



Department of Energy

Washington, DC 20585

March 20, 2007

MEMORANDUM FOR DISTRIBUTION

FROM: 
MARK B. WHITAKER, JR.
DEPARTMENTAL REPRESENTATIVE TO THE
DEFENSE NUCLEAR FACILITIES SAFETY BOARD
OFFICE OF HEALTH, SAFETY AND SECURITY

SUBJECT: Facility Representative Program Performance Indicators Quarterly Report,
October – December 2006 (4th Quarter CY)

Attached is the Facility Representative (FR) Program Performance Indicators Quarterly Report covering the period from October to December 2006. Data for these indicators are gathered by Field elements quarterly per DOE-STD-1063-2006, *Facility Representatives*, and reported to Headquarters program offices for evaluation and feedback to improve the FR Program. A summary of this quarter's data concluded:

- 72% Fully Qualified (last Quarter was 76%)
- 95% Staffing Level (last Quarter was 91%)
- 43% Time Spent in the Field (DOE goal is >40%)
- 75% Time Spent in Oversight Activities (DOE Goal is > 65%)

Percentages are based on FR staffing analyses at **202** Full Time Equivalent (FTEs) and **192** FTEs actual staffing. Current FR information and past quarterly performance indicator reports are accessible at the Facility Representative web site. Should you have any questions or comments on this report, please contact the DOE Facility Representative Program Manager, Joanne D. Lorence at 202-586-7631.

Attachment



Facility Representative Program Performance Indicators Quarterly Report
March 20, 2007

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ENVIRONMENTAL MANAGEMENT SITES

Facility Representative Program Performance Indicators (4QCY2006)

<u>Field or Ops Office</u>	<u>Staffing Analysis</u>	<u>FTEs</u>	<u>Actual Staffing</u>	<u>% Staffing</u>	<u>Attrition</u>	<u>% Core Qualified</u>	<u>% Fully Qualified</u>	<u>% Field Time *</u>	<u>% Oversight Time **</u>
CBFO	1	2	2	200	0	100	50	60	65
ID (ICP)	12	12	12	100	0	80	75	42	77
OH/WVDP	3	3	3	100	0	100	67	40	70
OR (EM)	19	19	17	89	2	94	65	47	76
ORP	14	14	14	100	0	86	79	42	69
PPPO	4	4	4	100	0	100	100	37	94
RL	19	19	19	100	0	89	89	43	72
SR	31	31	31	100	0	87	84	48	84
EM Totals	103	104	102	99	2	89	79	45	77
DOE GOALS	-	-	-	100	-	-	>80	>40	>65

* % Field Time is defined as the number of hours spent in the plant/field divided by the number of available work hours in the quarter. The number of available work hours is the actual number of hours a Facility Representative works in a calendar quarter, including overtime hours. It does not include leave time (sick, annual, or other) or holidays, nor does it include special assignments greater than 1 week assigned by the Field Element Manager.

** % Oversight Time includes % Field Time

EM Facility Representative (FR) Highlights:

- A Waste Disposition Project (WDP) FR identified a substantive regulatory non-compliance related to the integrity of mixed-transuranic waste containers stored in RCRA permitted storage buildings at the Advanced Mixed Waste Treatment Facility. The FR performed significant research, provided an extensively detailed written report, and effectively coordinated the oversight activity with DOE-ID environmental staff and the State of Idaho environmental regulators. Corrective actions have resulted in operational changes to define criteria for satisfactory container integrity, implementing comprehensive container inspections for retrieved containers and improved mitigative actions for containers with poor integrity.
- At Oak Ridge National Laboratory, FRs provided oversight for major HEPA filter changeout in facility 3019 and at Molten Salt Reactor Experiment in preparation for operation.
- At Office of River Protection (ORP), a FR identified that the rounds frequency for newly installed equipment was not properly established and was not in compliance with the Notice of Construction. As a result, the contractor corrected the frequency by revising the rounds procedure.
- At ORP, a FR identified problems with drawing information accuracy. The FR reviewed drawing information for an exhaustor installed to support tank waste transfers and found that the decimal points were missing from the values specified for instrument alarm and interlock set-points. Further review determined an incorrect setting on the scanner equipment. Corrective actions included an extent of condition review that identified a set of affected drawings that were subsequently rescanned and changes to the scanning procedures.
- At ORP, a FR noted non-compliance to an Alarm Response Procedure (ARP) due to an actual primary ventilation shutdown alarm and pressurization alarm. Contractor management has addressed this issue by re-emphasizing the expected response to the shift crews.
- At PPPO, FRs identified Depleted Uranium Hexafluoride Conversion Project subcontractor work practices with the potential to cause failure of floor hole opening covers. This prompted additional controls to be implemented to strengthen floor hole opening covers.
- At PPPO, FRs reviewed the Portsmouth Quality Assurance Assessment report for lessons learned that were applicable to Paducah and provided Paducah staff with PPPO QA Program Plan refresher training.
- At Richland, a FR identified a Lock Out Tag Out (LOTO) issue pertaining to vendor equipment - the lack of proper LOTO for diesel generator maintenance and inadequate control of LOTO by K West Shift Operations. This event gained the attention of a site wide issue with vendors and LOTO.
- At Richland, a FR identified an unsafe condition for High Mast Lighting pole installation at the Plutonium Finishing Plant (PFP). The FR recognized that the top rigging was not configured as shown on the critical lift plan drawings.

