RUBY CANYON ENGINEERING

# Verification Report for Emission Reductions Reported by Blue Source Relating to J. B. Hunt Trucking Intermodal Project

April 28, 2009

Updated Verifier Accreditation Status December 07, 2009

Changed the Terminology of Crediting Period to Reporting Period April 22, 2010

Defined the Terminology of the 10 year Crediting Period May 28, 2010


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# 1.0 Introduction

This GHG emission reduction project verification is being performed by Ruby Canyon Engineering, Inc. (RCE). The project involves the use of lower energy-intensity intermodal transportation systems (rail) for freight that was previously transported by truck. RCE's background and qualifications can be found in Appendix A.

## 1.1 Responsible Parties:


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## 1.2 Project Background

Blue Source is an active supplier of emission reduction credits sourced from geologic sequestration, conservation, transportation, and avoidance projects and entities. J.B. Hunt Transport Services, Inc. (J.B. Hunt) is one of the largest truck-load transportation and logistics companies in North America.

In 1989, J.B. Hunt formed a partnership with the former Santa Fe Railroad (now Burlington Northern Santa Fe). Over the next decade new intermodal concepts were developed and tested. In 2000, the J.B. Intermodal (JBI) business segment was formed within J.B. Hunt and over 300 million USD of capital was invested in containers, chassis, tractors and software to support the new JBI.

The goal of intermodal ground transport is to optimize the best of both truck and rail modes. Freight is loaded in containers and picked up at a shipper's location by a JBI tractor or third party dray company for transport to the rail yard. The freight is then transported from highway vehicles to rail cars for what is typically the longest leg of the route. At the destination rail yard, JBI freight is then transferred from the rail car and delivered by JBI or dray carriers to the final destination. This method of transporting freight via intermodal reduces fuel consumption and greenhouse gas emissions. Transporting freight via trains is over three times more efficient than trucks on a ton-mile basis. Thus, using trains to transport freight has the potential to provide significant greenhouse gas emissions reductions.

Estimates of baseline emissions, actual (project) emissions, and emission reductions (ERs) were verified in accordance with the ISO 14064-3 guidelines. This verification is based on data obtained from J.B Hunt, Blue Source and protocol entitled *Blue Source's Project Description Report – GHG Reduction Protocol for J. B. Hunt's Intermodal Transport Project* that was developed for this project. It covers the emission reductions generated for the reporting period of October 1, 2006 – September 2008. The protocol was based on established emission estimation techniques, conservative estimates, accurate/reliable data sources, emissions factors, and documented methodologies. Verification findings indicate that all significant emission sources that materially affect the ERs are included within the scope of the project. Emission factors and methodology used to calculate actual emissions are consistent by source type (truck or rail). The sources of data are documented and records maintained by J.B. Hunt.

Emission reduction estimates were determined annually over the creation period. Baseline emissions are the actual $CO_2e$ emissions that would have been released to the atmosphere in the absence of the investment that JBI made in their intermodal program. This verification report documents that carbon dioxide equivalent ($CO_2e$) emission credits totaling 3,189,840 tons (metric) were created for the reporting period of October 1, 2006 – September 30, 2008 from this project following ISO 14064-2 methods.

# 2.0 Verification Plan

The verification plan involved working with Blue Source and J. B. Hunt personnel to gain an understanding of the project scope, source data locations and documentation, and project monitoring and maintenance systems. To do this RCE did the following:

- Reviewed the preliminary project calculations spreadsheets, GHG assertion, with associated input data parameters such as truck load, miles driven, truck and train fuel economies, variance factors, and GHG emission factors
- Performed a site visit to J. B. Hunt headquarters located in Lowell, Arkansas to witness data management and storage, interview engineers and IT personnel
- Requested and received GHG assertion spreadsheet and project description document
- Sent follow-up questionnaires to Blue Source requesting additional data and support documentation, clarification on existing data and with the preliminary calculation methods
- Performed a risk-based sample plan and reviewed the data received and followed up with an additional questionnaire requesting further clarifications
- Continued with sampling and analysis to assess the materiality of the methods and data used to generate the GHG assertion
- Reviewed the internal audits and controls in place and used by J.B. Hunt

## 2.1 Objectives

The goal of the validation and verification activities was to ensure that the project was eligible under the Canadian Standards Association (CSA) GHG CleanProjects™ Registry guidelines, GHG assertion made by Blue Source was materially correct, and that calculation methods and data gathering and monitoring systems used were compliant with GHG standards and CSA guidelines. Furthermore, the validation and verification activities ensure that the data provided to RCE is well documented and free of any material errors.

