



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001**

August 28, 2014

ALL AGREEMENT STATES

ACCEPTANCE TO THE ROOT CAUSE WORKSHOP (G-205) (FSME-14-085)

Purpose: To provide the list of students selected for the U.S. Nuclear Regulatory Commission's (NRC) Root Cause Workshop (G-205).

Background: The NRC provides the list of students and instructions to the States to help ensure that States with candidates on waiting lists will have an opportunity to fill vacated slots that may open up after this notification letter has been sent.

Discussion: Enclosure 1 is the list of students from the States selected to attend the October 27-31, 2014, Root Cause Workshop (G-205) in North Bethesda, Maryland. Please provide the list of students and instructions (Enclosure 2) to each individual from your program that has been accepted to this class. Also included for your information is a tentative schedule for the course (Enclosure 3). Please inform us of any cancellations immediately so that individuals on the waiting list have an opportunity to attend.

If you have any questions regarding this correspondence, please contact me at 301-415-3340 or the individual named below:

POINT OF CONTACT: Marcia J. Casby INTERNET: AStrainingandtravel.Resource@nrc.gov
TELEPHONE: (301) 415-6525

/RA Lisa Dimmick for/

Laura A. Dudes, Director
Division of Materials Safety and State Agreements
Office of Federal and State Materials
and Environmental Management Programs

Enclosures:

1. List of students
2. Instructions for students
3. Tentative Schedule

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DISTRIBUTION: MSSA r/f Latonya Mahlahla, TCC

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OFFICE	FSME/MSSA/ASPB	FSME/MSSA/ASPB	FSME/MSSA
NAME	MCasby	DSollenberger for DWhite	LDimmick for LADudes
DATE	8/28/14	8/28/14	8/28/14

OFFICIAL RECORD COPY

ROOT CAUSE WORKSHOP (G-205)
October 27-31, 2014
North Bethesda, MD

STATE	PARTICIPANT
TEXAS (TXDH)	Chris Myers
FLORIDA	Yvette Forrest

INSTRUCTIONS TO STUDENTS

ACCEPTANCE: This is to advise you that individuals listed in Enclosure 1 have been accepted for participation in the training course (G-205) Root Cause Workshop. This course is scheduled to be presented at the U.S. Nuclear Regulatory Commission's (NRC's) Professional Development Center (PDC) October 27-31, 2014. The PDC is located at our new 3 White Flint North Building which is situated across Marinelli Road from One White Flint North between the White Flint Metro station entrance and the Metro parking garage. The address for the new building is 11601 Landsdown Street, North Bethesda, MD 20852. Please allow sufficient time to process through security upon arrival. You will be required to show proof of identification when you arrive. After you have processed through security, you will be escorted by an NRC employee to the 2nd floor where the training will be held.

COURSE: This course will be conducted beginning at 8:00 a.m. and end at 4:30 p.m. each day except for Friday, October 31, 2014, when the class is scheduled to end at 2:00 pm.

LODGING AND TRAVEL: Please plan to arrive on Sunday, October 26, 2014, and depart on Friday, October 31, 2014. Students must make their own lodging and travel arrangements. If traveling by air, please contact Carlson Travel at 1-800-453-8396 for airline reservations, and indicate that the travel is "Invitational" for the NRC. Please complete the new Travel Application Form, located at <http://nrc-stp.ornl.gov/training.html> and submit to Marcia Casby (AStrainingandtravel.Resource@nrc.gov) by September 22. If you have any questions regarding the travel form, please contact Marcia Casby at 301-415-6525. Individuals should request the Federal government rate at the hotels. The per diem for North Bethesda, Maryland is 219/71/290. This means that lodging/meals/not to exceed the total. No rental cars will be authorized for travel. Students will be reimbursed for transportation between the airport and hotel only. The hotel listed below is the most convenient, located on the Metro (White Flint Station on the Red Line), directly across from, and within walking distance of the training site. ***If you elect to stay at an alternate hotel, you will be responsible for your own transportation between your hotel and the training site.*** If you plan to drive, the Federal mileage reimbursement is 56 cents per mile.

Bethesda North Marriott Hotel
5701 Marinelli Rd.
North Bethesda, Maryland 20852
(301) 822-9200

DIRECT DEPOSIT: We are very pleased to be offering Direct Deposit for travel reimbursements. If you prefer this method, please complete the form located on our Web site and link provided here, [Direct Deposit Form](#). Follow the instructions on the form, and return to Mary Matheson at Mary.Matheson@nrc.gov. Once you have signed up for Direct Deposit, you are in the system and will not need to complete a new form unless your banking information changes. When it is time to complete your voucher for reimbursement, in the address box enter "Enrolled for Direct Deposit." If you have any questions regarding direct deposit, please contact Mary Matheson at 301-415-8748.