As a result, the contractor re-evaluated the evolution and developed a Recovery Plan.

- At Richland, FRs provided dayshift, backshift and weekend oversight during the transfer of 3.5 cubic meters of sludge from K-West to K-East.
- At Savannah River, 4 FRs participated in two integrated project teams for two major projects (Actinide Removal Project (ARP) and Modular Caustic Side Extraction (MCU) Facility) and the successful transition from facility modification (ARP)/construction (MCU) to the commencement of start-up testing for these projects, concurrent with accomplishment of assigned H-Tank Farms (HTF) FR oversight duties.
- At Savannah River, a FR participated as a team member in the Operational Readiness Review for remote-handled TRU waste operations at the Waste Isolation Pilot Plant.
- At Savannah River, H-Canyon FRs questioned WSRC about flammability calculations for High Activity Waste Tanks due to the ammonia contribution to hydrogen generation. As a result, additional controls are being added in the event of a loss of process vessel ventilation.
- At Savannah River, H-Tank Farm FRs performed oversight during the 2H evaporator chemical cleaning and subsequent return to operation.
- At West Valley, FRs conducted the Annual Freeze Protection Surveillance, participated in a Container Handling surveillance and the Annual Integrated Safety Management review.
- At West Valley, FRs identified several recurring hoisting and rigging issues where personnel were under suspended loads or where loads were left suspended and unattended.
- During observation of Radioactive Waste Management Complex (RWMC) Low Level Waste Disposal Operations, a WDP FR identified the Manitowoc 3900W crane was being utilized for lifting operations without an appropriate and required operational hook latch.

NUCLEAR ENERGY, SCIENCE, AND TECHNOLOGY

Facility Representative Program Performance Indicators (4QCY2006)

<u>Field or Ops Office</u>	<u>Staffing Analysis</u>	<u>FTEs</u>	<u>Actual Staffing</u>	<u>% Staffing</u>	<u>Attrition</u>	<u>% Core Qualified</u>	<u>% Fully Qualified</u>	<u>% Field Time *</u>	<u>% Oversight Time **</u>
ID (NE)	10	10	10	100	0	100	90	41	76
OR (NE)	3	3	3	100	1	100	100	38	76
NE Totals	13	13	13	100	1	100	92	40	76
DOE GOALS	-	-	-	100	-	-	>80	>40	>65

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** % Oversight Time includes % Field Time

NE Facility Representative (FR) Highlights:

- At Idaho, a FR at the Materials and Fuels Complex (MFC) identified concerns with a subcontractor permit required for confined space downgrading. A subcontractor was observed to have inappropriately downgraded a Permit Required Confined Space. Once brought to the attention of the INL contractor by the FR, the subcontractor was found not to be adhering to Job Safety Analysis requirements for confined space entry.
- At Idaho, a Reactor Technology Complex (RTC) FR determined less than adequate Conduct of Operations at RTC. Findings included failure to follow procedures and Standing Directives; failure to identify and document equipment deficiencies; inadequate maintenance procedures; and failure to recognize and address unexpected system response (e.g., Diesel Generator auto start).
- At Idaho, a Science and Technology Complex (STC) FR toured the INL National Security Laboratory and noted very poor housekeeping throughout research areas. This was brought to the attention of the facility manager who committed to improve the housekeeping. Within one week the FR noted a significant improvement within the facility.

NATIONAL NUCLEAR SECURITY ADMINISTRATION SITES

Facility Representative Program Performance Indicators (4QCY2006)

<u>Site Office</u>	<u>Staffing</u>		<u>Actual</u>		<u>Attrition</u>	<u>% Core</u> <u>Qualified</u>	<u>% Fully</u> <u>Qualified</u>	<u>% Field</u> <u>Time *</u>	<u>% Oversight</u> <u>Time **</u>
	<u>Analysis</u>	<u>FTEs</u>	<u>Staffing</u>	<u>% Staffing</u>					
LASO	11	11	8	73	2	100	33	29	47
LSO	10	9	9	90	2	100	33	49	76
NSO	10	10	7	70	0	86	57	38	64
PXSO	10	10	10	100	0	70	60	49	81
SRSO	4	4	3	75	1	100	100	48	78
SSO	11	11	11	100	0	45	45	37	73
YSO	12	11	11	92	0	100	55	41	65
NNSA Totals	68	66	59	87	5	83	50	41	69
DOE GOALS	-	-	-	100	-	-	>80	>40	>65

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** % Oversight Time includes % Field Time

NNSA Facility Representative (FR) Highlights:

- At Livermore, a FR identified equipment which is designed for safe storage of hazardous materials in operational use without the contractor completing a Readiness Assessment. The FR informed the contractor to suspend this work until the assessment was completed.
- At Livermore, during a review of the contractor's on-shift training program, a FR identified a number of weaknesses regarding the on-the-job training (OJT) program. The contractor is revising their training manual to clarify their OJT program.
- At Los Alamos, a FR documented conditions of poor radcon practices to include lack of and/or inconsistent postings and personnel monitoring practices.
- At Los Alamos, a FR participated in a Safety Basis Team review of the Transportation Safety Document for shipping nuclear HC-2 and HC-3 materials.
- At Los Alamos, a FR performed surveillance of WIPP loading operations at RANT.
- At Los Alamos, FRs performed program self-assessments in preparation for CDNS review.
- At Nevada, FRs performed an assessment of Conduct of Operations at the Device Assembly Facility. In addition, the FRs supported an intensive testing program at the Joint Actinide Shock Physics Experimental Research Facility.
- At Pantex, FRs supported two NNSA Readiness Assessments and several FRs completed portions of their qualification process.
- At Sandia, a FR participated as a Board Member for Type B Accident Investigation Board to investigate the July 31, 2006, Fall from Ladder Accident at the Lawrence Livermore National Laboratory in Livermore, California.
- At Savannah River, a FR supported a SRSO assessment of the contractor's Operator Aid program identifying that there was no process to update Operator Aids when the source document is revised.
- At Savannah River, FRs continued to support startup activities for the Tritium Extraction Facility including 24-hour continuous coverage of initial radioactive operations.
- At Y-12, a FR assessed vault loading work practices were not consistent with procedure requirements and notified the shift manager. The shift manager stopped the work activity and the contractor issued a line management concern with initiating corrective actions.
- At Y-12, a FR served on a federal team to tour proposed sites and evaluate relevant proposals and information to help the Department reestablish domestic capability for producing Pu-238 for space and defense radioisotope power systems. The team will identify a strategy then provide a recommendation on a preferred alternative to accomplish the Pu-238 mission for NE-34.

OFFICE OF SCIENCE SITES

Facility Representative Program Performance Indicators (4QCY2006)

Area/Site Office	Staffing		Actual		Attrition	% Core Qualified	% Fully Qualified	% Field Time *	% Oversight Time **
	Analysis	FTEs	Staffing	% Staffing					
AMES	1	1	1	100	0	100	100	28	75
ASO	5	5	5	100	0	100	100	25	82
BHSO	6	6	6	100	0	100	50	40	81
FSO	2	2	2	100	0	100	100	39	94
OR (SC)	2	2	2	100	0	100	100	44	84
PNSO	2	1.5	1.5	75	0	100	100	44	77
SC Totals	18	17.5	17.5	97	0	100	83	36	82
DOE GOALS	-	-	-	100	-	-	>80	>40	>65

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** % Oversight Time includes % Field Time

SC Facility Representative (FR) Highlights:

- Argonne Site Office (ASO) FRs supported contract transition effort and activities, including major commitment to review and approve sitewide ES&H documentation submitted in association with the new M&O contractor (UChicago Argonne, LLC).
- At the Brookhaven Site Office (BHSO), a FR identified an electrical lockout/tagout program issue whereby lab electricians were lifting electrical leads without a proper lockout/tagout applied.
- At BHSO, FRs were involved in the preliminary review of the Brookhaven Graphite Research Reactor (BGRR) Documented Safety Analysis (DSA) and Technical Safety Requirements (TSRs) in preparation for the D&D of the BGRR.
- At Fermi, FSO FRs were involved in numerous safety activities and initiatives this quarter. The following is a list of those activities: • DNFSB 2004-1 Follow-up Activities; • FSO Conduct of Operations Review; • Focused Oversight on Subcontractor Activities; • Quality Assurance Review of Reported Injuries/Illnesses.
- At Oak Ridge, FRs continued operational oversight of ORNL non-reactor nuclear facilities as well as accelerator facilities.
- At Pacific Northwest, a FR completed a surveillance of Shift Routines and Operating Practices in the Radiochemical Processing Laboratory (RPL). The surveillance identified issues with the long-term reduced operability of several key hotcell facility level indication systems where real property requirements for appropriate maintenance were not being met. Issues were also identified with the operator rounds governing procedure. The Site Office requested the contractor provide a formal corrective action plan based on appropriate causal analysis for the real property maintenance issue. The FR reviewed and commented on several drafts of the causal analysis and the corrective action plan prior to Contractor submittal.
- At Pacific Northwest, a FR investigated the circumstances of an airborne contamination event in the RPL where two foreign national visitors were potentially exposed to airborne Pu-238 for a short period of time following a continuous air monitor alarm. Multiple issues of procedural noncompliance and other work planning/research system commissioning issues existed during the event. Dose evaluations based on special bioassay results for the contractor staff members and visitors involved were still underway at the end of December with no final dose consequences yet made.
- At Pacific Northwest, FRs monitored the contractor's investigation and corrective actions for an event involving a chemical [1,2 Bis-(dimethylphosphino) ethane] unexpectedly detonating in a lab in the Environmental Molecular Science Lab (EMSL), resulting in a minor injury to a researcher.