### 2.2 Eligibility Criteria

To be eligible under CSA GHG CleanProjects™ Registry guidelines a project must follow the GHG emission reduction reporting methods in ISO 14064-2, which specifies principles, requirements and provides guidance at the project level for quantifying and reporting activities intended to cause GHG emission reductions or removal enhancements.

### 2.3 Scope

The scope of the validation and verification activities includes the following:

- Establish the eligibility of the Project under the CSA's GHG CleanProjects™ Registry
- Verify the existence and ongoing operation and maintenance of the Project
- Verify the source of the raw data
- Ensure the completeness and accuracy of the GHG reduction calculations.
- Verify that the monitoring, metering, and recordkeeping procedures conducted by the Project operator meet the ISO 14064 guidelines

### 2.4 Materiality

The accuracy of the GHG assertion is dependent upon the accuracy and completeness of the relevant data needed to calculate the GHG assertion. The relevant data in this case includes:

- Number of loads dispatched by J. B. Hunt
- Documented miles driven by each truck
- Estimated miles traveled for each train load
- Fuel economies of both the trucks and trains
- Mileage variance factors

## 3.0 Assessment of GHG Data and Information

### 3.1 Scope

The following sections define the scope to which the GHG verification activities were limited to.

#### *3.1.1 Project boundary*

The project boundary includes all truck loads dispatched by J.B. Hunt for their JBT and JBI fleets (including the independent contractors and outsourced drays), and the rail intermodal loads contracted through J.B. Hunt, but dispatched through third-party railroad companies.

#### *3.1.2 Baseline scenario*

In the absence of the Project Activities, all of the loads of freight would have been transported by over-the-road JBT trucks rather than by railroads. This is the baseline scenario.

#### *3.1.3 Infrastructure, activities, technologies and processes of the GHG project*

A *fuel-based methodology* is used to calculate all $CO_2e$ emissions. Thus, the largest data requirements are truck loads (empty, loaded and deadhead), miles traveled, and fuel economy (which is then converted to fuel consumption). J.B. Hunt engineers provided spreadsheets containing the annual dispatch, empty and deadhead truck loads and miles, load weights, truck fleet fuel economies, and rail miles from October 1, 2006 to September 30, 2008.

#### *3.1.4 GHG sources, sinks and/or reservoirs*

The GHG emissions sources applicable to this project include mobile source combustion of diesel fuel.

#### *3.1.5 Types of greenhouse gases*

The GHG mobile source emissions applicable to this project include $CO_2$, $CH_4$, and $N_2O$.

#### *3.1.6 Start Date of Crediting Period & Reporting Period*

- The Project Start Date of the 10 year Crediting Period is October 1, 2006
- RCE verified emissions reductions for the reporting period of October 1, 2006 to September 30, 2008.

#### *3.1.7 Materiality*

The process that J.B. Hunt used to determine the GHG emission reduction assertion was found to be free from material misstatements and be materially correct.

The majority of the GHG assertion (~70%) was from the intermodal loads carried by the Burlington Northern & Santa Fe railroad. Actual track miles and more recent BNSF fuel economies were available for BNSF. In addition, actual track miles and railroad-specific fuel economies were available for Norfolk Southern railroad which represented approximately 19% of the GHG assertion.

### 3.2 Sampling Plan

RCE's risk-based sample plan was based on the following:

- reviewing of the GHG report and assertion,
- on-site assessment of the trucking dispatch, data management, and maintenance operations,
- completeness of supporting documentation,
- calculation methodologies were correctly applied,
- calculations and results were materially correct,
- verify that all the necessary monitoring and metering were in place.

### 3.3 Assessment Against Validation or Verification Criteria

#### *3.3.1 Eligibility*

The CSA's GHG CleanProjects™ Registry guidelines indicate a project must follow the GHG emission reduction reporting methods in ISO 14064-2. RCE has determined that the project has met these requirements.

### 3.4 Assessment of GHG Information and Information System Controls

#### *3.4.1 Dispatched Loads*

Dispatched loads are entered from J.B. Hunt's headquarters and entered into the truck's on-board computer. The load is tracked and the data transferred to J.B. Hunt's mainframe computer database. Output files are queried for daily reports. J.B. Hunt uses error checking software to match each load order with actual truck data.

