



To: Distribution

From: Ernestine Bryant, STOrage and RETrieval (STORET), Project Manager (PjM),
Solutions Development Center (SDC)

Subject: Minutes of STORET Change Control Board (CCB) Meeting

1.0 MEETING

A CCB Meeting was held on June 2, 2004 at the SDC. The purpose of the meeting was to resolve project issues, review and address the status of current project activities, and ensure that activities are within the scope of the Job Assignment (JA).

2.0 ATTENDEES

Bryant, Ernestine - Project Manager
Christian, Kevin
King, Robert - Job Assignment Manager (JAM)
Manning, Lee
McElhinney, Cary
Norris, Blythe
Szajgin, Tracey - Program Manager
Thadkamalla, Ganesh

3.0 CCB ACTIONS

The discussion covered the following topics:

- Administrative.
- Central Administration.
- Central Warehouse.

3.1 Administrative

STORET Report Module modifications will be performed under Task 6.

STORET training is scheduled for June 15-17, 2004. At least eight computers will be needed in the training room. Training preparation will be performed on June 14, 2004.

3.2 STORET Central Administration

The current Visual Basic (VB) design was discussed. The following reference tables are under development: Bio Part, Method and Datum, Sample Matrix, and Unit of Measure. Drafts of the design specifications (Appendix A) were distributed for review and the application was demonstrated. The following is a summary of the findings:

Global:

- When a record is highlighted, action should default to update/change and data entry fields should be populated.
- Expand width of each list box column to the maximum width of associated data column.
- None of the lists should allow entry.
- Default window resolution is 1024 x 768; all windows should be large enough to fill this entire area.
- Make the menu bar more conspicuous and use the standard Windows format (e.g., File, Edit, Help).
- Add a user-defined sort capability to each list box.
- Pop up a confirmation message for the user to save changes if a different record is highlighted before changes to the current record have been saved.
- Replace “Accept” with “Save”.
- Optional drop down lists should include a “<Blank>” row.
- Provide window level and field level help.

- Do not incorporate rules to prevent deletion as implemented in the v1.1 reference table application.
- Allow multiple windows to be open at a given time, but not multiples of the same window.
- Font should be Arial 8 or 9.
- D_Userid_Code values should always be upper case.

Method and Datum:

- ID_Code and EDR_Code should always be upper case.
- Default sort order on the list should be Category, Subcategory, then ID_Code.
- ID_Code, Category, and Subcategory combination must be unique.

Sample Matrix:

- Code should always be upper case.

Unit of Measure:

- Add new columns to Unit of Measure reference table maintenance as is done for the Unit of Measure Extract, Transform, and Load (ETL) conversion routine.

B. King and L. Manning requested a copy of the current VB design for their in depth review. The STORET team will continue to research other possible design options.

3.3 Central Warehouse

North American Datum (NAD) 83 was chosen as the standard horizontal datum. L. Manning summarized the standardization requirement. K. Christian stated that GeoTrans software is open source and can transform many datums. G. Thadkamalla presented research done on North American Datum Conversion (NADCON), Oracle Spatial, and GeoTrans (Appendix B). The study showed that Oracle Spatial and GeoTrans followed similar transformation patterns. He also mentioned that an initial study showed NADCON and Arc Info transformations matched very closely. Upon discussing pro and cons, B. King directed the STORET team to use the Oracle Spatial option. L. Manning stated that both station and activity location latitude and longitude data should be converted. Station fact table will have three new columns for storing standard datum, latitude, and longitude data. Result fact tables will have five new columns for

storing standard datum, station latitude, station longitude, activity latitude, and activity longitude data.

The STORET team stated that unit testing has been completed for the Unit of Measure (UOM) conversion. FIX015 reference table update will be evaluated to identify any possible units that need to be converted.

4.0 ACTION ITEMS

Number	Description	Date Issued	Status	Assignment	Date Completed
0001	Research VB.NET capabilities and provide response.	06/02/2004	Open	B. Norris	
0002	Provide STORET team with copy of Dasler software.	06/02/2004	Open	B. King	

5.0 NEXT CCB MEETING

The next meeting will be at 8:30 am, June 30, 2004 at the SDC.

6.0 APPROVAL OF MINUTES

Robert E. King
Job Assignment Manager

Date

Distribution:

