Portland, OR
510.0002

4. The effective date of this Assignment shall be July 11, 1995.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first herein written.

BUNGE CORPORATION

By: _____

Its: Senior Vice President

"Assignor"

CARGILL, INCORPORATED

By: _____

Its: Vice President

"Assignee"

ASSIGN.102

EXHIBIT A

**Assumed Contracts**

1. Private Roadway Encroachment Agreement (Audit No. 105268) dated October 17, 1977 between the Oregon-Washington Railroad & Navigation Company, its lessee Union Pacific Railroad Company, and Bunge Corporation.

2. Industry Track Contract (Audit No. 125926) dated January 10, 1977 between the Oregon-Washington Railroad & Navigation Company, its lessee Union Pacific Railroad Company and Bunge Corporation.

3. Supplemental Agreement dated October 19, 1983 (Audit No. 135193) to Industry Spur Track Agreement dated April 14, 1983 between the Oregon-Washington Railroad & Navigation Company, its lessee Union Pacific Railroad Company, and Bunge Corporation. (Copy of original Industry Spur Track Agreement not attached.)

EXHIBIT B

**Legal Description**

PARCEL I:

A parcel of land lying in the Southwest quarter of Section 27, Township 1 North, Range 1 East, City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:

Beginning at a point on the Southwesterly line of North River Street, said point being South 50°58'41" East a distance of 235.49 feet from the East corner of River Lot 19, Albina, as conveyed to Dillingham Corporation, by Deed recorded February 13, 1969 in Book 663 Page 196, Deed Records; thence along said Southwesterly line South 50°58'41" East a distance of 179.04 feet to a point; thence leaving said Southwesterly line of North River Street North 88°46'41" West a distance of 13.54 feet to a point; thence South 59°22'30" West 361.2 feet more or less to a point on the Harbor line; thence along said Harbor line North 34°31'11" West 8.0 feet more or less; thence North 50°14'11" West 268.8 feet more or less to a point on the Southwesterly extension of the Southeasterly line of River Lot 19, Albina; thence leaving said Harbor line North 39°01'19" East along said Southwesterly extension and Southeasterly line a distance of 145.9 feet more or less to a point; thence leaving said Southwesterly extension of the Southeasterly line of River Lot 19, Albina, South 52°19'00" East a distance of 93.00 feet to a point; thence North 58°02'25" East a distance of 22.60 feet to a point; thence South 30°52'05" East a distance of 57.93 feet to a point; thence North 58°44'50" East a distance of 194.39 feet to a point; thence South 50°58'41" East a distance of 15.14 feet to a point; thence North 39°01'19" East a distance of 8.25 feet to the point of beginning.

EXCEPTING THEREFROM ownership of the State of Oregon in and to that portion of the premises herein described lying below the line of ordinary high water of the Willamette River.

PARCEL II:

A tract of land in the William Irving Donation Land Claim and Joshua Delay Donation Land Claim: Also of the Southwest one quarter of Section 27 and the Northwest one quarter of Section 34, Township 1 North, Range 1 East of the Willamette Meridian in the City of Portland, County of Multnomah and State of Oregon; described as follows:

Beginning at a point in the North line of the said William Irving Donation Land Claim, that is North 89°42'45" East 270.89 feet from the Northwest corner of said Claim, which point is the Northwest corner of Third Street extended in the Old City of East Portland, said point is North 89°42'45" East 16.20 feet from the intersection of said Donation Land Claim line with the Southwesterly line of North River Street, also is the intersection of said Donation Land Claim line with the Northerly prolongation of the curve of the Western right of way line of the Oregon-Washington Railway and Navigation Co., as described and recorded March 24, 1882 in Deed Book 54 at Page 77 said Multnomah County; thence Southeasterly along

the Westerly line of Third Street and the Westerly right of way line of said O.W.R. & N. Co., 1163.75 feet to a point in the Northerly line of the Northern Pacific Terminal tract recorded December 9, 1882 in Deed Book 62 at Page 139, which point is the intersection with the South line of North Dixon Street extended Westerly; thence along the Westerly extension of the South line of North Dixon Street and the Northerly line of the said Northern Pacific Terminal tract, South 51°33'30" West 212.42 feet to the intersection with the harbor line of the Eastern bank of the Willamette River; thence North 36°01'45" West 1196.00 feet along said Harbor line to the intersection with the Northerly line of the Interior Warehouse Tract, recorded February 3, 1954, in Deed Book 1642, at Page 318, said Multnomah County; thence North 57°54'45" East 361.24 feet along said line to a point in the North line of said William Irving Donation Land Claim line; thence North 89°42'45" East along said Donation Land Claim line to the point of beginning.

EXCEPTING THEREFROM ownership of the State of Oregon in and to that portion of the premises herein described lying below the line of ordinary high water of the Willamette River.

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RAILROAD COMPANIES' COUNTERPART

Portland, ORE
510.02 JJMC

SUPPLEMENTAL AGREEMENT to agreement dated April 14, 1983 covering construction, maintenance and operation of industry spur track at Portland (Albina), OR
PLD 9005-34-1.2
(8307)

RECEIVED NOV 1 8 1983
U. P. R. R. CO.

135193

THIS SUPPLEMENTAL AGREEMENT is made and entered into as of the 19TH day of OCTOBER, 1983, by and between OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, an Oregon corporation, and its lessee UNION PACIFIC RAILROAD COMPANY, a Utah corporation (herein the "Railroad Company"), and BUNGE CORPORATION, a New York corporation (herein the "Industry").

RECITALS:

On April 14, 1983, the parties entered into an agreement (hereinafter referred to as "original agreement") covering construction, maintenance and operation of private industry trackage (herein "Track") at Portland, Multnomah County, Oregon.

The parties now desire to revise Exhibit C of said original agreement to reflect the true costs of the industry track construction project.

NOW, THEREFORE, IT IS MUTUALLY AGREED by and between the parties hereto as follows:

(1) Exhibit C-1, attached hereto and by this reference made a part hereof, shall be and hereby is substituted for Exhibit C attached to said original agreement.

(2) Article II(A) of said original agreement is hereby revised to provide for a construction cost to the Industry of $314,608 as opposed to the original cost of $288,265.

(3) This agreement is supplemental to the original agreement, and nothing herein contained shall be construed as amending or modifying the same except as herein specifically provided; and said original agreement, as hereby amended, shall remain in full force and effect until terminated as provided therein.



ENTERED 1-13-83

CARG002699

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Agreement to be executed, in duplicate, as of the day and year first above written.

OREGON-WASHINGTON RAILROAD
& NAVIGATION COMPANY
UNION PACIFIC RAILROAD COMPANY

By _____
General Manager

BUNGE CORPORATION

Attest: (Seal)

_____
Secretary

By _____
Vice President



CARG002700

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RAILROAD COMPANIES' COUNTERPART

SUPPLEMENTAL AGREEMENT to agreement dated April 14, 1983 covering construction, maintenance and operation of industry spur track at Portland (Albina), OR
PLD 9005-34-1.2
(8307)

RECEIVED NOV 18 1983
U. P. R. R. Co.
Audit No. 135193

THIS SUPPLEMENTAL AGREEMENT is made and entered into as of the 19TH day of OCTOBER, 1983, by and between OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, an Oregon corporation, and its lessee UNION PACIFIC RAILROAD COMPANY, a Utah corporation (herein the "Railroad Company"), and BUNGE CORPORATION, a New York corporation (herein the "Industry").

RECITALS:

On April 14, 1983, the parties entered into an agreement (hereinafter referred to as "original agreement") covering construction, maintenance and operation of private industry trackage (herein "Track") at Portland, Multnomah County, Oregon.

The parties now desire to revise Exhibit C of said original agreement to reflect the true costs of the industry track construction project.

NOW, THEREFORE, IT IS MUTUALLY AGREED by and between the parties hereto as follows:

(1) Exhibit C-1, attached hereto and by this reference made a part hereof, shall be and hereby is substituted for Exhibit C attached to said original agreement.

(2) Article II(A) of said original agreement is hereby revised to provide for a construction cost to the Industry of $314,608 as opposed to the original cost of $288,265.

(3) This agreement is supplemental to the original agreement, and nothing herein contained shall be construed as amending or modifying the same except as herein specifically provided; and said original agreement, as hereby amended, shall remain in full force and effect until terminated as provided therein.



ENTERED
11-13-83

CARG002702

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Agreement to be executed, in duplicate, as of the day and year first above written.

OREGON-WASHINGTON RAILROAD
& NAVIGATION COMPANY
UNION PACIFIC RAILROAD COMPANY

By _____
General Manager

BUNGE CORPORATION

Attest: (Seal)

_____
Secretary

By _____
Vice President



CARG002703

Irving 0063.PDF

**CARGILL, INCORPORATED**
**LAW DEPARTMENT**

Mailing Address:
P.O. Box 5624
Minneapolis, MN 55440-5624

Location/Shipping Address:
15407 McGinty Road West
Wayzata, MN 55391-5624

Facsimile:
(952) 742-6349
or (952) 742-7503

**Marilynn W. Paulson**
**Senior Paralegal**
Phone: (952) 742-6276

Marilynn_Paulson@cargill.com

November 1, 2001

**VIA COURIER**

Mr. Jim Roth
Union Pacific Railroad
1800 Farnam Street
Omaha, NE 68102

RE: Portland, OR: Sublease of Facility and Assignment of Private Roadway Encroachment Agreement

Dear Jim:

As we discussed, Cargill Incorporated ("Cargill") and Louis Dreyfus Corporation ("Louis Dreyfus") are in the process of finalizing a joint venture in which the joint venture, CLD Pacific Grain, LLC, 222 SW Columbia, Suite 1133, Portland, OR 97201 ("CLD") shall lease or sublease certain PNW facilities from Cargill and Louis Dreyfus. This would include an assignment of Cargill's interest in a Private Roadway Encroachment Agreement dated October 17, 1977 (105268; A-92381). CLD will commence operations on or about December 1, 2001.

Please arrange to have the necessary assignment document for agreement prepared for execution by Cargill and CLD and forward to me. If you have any questions or need further information from me, please contact me.

Very truly yours,

Marilynn W. Paulson

Marilynn W. Paulson
Senior Paralegal

MWP
251302
cc: C. W. Putnam/Law/24

left msg 12/27

Folde[redacted]o: 591-35
Audit No: A-92381

ASSIGNMENT

THIS AGREEMENT is entered into on February 1, 1996, between UNION PACIFIC RAILROAD COMPANY("Lessor") and BUNGE CORPORATION, a New York corporation ("Assignor").

RECITALS:

By instrument dated October 17, 1977, Lessor and Assignor, or their predecessors in interest, entered into an agreement ("Basic Agreement"), identified as Audit No. A-92381, at Portland (Albina), Oregon.

AGREEMENT:

Effective July 14, 1995, Assignor assigns all of Assignor's right, title and interest in and to the Basic Agreement, including any supplement or amendment (if any) to CARGILL, INC., a Delaware

4/10/2002 10:10:59 AM

# Lease Data Sheet

Trx ID.: 2060

Type: Land LeaseCounty:

Division: WGTG-NAG - Worldwide Grain Trading Grou Lease City: **Portland**

Lease Number: A92381 Lease State: **OR**

A-Z File No: L38009-00510.0001

Physical File: Portland-OR-..

File Title: Portland, OR (CGD) Easements and Rights of Way

Options: Purchase? No Renew? No Evergreen? Yes

Lease Date: 3/10/2002 Expiration Date: Notice Given by: Suspend Date:

Expired Date: Amended Date: Termination Date: Extended Date:

Lessor: Union Pacific Railroad Company, CLD Pacific Grain, LL Cargill Lessor

Lessee: Cargill, Incorporated

Comments: Private roadway (16 foot gravel encroachment). Assigned original instrument of 10/17/77 to Cargill on March 10, 2002. Admin handling fee of $500.

First Notice: SecondNotice: Final Notice

Memo Recorded: Memo Terminated:

Entered On: 4/10/2002 By: skollodg Changed On: 4/10/2002 By: skollodg

*** * * KEEP ON TOP * * ***

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Consent to Assignment

Audit No.A-92381

THIS AGREEMENT is made and entered into on 3/19, 2002 between UNION PACIFIC RAILROAD COMPANY ("Lessor"), CLD Pacific Grain, LLC, ("Lessee") and Cargill Incorporated ("Assignee"), whose address is 15407 McGinty Road West, Wayzata, MN, 55391-5624.

RECITALS:

By instrument dated October 17, 1977, Lessor and Lessee, or their predecessors in interest, entered into an agreement ("Basic Agreement"), identified as Audit No. A-92381, at Portland, Oregon.

Lessee desires to conditionally assign to Assignee all of Lessee's right, title and interest in the Basic Lease, including any supplement or amendment (if any), as security for indebtedness ("Security for Indebtedness").

IT IS AGREED BETWEEN THE PARTIES AS FOLLOWS:

Section 1. LESSOR CONSENTS TO CONDITIONAL ASSIGNMENT.

Lessee may conditionally assign to Assignee all of Lessee's right, title and interest in the Basic Lease, subject to the terms and conditions of this Consent.

Section 2. LESSEE REMAINS BOUND.

This Consent shall not release Lessee from Lessee's obligations and liabilities under the Basic Lease.

Section 3. ASSIGNEE TO BE BOUND IF ASSIGNEE'S RIGHTS ARE ENFORCED.

If Assignee exercises any rights under the Lease, or otherwise takes possession of the leased premises, then Assignee, jointly and severally with Lessee, shall be bound by all of the provisions of the Basic Lease and shall perform all of the obligations of Lessee under the Basic Lease accruing on and after the date of such exercise or taking of possession. Assignee shall give Lessor written notice prior to exercising any rights of Lessee under the Lease.