#### *3.4.2 Miles Traveled*

Data for the trucks were collected in J.B. Hunt on-board truck computers, and communicated via satellite tracking system to an in-house database system (IBM mainframe). J.B. Hunt checks the truck's odometer readings with the dispatched miles to record any variances.

Actual rail miles were tracked for Burlington Northern & Santa Fe and Norfolk Southern railroads and J.B. Hunt used software PC Railer to estimate the rail miles for the remaining loads. For the most frequented routes, PC Railer miles were compared to actual track miles (for BNSF & NS railroads) for approximately 70% of the total loads. Based on the results, J.B. Hunt provided a PC Miler adjustment factor (approximately 10%) for the remaining estimated rail miles included in the GHG assertion.

#### *3.4.3 Fuel Economies*

Fuel economies for each truck were determined using data from the truck's on-board computer. However, when calculating truck fuel economies on a monthly basis, small errors are introduced because the days of fuel consumption of a single fill up can span between two consecutive months. Because of this, J.B. Hunt used quarterly (3 month) fuel economies in the GHG assertion, reducing the uncertainty of the fuel economies. Fuel economies are recorded each time a driver fills up a truck with diesel. Safeguards are in place to ensure that the diesel is being used by the J.B. Hunt truck. Based on the truck's history, (and because partial fill-ups can affect the MPG tracking) if the MPG is too high or low, the driver may not be given permission by J.B. Hunt to fill up without further investigation.

Information regarding the energy intensities (Btu/revenue-ton-miles) of the railroads was obtained from the American Railroad Association and the two largest carriers for J.B. Hunt, Burlington Northern & Santa Fe and Norfolk Southern railroad for the most recent years available. In addition, year 2001 BNSF study showed the energy intensities of their intermodal locomotives are 21% less efficient than their overall fleet average (600 intermodal gross ton-miles/gallon of diesel vs. 762 average gross ton-miles/gallon of diesel). The reasons for the difference are the use of larger locomotive engines for intermodal transport, requiring travel at higher than average speeds (70mph vs. 45mph). An additional 1% factor is applied to account for rail yard emissions for loading and unloading containers (using overhead cranes and Hostler trucks).

#### *3.4.4 Variance Factors*

Actual truck miles driven by both the JBI and JBT fleets are greater than the standard Rand McNally miles used by the dispatched load orders. In order to reflect actual miles driven, the Rand McNally miles are multiplied by two factors. The first, a *loaded mile adjustment factor*, combines the loaded truck, empty truck, and deadhead miles, and compares them to the Rand McNally miles. The second factor applied to the Rand McNally miles is called the *variance factor*. This represents the additional miles driven by the truck drivers that are not required for shipment of the dispatched loads.

#### *3.4.5 Subsequent Data Received*

Following the receipt of the GHG assertion and the site visit conducted by RCE on November 18, 2008, RCE sent J.B. Hunt a request for source documentation and additional clarifications. RCE received all of the requested information between January 29 – March 16, 2009.

On February 3, 2009, RCE interviewed a J.B. Hunt representative of their internal auditing (IA) department to discuss in more detail risk assessment and the internal controls that J.B. Hunt has in place to ensure the accuracy of its data. RCE found that J.B. Hunt's IA group has internal controls in place for seventeen different business cycles, including truck loads and fuel purchases. Cycle objectives and risk assessment leads to specific internal controls and actions. J.B. Hunt provided copies of the IA controls.

### 3.5 Evaluation of the GHG Assertion

#### *3.5.1 Emission reduction calculation*

The final GHG assertion presented by J.B. Hunt was found to be free of material errors, and verified by RCE. **Table 2** shows the total quantity of $CO_2$e of baseline emissions, project emissions, and emission reductions from the intermodal project for the reporting period of October 1, 2006 to September 30, 2008.