Bryant, Ernestine

King, Robert

Manning, Lee

McElhinney, Cary

Szajgin, Tracey

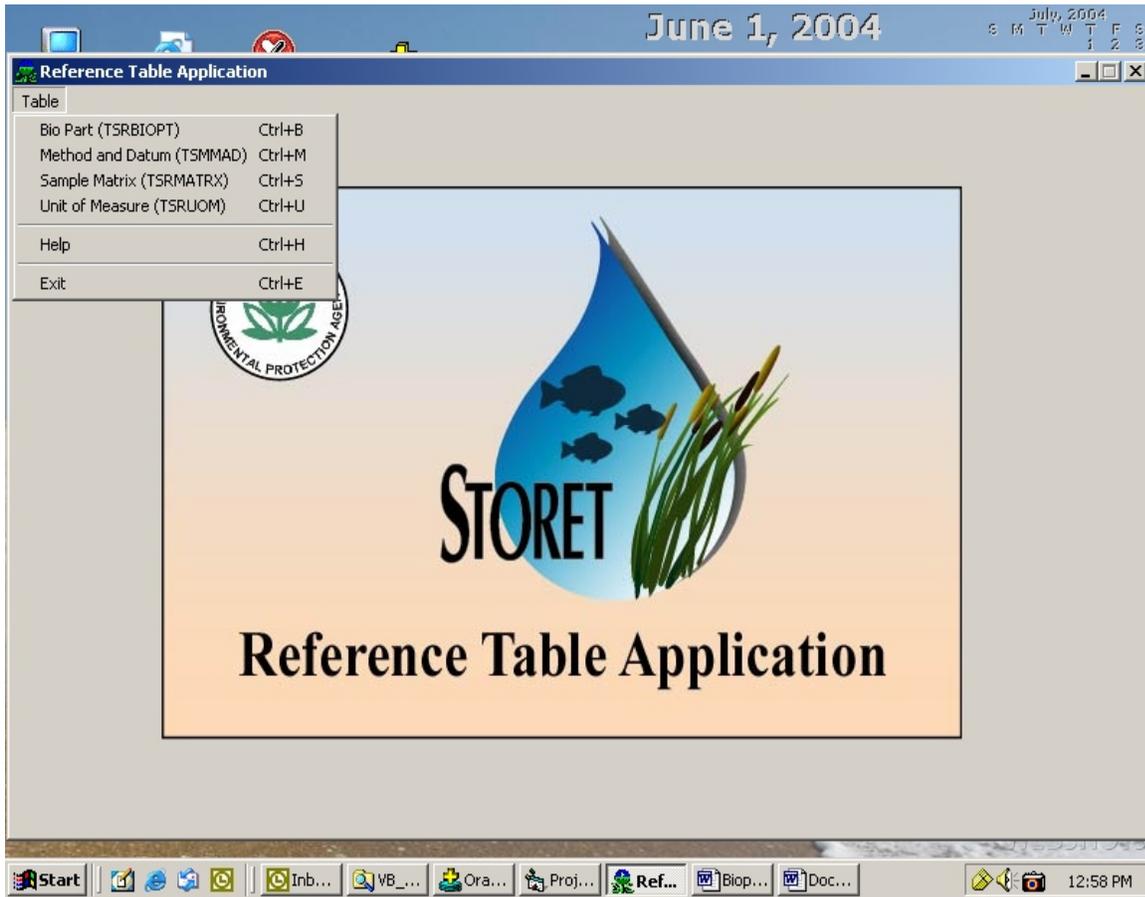
King.Robert@epamail.epa.gov

Manning.Lee@epamail.epa.gov

Mcelhinney.Cary@epa.gov

ATTACHMENT A

Draft Reference Table Design Specifications



STORET
Visual Basic Reference Table Application
Specification Package

Form Name: frmMAD

Window Name: Method and Datum (TSMMD) Data Entry

SIR(s): 0813

Last Update: 05/28/2004

Processing Overview/Description:

This window is used to maintain Method and Datums (MAD) for the system. This reference table is maintained only by central administrators. The upper portion of the form displays a list of all MADs in the system. The lower portion displays entry fields for the creation of new MADs and modification of existing MADs. Deletion of a MAD is done by selecting a row and pressing the Delete menu item.

Tables Used:

Table	Column
TSMMD	TSMMD_IS_NUMBER
	TSMMD_ORG_ID
	ID_CODE
	EDR_CODE
	CATEGORY
	SUBCATEGORY
	DESCRIPTION
	D_USERID_CODE
	D_LAST_UPDATE_TS

Table	Column
TSMEISN	TSMEISN_ORG_ID
	IS_NUMBER
	TSMEISN_NAME

Links From:

frmMain form.

Global Variables/Inputs:

Natural Language	Variable
The ID of the Oracle user logged into the application.	vUserId

Links To:

Returns to frmMain.

Output Parameters/Variables:

None.

Local Variables:

Natural Language	Variable
An ID representing the action to be taken (i.e., Insert or Update) when user presses "Accept" button.	vAction
General recordset for short term queries.	rs
Master recordset for UOM list to be used throughout form processing.	rsMaster
A String representing current SQL Select statement.	strSql

Natural Language	Variable
A Number representing current IS Number.	vISNum
A string representing TSMMD Code.	vID
A string representing TSMMD Category.	vCategory
A string representing TSMMD Subcategory.	vSubCat
Visual Basic "Column" variables representing each column in the list box.	Col1, Col2, Col3, Col4, Col5, Col6, Col7, Col8, Col9
A variant representing the current row selected in the list box.	vBookmark
An integer representing whether or not a row has been selected.	vSubscript

Design Standards:

Follow Visual Basic Design Standards document.

Menu:

Action

Insert	Ctrl+I
Update	Ctrl+U
Delete	Ctrl+D

Close	Ctrl+C

Help	Ctrl+H

Event Processing:

Event/Internal Procedure	Action(s)
Form Load	Populate DataGrid (list box) with all MADs.
DataGrid1 Click	Select/unselect logic. Blank out all entry fields. Null local variables for entry fields. If select, then enable Update and Delete commands. If unselect, then enable Insert.

Event/Internal Procedure	Action(s)
DataGrid1 AfterDelete	Blank out all entry fields.
cmdInsert_Click	Blank out all entry fields. Put cursor on ID Code field. Null local variables associated with each entry field. Set vAction to "Insert".
cmdUpdate_Click	Populate entry fields at bottom of form with values from selected row; populate local variables for entry fields. Put cursor on ID Code field. Set vAction to "Update".
cmdDelete_Click	<i>?? Check for use of code in TSMALP; if found then give appropriate error and prevent deletion. Otherwise, display a warning message. If confirms okay, then delete record from database and remove deleted record from list box.</i>
cmdAccept_Click	Check for mandatory fields and duplicate. <ul style="list-style-type: none"> • If insert then get next is number from TSMEISN and insert new record. • If update then update existing record. Only need to check for duplicate if data has changed in ID Code, Category, and/or Subcategory fields.
cmdClose_Click	Close form and return to menu.
Help_Click	Call Help (TBD)

Disable Rules:

- Insert is disabled if a MAD has been selected.
- Update is disabled if a MAD has not been selected.
- Delete is disabled if a MAD has not been selected.
- Accept is disabled until Insert or Update from the menu has been chosen.
- Cancel is disabled until Insert or Update from the menu has been chosen.

Business Rules:

General:

- TSMAD table has five or less entry fields, so data entry may be combined with the list box on a single form.

Data Entry:

- On insert, use the next available ISN from the TSMEISN table where table name is TSMMD.
- The following fields are enterable (and updateable) by the user: ID Code, EDR Code, Category, Subcategory, and Description.
- The following fields are optional: EDR Code and Description.
- ID Code/Category/Subcategory combination must be unique.
- Set D_USERID_CODE to current user.
- Set D_Last_Update_TS to Oracle system date.
- This is a reference table. The TSMMD_ORG_ID will always be set to "ZZZZZZZZ" representing the national organization.
- Only Central administrator(s) may perform this function. It will be part of a standalone central icon that is used to maintain all reference tables as well as Serial Organization Identifier (SOI) and Organization.
- Do not prevent modification of a row based on associations to existing data entered via the Data Entry Application.

List Box:

- Show D_Userid_Code, D_Last_Update_TS, and IS Number as the last three columns in the list box. Do not include Org_ID since that will always be "ZZZZZZZZ".
- Provide a warning message on Delete.
- *Prevent deletion of a row if used by the TSMALP table...?*
- Show as many lines of MADs as possible in the box. List box is vertically and horizontally scrollable.
- Display ALL columns from the table in the list box except the Org ID.
- Sort list by ascending Code, by ascending Category, by ascending Subcategory.

Error Handling:

- If duplicate found, display appropriate error. Make ID Code, Category, and Subcategory field background color red.
- If mandatory fields are missing, display appropriate error and make field background color red.