Section 4. NO FURTHER ASSIGNMENT.

This Consent shall not be deemed to authorize any further assignment of the Basic Lease, voluntary or otherwise, without the prior written consent of Lessor.

Section 5. ADMINISTRATIVE HANDLING CHARGE.

Upon the execution and delivery of this Consent, Lessee shall pay Lessor an administrative handling charge of Five Hundred Dollars (500.00).

IN WITNESS WHEREOF, the parties have executed this Consent as of the day and year first herein written.

UNION PACIFIC RAILROAD COMPANY

By:_____
Manager - Real Estate

CARGILL INCORPORATED

By: _____
Title: V.P.
(Lessee)

CLD PACIFIC GRAIN, LLC

By: _____
Title: General Manager
(Assignee)

**CARGILL INCORPORATED**
*Financial Service Center*
*Fargo, ND*

*US Bank East Grand Forks*
*East Grand Forks, MN 56721*

75-1592
912

| MM/DD/YY | Number |
|---|---|
| 03/11/02 | 801925016 |

Amount
$**********$500.00

Five Hundred and NO/100 Dollars

*Pay to The order of*
UNION PACIFIC RAILROAD
PO BOX 502453
ST LOUIS MO 63150-2453

⑈801925016⑈ ⑆091215927⑆152100003085⑈

# REMITTANCE STATEMENT

000004
394434 Financial Service Center

| VENDOR | 50077011 |
|---|---|

| DATE | 03/11/02 |
|---|---|

| PAYMENT # | 801925016 |
|---|---|

| Vendor Ref#/Invoice # | Purchase Location | PO#/Ref# | Voucher# | Invoice Amount | Discount | Sales Tax | Net Amount | Description |
|---|---|---|---|---|---|---|---|---|
| 022502 | CGD-Division Office Admin | 000 | PL00024541 | 500.00 | | | 500.00 | ROADWAY ENCROACHMT LIC |

If you have any questions, please call the
Financial Service Center at 1-800-513-1098.

17379
4

-1958 (11/00)

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**CARGILL, INCORPORATED**
**LAW DEPARTMENT**

Mailing Address:
P.O. Box 5624
Minneapolis, MN 55440-5624

Location/Shipping Address:
15407 McGinty Road West
Wayzata, MN 55391-5624

Facsimile:
(952) 742-6349
or (952) 742-7503

**Marilynn W. Paulson**
**Senior Paralegal**
Phone: (952) 742-6276

Marilynn_Paulson@cargill.com

April 1, 2002

**VIA OVERNIGHT MAIL**

Arnie Schaufler
CLD Pacific Grain, LLC
222 SW Columbia, Suite 1133
Portland, OR 97201

RE: Portland, OR: Assignment of UP Lease

Dear Gene:

Enclosed is an original of the Consent to Conditional Assignment of lease audit no. A92381 at Portland, Oregon. If you have any questions, give me a call.

Very truly yours,

Marilynn

Marilynn W. Paulson
Senior Paralegal

MWP
Enclosure
265487

Irving 0066.PDF

Consent to Assignment

Audit No.A-92381

THIS AGREEMENT is made and entered into on March 19, 2002 between UNION PACIFIC RAILROAD COMPANY ("Lessor"), CLD Pacific Grain, LLC, ("Lessee") and Cargill Incorporated ("Assignee"), whose address is 15407 McGinty Road West, Wayzata, MN, 55391-5624.

RECITALS:

By instrument dated October 17, 1977, Lessor and Lessee, or their predecessors in interest, entered into an agreement ("Basic Agreement"), identified as Audit No. A-92381, at Portland, Oregon.

Lessee desires to conditionally assign to Assignee all of Lessee's right, title and interest in the Basic Lease, including any supplement or amendment (if any), as security for indebtedness ("Security for Indebtedness").

IT IS AGREED BETWEEN THE PARTIES AS FOLLOWS:

Section 1. LESSOR CONSENTS TO CONDITIONAL ASSIGNMENT.

Lessee may conditionally assign to Assignee all of Lessee's right, title and interest in the Basic Lease, subject to the terms and conditions of this Consent.

Section 2. LESSEE REMAINS BOUND.

This Consent shall not release Lessee from Lessee's obligations and liabilities under the Basic Lease.

Section 3. ASSIGNEE TO BE BOUND IF ASSIGNEE'S RIGHTS ARE ENFORCED.

If Assignee exercises any rights under the Lease, or otherwise takes possession of the leased premises, then Assignee, jointly and severally with Lessee, shall be bound by all of the provisions of the Basic Lease and shall perform all of the obligations of Lessee under the Basic Lease accruing on and after the date of such exercise or taking of possession. Assignee shall give Lessor written notice prior to exercising any rights of Lessee under the Lease.

Section 4. NO FURTHER ASSIGNMENT.

This Consent shall not be deemed to authorize any further assignment of the Basic Lease, voluntary or otherwise, without the prior written consent of Lessor.

Section 5. ADMINISTRATIVE HANDLING CHARGE.

Upon the execution and delivery of this Consent, Lessee shall pay Lessor an administrative handling charge of Five Hundred Dollars (500.00).

IN WITNESS WHEREOF, the parties have executed this Consent as of the day and year first herein written.

UNION PACIFIC RAILROAD COMPANY

By: _____
Manager - Real Estate

CARGILL INCORPORATED

By: _____
Title: V.P.
(Lessee)

CLD PACIFIC GRAIN, LLC

By: _____
Title: General Manager
(Assignee)

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Consent to Assignment

Audit No.A-92381

THIS AGREEMENT is made and entered into on March 19, 2002 between UNION PACIFIC RAILROAD COMPANY ("Lessor"), CLD Pacific Grain, LLC, ("Lessee") and Cargill Incorporated ("Assignee"), whose address is 15407 McGinty Road West, Wayzata, MN, 55391-5624.

RECITALS:

By instrument dated October 17, 1977, Lessor and Lessee, or their predecessors in interest, entered into an agreement ("Basic Agreement"), identified as Audit No. A-92381, at Portland, Oregon.

Lessee desires to conditionally assign to Assignee all of Lessee's right, title and interest in the Basic Lease, including any supplement or amendment (if any), as security for indebtedness ("Security for Indebtedness").

IT IS AGREED BETWEEN THE PARTIES AS FOLLOWS:

Section 1. LESSOR CONSENTS TO CONDITIONAL ASSIGNMENT.

Lessee may conditionally assign to Assignee all of Lessee's right, title and interest in the Basic Lease, subject to the terms and conditions of this Consent.

Section 2. LESSEE REMAINS BOUND.

This Consent shall not release Lessee from Lessee's obligations and liabilities under the Basic Lease.

Section 3. ASSIGNEE TO BE BOUND IF ASSIGNEE'S RIGHTS ARE ENFORCED.

If Assignee exercises any rights under the Lease, or otherwise takes possession of the leased premises, then Assignee, jointly and severally with Lessee, shall be bound by all of the provisions of the Basic Lease and shall perform all of the obligations of Lessee under the Basic Lease accruing on and after the date of such exercise or taking of possession. Assignee shall give Lessor written notice prior to exercising any rights of Lessee under the Lease.

Section 4. NO FURTHER ASSIGNMENT.

This Consent shall not be deemed to authorize any further assignment of the Basic Lease, voluntary or otherwise, without the prior written consent of Lessor.

Section 5. ADMINISTRATIVE HANDLING CHARGE.

Upon the execution and delivery of this Consent, Lessee shall pay Lessor an administrative handling charge of Five Hundred Dollars (500.00).

IN WITNESS WHEREOF, the parties have executed this Consent as of the day and year first herein written.

UNION PACIFIC RAILROAD COMPANY

By:_____
Manager - Real Estate

CARGILL INCORPORATED

By:_____
Title: V.P.
(Lessee)

CLD PACIFIC GRAIN, LLC

By:_____
Title: General Manager
(Assignee)

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**CARGILL, INCORPORATED**
**LAW DEPARTMENT**

Mailing Address:
P.O. Box 5624
Minneapolis, MN 55440-5624

Location/Shipping Address:
15407 McGinty Road West
Wayzata, MN 55391-5624

Facsimile:
(952) 742-6349
or (952) 742-7503

**Marilynn W. Paulson**
**Senior Paralegal**
Phone: (952) 742-6276

Marilynn_Paulson@cargill.com

L 38007
510.0001
F

March 13, 2002

Mr. Jim Roth
Union Pacific Railroad Company
1800 Farnam Street
Omaha, NE 68102

RE: Portland, OR: Consent to Conditional Assignment for Lease No. 591-35 (A-92381)
Our File No. 510.0001

Dear Jim:

Enclosed are triplicate originals of the above referenced Consent to Conditional Assignment executed by Cargill and CLD. Also enclosed is the administrative fee of $500. Please arrange for execution by Union Pacific and return two originals to me and I will forward one to CLD.

Should you have any questions please contact me.

Very truly yours,

Marilynn

Marilynn W. Paulson
Senior Paralegal

MWP
Enclosures
261629

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**CARGILL, INCORPORATED**
**LAW DEPARTMENT**

Mailing Address:
P.O. Box 5624
Minneapolis, MN 55440-5624

Location/Shipping Address:
15407 McGinty Road West
Wayzata, MN 55391-5624

Facsimile:
(952) 742-6349
or (952) 742-7503

**Marilynn W. Paulson**
**Senior Paralegal**
Phone: (952) 742-6276

Marilynn_Paulson@cargill.com

January 5, 2002

**VIA COURIER**

Jim Roth
Union Pacific Railroad
1800 Farnam Street
Omaha, NE 68102

RE: Portland, OR: Sublease of Facility and Private Roadway Encroachment Agreement

Dear Jim:

Enclosed you will find the consent that you recently sent to me. Please note that this consent does not belong to or relate in any way to Cargill's encroachment agreement referenced above. If you recall, Cargill has entered into a joint venture with Louis Dreyfus Corporation in which the joint venture, CLD Pacific Grain, LLC, 222 SW Columbia, Suite 1133, Portland, OR 97201 ("CLD") is currently leasing or subleasing certain Pacific Northwest facilities from Cargill and Louis Dreyfus. The private encroachment agreement is at Cargill's facility in Portland and is dated October 17, 1977 (105268; A-92381).

Please review your files again and prepare an assignment and consent for the private encroachment agreement for execution by Cargill and CLD and forward to me as soon as possible. If you have any questions, please contact me.

Very truly yours,

Marilynn W. Paulson

Marilynn W. Paulson
Senior Paralegal

MWP
Enclosures
256931

# ASSIGNMENT AND ASSUMPTION OF PAVING LICENSE AGREEMENT AND CONSENT

**THIS ASSIGNMENT AND ASSUMPTION OF PAVING LICENSE,** by and between **EQUITY INDUSTRIAL LIMITED PARTNERSHIP VI**, a Massachusetts limited partnership, with an address of 145 Rosemary Street, Suite E, Needham, Massachusetts 02194 ("Assignor"), and **IRON MOUNTAIN STATUTORY TRUST-1999**, a Connecticut statutory trust with an address c/o First Union National Bank, Trustee, 10 State House Square, Hartford, Connecticut 06103, Attn: Corporate Trust Administration ("Assignee").

## RECITALS

TOYS "R" US, INC. and **UNION PACIFIC RAILROAD COMPANY,** a Delaware corporation, successor and interest to **OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY**, to be addressed at 1800 Farnam Street, Omaha, Nebraska 68102 ("Railroad"), or their predecessors-in-interest, entered into a Paving License dated December 16, 1980 and subsequently amended bearing Railroad's Audit Number 132543 and recorded under Auditor's File 8G12300203 of the Deed of Records of King County, Washington on December 30, 1980 ("Paving License"), covering premises upon and across Railroad's right-of-way located in Kent, Washington.

The interest of Toys "R" Us, Inc. as licensee in the Paving License was assigned to Assignor, and Railroad consented to such assignment, by instrument recorded in King County as instrument 200004100401 on April 11, 2000.

Assignor has conveyed the property benefited by the Paving License to Assignee by deed recorded in King County as instrument number 20010516002215 on May 16, 2001; and in connection therewith, Assignor wishes to assign to Assignee, and Assignee wishes to receive, such rights and privileges as may exist under the Parking License.

**NOW, THEREFORE,** in consideration of the mutual covenants contained herein and for other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, effective as of May 16, 2001 (the "Effective Date"), Assignor does hereby sell, assign, transfer and set over, unto Assignee all of Assignor's right, title and interest in and to the Paving License and any supplement or amendment thereto.

Assignee hereby accepts the above assignment and agrees to be bound by and to perform and observe fully and faithfully all of the covenants, stipulations and conditions contained in the Paving License and any supplement or amendment thereto to be performed and observed by Assignor and assumes all liabilities and obligations contained in the Paving License and to any supplement and amendment thereto to be assumed by Assignor.

Assignor hereby covenants and agrees to indemnify and hold Assignee and its agents, servants, employees, contractors, licensees, invitees, officers, shareholders, directors, partners, managers and members harmless from and against any and all costs, claims, liabilities, demands, actions, causes of action, suits, proceedings, damages, interests and expenses of every nature whatsoever, which may arise, be asserted or accrue under or in connection with the Paving License, including, without limitation, the costs and expenses of defending any action or proceeding (including, but not limited to, reasonable attorneys' fees and disbursements) prior to the Effective Date.

Assignee hereby covenants and agrees to indemnify and hold Assignor and its agents, servants, employees, contractors, licensees, invitees, officers, shareholders, directors, partners, managers and members harmless from and against any and all costs, claims, liabilities, demands, actions, causes of action, suits, proceedings, damages, interest and expenses of every nature whatsoever, which may arise, be asserted or occur under or in connection with the Paving License, including, without limitation, the costs and expenses of defending any action or proceeding (including but not limited to, reasonable attorneys' fees and disbursements) from and after the Effective Date.