**Table 2: Total GHG reductions from methane utilized and sold**

| Year | Baseline Emissions metric tons $CO_2$e/year | Project Emissions metric tons $CO_2$e /year | Emissions Reductions metric tons $CO_2$e |
|---|---|---|---|
| O-D 2006 | 660,583 | 296,106 | 364,477 |
| 2007 | 2,847,801 | 1,278,199 | 1,569,602 |
| J-S 2008 | 2,300,116 | 1,044,355 | 1,255,761 |
| **Total** | **5,808,500** | **2,618,660** | **3,189,840** |

### 3.6 Verification Records

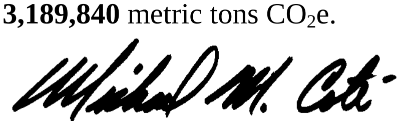
The calculation spreadsheets and support documentation that support the GHG assertion reside at RCE's Grand Junction, Colorado office. The information is stored according to RCE's ISO 14064-3 record retention policy.

Verification records include:

- Monthly and quarterly truck fuel economies
- Rand McNally road mines, PC Railer miles, actual track miles (monthly)
- Number of loaded, empty, and deadhead loads each month (monthly)
- Railroad fuel economies (annual)
- Justification of variance factors (monthly)
- GHG assertion spreadsheet
- Project design document
- Empty rail miles
- Internal control activities for J.B. Hunt's fuel and revenue cycles
- Samples of tractor-level MPGs
- Comparison of PC Miler, PC Railer, Rand McNally, and actual track miles for heaviest used routes
- IT Recovery Plan
- Process for IA Controls

## 4.0 Conclusions

RCE verifies that the GHG assertion of methane emission reductions related to the J.B. Hunt intermodal project as provided by Blue Source (**Table 2)** is materially correct at a reasonable level of assurance (95%), follows ISO 14064-3 guidelines, and meets the eligibility criteria of CSA. The total reductions for the reporting period October 1, 2006 to September 30, 2008 equal **3,189,840** metric tons $CO_2$e.



Michael M. Coté
Vice President

Date:
April 28, 2009

# Appendix A

## RCE Verification Experience

RCE has completed complex GHG inventories for several U.S. and international companies that included stationary combustion, mobile combustion, process emissions, fugitive emissions, and indirect electric emissions. As a result, the RCE staff is quite familiar with emissions estimation, calculation methods, emission factors, and the concepts of materiality. Moreover, RCE has completed numerous project design documents and monitoring plans for CDM and VER projects, as well as attended validation meetings for project proponents. This experience has given RCE first hand knowledge of project eligibility issues, monitoring and metering systems, and additionality testing.

Since its formation, RCE has been a subcontractor to the U.S. EPA's Climate Change Division. As part of this project, RCE manages the coal emissions inventory each year for the annual "U.S. Greenhouse Gas Emissions and Sinks" document. Over the years, RCE has made significant improvements to the methodology used to calculate emissions avoided at coal mines that recover and use methane. RCE authored a new abandoned mine methane emissions estimation methodology on behalf of U.S. EPA's Coalbed Methane Outreach Program that was accepted into the *2006 IPCC Greenhouse Gas Inventory Guidelines*. In 2007, RCE developed new emission factors for the U.S. EPA's GasStar program to be used for the natural gas production and processing sectors.

RCE is an experienced greenhouse gas (GHG) project verifier. The senior staff at RCE has been verifying GHG offset projects since 2003 in the U.S. RCE is currently completing the ANSI accreditation program to become an ISO 14065 approved GHG validator and verifier (V&V). The accreditation process is expected to be completed by March 30, 2009. RCE is currently an approved verifier for the Chicago Climate Exchange, California Climate Action Registry, The Climate Registry, and the American Carbon Registry. RCE has completed GHG verifications in the coal mine methane, abandoned mine methane, agricultural wastewater, oil & gas, renewable energy, and transportation sectors.

## Company Accreditations

RCE received its ANSI accreditation under ISO 14065 (Requirements for Greenhouse Gas Validation and Verification Bodies) in October 2009. The ISO standards require rigorous and consistent GHG management and verification policies of validation/verification bodies. RCE is accredited to perform validations and verifications of GHG inventories and projects for the following GHG programs and registries:

| Climate Action Reserve | Chicago Climate Exchange | TCR & CCAR | American Carbon Registry |
|---|---|---|---|
| landfill methane | coal mine methane | electric power generation | All Sectors |
| agricultural methane | abandoned mine methane | transmission & distribution | |
| coal mine methane | agricultural methane | combined heat & power | |
| organic waste projects | landfill methane | mining & metals | |
| | renewable energy | manufacturing | |
| | | transportation | |
| | | | |