Window Layout:

Method and Datum Maintenance

Action

ID_CODE	CATEGORY	SUBCATEGORY	DESCRIPTION	EDR_CODE	D_USERID_CODE	D_LAST_UPDATE_TS	TSMMD IS N
001	VERTICAL	METHOD	GPS Carrier Phase Stati	001	LJM	12/29/2002 2:01:21 PM	66
002	HORIZONTAL	METHOD	Address Matching-Block	002	LJM	12/1/1998	20
002	VERTICAL	METHOD	GPS Carrier Phase Kine	002	LJM	12/29/2002 2:01:21 PM	65
003	HORIZONTAL	METHOD	Address Matching-Street	003	LJM	12/1/1998	21
003	VERTICAL	METHOD	GPS Code (Pseudo Range)	003	LJM	12/1/1998	4
004	HORIZONTAL	METHOD	Address Matching-Nearest Intersection	004	LJM	12/1/1998	22
004	VERTICAL	METHOD	GPS Code (Pseudo Range)	004	LJM	12/1/1998	2
005	HORIZONTAL	METHOD	Address Matching-Prime	005	LJM	12/1/1998	23
005	VERTICAL	METHOD	GPS Code (Pseudo Range)	005	LJM	12/29/2002 2:01:21 PM	67
006	HORIZONTAL	METHOD	Address Matching-Digit	006	LJM	12/1/1998	24
006	VERTICAL	METHOD	GPS Code (Pseudo Range)	006	LJM	12/29/2002 2:01:21 PM	68
007	HORIZONTAL	METHOD	Address Matching-Other	007	LJM	12/1/1998	25
007	VERTICAL	METHOD	Classical Surveying Tec	007	storuser	5/7/2004 12:09:59 PM	3
008	HORIZONTAL	METHOD	Census Block-1990-Cer	008	LJM	12/1/1998	27
008	VERTICAL	METHOD	Other	008	LJM	12/29/2002 2:01:21 PM	70
009	HORIZONTAL	METHOD	Census Block/Group-19	009	LJM	12/1/1998	28
009	VERTICAL	METHOD	Altimetry	009	LJM	12/29/2002 2:01:21 PM	64
010	HORIZONTAL	METHOD	Census Block/Tract-19	010	LJM	12/1/1998	29
010	VERTICAL	METHOD	Precise Leveling-Bench	010	LJM	12/29/2002 2:01:21 PM	71
011	HORIZONTAL	METHOD	Census-Other	011	LJM	12/1/1998	30
011	VERTICAL	METHOD	Leveling-Non Bench Me	011	LJM	12/29/2002 2:01:21 PM	69

ID Code: 004 Category: HORIZONTAL Subcategory: METHOD

EDR Code: 004 Description: Address Matching-Nearest Intersection

Accept Cancel

STORET
Visual Basic Reference Table Application
Specification Package

Form Name: frmBiopart

Window Name: Biopart (TSRBIOPT) Data Entry

SIR(s): 1607

Last Update: 06/01/2004

Processing Overview/Description:

This window is used to maintain Bioparts for the system. This reference table is maintained only by central administrators. The upper portion of the form displays a list of all bioparts in the system. The lower portion displays entry fields for the creation of new bioparts and modification of existing bioparts. Deletion of a Biopart is done by selecting a row and pressing the Delete menu item.

Tables Used:

Table	Column
TSRBIOPT	TSRBIOPT_IS_NUMBER
	TSRBIOPT_ORG_ID
	NAME
	D_USERID_CODE
	D_LAST_UPDT_TS
TSMEISN	TSMEISN_ORG_ID
	IS_NUMBER
	TSMEISN_NAME

Links From:

frmMain form.

Global Variables/Inputs:

Natural Language	Variable
The ID of the Oracle user logged into the application.	vUserId

Links To:

Returns to frmMain.

Output Parameters/Variables:

None.

Local Variables:

Natural Language	Variable
An ID representing the action to be taken (i.e., Insert or Update) when user presses "Accept" button.	vAction
General recordset for short term queries.	rs
Master recordset for UOM list to be used throughout form processing.	rsMaster
A String representing current SQL Select statement.	strSql
A Number representing current IS Number.	vISNum
A string representing TSRBIOPT Name.	vName
Visual Basic "Column" variables representing each column in the list box.	Col1, Col2, Col3, Col4, Col5

Natural Language	Variable
A variant representing the current row selected in the list box.	vBookmark
An integer representing whether or not a row has been selected.	vSubscript

Design Standards:

Follow Visual Basic Design Standards document.

Menu:

Action

Insert	Ctrl+I
Update	Ctrl+U
Delete	Ctrl+D

Close	Ctrl+C

Help	Ctrl+H

Event Processing:

Event/Internal Procedure	Action(s)
Form Load	Populate DataGrid (list box) with all bioparts.
DataGrid1 Click	Select/unselect logic. Blank out all entry fields. Null local variable for Name entry field. If select, then enable Update and Delete commands. If unselect, then enable Insert.
DataGrid1 AfterDelete	Blank out all entry fields.
cmdInsert_Click	Blank out all entry fields. Put cursor on Name field. Null local variable associated with Name entry field. Set vAction to "Insert".
cmdUpdate_Click	Populate entry fields at bottom of form with values from selected row; populate local variable for Name. Put cursor on Name field. Set vAction to "Update".

Event/Internal Procedure	Action(s)
cmdDelete_Click	Check for existence of relationships; if found then give appropriate error and prevent deletion. Otherwise, display a warning message. If confirms okay, then delete record from database and remove deleted record from list box.
cmdAccept_Click	Check for mandatory fields and duplicate. <ul style="list-style-type: none"> • If insert then get next is number from TSMEISN, check for duplicate name, and insert new record. • If update then check for duplicate name and update existing record.
cmdClose_Click	Close form and return to menu.
Help_Click	Call Help (TBD).

Disable Rules:

- Insert is disabled if a Biopart has been selected.
- Update is disabled if a Biopart has not been selected.
- Delete is disabled if a Biopart has not been selected.
- Accept is disabled until Insert or Update from the menu has been chosen.
- Cancel is disabled until Insert or Update from the menu has been chosen.

Business Rules:

General:

- TSRBIOPT table has five or less entry fields, so data entry may be combined with the list box on a single form.

Data Entry:

- On insert, use the next available ISN from the TSMEISN table where table name is TSRBIOPT.
- Name is enterable (and updateable) by the user.
- Name must be unique.
- Set D_USERID_CODE to current user.
- Set D_Last_Updt_TS to Oracle system date.
- This is a reference table. The TSRBIOPT_ORG_ID will always be set to “ZZZZZZZZ” representing the national organization.

- Only Central administrator(s) may perform this function. It will be part of a standalone central icon that is used to maintain all reference tables as well as Serial Organization Identifier (SOI) and Organization.
- Do not prevent modification of a row based on associations to existing data entered via the Data Entry Application.