Assignor hereby represents and warrants to Assignee that (i) the execution, performance and delivery by Assignor of this Assignment does not violate any provision of its partnership agreement and has been duly and validly authorized and approved by any required partnership governing documents of Assignor, (ii) the obligations of Assignor under this Assignment are legal, valid, binding and enforceable against Assignor in accordance with its terms, and (iii) the person executing this Assignment has the authority to so execute, perform and deliver this Assignment on behalf of Assignor.

Assignee hereby represents and warrants to Assignor that (i) the execution, performance and delivery by Assignee of this Assignment does not violate any provision of its charter or by-laws and has been duly and validly authorized and approved by any required corporate action of Assignee, (ii) the obligations of Assignee under this Assignment are legal, valid, binding and enforceable against Assignee in accordance with its terms, and (iii) the person executing this Assignment has the authority to so execute, perform and deliver this Assignment on behalf of Assignee.

This Assignment shall be binding upon, and inure to the benefit of the parties hereto and their respective legal representatives, successors and assigns.

Railroad, in consideration of the covenants and agreements of Assignor and Assignee herein contained, gives its consent to the aforesaid assignment, **PROVIDED,** however, that such consent shall not be deemed or construed to authorize any further assignment of the Paving License, whether voluntary, by operation of law, or otherwise, without the prior consent in writing of Railroad which consent shall not be unreasonably withheld; and **PROVIDED, FURTHER,** that, as between Assignor and Railroad, neither said assignment nor anything herein contained shall be construed as releasing Assignor, in the event of default of Assignee, from the obligation to perform all of the covenants and agreements contained in the Paving License or any supplement or amendment thereto

to be performed by Assignor, or from any of the liabilities assumed by Assignor under said Paving License.

The Assignor, when returning this Agreement by the Assignor and Assignee, shall pay to Railroad an administrative handling charge of $500.00.

Executed as of this _____ day of September, 2001.

Witness:

Name: _____

**UNION PACIFIC RAILROAD COMPANY**

By: _____
Name: Doug Rice
Title: Senior Manager – Real Estate

**EQUITY INDUSTRIAL LIMITED PARTNERSHIP VI**

By: **EQUITY INDUSTRIAL VI, INC.,** Its General Partner

Witness:

Name: Deborah L. Hammond

By: _____
Name: Donald A. Levine
Title: President

**IRON MOUNTAIN STATUTORY TRUST-1999**

By: **FIRST UNION NATIONAL BANK, TRUSTEE,** and not individually

Witness:

_____
Name: _____

By: _____
Name: _____
Title: _____

to be performed by Assignor, or from any of the liabilities assumed by Assignor under said Paving License.

The Assignor, when returning this Agreement by the Assignor and Assignee, shall pay to Railroad an administrative handling charge of $500.00.

Executed as of this _____ day of September, 2001.

Witness:

_____

Name: _____

**UNION PACIFIC RAILROAD COMPANY**

By: _____

Name: Doug Rice
Title: Senior Manager – Real Estate

Witness:

_____

Name: _____

**EQUITY INDUSTRIAL LIMITED PARTNERSHIP VI**

By: **EQUITY INDUSTRIAL VI, INC.,** Its General Partner

By: _____

Name: Donald A. Levine
Title: President

Witness:

Gary B. Watke

Name: G. B. Watke

**IRON MOUNTAIN STATUTORY TRUST-1999**

By: **FIRST UNION NATIONAL BANK, TRUSTEE,** and not individually

By: _____

Name: _____
Title: Timothy A. Donmoyer
Vice President

STATE OF NEBRASKA )
) SS
COUNTY OF DOUGLAS )

On this 3 day of ~~September~~ December, 2001, before me, the undersigned, a Notary Public in and for the State of Nebraska, duly commissioned and sworn, personally appeared DOUG RICE to me known to be the Senior Manager – Real Estate of the UNION PACIFIC RAILROAD COMPANY, the corporation that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he is authorized to execute the said instrument and that the seal affixed (if any) is the corporate seal of said corporation.

Witness my hand and official seal hereto affixed the day and year first above written.

GENERAL NOTARY-State of Nebraska
STANLEY C. MISFELDT
My Comm. Exp. April 12, 2003

Stanley C Misfeldt
Notary Public

My commission expires: 4/12/2003

COMMONWEALTH OF MASSACHUSETTS )
) SS
COUNTY OF SUFFOLK )

~~September~~ October 5, 2001

Then there appeared the above-named Donald A. Levine as President of EQUITY INDUSTRIAL VI, INC., the general partner of EQUITY INDUSTRIAL LIMITED PARTNERSHIP VI, who acknowledged the foregoing instrument to be his free act and deed and the free act and deed of Equity Industrial Limited Partnership VI, before me.

Daniel Lanzillo
Notary Public

My commission expires: 9/1/06

STATE OF CONNECTICUT )
) SS
COUNTY OF Suffolk )

October
~~September~~ 25, 2001

Then there appeared the above-named Timothy Donmayer, as Vice President of FIRST UNION NATIONAL BANK, as Trustee for IRON MOUNTAIN STATUTORY TRUST -1999 who acknowledged the foregoing instrument to be his free act and deed and the free act and deed of First Union National Bank and Iron Mountain Statutory Trust-1999, before me.

Jeanne A. Zypk
Notary Public

My commission expires: 4-18-08

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RAILROAD COMPANIES' COUNTERPART

PRIVATE ROADWAY ENCROACHMENT
Albina, Portland, Oregon
PLD 9005-34-1.2

Dept. No. 32398

Rev. Ren. & Tfrs. Agreement
Department No. 28349
Audit No. A-92381

THIS AGREEMENT is made and entered into as of the 17th day of October, 1977, by and between the OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, an Oregon corporation, and its lessee, UNION PACIFIC RAILROAD COMPANY, a Utah corporation (hereinafter collectively called "Licensor"), and BUNGE CORPORATION, a New York corporation (hereinafter called "Licensee").

RECITALS:

The Licensee desires to maintain and use a private 16-foot gravel roadway (hereinafter called "Private Roadway"), on and along the main line right of way of the Licensor between North Albina Avenue and North River Street for truck access to the Licensee's grain elevators at Portland (Albina), in Multnomah County, Oregon, in the location shown outlined in red on print D-8454 dated May 16, 1978, attached hereto, marked Exhibit "A", and by this reference made a part hereof.

NOW, THEREFORE, IT IS MUTUALLY AGREED by and between the parties hereto as follows:

U. P. R. R. Co. Lease
Audit No. A 103268

Section 1. LICENSOR GRANTS RIGHT.

(a) In consideration of the covenants and agreements herein contained to be by the Licensee kept, observed and performed, the Licensor hereby grants to the Licensee, subject to the terms and conditions herein stated, the right to maintain and use said Private Roadway on and along said right of way in the location described in the recitals hereof.

(b) The foregoing grant is subject and subordinate to the prior and continuing right and obligation of the Licensor to use and maintain the Licensor's entire railroad right of way in the performance of the Licensor's public duty as a common carrier, and is also subject to the right and power of the Licensor to construct, maintain, repair, renew, use, operate, change, modify or relocate railroad tracks, signal, communication or other wire lines, pipelines and other facilities upon, along or across any or all parts of said right of way, all or any of which may be freely done at any time or times by the Licensor without liability to the Licensee or to any other party for compensation or damages.



ENTERED 1-13-88

Portland, OR
510.0001

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(c) The foregoing grant is also subject to all outstanding superior rights (including, but not limited to, those in favor of licensees and lessees of said right of way, and others) and the right of the Licensor to renew and extend the same, and is made without covenant of title or for quiet enjoyment.

(d) The Licensee's use of the Private Roadway necessitated the relocation of the Licensor's television camera and related lighting shown on Exhibit "A" at the north end of the Private Roadway to the southerly end thereof in the location indicated on Exhibit "A". In consideration of the license and permission granted herein, the Licensee has paid to the Licensor, the cost of relocating said television camera; the sum of SEVEN THOUSAND EIGHT HUNDRED AND NO/100 DOLLARS ($7,800.00).

Section 2. MAINTENANCE AND USE.

(a) The Licensee, at the sole expense of the Licensee, shall maintain said Private Roadway and shall install, repair, renew and replace any and all appurtenant fences, gates, drainage facilities, traffic signs or devices, and identification signs shown on Exhibit "A" or required at any time by the Licensor, by law, or by any public authority having jurisdiction. All work performed by the Licensee on said right of way in connection with the maintenance of said Private Roadway shall be done to the satisfaction of the Licensor.

(b) Said Private Roadway shall be maintained and used by the Licensee in such manner as to cause no interference whatsoever with the operation of the tracks of the Licensor, and nothing shall be done or suffered to be done by the Licensee which would in any way endanger the safety of operations of said tracks.

(c) The Licensee shall not do, suffer or permit anything which will or may obstruct, endanger or interfere with, hinder or delay the maintenance and operation of the Licensor's railroad tracks or appurtenant facilities or the facilities or equipment of others lawfully using the Licensor's property. The Licensee shall adequately supervise and police use of said Private Roadway so that no agent, employee, patron or invitee of the Licensee or vehicle of said persons stops or stands on the Licensor's tracks or attempts to cross the Licensor's railroad tracks at any time.



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Section 3. MODIFICATION OR RELOCATION OF PRIVATE ROADWAY.

(a) The right herein granted is subject to the needs and requirements of the Licensor in the operation of its railroad and the improvements and use of its property, and the Licensee shall, at the Licensee's sole expense, make any and all modifications or changes in said Private Roadway, or move the same to such new location as the Licensor may designate, whenever, in the furtherance of such needs and requirements, the Licensor shall find such action necessary or desirable.

(b) All the terms, conditions and stipulations herein expressed with reference to the maintenance and use of the Private Roadway in the location hereinbefore described shall apply to the Private Roadway when modified or moved to a new location under the terms of this section.

Section 4. PRIVATE ROADWAY TO BE A STRICTLY PRIVATE ONE. It is expressly stipulated that the Private Roadway is to be a strictly private one and is not intended for public use. The Licensee shall not at any time permit or suffer said Private Roadway to become or to be used as a public road. The Licensee, without expense to the Licensor, will take any and all necessary action to preserve the private character of said Private Roadway, including the erection and maintenance of such signs, fences and gates, if any, as in the judgment of the Licensor may be necessary or desirable.

Section 5. ASSUMPTION OF RISK; INDEMNIFICATION. The Licensee shall use said Private Roadway at the Licensee's own risk, and the Licensee agrees to and does assume all risks thereof and incidental thereto, including, without limitation, risks incident to the Licensor's train operations in the vicinity of the Private Roadway and defects in the construction and maintenance of said Private Roadway. The Licensee acknowledges that the Private Roadway and the use thereof permitted hereunder will subject the Licensor's property and operations to additional hazards and liability; and as a material consideration for this license, the Licensee shall indemnify and hold harmless the Licensor and other railroad companies which use the property of the Licensor, their officers, agents and employees, against and from any and all loss, damages, claims, demands, actions, causes of action, costs and expenses of whatsoever nature which may result from injury to or death of persons whomsoever or from loss of or damage to property whatsoever (including damage to the roadbed, tracks, equipment or other property of the



CARG002733

Licensor and such other railroad companies) when such injury, death, loss or damage is due to or arises in connection with or as a result of:

(a) any work done by the Licensee in connection with the maintenance or removal of said Private Roadway; or

(b) the use of said Private Roadway by the Licensee, or the agents, employees, patrons or invitees of the Licensee, or by others with the consent of the Licensee; or

(c) the breach of any covenant or obligation assumed by or imposed on the Licensee pursuant to this agreement, or the failure of the Licensee to promptly and fully do any act or work for which the Licensee is responsible pursuant to this agreement;

except when such loss, damages, claims, demands, actions, causes of action, or costs and expenses are caused by the sole negligence of the Licensor, its agents, servants or employees.

Section 6. TERMINATION ON BREACH AND WAIVER OF BREACH. It is agreed that the breach of any covenant, stipulation or condition herein contained to be kept and performed by the Licensee shall, at the option of the Licensor, forthwith work a termination of this agreement and all rights of the Licensee hereunder. A waiver by the Licensor of a breach by the Licensee of any covenant or condition of this agreement shall not impair the right of the Licensor to avail the Licensor of any subsequent breach thereof.

Section 7. TERMINATION ON NOTICE. This agreement may be terminated by written notice given by either party to the other on any date in such notice stated, not less, however, than thirty (30) days subsequent to the date on which such notice shall be given.

Section 8. REMOVAL OF PRIVATE ROADWAY.

(a) Upon termination of this agreement howsoever, the Licensor shall, at the sole expense of the Licensee, _____ restore the premises of the Licensor to a condition comparable to that existing immediately prior to the date of this agreement.



CARG002734

(b) In the event of the restoration as in this section provided, the Licensor shall not be liable to the Licensee for any damage sustained by the Licensee for or on account of such restoration, and such restoration shall not prejudice or impair any right of action for damage, or otherwise, which the Licensor may have against the Licensee.

Section 9. EFFECTIVE DATE; TERM. This agreement shall take effect as of the date first herein written, and, unless sooner terminated as herein provided, shall continue in full force and effect for a period of ten (10) years.

Section 10. AGREEMENT NOT TO BE ASSIGNED. The Licensee shall not assign this agreement, or any interest therein, without the written consent of the Licensor.

Section 11. SUCCESSORS AND ASSIGNS. Subject to the provisions of Section 10 hereof, this agreement shall be binding upon and inure to the benefit of the parties hereto, their respective successors and assigns.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed, in duplicate, as of the day and year first hereinabove written.