# Appendix B: Examples of Supporting Documentation Provided

## B-1: Excerpt of Internal Controls for Fuel Cycle

**Fuel - 2008**

| Obj. No. | Objective | Assertions | Risk(s) | Control Activities |
|---|---|---|---|---|
| **1** | Fuel purchases are valid and properly authorized. | Existence<br>Occurrence<br>Completeness<br>Rights & Oblig.<br>Authorization | 1A. Unauthorized purchases of OTR fuel occur. | F6. Entry or communication of a valid JB Hunt DOT number or ICC number, driver number, hub reading and equipment number is required and verified prior to fueling a piece of equipment. |
| | | | | F7. Calculation of MPG is made and checked for reasonableness after fueling but prior to the complete authorization of the transaction. |
| | | | | F26. Dollar and gallon limits per OTR fuel PO's are established within the system and only authorized individuals are allowed to issue OTR fuel PO's through password protected access to the fuel system, in the event an automated OTR fuel PO could not be issued. |
| | | | | F13. Approved OTR PO's are extracted from the host fuel system into Peoplesoft A/P and individually matched within a pre-set dollar tolerance to the applicable vendor invoice prior to payment. Vendor invoices not matching within the tolerance range are included on match exception reports and investigated. |
| | | | 1B. Purchases of OTR fuel are made at unauthorized per unit prices. | F9. Fuel unit prices from common/standard vendors are received and preapproved daily by the fuel department within the host system. |
| | | | | F10. Fuel unit prices of vendors not included in the fuel system are minimal in occurrence and PO's for transactions with such vendors must be approved/processed directly by the fuel help desk or fuel management. |
| | | | 1C. Fictitious OTR fuel purchases are processed through the fuel system. | F8. Physical location of the truck being refueled OTR is verified using OBC satellite tracking system prior to fueling (except at independents). |
| | | | | F6. Entry or communication of a valid JB Hunt DOT number or ICC number, driver number, hub reading and equipment number is required and verified prior to fueling a piece of |
| | | | | F7. Calculation of MPG is made and checked for reasonableness after fueling but prior to the complete authorization of the transaction. |
| | | | 1D. Authorized OTR fuel unit prices are not correctly entered | F1. An email notification is generated if fuel prices are not received from the vendor by a specified deadline. |
| | | | | F2. Subsequent to the download of vendor pricing data into the host, an email notification is generated if fuel prices are not within $.02 +/- of the previous business day's price per gallon and the variance is investigated. |
| | | | | F3. Prices within the $.02 variance are automatically approved for use in the host system, however, prices outside the range remain inactive until investigated and manual approved in the system. |
| | | | | F4. The vendor fuel data interface program contains checks for invalid, misclassified or missing data within the files received from the vendor. |
| | | | | F5. Ability to make manual changes to prices within the host fuel system is limited to three maintenance/fuel individuals and IT support. |

## B-2: PC Railer Output

Microsoft Excel - Eagle_Lane_Segments.xls

=rmiles(A14,C14,$B$3,D14,F14,$B$5,$B$6,$B$7,$B$8)

| ROUTING CRITERIA | | |
|---|---|---|
| Origin Railroad | BNSF | **Origin Railroad:** Includes any valid railroad in the PC*MILER\|Rail database |
| Origin Geocode Type | C | **Geocode Types *(OrigGeo, DestGeo)*:** City/State, SPLC, ERPC, FSAC, Rule260 |
| Destination Railroad | CSXT | **Destination Railroad:** Includes any valid railroad in the PC*MILER\|Rail database |
| Destination Geocode T | C | **Geocode Types *(OrigGeo, DestGeo)*:** City/State, SPLC, ERPC, FSAC, Rule260 |
| Routing Formula | I | **Routing Formula:** Practical, Intermodal, Shortest, Coal/Bulk, AutoRacks, FuelSurcharge |
| Routing Family | F | **Routing Family *(RouteFam)*:** Familized, Non-Familized |
| Routing Type | A | **Routing Type *(RouteType)*:** Interactive, Auto-Routing |
| Routing Setting | I | **Routing Setting *(IncEx)*:** Include, Exclude (If Routing Type is I, this field should be left blank) |