List Box:

- Show D_Userid_Code, D_Last_Update_TS, and IS Number as the last three columns in the list box. Do not include Org_ID since that will always be “ZZZZZZZZ”.
- Provide a warning message on Delete.
- Prevent deletion of a row if it is associated to a Field Activity.
- Show as many lines of bioparts as possible in the box. List box is vertically and horizontally scrollable.
- Display ALL columns from the table in the list box except the Org ID.
- Sort list by ascending Name.

Error Handling:

- If duplicate found, display appropriate error. Make Name field background color red.
- If mandatory fields are missing, display appropriate error and make field background color red.
- On delete, if it is associated with a Field Activity, then give an appropriate error message.

Window Layout:

The screenshot shows a window titled "Biopart (TSRBIOPT) Data Entry". Below the title bar is a table with the following columns: NAME, D_USERID_CODE, D_LAST_UPDT_TS, and TSRBIOPT_IS_NUMBER. The table lists various biological parts, with "Bone, marrow" selected. Below the table is a "Name" input field containing "Bone, marrow" and two buttons: "Accept" and "Cancel".

NAME	D_USERID_CODE	D_LAST_UPDT_TS	TSRBIOPT_IS_NUMBER
Abdomen	LJM	5/20/1998 8:40:10 AM	32
Adrenal	LJM	5/20/1998 8:40:10 AM	34
Arm	LJM	5/20/1998 8:40:10 AM	46
Bark	LJM	5/20/1998 8:40:10 AM	69
Bile	LJM	5/20/1998 8:40:10 AM	40
Blood	LJM	5/20/1998 8:40:10 AM	21
Blood plasma	LJM	5/20/1998 8:40:10 AM	22
Body	LJM	5/20/1998 8:40:10 AM	4
Body wall	LJM	5/20/1998 8:40:10 AM	5
Bone tissue	LJM	5/20/1998 8:40:10 AM	8
Bone, acellular	LJM	5/20/1998 8:40:10 AM	9
Bone, cellular	LJM	5/20/1998 8:40:10 AM	10
Bone, marrow	LJM	5/20/1998 8:40:10 AM	11
Brain	storuser	6/1/2004 12:20:11 PM	29
Connective tissue	LJM	5/20/1998 8:40:10 AM	18
Digestive gland	LJM	5/20/1998 8:40:10 AM	44
Ear	LJM	5/20/1998 8:40:10 AM	27
Edible portion	LJM	5/20/1998 8:40:10 AM	52
Egg/ovum	LJM	5/20/1998 8:40:10 AM	50
Eye	LJM	5/20/1998 8:40:10 AM	28
Fat/adipose tissue	LJM	5/20/1998 8:40:10 AM	19
Feather	LJM	5/20/1998 8:40:10 AM	68
Feces	LJM	5/20/1998 8:40:10 AM	25
Fin	LJM	5/20/1998 8:40:10 AM	66
Fish fillet, homog., skin off	LJM	5/20/1998 8:40:10 AM	54

Name:

Accept Cancel

STORET
Visual Basic Reference Table Application
Specification Package

Form Name: frmUOM

Window Name: Unit of Measure (TSRUOM) Data Entry

SIR(s): 1608

Last Update: 05/17/2004

Processing Overview/Description:

This window is used to maintain Unit of Measures (UOM) for the system. This reference table is maintained only by central administrators. The upper portion of the form displays a list of all UOMs in the system. The lower portion displays entry fields for the creation of new UOMs and modification of existing UOMs. Deletion of a UOM is done by selecting a row and pressing the Delete menu item.

Future Considerations:

1. Once we are ready to add the new columns to support UOM conversion, then this will need to be updated. If more than 2 columns are added, then this could significantly affect the design and implementation (would require a separate data entry form).
2. Will need to remove this functionality from the Cool:Gen application.

Tables Used:

Table	Column
TSRUOM	TSRUOM_IS_NUMBER
	TSRUOM_ORG_ID
	SHORT_FORM_NAME
	UOM_TYPE

Table	Column
	DESCRIPTION_TEXT
	D_USERID_CODE
	D_LAST_UPDATE_TS
TSMEISN	TSMEISN_ORG_ID
	IS_NUMBER
	TSMEISN_NAME

Links From:

frmMain form.

Global Variables/Inputs:

Natural Language	Variable
The ID of the Oracle user logged into the application.	vUserId

Links To:

Returns to frmMain.

Output Parameters/Variables:

None.

Local Variables:

Natural Language	Variable
An ID representing the action to be taken (i.e., Insert or Update) when user presses "Accept" button.	vAction
General recordset for short term queries.	rs
Master recordset for UOM list to be used throughout form processing.	rsMaster

Natural Language	Variable
A String representing current SQL Select statement.	strSql
A Number representing current IS Number.	vISNum
A string representing TSRUOM UOM_TYPE.	vType
A string representing TSRUOM SHORT_FORM_NAME.	vName
Visual Basic "Column" variables representing each column in the list box.	Col1, Col2, Col3, Col4, Col5, Col6, Col7
A variant representing the current row selected in the list box.	vBookmark
An integer representing whether or not a row has been selected.	vSubscript

Design Standards:

Follow Visual Basic Design Standards document.

Menu:

Action

Insert	Ctrl+I
Update	Ctrl+U
Delete	Ctrl+D

Close	Ctrl+C

Help	Ctrl+H

Event Processing:

Event/Internal Procedure	Action(s)
Form Load	Populate DataGrid (list box) with all UOMs; populate Type combo box.

Event/Internal Procedure	Action(s)
DataGrid1_Click	Select/unselect logic. Blank out Name and Description entry fields. Null local variables associated with each entry field. If select, then enable Update and Delete commands. If unselect, then enable Insert.
DataGrid1_AfterDelete	Blank out Name and Description entry fields.
cmdInsert_Click	Blank out Name and Description entry fields. Put cursor on Type combo box. Null local variables associated with each entry field. Set vAction to "Insert".
cmdUpdate_Click	Populate entry fields at bottom of form with values from selected row; populate local variables associated with each. Put cursor on Type combo box. Set vAction to "Update".
cmdDelete_Click	Check for existence of relationships; if found then give appropriate error and prevent deletion. Otherwise, display a warning message. If confirms okay, then delete record from database and remove deleted record from list box.
cmdAccept_Click	<p>Check for mandatory fields and duplicate.</p> <ul style="list-style-type: none"> • If insert then get next is number from TSMEISN and insert new record. • If update then update existing record. Only need to check for duplicate if data has changed in type and/or name fields.
cmdClose_Click	Close form and return to menu.
Help_Click	Call Help (TBD).