OREGON-WASHINGTON RAILROAD
& NAVIGATION COMPANY
UNION PACIFIC RAILROAD COMPANY

By _____
General Manager

ATTEST: (Seal)

_____
Secretary

BUNGE CORPORATION

By _____
Vice President



CARG002735

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L 38009
F. tland, OR
510.0001
Clarke Denise 7/11/00

# UNION PACIFIC RAILROAD COMPANY

Real Estate Department

R. D. Uhrich
Assistant Vice President
J. A. Anthony
Director-Contracts
D. D. Brown
Director-Real Estate
M. W. Casey
General Director-Special Properties
J. P. Gade
Director-Facility Management

1800 Farnam Street
Omaha, Nebraska 68102
Fax (402) 997-3601

J. L. Hawkins
Director-Operations Support
M. E. Heenan
Director-Administration & Budgets
D. H. Lightwine
Director-Real Estate
T. K. Love
Director-Real Estate

JUL 5 - 2000

Folder No. 00591-35

CARGILL, INCORPORATED
P O BOX 5606
MINNEAPOLIS MINNESOTA 55440-5606

Geentlemen:

RE: Renewal Rider covering a Private Roadway Encroachment at Mile Post 0.400 at or near Portland, Multnomah County, Oregon

Attached is your copy of the fully-executed original of the above-referenced Renewal Rider.

The Railroad Company has authorized the installation of fiber optic cable facilities on its property in certain areas. **Prior to digging on the Railroad's property you must contact the Railroad Company at 1-800-336-9193 to determine if this property contains fiber optic cable.** In any event, you should thoroughly review the terms and conditions of this Lease.

In compliance with the Internal Revenue Service's policy regarding its Form 1099, this is to advise you that 94-6001323 is Union Pacific Railroad Company's Federal Taxpayer Identification Number and we are doing business as a corporation.

Sincerely yours,

R. D. Rice
Senior Manager
(402) 997-3636

| | |
|---|---|
| To: Chris Putnam | Date 7/16 |
| Co. | # of Pgs. 3 |
| Dept. | From Gene Loffler |
| Fax No. | Phone # ~~Fax #~~ 503-478-1125 |

# RENEWAL RIDER AGREEMENT

**UNION PACIFIC RAILROAD COMPANY**, a Delaware corporation, and its predecessors in interest, (hereinafter the "Railroad Company") and **CARGILL, INCORPORATED**, a Delaware Corporation, (hereinafter the "Licensee"), or their predecessors in interest, have heretofore entered into an agreement dated October 17, 1977, bearing Railroad Company Audit No. A92381 (hereinafter "Basic Agreement") covering a Private Roadway Encroachment. at Mile Post 0.400 at or near Portland, Multnomah County, Oregon.

The parties hereto now mutually agree that the Basic Agreement, including any supplement or amendment thereto (if any), is hereby adopted by the parties hereto as their agreement for a term beginning October 17, 1987, and extending to October 17, 2003.

All the terms and conditions of the Basic Agreement, as heretofore or herein supplemented and/or amended (if applicable), shall have the same force and effect and be as binding upon the parties hereto during said term as if the same were repeated herein.

The following Special Provision for 'Protection of Fiber Optic Cable Systems' is hereby made a part hereof.

a. Fiber optic cable systems may be buried on the Licensor's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. Licensee shall telephone the Licensor at 1-800-336-9193 (a 24-hour number) to determine if fiber optic cable is buried anywhere on the Licensor's premises to be used by the Licensee. If it is, Licensee will telephone the telecommunications company(ies) involved, arrange for a cable locator, and make arrangements for relocation or other protection of the fiber optic cable prior to beginning any work on the Licensor's premises.

b. In addition to other indemnity provisions in this Agreement, the Licensee shall indemnify and hold the Licensor harmless from and against all costs, liability and expense whatsoever (including, without limitation reasonable, attorneys' fees, court costs and expenses) arising out of any negligent act or omission of the Licensee, its contractor, agents and/or employees, that causes or contributes to (i) any damage to or destruction of any telecommunications system on Licensor's property, and (ii) any injury to or death of any person employed by or on behalf of any telecommunications company, and/or its contractor, agents or employees, on Licensor's property. Licensee shall not have or seek recourse against Licensor for any claim or cause of action for alleged loss of profits or revenue or loss of service or other consequential damage to a telecommunication company using Licensor's property or a customer or user of services of the fiber optic cable on Licensor's property to the extent such claim or cause of action arises from Licensee's negligence or willful misconduct.

RENEWAL 890707
Standard Form Approved AVP-Law

Audit No. A92381
Folder No. 00591-35

Executed this 5 day of July, 2000.

**UNION PACIFIC RAILROAD COMPANY**

By: _____
Senior Manager

WITNESS:

x Marilynn W Faulson

**CARGILL, INCORPORATED**

x _____
Title _____

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## Paulson, Marilynn W. /mtkl

**From:** Paulson, Marilynn W. /mtkl
**Sent:** Monday, June 19, 2000 3:40 PM
**To:** Loffler, Gene /ro
**Cc:** Putnam, Christopher W. /mtkl
**Subject:** UP RR Extension

Gene, fyi, the UP accepted our changes and sent originals to me for execution. I will arrange to have Don Vogt sign and send back to UP. Consider it a done deal.


---
Marilynn Paulson, Law Department
Mail Stop #24
Phone: 612-742-6276 Fax: 612-742-6349
Marilynn_Paulson@cargill.com
---




CARG002741

**UNION PACIFIC RAILROAD COMPANY**
Real Estate Department

H. D. Uhrich
Assistant Vice President
J. A. Anthony
Director-Contracts
D. D. Brown
Director-Real Estate
M. W. Casey
General Director-Special Properties
J. P. Gade
Director-Facility Management

1800 Farnam Street
Omaha, Nebraska 68102
Fax: (402) 997-3601

J. L. Hawkins
Director-Operations Support
M. E. Heenan
Director-Administration & Budgets
D. H. Lightwine
Director-Real Estate
T. K. Love
Director-Real Estate

June 14, 2000

591-35

Ms. Marilynn W. Paulson
Senior Paralegal
Cargill Incorporated
P O Box 5624
Minneapolis, Minnesota 55440-5624

Dear Ms. Paulson:

Thank you for your letter of June 8 concerning the proposed Renewal rider in connection with Audit No. A-92381.;

I have revised the proposed Renewal Rider in line with your request. You will find duplicate originals enclosed to be executed by Cargill. Upon execution please return both copies to me for my further handling on behalf of the Railroad.

Thank you for your cooperation in finalization of this matter.

Sincerely,

R.D. Rice
Sr. Manager - Real Estate
(402) 997-3636

## Paulson, Marilynn W. /mtkl

**From:** loffler, gene /ro
**Sent:** Monday, June 12, 2000 9:16 AM
**To:** Putnam, Christopher W. /mtkl
**Cc:** Paulson, Marilynn W. /mtkl
**Subject:** RE: UP RR Letter

Thanks

_____ Reply Separator _____
Subject: RE: UP RR Letter
Author: Christopher W. Putnam at mtkl
Date: 06/08/2000 8:06 AM

Gene, I have reviewed the extension agreement and have made some changes. Marilynn is also reviewing the document and will compare it with the original encroachment agreement in our files to make sure that the extension language is correct, after which we will send a letter directly to the UP with our requested changes. We will copy you on the letter.

Chris

-----Original Message-----
From: loffler, gene /ro
Sent: Wednesday, June 07, 2000 1:53 PM
To: Putnam, Christopher W. /mtkl
Subject: UP RR Letter

Faxed you a copy of a letter. Pls review and advise if I can sign here. Think it is for Portland-Irving Elevator.



CARG002743

# CARGILL, INCORPORATED
## LAW DEPARTMENT


James D. Moe
Corporate Vice President
General Counsel & Secretary

Ronald L. Laumbach
Vice President &
North America
General Counsel

Derek VanVolkenburgh
Vice President &
Assistant General
Counsel

Linda L. Cutler
Vice President
Assistant General Counsel &
Assistant Secretary

Gretchen Q. Banks
Assistant Vice President &
North America Assistant
General Counsel

H. Jed Hepworth
Vice President &
Latin America
General Counsel

Frederick L. Budde
Assistant Vice President &
North America Associate
General Counsel

Steven C. Euler
Vice President &
Assistant General
Counsel

Felix A. Ricco
Assistant Vice President &
North America Associate
General Counsel

Mailing Address:
P.O. Box 5624
Minneapolis, MN 55440-5624

Location/Shipping Address:
15407 McGinty Road West
Wayzata, MN 55391-2399

FAX (952) 742-6349
or (952) 742-7503
or (952) 742-1013

Senior Attorneys
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David L. Biek
Shirley R. Boyd
Carolyn J. Brue
James D. Dingel
Todd T. Erickson
Phillip M. Fantle
Robert S. Goedken
Ronald E. Hunter
Mark J. Isaacson
Tracy Wessel Johnson
Harold G. Kern
Jay A. Kroese
Mark C. Kruger
Jon D. Lammers
Joseph R. Liesch
Richard L. Mack
Thomas W. MacLeod
James R. Magnusson
Grace P. Malilay
Dennis J. Orke
LaRaye M. Osborne
Brian R. Pioske
Randall J. Romsdahl
Albert J. Sufka
Laura Hicks Witte

Attorneys
Janet H. Anderson
Brenda J. Arndt
Rodrigo Bustamante
Daniel J. Enebo
Glen M. Goldman
Andrew S. Gottschalk
Timothy L. Howe
Jeffrey B. Johnson
Jeffrey R. Johnson
Thomas W. Lindberg
Karin M. Nelsen
Michael D. Pederson
Scott T. Piering
Christopher W. Putnam
Mark T. Quayle
Paul B. Savereide
Jeffrey J. Skelton
Kimberly K. Thorstad
Geri L. Williams


June 8, 2000


Writer's Direct Number
Phone: (952) 742-6276
Marilynn_Paulson@cargill.com


R. D. Rice
Sr. Manager - Real Estate
Union Pacific Railroad Company
1900 Farnam Street
Omaha, NE 68102

RE: Portland, OR: Renewal Rider for Audit A-92381

Dear Mr. Rice:

Attached are duplicate originals of the Renewal Rider Agreement related to the agreement for private roadway encroachment.

Please arrange for execution by the Railroad and return one fully-executed original to me.

Very truly yours,

Marilynn W. Paulson

Marilynn W. Paulson
Senior Paralegal

MWP
Enclosure
195987

cc: C. W. Putnam/Law/24

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## RENEWAL RIDER AGREEMENT

UNION PACIFIC RAILROAD COMPANY, a Delaware corporation, and its predecessors in interest (hereinafter the "Railroad Company") and CARGILL, INCORPORATED, a Delaware Corporation, (hereinafter "Licensee"), or their predecessors in interest, have heretofore entered into an agreement dated October 17, 1977, bearing Railroad Company Audit No. A92381 (hereinafter "Basic Agreement") covering a Private Roadway Encroachment, at Mile Post 0.400 at or near Portland, Multnomah County, Oregon.

The parties hereto now mutually agree that the Basic Agreement, including any supplement or amendment thereto (if any) is hereby adopted by the parties hereto as their agreement for a term beginning October 17, 1987 and extending to October 17, 2003.

All the terms and conditions of the Basic Agreement, as heretofore or herein supplemented and/or amended (if applicable) shall have the same force and effect and be as binding upon the parties hereto during said term as if the same were repeated herein.

The following Special Provision for Protection of Fiber Optic Cable Systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. Licensee shall telephone the Licensor at 1-800-336-9163 (a 24-hour number) to determine if fiber optic cable is buried anywhere on the Licensor's premises to be used by the Licensee.

a. Fiber optic cable systems may be buried on the Licensor's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. Licensee shall telephone the Licensor at 1-800-336-9163 (a 24-hour number) to determine if fiber optic cable is buried anywhere on the Licensor's premises to be used by the Licensee. If it is, Licensee will telephone the telecommunications company(ies) involved, arrange for a cable locator, and make arrangements for relocation or other protection of the fiber optic cable prior to beginning any work on the Licensor's premises.

b. In addition to other indemnity provisions in this Agreement, the Licensee shall indemnify and hold the Licensor harmless from and against all costs, liability and expense whatsoever (including without limitation, reasonable attorneys' fees, court costs and expenses) arising out of any negligent act or omission of the Licensee, its contractor, agents and/or employees that causes or contributes to (1) any damage to or destruction of any telecommunications system on Licensor's property, and (ii) any injury to or death of any person employed by or on behalf of any telecommunications company, and or its contractor, agents or employees, on Licensor's property. Licensee shall not have or seek recourse against Licensor for any claim or cause of action for alleged loss of profits or revenue or loss of service or other consequential damage to a telecommunication company using Licensor's property or a customer or user of services of the fiber optic cable on Licensor's property to the extent such claim or cause of action arises from Licensee's negligence or willful misconduct.

Executed this ____ day of _____, 2000.

**UNION PACIFIC RAILROAD COMPANY**

By: _____
Its: _____
Senior Manager

**WITNESS:**

_____

**CARGILL, INCORPORATED**

By: _____
Its: _____

195956

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# UNION PACIFIC RAILROAD COMPANY

Real Estate Department

R. D. Uhrich
Assistant Vice President
J. A. Anthony
Director-Contracts
D. D. Brown
Director-Real Estate
M. W. Casey
General Director-Special Properties
J. P. Gads
Director-Facility Management

1800 Farnam Street
Omaha, Nebraska 68102
Fax: (402) 997-3601

J. L. Hawkins
Director-Operations Support
M. E. Heenan
Director-Administration & Budgets
D. H. Lightwine
Director-Real Estate
T. K. Love
Director-Real Estate

May 31, 2000

591-35

Mr. Gene Loffer
Cargill Incorporated
1750 N. W. Naito Parkway
Portland, Oregon 97209

Dear Mr. Loffer:

Thank you for your phone call concerning the Private Roadway Encroachment in Portland, Oregon identified as Audit A-92381.