*=Rmiles(Orig,OrigRR,OrigGeo,Dest,DestRR,DestGeo,"Route Formula","Route Fam","RouteType","IncEx")*

| Orig_City | Orig_Zip | Orig_RR | Dest_City | Dest_Zip | Dest_RR | | Intermodal Rting, Familized, A, I |
|---|---|---|---|---|---|---|---|
| ALBANY NY | 12202 | NS | CHICAGO IL | 60609 | NS | =rmiles(A1 | 939.0999756 |
| ALBUQUERQUE NM | 87101 | BNSF | HODGKINS IL | 60525 | BNSF | 1341.40 | 1341.400024 |
| ATLANTA GA | 30318 | NS | JERSEY CITY NJ | 07307 | NS | 966.80 | 966.7999878 |
| ATLANTA GA | 30318 | NS | LANGHORNE PA | 19047 | NS | 910.30 | 910.2999878 |
| ATLANTA GA | 30318 | NS | LAREDO TX | 78042 | KCS | 1361.20 | 1361.199951 |
| ATLANTA GA | 30318 | NS | MEMPHIS TN | 38114 | NS | 443.10 | 443.1000061 |
| ATLANTA GA | 30318 | NS | MERIDIAN MS | 39301 | NS | 317.00 | 317 |
| ATLANTA GA | 30318 | NS | MIAMI FL | 33166 | NS | 697.20 | 697.2000122 |
| ATLANTA GA | 30318 | NS | NORFOLK VA | 23324 | NS | 670.10 | 670.0999756 |
| ATLANTA GA | 30318 | NS | NORTH KANSAS CITY MO | 64116 | NS | 991.70 | 991.7000122 |
| ATLANTA GA | 30318 | NS | RUTHERFORD PA | 17111 | NS | 791.60 | 791.5999756 |
| AUSTELL GA | 30106 | NS | CHICAGO IL | 60620 | NS | 791.50 | 791.5 |
| AYER MA | 01432 | NS | CHICAGO IL | 60609 | NS | 1112.00 | 1112 |
| BALTIMORE MD | 21224 | CSXT | CHICAGO IL | 60638 | CSXT | 803.30 | 803.2999878 |
| BALTIMORE MD | 21224 | CSXT | CHICAGO IL | 60636 | CSXT | 803.30 | 803.2999878 |
| BALTIMORE MD | 21224 | CSXT | JACKSONVILLE FL | 32219 | CSXT | 795.40 | 795.4000244 |
| BALTIMORE MD | 21224 | CSXT | ORLANDO FL | 32824 | CSXT | 939.50 | 939.5 |
| CHICAGO IL | 60638 | CSXT | BALTIMORE MD | 21224 | CSXT | 803.30 | 803.2999878 |
| CHICAGO IL | 60638 | CSXT | EAST SYRACUSE NY | 13057 | CSXT | 676.20 | 676.2000122 |

Lane Segment Miles / PCM Rail Formulas / BN Mi / Lane Sgmnts GrpBy w Mi / **Lane Sgmnts GrpBy w Mi Formulas** / Lane Segments w RR / Lane S

## B-3: Sample of Rail Mile Variance Query

```
Query: JENG062.RAMP_HIST_06_08_Q
SELECT
VALUE(T3.ORIGIN_RAMP, T4.ORIGIN_RAMP) AS ORIGIN_RAMP
,VALUE(T3.DESTINATION_RAMP, T4.DESTINATION_RAMP) AS DESTINATION_RAMP
, VOL_2006
, TRAIN_LD_MI_2006
, AVG_LOH_2006
, VOL_2007
, TRAIN_LD_MI_2007
, AVG_LOH_2007
, VOL_2008
, TRAIN_LD_MI_2008
, AVG_LOH_2008

FROM
(
SELECT
VALUE(T1.ORIGIN_RAMP, T2.ORIGIN_RAMP) AS ORIGIN_RAMP
,VALUE(T1.DESTINATION_RAMP, T2.DESTINATION_RAMP) AS DESTINATION_RAMP
, VOL_2006
, TRAIN_LD_MI_2006
, AVG_LOH_2006
, VOL_2007
, TRAIN_LD_MI_2007
, AVG_LOH_2007

FROM
(
Select
origin_ramp
, destination_ramp
, count(order_nbr) as vol_2006
, SUM(TRAIN_LOADED_MI) AS TRAIN_LD_MI_2006
, sum(train_loaded_mi)/count(order_nbr) as avg_loh_2006

from icq.ord06_hist
where im_train_flag = 'Y'
and ord_rec_status <> 'C'

group by origin_ramp
, destination_ramp
)t1

FULL OUTER JOIN
(
Select
origin_ramp
, destination_ramp
, count(order_nbr) as vol_2007
, SUM(TRAIN_LOADED_MI) AS TRAIN_LD_MI_2007
, sum(train_loaded_mi)/count(order_nbr) as avg_loh_2007

from icq.ord07_hist
where im_train_flag = 'Y'
and ord_rec_status <> 'C'

group by origin_ramp
, destination_ramp
)t2
ON T1.ORIGIN_RAMP = T2.ORIGIN_RAMP
AND T1.DESTINATION_RAMP = T2.DESTINATION_RAMP

)T3

FULL OUTER JOIN
(
Select
origin_ramp
, destination_ramp
, count(order_nbr) as vol_2008
, SUM(TRAIN_LOADED_MI) AS TRAIN_LD_MI_2008
, sum(train_loaded_mi)/count(order_nbr) as avg_loh_2008

from icq.order_hist
where im_train_flag = 'Y'
```