Disable Rules:

- Insert is disabled if a UOM has been selected.
- Update is disabled if a UOM has not been selected.
- Delete is disabled if a UOM has not been selected.
- Accept is disabled until Insert or Update from the menu has been chosen.
- Cancel is disabled until Insert or Update from the menu has been chosen.

Business Rules:

General:

- TSRUOM table has five or less entry fields, so data entry may be combined with the list box on a single form.

Data Entry:

- On insert, use the next available ISN from the TSMEISN table where table name is TSRUOM.
- The following fields are enterable (and updateable) by the user: UOM Type, Short Form Name, and Description.
- UOM Type and Short Form Name combination must be unique.
- Populate the UOM Type drop down based on permitted values from Cool:Gen model. Specifically: AREA, FLOW, LEN, MISC, NONE, PROD, SUBST, TAX, TEMP, TIME, VEL, and VOL.
- Set D_USERID_CODE to current user.
- Set D_Last_Update_TS to Oracle system date.
- This is a reference table. The TSRUOM_ORG_ID will always be set to "ZZZZZZZZ" representing the national organization.
- Only Central administrator(s) may perform this function. It will be part of a standalone central icon that is used to maintain all reference tables as well as Serial Organization Identifier (SOI) and Organization.
- Do not prevent modification of a row based on associations to existing data entered via the Data Entry Application.

List Box:

- Show D_Userid_Code, D_Last_Update_TS, and IS Number as the last three columns in the list box. Do not include Org_ID since that will always be "ZZZZZZZZ".
- Provide a warning message on Delete.
- Prevent deletion of a row if it is associated to a Result, Result Class Interval (RCI), Result QC Adjustment Factor, or Detection Quantitation Limit.
- Show as many lines of units as possible in the box. List box is vertically and horizontally scrollable.
- Display ALL columns from the table in the list box except the Org ID.
- Sort list by ascending UOM Type, then Short Form Name.

Error Handling:

- If duplicate found, display appropriate error. Make UOM Type and Short Form Name field background color red.
- If mandatory fields are missing, display appropriate error and make field background color red.
- On delete, if it is associated with a Result, RCI, etc. then give an appropriate error message and prevent deletion.

Window Layout:

The screenshot shows a window titled "Unit of Measure (TSRUOM) Data Entry". It contains a table with the following columns: UOM TYPE, SHORT FORM NAME, DESCRIPTION TEXT, D USERID CODE, D LAST UPDATE TS, and TSRUOM IS NUMBER. The row for "ha" (Hectares) is highlighted. Below the table, there are input fields for "UOM Type" (set to AREA) and "Short Form Name" (set to ha), with a "Description" field showing "Hectares". "Accept" and "Cancel" buttons are at the bottom right.

UOM TYPE	SHORT FORM NAME	DESCRIPTION TEXT	D USERID CODE	D LAST UPDATE TS	TSRUOM IS NUMBER
AREA	ac	Acres	LJM	5/20/1998 8:40:28 AM	199
AREA	cm2	Square centimeters	storuser	5/24/2004 2:46:42 PM	191
AREA	dm2	Square decimeters	storuser	5/24/2004 2:51:23 PM	273
AREA	ft2	Square feet	storuser	5/24/2004 2:48:37 PM	196
AREA	ha	Hectares	LJM	5/20/1998 8:40:28 AM	194
AREA	in2	Square inches	LJM	5/20/1998 8:40:28 AM	195
AREA	km2	Square kilometers	LJM	5/20/1998 8:40:28 AM	193
AREA	m2	Square meters	LJM	5/20/1998 8:40:28 AM	192
AREA	mi2	Square miles	LJM	5/20/1998 8:40:28 AM	198
AREA	mm2	Square millimeters	LJM	5/20/1998 8:40:28 AM	190
AREA	nmi2	Square nautical miles	LJM	3/22/2001	274
AREA	yd2	Square yards	LJM	5/20/1998 8:40:28 AM	197
FLOW	cfm	Cubic feet per minute	LJM	5/20/1998 8:40:28 AM	139
FLOW	cfs	Cubic feet per second	LJM	5/20/1998 8:40:28 AM	138
FLOW	cm3/hr	Cubic centimeters per hour	LJM	5/20/1998 8:40:28 AM	143
FLOW	cm3/min	Cubic centimeters per minute	LJM	5/20/1998 8:40:28 AM	142
FLOW	cm3/sec	Cubic centimeters per second	LJM	5/20/1998 8:40:28 AM	141
FLOW	drips/min	Drips per minute	STORUSER	4/9/2001 8:46:17 AM	241
FLOW	ft3/day	Cubic feet per day	LJM	5/20/1998 8:40:28 AM	140

UOM Type: AREA Short Form Name: ha
Description: Hectares

Accept Cancel

STORET
Visual Basic Reference Table Application
Specification Package

Form Name: frmMatrix

Window Name: Sample Matrix (TSRMATRX) Data Entry

SIR(s): 1609

Last Update: 05/27/2004

Processing Overview/Description:

This window is used to maintain Sample Matrices for the system. This reference table is maintained only by central administrators. The upper portion of the form displays a list of all sample matrices in the system. The lower portion displays entry fields for the creation of new matrices and modification of existing matrices. Deletion of a matrix is done by selecting a row and pressing the Delete menu item.

Tables Used:

Table	Column
TSRMATRX	TSRMATRX_IS_NUMBER
	TSRMATRX_ORG_ID
	CODE
	NAME
	DESCRIPTION
	D_USERID_CODE
	D_LAST_UPDATE_TS
TSMEISN	TSMEISN_ORG_ID
	IS_NUMBER
	TSMEISN_NAME

Links From:

frmMain form.

Global Variables/Inputs:

Natural Language	Variable
The ID of the Oracle user logged into the application.	vUserId

Links To:

Returns to frmMain.

Output Parameters/Variables:

None.

Local Variables:

Natural Language	Variable
An ID representing the action to be taken (i.e., Insert or Update) when user presses "Accept" button.	vAction
General recordset for short term queries.	rs
Master recordset for UOM list to be used throughout form processing.	rsMaster
A String representing current SQL Select statement.	strSql
A Number representing current IS Number.	vISNum
A String representing TSRMATRX Code.	vID
Visual Basic "Column" variables representing each column in the list box.	Col1, Col2, Col3, Col4, Col5, Col6, Col7
A variant representing the current row selected in the list box.	vBookmark

Natural Language	Variable
An integer representing whether or not a row has been selected.	vSubscript

Design Standards:

Follow Visual Basic Design Standards document.