I have enclosed duplicate originals of a Renewal Rider designed to extend the agreement to and including October 17, 2003. I would appreciate your arranging to have the enclosed executed and returned to me for my further handling on behalf of the Railroad.

Sincerely,

R.D. Rice
Sr. Manager - Real Estate
(402) 997-3636

RECEIVED
JUN 06 2000
CARGILL / ET

| | | |
|---|---|---|
| To: Chris Putnam | Date 6/7 | |
| Co. | # of Pgs. 3 | |
| Dept. Law | From Gene Loffler | |
| Fax No. Pls review + advise if | Phone # 503-478-1135 | Fax # |

I can sign off.

RENEWAL 890707
Standard Form Approved AVP-Law

Audit No. A92381
Folder No. 00591-35

# RENEWAL RIDER AGREEMENT

**UNION PACIFIC RAILROAD COMPANY**, a Delaware corporation, and its predecessors in interest, (hereinafter the "Railroad Company") and **CARGILL, INCORPORATED**, a Delaware Corporation, (hereinafter the "Licensee"), or their predecessors in interest, have heretofore entered into an agreement dated October 17, 1977, bearing Railroad Company Audit No. A92381 (hereinafter "Basic Agreement") covering a Private Roadway Encroachment, at Mile Post 0.400 at or near Portland, Multnomah County, Oregon.

The parties hereto now mutually agree that the Basic Agreement, including any supplement or amendment thereto (if any), is hereby adopted by the parties hereto as their agreement for a term beginning October 17, 1987, and extending to October 17, 2003.

All the terms and conditions of the Basic Agreement, as heretofore or herein supplemented and/or amended (if applicable), shall have the same force and effect and be as binding upon the parties hereto during said term as if the same were repeated herein.

The following Special Provision for 'Protection of Fiber Optic Cable Systems' is hereby made a part hereof.

a. Fiber optic cable systems may be buried on the Licensor's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. Licensee shall telephone the Licensor at 1-800-336-9193 (a 24-hour number) to determine if fiber optic cable is buried anywhere on the Licensor's premises to be used by the Licensee. If it is, Licensee will telephone the telecommunications company(ies) involved, arrange for a cable locator, and make arrangements for relocation or other protection of the fiber optic cable prior to beginning any work on the Licensor's premises.

b. In addition to reasonable other indemnity provisions in this Agreement, the Licensee shall indemnify and hold the Licensor harmless from and against all costs, liability and expense whatsoever (including, without limitation, attorneys' fees, court costs and expenses) arising out of any negligent act or omission of the Licensee, its contractor, agents and/or employees, that causes or contributes to (i) any damage to or destruction of any telecommunications system on Licensor's property, and (ii) any injury to or death of any person employed by or on behalf of any telecommunications company, and/or its contractor, agents or employees, on Licensor's property. Licensee shall not have or seek recourse against Licensor for any claim or cause of action for alleged loss of profits or revenue or loss of service or other consequential damage to a telecommunication company using Licensor's property or a customer or user of services of the fiber optic cable on Licensor's property. to the extent such claim or cause of action arises from Licensee's negligence or willful misconduct.

RENEWAL 890707
Standard Form Approved AVP-Law

Audit No. A92381
Folder No. 00591-35

Executed this _____ day of _____, 20___.

**UNION PACIFIC RAILROAD COMPANY**

By: _____
Senior Manager

WITNESS:

X_____

**CARGILL, INCORPORATED**

X_____
Title_____

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UNION PACIFIC RAILROAD COMPANY
CONTRACTS & REAL ESTATE DEPARTMENT

R.D. UHRICH
ASSISTANT VICE PRESIDENT

ROOM 1100, 1416 DODGE STREET
OMAHA, NEBRASKA 68179
(402) 271-3753
FAX (402) 271-5493

FEB 01 1996

J. A. ANTHONY
DIRECTOR-CONTRACTS & JOINT FACILITIES
D. D. BROWN
DIRECTOR-REAL ESTATE
J. L. HAWKINS
DIRECTOR-OPERATIONS SUPPORT
D. H. LIGHTWINE
DIRECTOR-REAL ESTATE
W. R. ULRICH
DIRECTOR-BUILDING SERVICES

**Folder: 591-35**

JANET M VARLEY
BUNGE CORPORATION
P O BOX 28500
ST LOUIS MO 63146

Dear Ms. Varley:

RE: **Lease Audit No. A-92381,** Covering Use of Railroad Property at Portland (Albina), Oregon

Attached is your fully-executed original copy of the Assignment for the Lease covering the above-referenced property.

The Railroad Company has authorized the installation of fiber optic cable facilities on its property in certain areas. Prior to using the Railroad Company's property, you should thoroughly review the terms and conditions of your Lease. If necessary, you should contact the Railroad Company at 1-800-336-9193 to determine whether a fiber optic cable is buried on the leased property.

In compliance with the Internal Revenue Service's policy regarding their Form 1099, 136400825 is UNION PACIFIC RAILROAD COMPANY's Federal Taxpayer Identification Number and we are doing business as a corporation.

Sincerely yours,

R.D. Rice
Sr. Manager - Real Estate

CC: Ms. Jean M. Carrasquillo
Cargill, Inc.
P. O. Box 5624
Minneapolis, Mn. 55440-5624

Fold[illegible] No: 591-35
Audit No: A-92381

# ASSIGNMENT

THIS AGREEMENT is entered into on February 1, 1996, between UNION PACIFIC RAILROAD COMPANY("Lessor") and BUNGE CORPORATION, a New York corporation ("Assignor").

RECITALS:

By instrument dated October 17, 1977, Lessor and Assignor, or their predecessors in interest, entered into an agreement ("Basic Agreement"), identified as Audit No. A-92381, at Portland (Albina), Oregon.

AGREEMENT:

Effective July 14, 1995, Assignor assigns all of Assignor's right, title and interest in and to the Basic Agreement, including any supplement or amendment (if any) to CARGILL, INC., a Delaware corporation ("Assignee") whose address is P. O. Box ~~5624~~, 5606 Minneapolis, MN 55440-5606.
CARGILL GRAIN DIVISION

Assignee accepts the above assignment and agrees to be bound by all of the terms and conditions contained in the Basic Agreement and any supplement or amendment (if any).

Lessor gives its consent to this assignment. This consent does not authorize any further assignment of the Basic Agreement, whether voluntary, or otherwise, without the prior written consent of Lessor. In the event of default by Assignee, Assignor shall be bound by and shall perform all of the obligations of the Basic Agreement.

ADMINISTRATIVE HANDLING CHARGE:

Upon execution of this Assignment, Assignor shall pay Lessor an administrative handling charge of One Hundred Dollars ($100.00).

IN WITNESS WHEREOF, the parties have executed this Assignment as of the day and year first herein written.

UNION PACIFIC RAILROAD COMPANY

By: _____
SR. Manager - Real Estate

BUNGE CORPORATION

By: _____
Assignor

CARGILL, INCORPORATED

By: _____
~~Sr. Legal Assistant~~
Assignee
Don Vogt, Vice President
Cargill Grain Division

Portland or
$10.00
C063

CARG002754

Irving 0078.PDF

# CARGILL, INCORPORATED
## LAW DEPARTMENT

James D. Moe
Corporate Vice President
General Counsel
& Secretary

John S. Erickson
Vice President &
Deputy
General Counsel

Ronald L. Laumbach
Vice President &
North America
General Counsel

Linda L. Cutler
Vice President
Assistant General Counsel
& Assistant Secretary

Mailing Address:
P.O. Box 5624
Minneapolis, MN 55440-5624

Location/Shipping Address:
15407 McGinty Road West
Wayzata, MN 55391-2399

FAX (612) 742-6349
or (612) 742-7503

Gretchen Q. Banks
Karen L. Baril
Shirley R. Boyd
Frederick L. Budde
James D. Dingel
Phillip M. Fantle
Sheila Brennan Hagen
H. Jed Hepworth
Ronald E. Hunter
Mark J. Isaacson
Joseph R. Liesch
Grace Murgia Musilek
LaRaye M. Osborne
Bonnie E. Raquet
Lawrence A. Willey
Laura Hicks Witte

Steven M. Adams
David L. Biek
Carolyn J. Brue
Therese A. Coons
Robin P. Kinning
Colleen Murphy Knapp
Jay A. Kroese
Richard L. Mack
Thomas W. MacLeod
Brian R. Pioske
Maria-Inés Raij
David A. Robertson
Randall J. Romsdahl
Timothy A. Thomas
Peter A. Vorbrich

Writer's Direct Dial Number
(612) 742-6379

August 7, 1995

**VIA FAX: (314)994-6521**

Janet Varley
Legal Department
Bunge Corporation
11720 Borman Drive
P.O. Box 28500
St. Louis, MO 63146

RE: Portland, OR: Purchase of Grain Terminal Facility from Bunge Corporation
Our File No. 510

Dear Janet:

This is in follow-up to Marilynn Paulson's letter of July 14, 1995 (wherein she enclosed Bunge's copies of the closing documents from this transaction) and my letter of July 24, 1995. Please recall that one of the documents enclosed with Marilynn's letter was an executed original of the Assignment of Agreements concerning the three (3) agreements Bunge had in place with Union Pacific Railroad, the lessee of the Oregon-Washington Railroad & Navigation Company. In my July 24 letter, I had asked you to confirm for me that your office has undertaken to process these assignments with Union Pacific.

Please advise as to whether Union Pacific has given its written consent to these assignments. I would appreciate receiving copies of any documentation issued by Union Pacific in connection with this matter. In addition, please provide me with the name, address and phone number of the contact person at Union Pacific with whom your office is working so that I may contact him/her in order to obtain copies of the exhibits to the assigned agreements.

Thank you, in advance, for your attention to and cooperation in this matter. I look forward to hearing from you soon.

Sincerely,

Jean

Jean M. Carrasquillo
Senior Legal Assistant

JMC:
Enclosures
cil/42622

cc: R. J. Romsdahl/Law/24

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# CARGILL, INCORPORATED
## LAW DEPARTMENT

James D. Moe
Corporate Vice President
General Counsel
& Secretary

John S. Erickson
Vice President &
Deputy
General Counsel

Ronald L. Laumbach
Vice President &
North America
General Counsel

Linda L. Cutler
Vice President
Assistant General Counsel
& Assistant Secretary

Mailing Address:
P.O. Box 5624
Minneapolis, MN 55440-5624

Location/Shipping Address:
15407 McGinty Road West
Wayzata, MN 55391-2399

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or (612) 742-7503

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Robin P. Kinning
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Jay A. Kroese
Richard L. Mack
Thomas W. MacLeod
Brian R. Ploske
Maria-Inés Ralj
David A. Robertson
Randall J. Romsdahl
Timothy A. Thomas
Peter A. Vorbrich

Writer's Direct Dial Number
(612) 742-6379

July 24, 1995

**VIA FAX: (314)994-6521**

Janet Varley
Legal Department
Bunge Corporation
11720 Borman Drive
P.O. Box 28500
St. Louis, MO 63146

RE: Portland, OR: Purchase of Grain Terminal Facility from Bunge Corporation
Our File No. 510

Dear Janet:

This is in follow-up to Marilynn Paulson's letter of July 14, 1995 to you wherein she enclosed Bunge's copies of the closing documents from this transaction. Please recall that one of the documents enclosed with that letter was an executed original of the Assignment of Agreements concerning the three (3) agreements Bunge had with Union Pacific Railroad, the lessee of the Oregon-Washington Railroad & Navigation Company.

Please confirm for me that your office has undertaken to process these assignments with Union Pacific and whether Union Pacific has given its written consent to such assignments. I would appreciate receiving copies of any documentation issued by Union Pacific in connection with this matter. In addition, please provide me with the name, address and phone number of the contact person at Union Pacific with whom your office is working so that I may contact him/her in order to obtain copies of the exhibits to the assigned agreements.

If you should have any questions or comments concerning this letter or the assignment of the three (3) agreements with Union Pacific, please feel free to call me.

Thank you, in advance, for your attention to this matter. I look forward to hearing from you soon.

Sincerely,

Jean

Jean M. Carrasquillo
Senior Legal Assistant

JMC:
Enclosures
cil/42622

cc: R. J. Romsdahl/Law/24

COMMAND #141

| | DATE | TIME | TO/FROM | MODE | MIN/SEC | PGS | STATUS |
|---|---|---|---|---|---|---|---|
| 001 | 7/24 | 13:11 | 913149946521 | EC--S | 00' 53" | 003 | OK |

# Cargill, Incorporated
# Law Department
## Fax Transmission

Number of Pages (incl. this one): 3

To: Janet Varley
Legal Department/Bunge Corporation
Fax number: (314)994-6521

From: Jean Carrasquillo
Cargill, Incorporated/Law Department
P.O. Box 5624
Minneapolis, MN 55440-5624
Telephone: 612/742-6379 Fax: 612/742-6349

Date: July 24, 1995

If you do not receive all pages, please contact Jean Carrasquillo's secretary, Janet Voss, at 612/742-6830.

**********

Comments:

*Confidentiality Note: The information contained in this facsimile transmission is intended only for the personal and confidential use of the individual(s) or entity(ies) named above, and may include material that is privileged and confidential. Any dissemination, distribution, or copying of this transmittal is strictly prohibited. If you have received this transmittal in error, please notify us immediately by telephone (612/742-6830) and return the original transmittal to us by mail. Thank you.*

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# ASSIGNMENT OF AGREEMENTS

THIS AGREEMENT, made and entered into this 14th day of July, 1995, by and between CARGILL, INCORPORATED, a Delaware corporation to be addressed at 15407 McGinty Road West, Wayzata, Minnesota 55391 ("Assignee") and BUNGE CORPORATION, a New York corporation to be addressed at 11720 Borman Drive, St. Louis, Missouri 63146 ("Assignor").