G-205 Root Cause /Incident Investigation Workshop
Tentative Course Outline
October 27-31 2014

	Day 1	Day 2	Day 3	Day 4	Day 5
8:00 am-12:00pm	<ul style="list-style-type: none"> 1-Welcome 2-Initiating the RCA: Significant Operational Event <ul style="list-style-type: none"> o NRC Investigation Process o Integrating Safety Culture 3-RCA Techniques <ul style="list-style-type: none"> ▪ Fault tree analysis (FTA) ▪ Event and causal factor analysis (ECFA) ▪ Barrier analysis ▪ Management Oversight and Risk Tree analysis (MORT) ▪ Critical Incident Technique ▪ The 5-Whys technique ▪ Pareto analysis 4-Event And Causal Factor Analysis <ul style="list-style-type: none"> o Overview o Fundamentals o Start and Stop Rules o Procedure for ECFA 	<ul style="list-style-type: none"> Knowledge Check – Review of previous day’s material 5-Fact Finding Techniques <ul style="list-style-type: none"> o Document/record review o Interviewing o Active Listening 6-Fault tree analysis <ul style="list-style-type: none"> o Basic Concepts o Fundamentals o Developing the Fault Tree <ul style="list-style-type: none"> ▪ Fault Tree Diagrams ▪ Gates and Events o Class Example and Walkthrough 7-Pareto Analysis <ul style="list-style-type: none"> o Overview o Advantages o Application 8-The Five-Whys <ul style="list-style-type: none"> o Problem statements o Answering the questions o Problem resolution 	<ul style="list-style-type: none"> Knowledge Check – Review of previous day’s material 9-The Critical Incident Technique <ul style="list-style-type: none"> o Application o Five Steps o Evaluation 10-Barrier Analysis <ul style="list-style-type: none"> o Hazard-Barrier-Target o Barriers and Controls o Procedure for Barrier Analysis 11-Management and Oversight Risk Tree <ul style="list-style-type: none"> o Introduction <ul style="list-style-type: none"> ▪ What is MORT ▪ Overview Of The MORT Method o General Approach <ul style="list-style-type: none"> ▪ Conventions of the MORT Diagram ▪ MORT Structure ▪ Provisional Assumed Risks 	<ul style="list-style-type: none"> Knowledge Check – Review of previous day’s material Management and Oversight Risk Tree, Cont’d <ul style="list-style-type: none"> o Application of MORT to Investigations Procedure for MORT Analysis <ul style="list-style-type: none"> o Mini-Mort <ul style="list-style-type: none"> ▪ Overview ▪ Symbols o Mort Question Set 12-Advanced Interviewing <ul style="list-style-type: none"> o Asking questions to get the right answers o Applying “The Cognitive Interview Process” to recreate the event 	<ul style="list-style-type: none"> Knowledge Check – Review of previous day’s material 13-Case Study Summary Prepare for Out Brief – 1 hour <ul style="list-style-type: none"> o Presentations o 30 minutes to present o 15 minute “Mgmt review” <ul style="list-style-type: none"> • 10 min Findings Q&A • 5 min. Share one improvement takeaway
Lunch					
1:00 pm-4:30pm	<p>Case Study Assignment and Team Formation.</p> <ul style="list-style-type: none"> • Teaming – Forming, Storming, Norming, Performing • Define Communication • Establish Team roles <p>Case Study Assignment –</p> <ul style="list-style-type: none"> • Review the case study against NRC procedures and AIT Charter. • Develop an action plan. • Apply ECFA+ 	<p>Team Case Study Assignment:</p> <ul style="list-style-type: none"> • Document review and data collection • Apply RCA techniques: FTA, Pareto, 5 Whys, ECFA+ • Identify information gaps and how to fill them • Documents you want to review • Individuals you need to interview • Develop questions to “close the loops” 	<p>Team Case Study Assignment:</p> <ul style="list-style-type: none"> • Document review and data collection • Apply RCA techniques: CIT, H-B-T, MORT, FTA, Pareto, 5 Whys, ECFA+ • Conduct initial interviews 	<p>Team Case Study Assignment: Applying MORT and Barrier Analysis to the RCA and Finalizing the Report</p> <ul style="list-style-type: none"> • Conduct interviews • Demonstrate use of MORT chart • Demonstrate use of two other RCA techniques <p>Prepare draft “Out-Brief” presentation</p>	<p>Team Case Study Assignment: Document review and data collection</p> <ul style="list-style-type: none"> • Apply RCA techniques: Mini-MORT, CIT, H-B-T, MORT, FTA, Pareto, 5 Whys, ECFA+ • Conduct Follow-up interviews • Finalize report <p>Prepare 30 min “Out-Brief” presentation</p> <p>FRIDAY - COURSE ENDS AT 2:00 PM</p>