



# ELECTRAK Corporation

P.O. Box 428, Woodbine, MD 21797-0428

(301) 742-8986

AOL: ELECTRAK95

March 7, 2003

10CFR21-001

Director  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

Subject: 10CFR21 Reporting of Defects and Non-Compliance - ELECTRAK Corporation

Dear Sir:

The enclosed report addresses a reportable error and the corrective action to be taken by users of the fire hazards module within the TRAK2000 Cable Management and Appendix R Analysis System.

Should you have any questions, please feel free to contact me at your earliest convenience using any of the following:

Office: 410-795-0513  
Fax: 410-795-3422

Cell: 301-742-8986  
E-mail: TRAK2000@aol.com

Please sign below, acknowledging receipt of this report, and return or fax a copy within 10 working days after receipt.

Respectfully yours,

Francis W. Sufczynski  
President

  
\_\_\_\_\_  
Signature

4/3/03  
\_\_\_\_\_  
Date

Attachment: Software Error Notification Form

JE19

## SUMMARY

ELECTRAK Corporation has received notification about a problem relating to the use of the fire hazards module of the TRAK2000 Cable Management and Appendix R Analyses Software System. The problem was reported by Pennsylvania Power and Light Company (PPL). PPL uses the TRAK2000 software exclusively for its cable management and fire protection database activities at its Susquehanna Units 1 and 2 site.

The fire hazard module of the TRAK2000 software tracks and calculates the Btu and minute values of in-situ fire hazards (cable insulation, flammable fire wrap, mechanical items and electrical items) within each of the plant's fire zones. The calculated values are then compared with the user-defined maximum value for each fire zone. The user is then alerted when the calculated value exceeds the maximum allowed value. The reported error does NOT occur in this portion of the module.

The fire hazard module also tracks long-term and short-term transient fire hazards as well as miscellaneous in-situ fire hazards. (A miscellaneous in-situ fire hazard is defined in the software as one that is NOT cable insulation, fire wrap material, mechanical or electrical.) This category of fire hazards requires a combustible type code be assigned to the fire hazard. Combustible type codes reside in a validation table from which the user is able to select an appropriate code for a given fire hazard.

Each combustible type code has a multiplier assigned to it as determined by the PPL fire protection engineer. For example, code XXX is used for gasoline and has a multiplier of 1,000,000 Btu per gallon. When a gasoline tank is identified in the database, the user may assign it a quantity value of 1,000 gallons and affiliate it with the appropriate fire zone. TRAK2000 then calculates the product of 1,000,000 and 1,000 and assigns 1,000,000,000 Btu to the fire zone.

A fire zone may have many in-situ fire hazards whose cumulative calculated Btu values are summed and compared against the fire zone's maximum allowed value. For example, a fire zone has ten in-situ fire hazards of different varieties (i.e., using different codes) whose cumulative total = 100,000 Btu. The user then modifies the multiplier of a particular code to a larger value, which results in a delta of 20,000 Btu. (The total Btu value assigned the fire zone is now 120,000 Btu).

The error occurs when the software incorrectly adds the modified quantity to zero (0) instead of to the previously stored cumulative value, thus resulting in a lower and therefore less conservative value. The error is a result of inadequate testing of modified source code that incorporated a requested enhancement by PPL to the fire hazards module. The request is documented as a Software Change Request SCR-0375.



P.O. Box 428, Woodbine, MD 21797-0428

(301) 742-8986 AOL: ELECTRAK95  
QA File: 9502-270

February 18, 2003

Mr. Corrado Angione  
PPL Electric Utilities Corporation, LLC  
Two North Ninth Street  
Allentown, PA 18101-1179

Re: TRAK2000™ Error Notification Report

Dear Corrado:

In accordance with Paragraph 4.6 of the Software Life Cycle Control section of Revision 2 of the ELECTRAK Corporation Quality Assurance Program Manual, enclosed for your use is an Error Notification Report dated February 18, 2003.

Should you have any questions or require further clarification, please call me at your earliest convenience.

Respectfully yours,

A handwritten signature in cursive script that reads "Frank Sufczynski".

Frank Sufczynski  
President

cc: Robert J. Cook – Fermi Unit 2  
Martin Flynn – Vermont Yankee  
Robert Kirby – Nine Mile Point Unit 1

Attachment: TRAK2000™ Error Notification Report

## SOFTWARE ERROR NOTIFICATION

PROGRAM NAME: TRAK2000

NOTIFICATION BY: Corrado Angione (PPL)

VERSION: 4.05p

DATE OF NOTIFICATION: 02/13/03

VERSION DATE: November 19, 2002

DISTRIBUTION: Bob Cook – Fermi Unit 2

Bob Kirby – Nine Mile Point Unit 1

Martin Flynn – Vermont Yankee

### PREVIOUS VERSIONS WITH ERROR/DURATION

3.07p/26 mos. 4.00p/22 mos. 4.01p/14 mos. 4.02p/13 mos. 4.03p/12 mos. 4.04p/4 mos. 4.05p/3 mos.

### ERROR DESCRIPTION

When modifying the multiplier of a fire hazard's combustible type code, the recalculated Btu value of the affected fire zone(s) does not take into account the Btu values of other fire hazards that were unaffected by the change.

Computational  Non-Computational

### USER IMPACT

The Btu value of an affected fire zone will be displayed incorrectly with a low value if there are other fire hazards in that fire zone that are assigned a code other than the one whose multiplier was modified.

### RECOMMENDATIONS TO USER

Refrain from modifying a combustible type code's multiplier value pending receipt of Version 4.06p. Activate and utilize the RECALC button on the affected fire zones' combustible summary screen to correctly recalculate the Btu values.

## ERROR CLOSEOUT

### CAUSE OF ERROR

Source code error; regression testing of SCR-0375 did not test for condition.

### RECOMMENDED CORRECTIVE ACTION

10CFR21 Reporting Required:  Yes  No

Modify source code, regression test, and certify new version 4.06p. Recalculate combustible loads of all affected fire zones.

REVIEWED BY:

LEAD SOFTWARE ENGINEER: [Signature]

DATE: 2/18/03

PRESIDENT: [Signature]

DATE: 2/18/03