Menu:

Action

Insert	Ctrl+I
Update	Ctrl+U
Delete	Ctrl+D

Close	Ctrl+C

Help	Ctrl+H

Event Processing:

Event/Internal Procedure	Action(s)
Form Load	Populate DataGrid (list box) with all matrices.
DataGrid1 Click	Select/unselect logic. Blank out all entry fields. Null local variable for ID Code entry field. If select, then enable Update and Delete commands. If unselect, then enable Insert.
DataGrid1 AfterDelete	Blank out all entry fields.
cmdInsert_Click	Blank out all entry fields. Put cursor on Code field. Null local variable associated with Code entry field. Set vAction to "Insert".
cmdUpdate_Click	Populate entry fields at bottom of form with values from selected row; populate local variable for Code. Put cursor on Code field. Set vAction to "Update".

Event/Internal Procedure	Action(s)
cmdDelete_Click	Check for existence of relationships; if found then give appropriate error and prevent deletion. Otherwise, display a warning message. If confirms okay, then delete record from database and remove deleted record from list box.
cmdAccept_Click	Check for mandatory fields and duplicate. <ul style="list-style-type: none"> • If insert then get next is number from TSMEISN and insert new record. • If update then update existing record. Only need to check for duplicate if data has changed in code field.
cmdClose_Click	Close form and return to menu.
Help_Click	Call Help (TBD).

Disable Rules:

- Insert is disabled if a matrix has been selected.
- Update is disabled if a matrix has not been selected.
- Delete is disabled if a matrix has not been selected.
- Accept is disabled until Insert or Update from the menu has been chosen.
- Cancel is disabled until Insert or Update from the menu has been chosen.

Business Rules:

General:

- TSRMATRX table has five or less entry fields, so data entry may be combined with the list box on a single form.

Data Entry:

- On insert, use the next available ISN from the TSMEISN table where table name is TSRMATRX.
- The following fields are enterable (and updateable) by the user: Code, Name, and Description.
- Code must be unique.
- Set D_USERID_CODE to current user.
- Set D_Last_Update_TS to Oracle system date.
- This is a reference table. The TSRMATRX_ORG_ID will always be set to "ZZZZZZZZ" representing the national organization.

- Only Central administrator(s) may perform this function. It will be part of a standalone central icon that is used to maintain all reference tables as well as Serial Organization Identifier (SOI) and Organization.
- Do not prevent modification of a row based on associations to existing data entered via the Data Entry Application.

List Box:

- Show D_Userid_Code, D_Last_Update_TS, and IS Number as the last three columns in the list box. Do not include Org_ID since that will always be “ZZZZZZZZ”.
- Provide a warning message on Delete.
- Prevent deletion of a row if it is associated to a Field Activity or Automated Data Logger (ADL).
- Show as many lines of matrices as possible in the box. List box is vertically and horizontally scrollable.
- Display ALL columns from the table in the list box except the Org ID.
- Sort list by ascending Code.

Error Handling:

- If duplicate found, display appropriate error. Make Code field background color red.
- If mandatory fields are missing, display appropriate error and make field background color red.
- On delete, if it is associated with a Field Activity or ADL, then give an appropriate error message.

Window Layout:

Sample Matrix (TSRMATRIX) Data Entry

Action

CODE	NAME	DESCRIPTION	D_USERID	CODE	D_LAST_UPDATE	TS	TSRMATRIX
AD	Drilling Air	Drilling Air	STORUSER		1/29/2002 5:22:30 PM		2
AE	Air, Vapor Well Effluent	Air, Vapor Extraction Well Effluent	STORUSER		1/29/2002 5:22:30 PM		3
AQ	Air QC Matrix	Air Quality Control Matrix	storuser		5/19/2004 2:21:25 PM		4
CA	Cinder-Ash	Cinder-Ash	STORUSER		1/29/2002 5:22:30 PM		5
CF	Fly Ash Cinder	Fly Ash Cinder	STORUSER		1/29/2002 5:22:30 PM		6
DC	Drill Cuttings	Drill Cuttings	STORUSER		1/29/2002 5:22:30 PM		7
DG	Dredged Material	Dredged Material	STORUSER		1/3/2003 3:17:59 PM		59
GE	Gaseous Effluent	Gaseous Effluent (Stack Gas)	STORUSER		1/29/2002 5:22:30 PM		8
GL	Headspace, Liquid Sample	Headspace of Liquid Sample	STORUSER		1/29/2002 5:22:30 PM		9
GS	Soil Gas	Soil Gas	STORUSER		1/29/2002 5:22:30 PM		10
LA	Aqueous Phase/Sample	Aqueous Phase of a Multiple Phase Liquid or Solid Sample	STORUSER		1/29/2002 5:22:30 PM		11
LC	Liquid Condensate	Liquid Condensate	STORUSER		1/29/2002 5:22:30 PM		12
LD	Drilling Fluid	Drilling Fluid	STORUSER		1/29/2002 5:22:30 PM		13
LE	Liquid Emulsion	Liquid Emulsion	STORUSER		1/29/2002 5:22:30 PM		14
LF	Product on GW Table	Floating/Free Product on Groundwater Table	STORUSER		1/29/2002 5:22:30 PM		15
LH	Liq Waste< 5% Dry Solids	Free-Flowing, or Liquid Waste Containing Less Than 0.5%	STORUSER		1/29/2002 5:22:30 PM		16
LM	Multiphase Liquid Sample	Multiple Phase Liquid Waste Sample	STORUSER		1/29/2002 5:22:30 PM		17
LO	Organic Liquid	Organic Liquid	STORUSER		1/29/2002 5:22:30 PM		18
LU	Elutriate	Elutriate extracted from porous material	STORUSER		1/3/2003 3:17:59 PM		58
LV	Liquid-Vadose Zone	Liquid from Vadose Zone	STORUSER		1/29/2002 5:22:30 PM		19