WITNESSETH:

RECITALS:

WHEREAS, Assignor is presently a party to those certain leases, licenses and other agreements set forth on Exhibit A attached hereto and made a part hereof (collectively referred to as the "Agreements"); and

WHEREAS, Assignor is transferring its interest in that certain real property located in the Town of Portland, County of Multnomah, State of Oregon, to Assignee which is more specifically described on Exhibit B attached hereto and made a part hereof;

WHEREAS, Assignor and Assignee desire that all of Assignor's interest in and to the Agreements be assigned to Assignee.

AGREEMENT:

NOW THEREFORE, the parties hereto mutually agree as follows:

1. For and in consideration of One Dollar ($1.00) and other good and valuable consideration, the receipt of which the Assignee does hereby acknowledge, Assignor hereby sells, assigns, transfers, conveys and sets over to the Assignee all of Assignor's right, title and interest in and to the Agreements, as the same may have heretofore been amended or modified.

2. For and in consideration of the above Assignment, the Assignee hereby accepts and assumes the Assignment and agrees to be bound by and to abide by each and every one of the terms and conditions of the Agreements and hereby expressly assumes any and all liability for, and agrees to promptly make, any and all payments due thereunder and to perform all of the covenants and agreements contained in the Agreements from the effective date of this Assignment.

3. Any prepaid payments due under the Agreements shall be prorated between the parties as of the effective date of this Assignment.

Portland, OR
510.0001

original filed Portland OR Trks 510. — audit 135193

4. The effective date of this Assignment shall be July ___, 1995.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first herein written.

BUNGE CORPORATION

By: _____

Its: Senior Vice President

"Assignor"

CARGILL, INCORPORATED

By: _____

Its: Vice President

"Assignee"

ASSIGN.102

EXHIBIT A

**Assumed Contracts**

1. Private Roadway Encroachment Agreement (Audit No. 105268) dated October 17, 1977 between the Oregon-Washington Railroad & Navigation Company, its lessee Union Pacific Railroad Company, and Bunge Corporation.

2. Industry Track Contract (Audit No. 125926) dated January 10, 1977 between the Oregon-Washington Railroad & Navigation Company, its lessee Union Pacific Railroad Company and Bunge Corporation.

3. Supplemental Agreement dated October 19, 1983 (Audit No. 135193) to Industry Spur Track Agreement dated April 14, 1983 between the Oregon-Washington Railroad & Navigation Company, its lessee Union Pacific Railroad Company, and Bunge Corporation. (Copy of original Industry Spur Track Agreement not attached.)

EXHIBIT B

**Legal Description**

PARCEL I:

A parcel of land lying in the Southwest quarter of Section 27, Township 1 North, Range 1 East, City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:

Beginning at a point on the Southwesterly line of North River Street, said point being South 50°58'41" East a distance of 235.49 feet from the East corner of River Lot 19, Albina, as conveyed to Dillingham Corporation, by Deed recorded February 13, 1969 in Book 663 Page 196, Deed Records; thence along said Southwesterly line South 50°58'41" East a distance of 179.04 feet to a point; thence leaving said Southwesterly line of North River Street North 88°46'41" West a distance of 13.54 feet to a point; thence South 59°22'30" West 361.2 feet more or less to a point on the Harbor line; thence along said Harbor line North 34°31'11" West 8.0 feet more or less; thence North 50°14'11" West 268.8 feet more or less to a point on the Southwesterly extension of the Southeasterly line of River Lot 19, Albina; thence leaving said Harbor line North 39°01'19" East along said Southwesterly extension and Southeasterly line a distance of 145.9 feet more or less to a point; thence leaving said Southwesterly extension of the Southeasterly line of River Lot 19, Albina, South 52°19'00" East a distance of 93.00 feet to a point; thence North 58°02'25" East a distance of 22.60 feet to a point; thence South 30°52'05" East a distance of 57.93 feet to a point; thence North 58°44'50" East a distance of 194.39 feet to a point; thence South 50°58'41" East a distance of 15.14 feet to a point; thence North 39°01'19" East a distance of 8.25 feet to the point of beginning.

EXCEPTING THEREFROM ownership of the State of Oregon in and to that portion of the premises herein described lying below the line of ordinary high water of the Willamette River.

PARCEL II:

A tract of land in the William Irving Donation Land Claim and Joshua Delay Donation Land Claim: Also of the Southwest one quarter of Section 27 and the Northwest one quarter of Section 34, Township 1 North, Range 1 East of the Willamette Meridian in the City of Portland, County of Multnomah and State of Oregon; described as follows:

Beginning at a point in the North line of the said William Irving Donation Land Claim, that is North 89°42'45" East 270.89 feet from the Northwest corner of said Claim, which point is the Northwest corner of Third Street extended in the Old City of East Portland, said point is North 89°42'45" East 16.20 feet from the intersection of said Donation Land Claim line with the Southwesterly line of North River Street, also is the intersection of said Donation Land Claim line with the Northerly prolongation of the curve of the Western right of way line of the Oregon-Washington Railway and Navigation Co., as described and recorded March 24, 1882 in Deed Book 54 at Page 77 said Multnomah County; thence Southeasterly along

the Westerly line of Third Street and the Westerly right of way line of said O.W.R. & N. Co., 1163.75 feet to a point in the Northerly line of the Northern Pacific Terminal tract recorded December 9, 1882 in Deed Book 62 at Page 139, which point is the intersection with the South line of North Dixon Street extended Westerly; thence along the Westerly extension of the South line of North Dixon Street and the Northerly line of the said Northern Pacific Terminal tract, South 51°33'30" West 212.42 feet to the intersection with the harbor line of the Eastern bank of the Willamette River; thence North 36°01'45" West 1196.00 feet along said Harbor line to the intersection with the Northerly line of the Interior Warehouse Tract, recorded February 3, 1954, in Deed Book 1642, at Page 318, said Multnomah County; thence North 57°54'45" East 361.24 feet along said line to a point in the North line of said William Irving Donation Land Claim line; thence North 89°42'45" East along said Donation Land Claim line to the point of beginning.

EXCEPTING THEREFROM ownership of the State of Oregon in and to that portion of the premises herein described lying below the line of ordinary high water of the Willamette River.

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RAILROAD COMPANIES' COUNTERPART

PRIVATE ROADWAY ENCROACHMENT
Albina, Portland, Oregon
PLD 9005-34-1.2

Dept. No. 32398

Rev. Ren. & Tfrs. Agreement
Department No. 28349
Audit No. A-92381

THIS AGREEMENT is made and entered into as of the 17th day of October, 1977, by and between the OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, an Oregon corporation, and its lessee, UNION PACIFIC RAILROAD COMPANY, a Utah corporation (hereinafter collectively called "Licensor"), and BUNGE CORPORATION, a New York corporation (hereinafter called "Licensee").

RECITALS:

The Licensee desires to maintain and use a private 16-foot gravel roadway (hereinafter called "Private Roadway"), on and along the main line right of way of the Licensor between North Albina Avenue and North River Street for truck access to the Licensee's grain elevators at Portland (Albina), in Multnomah County, Oregon, in the location shown outlined in red on print D-8454 dated May 16, 1978, attached hereto, marked Exhibit "A", and by this reference made a part hereof.

NOW, THEREFORE, IT IS MUTUALLY AGREED by and between the parties hereto as follows:

U. P. R. R. Co. Audit No. A 103263

Section 1. LICENSOR GRANTS RIGHT.

(a) In consideration of the covenants and agreements herein contained to be by the Licensee kept, observed and performed, the Licensor hereby grants to the Licensee, subject to the terms and conditions herein stated, the right to maintain and use said Private Roadway on and along said right of way in the location described in the recitals hereof.

(b) The foregoing grant is subject and subordinate to the prior and continuing right and obligation of the Licensor to use and maintain the Licensor's entire railroad right of way in the performance of the Licensor's public duty as a common carrier, and is also subject to the right and power of the Licensor to construct, maintain, repair, renew, use, operate, change, modify or relocate railroad tracks, signal, communication or other wire lines, pipelines and other facilities upon, along or across any or all parts of said right of way, all or any of which may be freely done at any time or times by the Licensor without liability to the Licensee or to any other party for compensation or damages.



ENTERED 1-13-88

Portland OR
510.0001

CARG002769

(c) The foregoing grant is also subject to all outstanding superior rights (including, but not limited to, those in favor of licensees and lessees of said right of way, and others) and the right of the Licensor to renew and extend the same, and is made without covenant of title or for quiet enjoyment.

(d) The Licensee's use of the Private Roadway necessitated the relocation of the Licensor's television camera and related lighting shown on Exhibit "A" at the north end of the Private Roadway to the southerly end thereof in the location indicated on Exhibit "A". In consideration of the license and permission granted herein, the Licensee has paid to the Licensor, the cost of relocating said television camera; the sum of SEVEN THOUSAND EIGHT HUNDRED AND NO/100 DOLLARS ($7,800.00).

Section 2. MAINTENANCE AND USE.

(a) The Licensee, at the sole expense of the Licensee, shall maintain said Private Roadway and shall install, repair, renew and replace any and all appurtenant fences, gates, drainage facilities, traffic signs or devices, and identification signs shown on Exhibit "A" or required at any time by the Licensor, by law, or by any public authority having jurisdiction. All work performed by the Licensee on said right of way in connection with the maintenance of said Private Roadway shall be done to the satisfaction of the Licensor.

(b) Said Private Roadway shall be maintained and used by the Licensee in such manner as to cause no interference whatsoever with the operation of the tracks of the Licensor, and nothing shall be done or suffered to be done by the Licensee which would in any way endanger the safety of operations of said tracks.

(c) The Licensee shall not do, suffer or permit anything which will or may obstruct, endanger or interfere with, hinder or delay the maintenance and operation of the Licensor's railroad tracks or appurtenant facilities or the facilities or equipment of others lawfully using the Licensor's property. The Licensee shall adequately supervise and police use of said Private Roadway so that no agent, employee, patron or invitee of the Licensee or vehicle of said persons stops or stands on the Licensor's tracks or attempts to cross the Licensor's railroad tracks at any time.



CARG002770

Section 3. MODIFICATION OR RELOCATION OF PRIVATE ROADWAY.

(a) The right herein granted is subject to the needs and requirements of the Licensor in the operation of its railroad and the improvements and use of its property, and the Licensee shall, at the Licensee's sole expense, make any and all modifications or changes in said Private Roadway, or move the same to such new location as the Licensor may designate, whenever, in the furtherance of such needs and requirements, the Licensor shall find such action necessary or desirable.

(b) All the terms, conditions and stipulations herein expressed with reference to the maintenance and use of the Private Roadway in the location hereinbefore described shall apply to the Private Roadway when modified or moved to a new location under the terms of this section.

Section 4. PRIVATE ROADWAY TO BE A STRICTLY PRIVATE ONE. It is expressly stipulated that the Private Roadway is to be a strictly private one and is not intended for public use. The Licensee shall not at any time permit or suffer said Private Roadway to become or to be used as a public road. The Licensee, without expense to the Licensor, will take any and all necessary action to preserve the private character of said Private Roadway, including the erection and maintenance of such signs, fences and gates, if any, as in the judgment of the Licensor may be necessary or desirable.

Section 5. ASSUMPTION OF RISK; INDEMNIFICATION. The Licensee shall use said Private Roadway at the Licensee's own risk, and the Licensee agrees to and does assume all risks thereof and incidental thereto, including, without limitation, risks incident to the Licensor's train operations in the vicinity of the Private Roadway and defects in the construction and maintenance of said Private Roadway. The Licensee acknowledges that the Private Roadway and the use thereof permitted hereunder will subject the Licensor's property and operations to additional hazards and liability; and as a material consideration for this license, the Licensee shall indemnify and hold harmless the Licensor and other railroad companies which use the property of the Licensor, their officers, agents and employees, against and from any and all loss, damages, claims, demands, actions, causes of action, costs and expenses of whatsoever nature which may result from injury to or death of persons whomsoever or from loss of or damage to property whatsoever (including damage to the roadbed, tracks, equipment or other property of the



CARG002771

Licensor and such other railroad companies) when such injury, death, loss or damage is due to or arises in connection with or as a result of:

(a) any work done by the Licensee in connection with the maintenance or removal of said Private Roadway; or

(b) the use of said Private Roadway by the Licensee, or the agents, employees, patrons or invitees of the Licensee, or by others with the consent of the Licensee; or

(c) the breach of any covenant or obligation assumed by or imposed on the Licensee pursuant to this agreement, or the failure of the Licensee to promptly and fully do any act or work for which the Licensee is responsible pursuant to this agreement;

except when such loss, damages, claims, demands, actions, causes of action, or costs and expenses are caused by the sole negligence of the Licensor, its agents, servants or employees.

Section 6. TERMINATION ON BREACH AND WAIVER OF BREACH. It is agreed that the breach of any covenant, stipulation or condition herein contained to be kept and performed by the Licensee shall, at the option of the Licensor, forthwith work a termination of this agreement and all rights of the Licensee hereunder. A waiver by the Licensor of a breach by the Licensee of any covenant or condition of this agreement shall not impair the right of the Licensor to avail the Licensor of any subsequent breach thereof.

Section 7. TERMINATION ON NOTICE. This agreement may be terminated by written notice given by either party to the other on any date in such notice stated, not less, however, than thirty (30) days subsequent to the date on which such notice shall be given.

Section 8. REMOVAL OF PRIVATE ROADWAY.

(a) Upon termination of this agreement howsoever, the Licensor shall, at the sole expense of the Licensee, _____ restore the premises of the Licensor to a condition comparable to that existing immediately prior to the date of this agreement.