## B-4: IT Disaster Recovery Plan

### Business Continuity/Disaster Recovery Program

Contingency planning comes under the Business Continuity Office at J. B. Hunt Transport Services, Inc. J. B. Hunt's Continuity of Operations is divided into two distinct areas:

**Continuity of Operations Plans**: Each major business unit has continuity of operations plans which detail the specific steps to be taken in the event of an emergency involving the corporate headquarters in Lowell, Arkansas. These business units are:

- Corporate Security
- Dedicated Contract Services
- Finance (Payroll, Accounts Payables & Receivables)
- Freight Handling & Utilization
- Human Resources
- Integrated Capacity Solutions
- Intermodal
- Maintenance
- Marketing (Account Representatives/Area Service Managers)
- Safety
- Truck Operations – Automotive – Central Dispatch – Independent Owner/Operators

In the event of a failure or emergency involving the Corporate Headquarters requiring evacuations, our plans state that approximately 500 business mission critical personnel will be immediately relocated to three alternate facilities. Detailed plans have been developed showing where each group would be located.

Alternate Operations: currently we are set up to operate out of three alternate facilities, Commerce Center I which includes a 5,000 square foot semi-hardened computer facility known as the Dual Data Center, Commerce Center II which we recently reoccupied after purchasing the facility and a third alternate facility, referred to as old corporate or the Corporate Driver facility.

We have three means of communicating any emergency or failures to key employees which would also be used in recalling employees: 1) telephone pyramid and 2) text paging to notify business continuity and disaster recovery representatives.

**IT Disaster Recovery Plans:** J. B. Hunt has a dual data center which has been built to provide redundancy for J. B. Hunt's computer operations. This computer center is located within Lowell but separate from the Corporate Headquarters. J. B. Hunt's mainframe applications are mirrored real-time and all critical host applications can be restored within four (4) hours. Additionally, certain selected critical data is backed up on tape weekly and these tapes are transferred to a third party off-site vault.

**IT Disaster Recovery Groups:**
These groups are:

- Client Services
- Data Center Operations
- DB2/CICS

- Facilities
- Host Services
- IS Customer Service Center
- Network Infrastructure
- Server Services
- Telecommunications
- Keri Systems Doors

**Electrical Power:** The main corporate complex and the dual data center's power are supplied by separate electrical power companies. Each facility also has independent diesel generator plants which can carry the critical functions in each facility to include main-frame, mid-range computers, servers and telecommunications equipment. These UPS units are tested monthly.

**Fire Protection:** Each data center and our telecommunications center has full fire protection equipment installed. Fire sprinklers are installed throughout the three centers to protect critical equipment.

**Red Team:** We employ a red team approach for the review of all business continuity and disaster recovery plans. The red team comprised of business department and IT team member is led by a Director from the business operations area to ensure practical and realistic considerations in plan and test development.

**Continuity of Operations Tests:** Our complete plans were tested on a full scale basis last during December 2005 and January 2006 when we evacuated the corporate buildings and failed over to our alternate facilities for a period of several days.

We test selected portions of our plan annually including failing over from the primary mainframe computer to the backup computer plus storage hardware annually. Each test is fully documented and lessons learned during each test are used to further refine our plans.

**Point of Contact:** Our Vice President of Corporate Security and Audits is responsible for all Continuity of Operations planning and can be contacted if additional information is required:

Johnie Wood
Vice President, Corporate Security & Audits