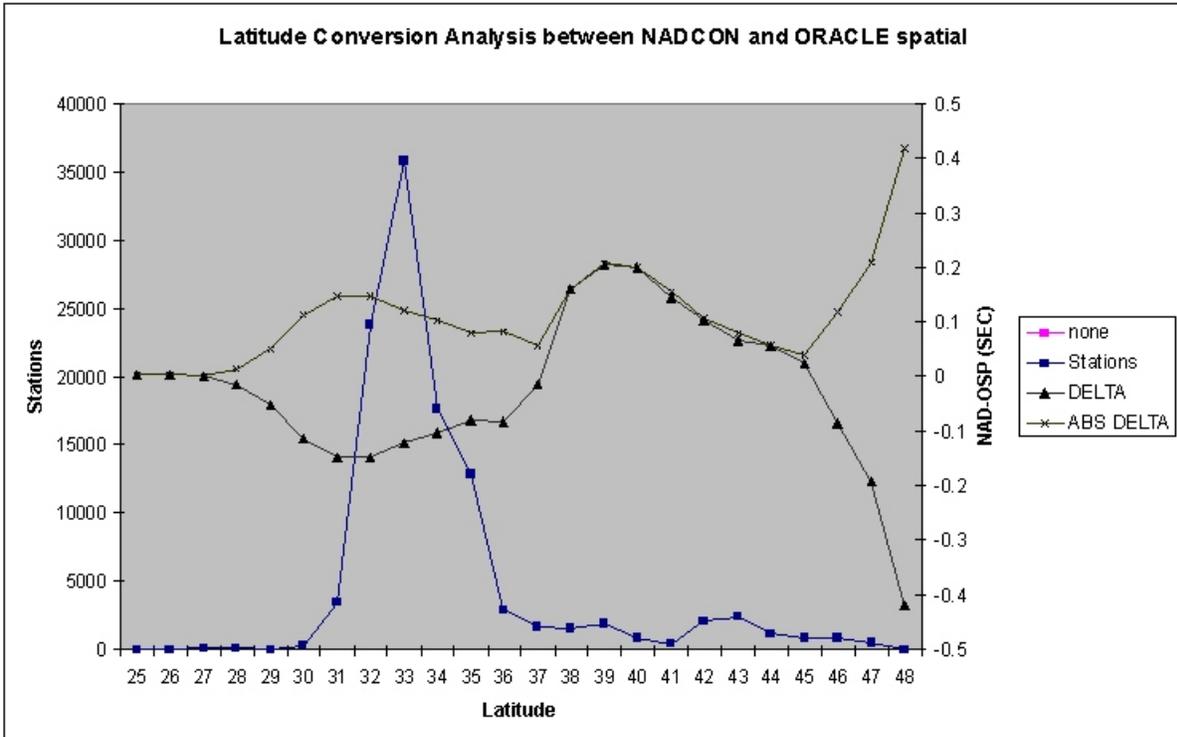
Code: GE Name: Gaseous Effluent

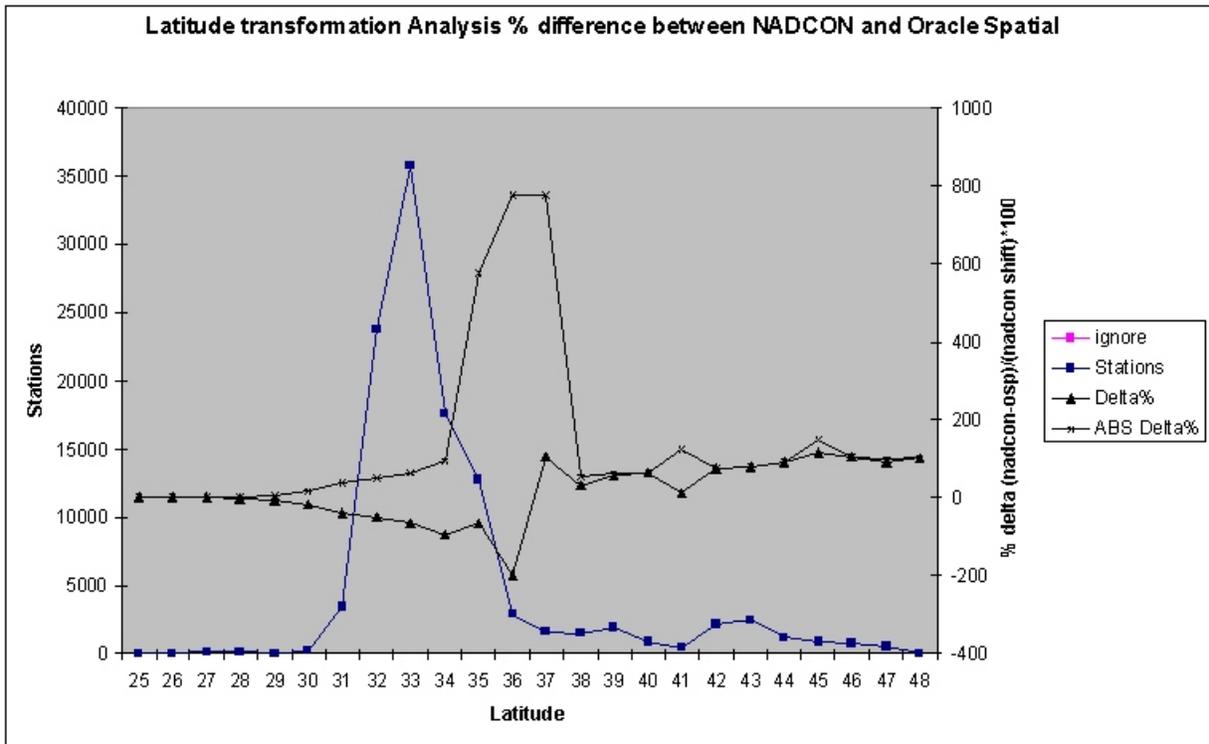
Description: Gaseous Effluent (Stack Gas)