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(b) In the event of the restoration as in this section provided, the Licensor shall not be liable to the Licensee for any damage sustained by the Licensee for or on account of such restoration, and such restoration shall not prejudice or impair any right of action for damage, or otherwise, which the Licensor may have against the Licensee.

Section 9. EFFECTIVE DATE; TERM. This agreement shall take effect as of the date first herein written, and, unless sooner terminated as herein provided, shall continue in full force and effect for a period of ten (10) years.

Section 10. AGREEMENT NOT TO BE ASSIGNED. The Licensee shall not assign this agreement, or any interest therein, without the written consent of the Licensor.

Section 11. SUCCESSORS AND ASSIGNS. Subject to the provisions of Section 10 hereof, this agreement shall be binding upon and inure to the benefit of the parties hereto, their respective successors and assigns.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed, in duplicate, as of the day and year first hereinabove written.

OREGON-WASHINGTON RAILROAD
& NAVIGATION COMPANY
UNION PACIFIC RAILROAD COMPANY

By _____
General Manager

ATTEST: (Seal)

_____
Secretary

BUNGE CORPORATION

By _____
Vice President



CARG002773

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RAILROAD COMPANIES' COUNTERPART

PRIVATE ROADWAY ENCROACHMENT
Albina, Portland, Oregon
PLD 9005-34-1.2

Dept. No. 32398

Rev. Ren. & Tfrs. Agreement
Department No. 28349
Audit No. A-92381

THIS AGREEMENT is made and entered into as of the 17th day of October, 1977, by and between the OREGON-WASHINGTON RAILROAD & NAVIGATION COMPANY, an Oregon corporation, and its lessee, UNION PACIFIC RAILROAD COMPANY, a Utah corporation (hereinafter collectively called "Licensor"), and BUNGE CORPORATION, a New York corporation (hereinafter called "Licensee").

RECITALS:

The Licensee desires to maintain and use a private 16-foot gravel roadway (hereinafter called "Private Roadway"), on and along the main line right of way of the Licensor between North Albina Avenue and North River Street for truck access to the Licensee's grain elevators at Portland (Albina), in Multnomah County, Oregon, in the location shown outlined in red on print D-8454 dated May 16, 1978, attached hereto, marked Exhibit "A", and by this reference made a part hereof.

NOW, THEREFORE, IT IS MUTUALLY AGREED by and between the parties hereto as follows:

U. P. R. R. Co. Audit No. A 105268

Section 1. LICENSOR GRANTS RIGHT.

(a) In consideration of the covenants and agreements herein contained to be by the Licensee kept, observed and performed, the Licensor hereby grants to the Licensee, subject to the terms and conditions herein stated, the right to maintain and use said Private Roadway on and along said right of way in the location described in the recitals hereof.

(b) The foregoing grant is subject and subordinate to the prior and continuing right and obligation of the Licensor to use and maintain the Licensor's entire railroad right of way in the performance of the Licensor's public duty as a common carrier, and is also subject to the right and power of the Licensor to construct, maintain, repair, renew, use, operate, change, modify or relocate railroad tracks, signal, communication or other wire lines, pipelines and other facilities upon, along or across any or all parts of said right of way, all or any of which may be freely done at any time or times by the Licensor without liability to the Licensee or to any other party for compensation or damages.



ENTERED 1-13-88

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(c) The foregoing grant is also subject to all outstanding superior rights (including, but not limited to, those in favor of licensees and lessees of said right of way, and others) and the right of the Licensor to renew and extend the same, and is made without covenant of title or for quiet enjoyment.

(d) The Licensee's use of the Private Roadway necessitated the relocation of the Licensor's television camera and related lighting shown on Exhibit "A" at the north end of the Private Roadway to the southerly end thereof in the location indicated on Exhibit "A". In consideration of the license and permission granted herein, the Licensee has paid to the Licensor, the cost of relocating said television camera; the sum of SEVEN THOUSAND EIGHT HUNDRED AND NO/100 DOLLARS ($7,800.00).

Section 2. MAINTENANCE AND USE.

(a) The Licensee, at the sole expense of the Licensee, shall maintain said Private Roadway and shall install, repair, renew and replace any and all appurtenant fences, gates, drainage facilities, traffic signs or devices, and identification signs shown on Exhibit "A" or required at any time by the Licensor, by law, or by any public authority having jurisdiction. All work performed by the Licensee on said right of way in connection with the maintenance of said Private Roadway shall be done to the satisfaction of the Licensor.

(b) Said Private Roadway shall be maintained and used by the Licensee in such manner as to cause no interference whatsoever with the operation of the tracks of the Licensor, and nothing shall be done or suffered to be done by the Licensee which would in any way endanger the safety of operations of said tracks.

(c) The Licensee shall not do, suffer or permit anything which will or may obstruct, endanger or interfere with, hinder or delay the maintenance and operation of the Licensor's railroad tracks or appurtenant facilities or the facilities or equipment of others lawfully using the Licensor's property. The Licensee shall adequately supervise and police use of said Private Roadway so that no agent, employee, patron or invitee of the Licensee or vehicle of said persons stops or stands on the Licensor's tracks or attempts to cross the Licensor's railroad tracks at any time.



CARG002776

Section 3. MODIFICATION OR RELOCATION OF PRIVATE ROADWAY.

(a) The right herein granted is subject to the needs and requirements of the Licensor in the operation of its railroad and the improvements and use of its property, and the Licensee shall, at the Licensee's sole expense, make any and all modifications or changes in said Private Roadway, or move the same to such new location as the Licensor may designate, whenever, in the furtherance of such needs and requirements, the Licensor shall find such action necessary or desirable.

(b) All the terms, conditions and stipulations herein expressed with reference to the maintenance and use of the Private Roadway in the location hereinbefore described shall apply to the Private Roadway when modified or moved to a new location under the terms of this section.

Section 4. PRIVATE ROADWAY TO BE A STRICTLY PRIVATE ONE. It is expressly stipulated that the Private Roadway is to be a strictly private one and is not intended for public use. The Licensee shall not at any time permit or suffer said Private Roadway to become or to be used as a public road. The Licensee, without expense to the Licensor, will take any and all necessary action to preserve the private character of said Private Roadway, including the erection and maintenance of such signs, fences and gates, if any, as in the judgment of the Licensor may be necessary or desirable.

Section 5. ASSUMPTION OF RISK; INDEMNIFICATION. The Licensee shall use said Private Roadway at the Licensee's own risk, and the Licensee agrees to and does assume all risks thereof and incidental thereto, including, without limitation, risks incident to the Licensor's train operations in the vicinity of the Private Roadway and defects in the construction and maintenance of said Private Roadway. The Licensee acknowledges that the Private Roadway and the use thereof permitted hereunder will subject the Licensor's property and operations to additional hazards and liability; and as a material consideration for this license, the Licensee shall indemnify and hold harmless the Licensor and other railroad companies which use the property of the Licensor, their officers, agents and employees, against and from any and all loss, damages, claims, demands, actions, causes of action, costs and expenses of whatsoever nature which may result from injury to or death of persons whomsoever or from loss of or damage to property whatsoever (including damage to the roadbed, tracks, equipment or other property of the



CARG002777

Licensor and such other railroad companies) when such injury, death, loss or damage is due to or arises in connection with or as a result of:

(a) any work done by the Licensee in connection with the maintenance or removal of said Private Roadway; or

(b) the use of said Private Roadway by the Licensee, or the agents, employees, patrons or invitees of the Licensee, or by others with the consent of the Licensee; or

(c) the breach of any covenant or obligation assumed by or imposed on the Licensee pursuant to this agreement, or the failure of the Licensee to promptly and fully do any act or work for which the Licensee is responsible pursuant to this agreement;

except when such loss, damages, claims, demands, actions, causes of action, or costs and expenses are caused by the sole negligence of the Licensor, its agents, servants or employees.

Section 6. TERMINATION ON BREACH AND WAIVER OF BREACH. It is agreed that the breach of any covenant, stipulation or condition herein contained to be kept and performed by the Licensee shall, at the option of the Licensor, forthwith work a termination of this agreement and all rights of the Licensee hereunder. A waiver by the Licensor of a breach by the Licensee of any covenant or condition of this agreement shall not impair the right of the Licensor to avail the Licensor of any subsequent breach thereof.

Section 7. TERMINATION ON NOTICE. This agreement may be terminated by written notice given by either party to the other on any date in such notice stated, not less, however, than thirty (30) days subsequent to the date on which such notice shall be given.

Section 8. REMOVAL OF PRIVATE ROADWAY.

(a) Upon termination of this agreement howsoever, the Licensor shall, at the sole expense of the Licensee, _____ restore the premises of the Licensor to a condition comparable to that existing immediately prior to the date of this agreement.



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(b) In the event of the restoration as in this section provided, the Licensor shall not be liable to the Licensee for any damage sustained by the Licensee for or on account of such restoration, and such restoration shall not prejudice or impair any right of action for damage, or otherwise, which the Licensor may have against the Licensee.

Section 9. EFFECTIVE DATE; TERM. This agreement shall take effect as of the date first herein written, and, unless sooner terminated as herein provided, shall continue in full force and effect for a period of ten (10) years.

Section 10. AGREEMENT NOT TO BE ASSIGNED. The Licensee shall not assign this agreement, or any interest therein, without the written consent of the Licensor.

Section 11. SUCCESSORS AND ASSIGNS. Subject to the provisions of Section 10 hereof, this agreement shall be binding upon and inure to the benefit of the parties hereto, their respective successors and assigns.

IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed, in duplicate, as of the day and year first hereinabove written.

OREGON-WASHINGTON RAILROAD
& NAVIGATION COMPANY
UNION PACIFIC RAILROAD COMPANY

By _____
General Manager

ATTEST: (Seal)

_____
Secretary

BUNGE CORPORATION

By _____
Vice President



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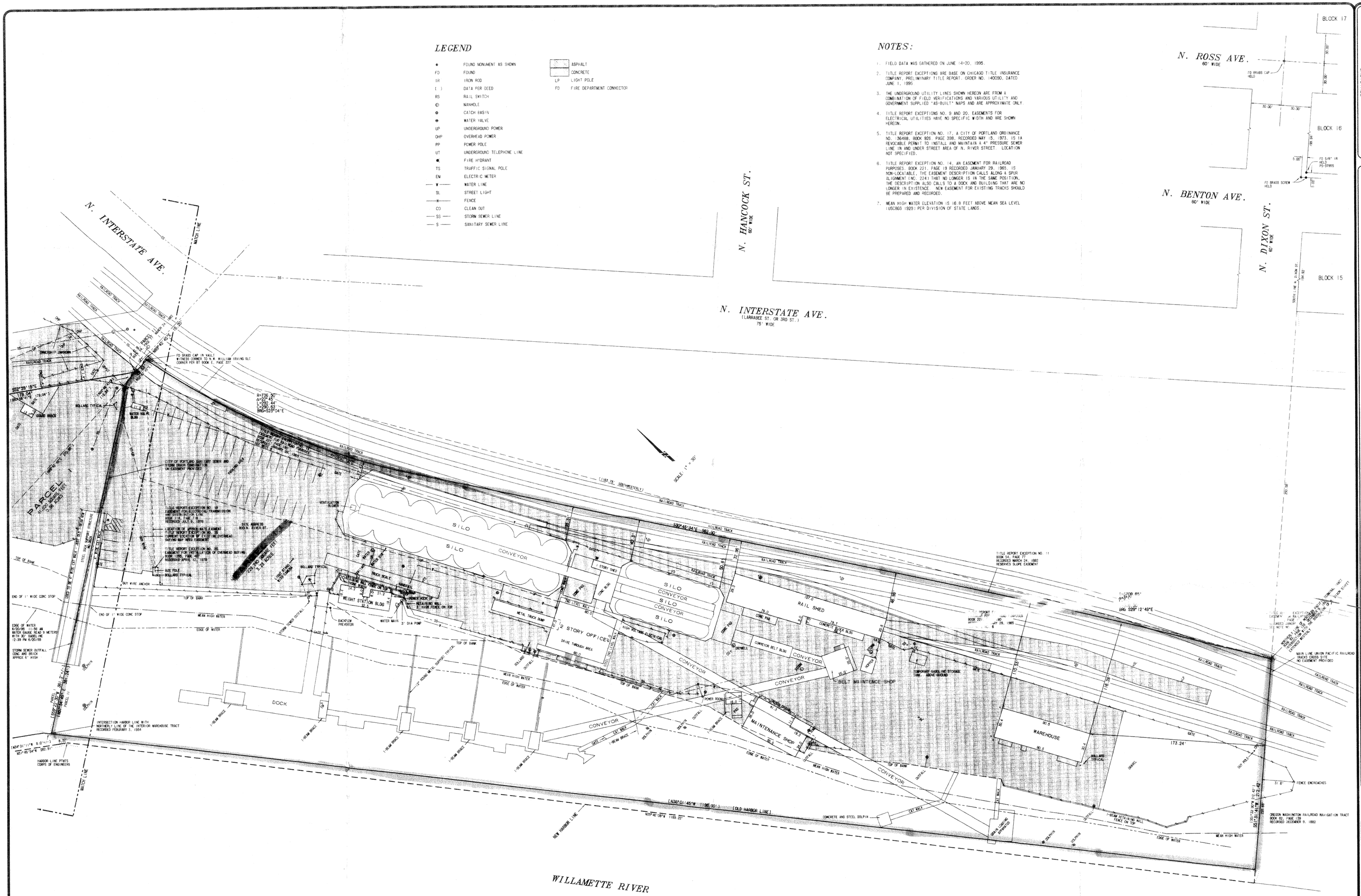
## LEGEND

| | |
|---|---|
| ● | FOUND MONUMENT AS SHOWN |
| FD | FOUND |
| IR | IRON ROD |
| ( ) | DATA PER DEED |
| RS | RAIL SWITCH |
| Ⓜ | MANHOLE |
| ● | CATCH BASIN |
| ⊕ | WATER VALVE |
| UP | UNDERGROUND POWER |
| OHP | OVERHEAD POWER |
| PP | POWER POLE |
| UT | UNDERGROUND TELEPHONE LINE |
| ● | FIRE HYDRANT |
| TS | TRAFFIC SIGNAL POLE |
| EM | ELECTRIC METER |
| —W— | WATER LINE |
| SL | STREET LIGHT |
| —X— | FENCE |
| CO | CLEAN OUT |
| —SS— | STORM SEWER LINE |
| —S— | SANITARY SEWER LINE |
| | ASPHALT |
| | CONCRETE |
| LP | LIGHT POLE |
| FD | FIRE DEPARTMENT CONNECTOR |

## NOTES:

1. FIELD DATA WAS GATHERED ON JUNE 14-20, 1995.
2. TITLE REPORT EXCEPTIONS ARE BASE ON CHICAGO TITLE INSURANCE COMPANY, PRELIMINARY TITLE REPORT, ORDER NO. 140090, DATED JUNE 1, 1995.
3. THE UNDERGROUND UTILITY LINES SHOWN HEREON ARE FROM A COMBINATION OF FIELD VERIFICATIONS AND VARIOUS UTILITY AND GOVERNMENT SUPPLIED "AS-BUILT" MAPS AND ARE APPROXIMATE ONLY.
4. TITLE REPORT EXCEPTIONS NO. 9 AND 20, EASEMENTS FOR ELECTRICAL UTILITIES HAVE NO SPECIFIC WIDTH AND ARE SHOWN HEREON.
5. TITLE REPORT EXCEPTION NO. 17, A CITY OF PORTLAND ORDINANCE NO. 56488, BOOK 926, PAGE 398, RECORDED MAY 15, 1973, IS IA REVOCABLE PERMIT TO INSTALL AND MAINTAIN A 4" PRESSURE SEWER LINE IN AND UNDER STREET AREA OF N. RIVER STREET. LOCATION NOT SPECIFIED.
6. TITLE REPORT EXCEPTION NO. 14, AN EASEMENT FOR RAILROAD PURPOSES, BOOK 221, PAGE 19 RECORDED JANUARY 29, 1965, IS NON-LOCATABLE. THE EASEMENT DESCRIPTION CALLS ALONG A SPUR ALIGNMENT (NO. 224) THAT NO LONGER IS IN THE SAME POSITION. THE DESCRIPTION ALSO CALLS TO A DOCK AND BUILDING THAT ARE NO LONGER IN EXISTENCE. NEW EASEMENT FOR EXISTING TRACKS SHOULD BE PREPARED AND RECORDED.
7. MEAN HIGH WATER ELEVATION IS 16.8 FEET ABOVE MEAN SEA LEVEL (USC&GS 1929) PER DIVISION OF STATE LANDS.




REVISIONS

DESIGNED: N.A. CHECKED: TPB
DRAWN: DTM DATE: 6/30/95

# A.L.T.A./A.C.S.M. LAND TITLE SURVEY

FOR CARGILL, INCORPORATED

SITUATED IN THE SW 1/4 OF SECTION 17 AND THE NW 1/4 OF SECTION 34, T 1 N, R 1 E, W.M.

W.B. WELLS & associates, inc.
4200 NORTHEAST FREMONT STREET
PORTLAND, OREGON 97213

SHEET 2 of 2

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After recording return to:
CHICAGO TITLE INSURANCE COMPANY
ATTN: PAULETTE STEVENSON
222 S. NINTH STREET, SUITE 860
MINNEAPOLIS, MN 55402

Portland, OR
510

Until a change is requested all tax statements shall be sent to the following address:

Cargill Incorporated
P.O. Box 9300, Minneapolis, MN 55440

Escrow No. 50000-6208-CE TAX/26
Order No. 140090

M140090

CHICAGO

WARRANTY DEED - STATUTORY FORM
(INDIVIDUAL or CORPORATION)

BUNGE CORPORATION, a New York Corporation

Grantor, conveys and warrants to CARGILL, INCORPORATED, a Delaware Corporation

Grantee, the following described real property free of encumbrances except as specifically set forth herein:

(Continued)

SEE ATTACHED EXHIBIT "A", made a part hereof by reference.

**This instrument will not allow use of the property described in this instrument in violation of applicable land use laws and regulations. Before signing or accepting this instrument, the person acquiring fee title to the property should check with the appropriate city or county planning department to verify approved uses and to determine any limits on lawsuits against farming or forest practices as defined in ORS 30.930.**

ENCUMBRANCES:

SEE ATTACHED EXHIBIT "B", made a part hereof by reference.

The true consideration for this conveyance is $

Dated 07/14/95; if a corporate grantor, it has caused its name to be signed by order of its board of directors.

BUNGE CORPORATION

BY: R. Kerwin

ITS: Senior Vice President

BY:

ITS:

STATE OF ~~OREGON~~ Minnesota, County of Hennepin )ss.
This instrument was acknowledged before me on July 14, 1995, by
This instrument was acknowledged before me on July 14, 1995
by R. KERWIN as Sr. Vice President
of Bunge Corporation

Marilynn W. Paulson
Notary ~~for~~ Public for ~~Oregon~~ Minnesota
My commission expires 1/31/2000

MARILYNN W. PAULSON
NOTARY PUBLIC—MINNESOTA
MY COMMISSION EXPIRES 1-31-2000

1 of 6

95 83651

Order No: 140090

EXHIBIT "A"

**LEGAL DESCRIPTION**

PARCEL I:

A parcel of land lying in the Southwest quarter of Section 27, Township 1 North, Range 1 East, City of Portland, County of Multnomah and State of Oregon, more particularly described as follows:

Beginning at a point on the Southwesterly line of North River Street, said point being South 50°58'41" East a distance of 235.49 feet from the East corner of River Lot 19, Albina, as conveyed to Dillingham Corporation, by Deed recorded February 13, 1969 in Book 663 Page 196, Deed Records; thence along said Southwesterly line South 50°58'41" East a distance of 179.04 feet to a point; thence leaving said Southwesterly line of North River Street North 88°46'41" West a distance of 13.54 feet to a point; thence South 59°22'30" West 361.2 feet more or less to a point on the Harbor line; thence along said Harbor line North 34°31'11" West 8.0 feet more or less; thence North 50°14'11" West 268.8 feet more or less to a point on the Southwesterly extension of the Southeasterly line of River Lot 19, Albina; thence leaving said Harbor line North 39°01'19" East along said Southwesterly extension and Southeasterly line a distance of 145.9 feet more or less to a point; thence leaving said Southwesterly extension of the Southeasterly line of River Lot 19, Albina, South 52°19'00" East a distance of 93.00 feet to a point; thence North 58°02'25" East a distance of 22.60 feet to a point; thence South 30° 52'05" East a distance of 57.93 feet to a point; thence North 58°44'50" East a distance of 194.39 feet to a point; thence South 50°58'41" East a distance of 15.14 feet to a point; thence North 39°01'19" East a distance of 8.25 feet to the point of beginning.

EXCEPTING THEREFROM ownership of the State of Oregon in and to that portion of the premises herein described lying below the line of ordinary high water of the Willamette River.

PARCEL II:

A tract of land in the William Irving Donation Land Claim and Joshua Delay Donation Land Claim: Also of the Southwest one quarter of Section 27 and the Northwest one quarter of Section 34, Township 1 North, Range 1 East of the Willamette Meridian in the City of Portland, County of Multnomah and State of Oregon; described as follows:

Beginning at a point in the North line of the said William Irving Donation Land Claim, that is North 89°42'45" East 270.89 feet from the Northwest corner of said Claim, which point is the Northwest corner of Third Street extended in the Old City of East Portland, said point is North 89°42'45" East 16.20 feet from the intersection of said Donation Land Claim line with the Southwesterly line of North River Street, also is the intersection of said Donation Land Claim line with the Northerly prolongation of the curve of the Western right of way line of the Oregon-Washington Railway and Navigation Co., as described and recorded March 24, 1882 in Deed Book 54 at Page 77 said Multnomah County; thence Southeasterly along the Westerly line of Third Street and the Westerly right of way line of said O.W.R. & N. CO., 1163.75 feet to a point in the Northerly line of the Northern Pacific Terminal tract recorded December 9, 1882 in Deed Book 62 at Page 139, which point is the intersection with the South line of North Dixon Street extended Westerly; thence along the Westerly extension of the South line of North Dixon Street and the Northerly line of the said Northern Pacific Terminal tract, South 51°33'30" West 212.42 feet to the

(Continued)

Order No: 140090 EXHIBIT "A" CONTINUED

**LEGAL DESCRIPTION**

intersection with the harbor line of the Eastern bank of the Willamette River; thence North 36°01'45" West 1196.00 feet along said Harbor line to the intersection with the Northerly line of the Interior Warehouse Tract, recorded February 3, 1954, in Deed Book 1642, at Page 318, said Multnomah County; thence North 57°54'45" East 361.24 feet along said line to a point in the North line of said William Irving Donation Land Claim line; thence North 89°42'45" East along said Donation Land Claim line to the point of beginning.

EXCEPTING THEREFROM ownership of the State of Oregon in and to that portion of the premises herein described lying below the line of ordinary high water of the Willamette River.

**EXHIBIT "B"**

1. Rights of the public and of governmental bodies in and to that portion of the premises herein described lying below the high water mark of the Willamette River.

2. Any adverse claims based upon the assertion that the Willamette River has changed in location.

3. Any adverse claim based on the assertion that any portion of said land has been created by artificial means or has accreted to such portions so created.

4. Rights established pursuant to ORS 274.905, et seq to all or any portion of the herein described premises created by artificial means.

5. An easement created by instrument, including terms and provisions thereof.
   Recorded: March 24, 1882
   Book: 54
   Page: 77
   In Favor Of: Oregon Railway and Navigation Co.
   For: Slope purposes

6. Utility easements, if any, by reason of said property having once been classified as part of North Albina Avenue. (Affects Parcel I)

7. Right, title and interest of others in and to a spur track as disclosed by Deed to R. Anthony DuBay and wife;
   Recorded: September 18, 1963
   Book: 2187
   Page: 190
   (Affects Parcel I)

8. An easement created by instrument, including terms and provisions thereof.
   Dated: March 17, 1964
   Recorded: January 29, 1965
   Book: 221
   Page: 190
   In Favor Of: Oregon-Washington Railroad and Navigation Company, an Oregon corporation, its successors, assigns and lessees, including its lessee, Union Pacific Railroad Company, a Utah corporation
   For: To maintain, operate, use, repair and renew a standard gauge railroad track or tracks

**EXHIBIT "B" CONTINUED**

9. Easement Agreement, including the terms and provisions thereof;
Dated: September 12, 1967
Recorded: September 27, 1967
Book: 583
Page: 1456
By and Between: Albina Engine and Machine Works, Inc., a corporation; and Pacific Power and Light Company, a corporation

As supplemented by instrument;
Recorded: December 12, 1968
Book: 654
Page: 1158

As further supplemented by instrument;
Recorded: June 3, 1969
Book: 680
Page: 863
(Affects Parcel I)

10. Permit Agreement, including the terms and provisions thereof;
Dated: March 21, 1969
Recorded: April 14, 1969
Book: 672
Page: 91
By and Between: Pacific Power and Light Company, a Maine corporation; and Pacific Northwest Bell Telephone Company
(Affects Parcel I)

11. Covenants, conditions, restrictions and easements, but omitting restrictions, if any, based on race, color, religion, sex, handicap, familial status or national origin, unless and only to the extent that said covenant, (a) is exempt under Chapter 42, Section 3607 of the United States Code or (b) relates to handicap but does not discriminate against handicapped persons, as contained in City of Portland, Ordinance No. 136458.
Recorded: May 15, 1973
Book: 926
Page: 1398

12. Covenants, conditions, restrictions and easements, but omitting restrictions, if any, based on race, color, religion, sex, handicap, familial status or national origin, unless and only to the extent that said covenant, (a) is exempt under Chapter 42, Section 3607 of the United States Code or (b) relates to handicap but does not discriminate against handicapped persons, as contained in Conditional Use Request No. CU3-75.
Recorded: January 27, 1975
Book: 1025
Page: 501

EXHIBIT "B" CONTINUED

An easement created by instrument, including terms and provisions thereof.

| | |
|---|---|
| Dated: | June 24, 1976 |
| Recorded: | July 9, 1976 |
| Book: | 1114 |
| Page: | 718 |
| In Favor Of: | Pacific Power and Light Company |
| For: | Electric transmission and distribution line of one or more wires and all necessary or desirable appurtenances |
| Affects: | Parcel II |

An easement created by instrument, including terms and provisions thereof.

| | |
|---|---|
| Dated: | February 14, 1978 |
| Recorded: | April 12, 1978 |
| Book: | 1255 |
| Page: | 437 |
| In Favor Of: | Pacific Power and Light Company |
| For: | Electric transmission and distribution line of one or more wires and all necessary or desirable appurtenances |
| Affects: | Parcel II |

STATE OF OREGON } ss
Multnomah County }

I a Deputy for the Recorder of Conveyances in and for said County do hereby certify that the within instrument of writing was received for record and recorded in the record of said County

95 JUL 17 PM 1:44

Vol / Page 95 83651

Witness my hand and seal of office affixed

Recorder of Conveyances

C Swick Deputy

6

D104842

When Recorded, Return to:
CHICAGO TITLE INSURANCE COMPANY
222 South Ninth Street - Suite 860
Minneapolis, Minnesota 55402

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