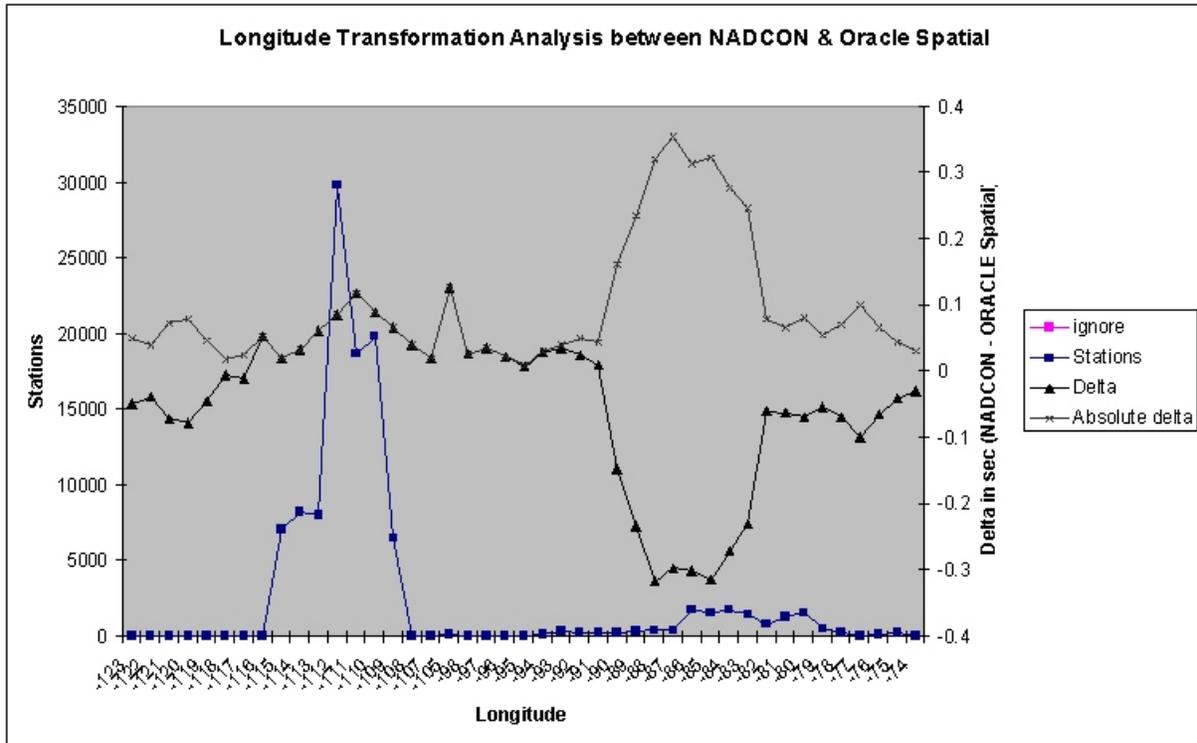
Accept Cancel

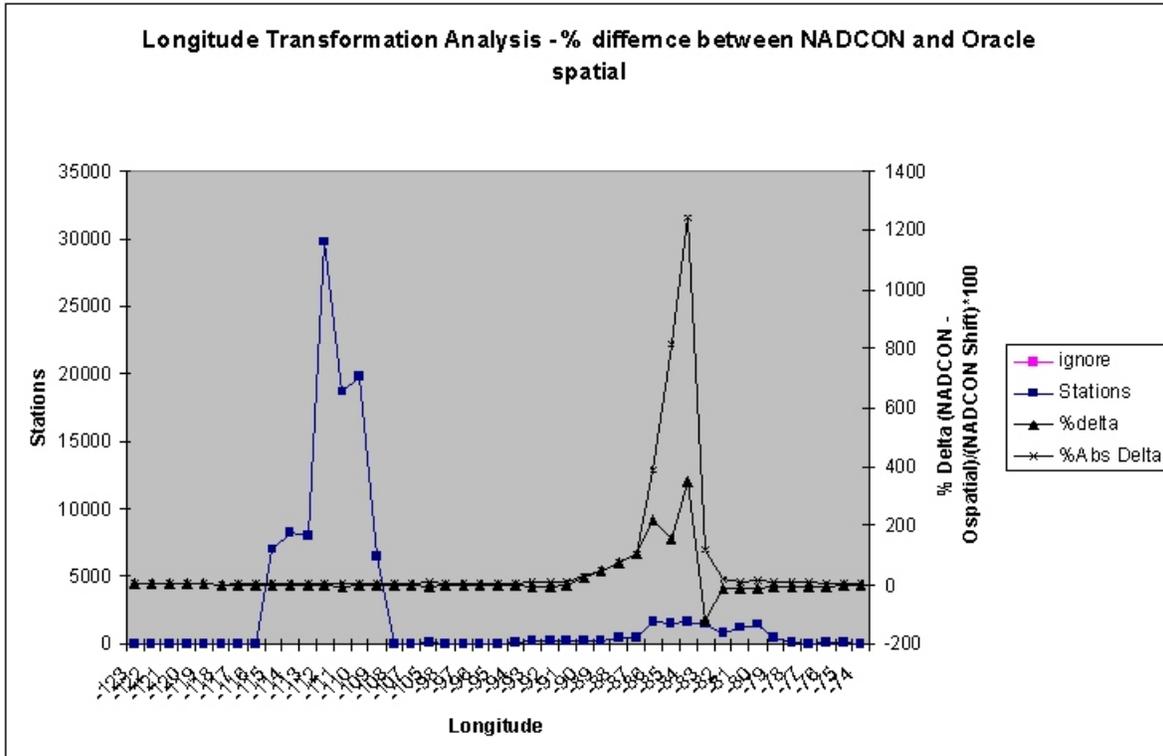
ATTACHMENT B

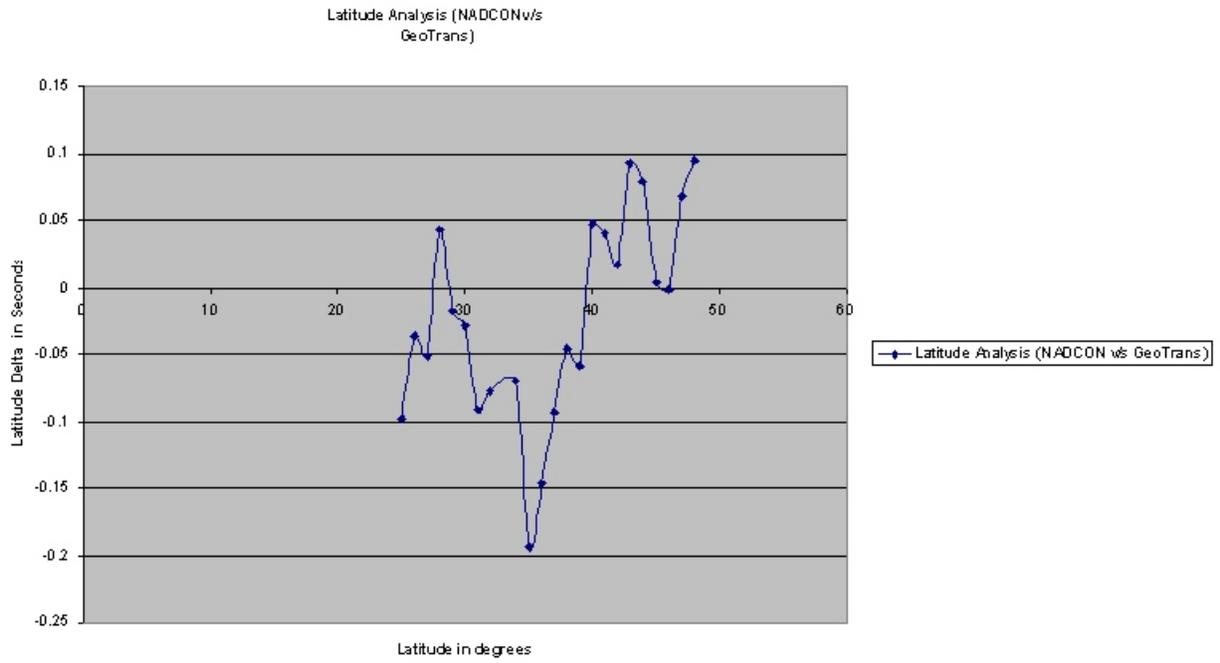
Horizontal Datum Comparisons











Longitude Analysis (MADCON v/s
GEOTRANS)

