



**Department of Energy**  
**National Nuclear Security Administration**  
 Washington DC 20585

OFFICE OF THE ADMINISTRATOR

December 4, 2018

MEMORANDUM FOR MARK HOLECEK  
 MANAGER  
 KANSAS CITY FIELD



FROM: WILLIAM I. WHITE  
 ASSOCIATE PRINCIPAL ADMINISTRATOR

SUBJECT: Honeywell Federal Manufacturing & Technology,  
 DE-NA0002839 Fiscal Year 2018 Award Fee Determination

The National Nuclear Security Administration (NNSA) has completed its assessment of Honeywell Federal Manufacturing & Technologies (FM&T), performance of the contract requirement for the period of October 1, 2017, through September 30, 2018, as evaluated against the Goals defined in the Performance Evaluation and Measurement Plan (PEMP). Based on assessment provided in the NNSA Performance Evaluation Report, award fee amounts are as follows:

	<u>At Risk%</u>	<u>Available</u>	<u>Final</u>	<u>Percent</u>
Goal-1: Manage the Nuclear Weapons Mission	45%	\$13,793,850	\$11,035,080	80%
Goal-2: Reduce Nuclear Security Threats	10%	\$3,065,300	\$2,912,035	95%
Goal-3: DOE and Strategic Partnership Projects Mission Objectives	2.5%	\$766,325	\$728,009	95%
Goal-4: Science, Technology & Engineering (ST&E)	2.5%	\$766,325	\$728,009	95%
Goal-5: Operations & Infrastructure	25%	\$7,663,250	\$6,973,558	91%
Goal-6: Leadership	15%	\$4,597,950	\$4,138,155	90%
<b>Total</b>		<b>\$30,653,000</b>	<b>\$26,514,845</b>	<b>86.5%</b>

In addition, the fixed fee and total fee summaries are provided below for your information:

Fixed Fee	\$0	\$0
SPP (Fixed Fee)	\$16,899,000	\$16,899,000
Total Fixed Fee	\$16,899,000	\$16,899,000
<b>Total Summary</b>	<b>\$47,552,000</b>	<b>\$43,413,845</b>





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National Nuclear Security  
Administration

Honeywell FM&T

Performance Evaluation  
Report (PER)

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NNSA Kansas City Field Office  
(KCFO)

Evaluation Period:  
October 1, 2017 –  
September 30, 2018

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December 3, 2018

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## Executive Summary

This Performance Evaluation Report (PER) provides the National Nuclear Security Administration (NNSA) assessment of Honeywell Federal Manufacturing and Technologies (FM&T) LLC, performance of the contract requirements for the period of October 1, 2017 through September 30, 2018 as evaluated against the Goals defined in the Performance Evaluation and Measurement Plan (PEMP). The NNSA took into consideration all input provided (e.g. CAS, Program Reviews, etc.) from NNSA Program and Functional Offices both at headquarters and in the field.

Honeywell Federal Manufacturing & Technologies (FM&T) submitted a Performance Self-Assessment Report that covered the rating period. FM&T is to be commended for the thoroughness of its report, which embraced the expectation of being self-critical as well as highlighting accomplishments. NNSA reviewed the self-assessment report and considered it in conducting its evaluation.

Performance against the Goals summarized below resulted in an overall rating of Very Good (86.5%) for Honeywell FM&T.

FM&T continues strong results on NNSA mission performance; however, an increased number of performance challenges were present throughout the reporting period. Issues in Goal 1 include receiving and inspection quality concerns and significant rise in the number of non-conformances for shipped product. Additional concerns with regard to the need for continued collaboration between the sites to resolve design and pre-production issues were noted in Goal 6. Significant performance accomplishments in Goals 2, 3, 4 and 5 were noteworthy this reporting period.

Specific observations for each Goal are provided in the following pages.

**Goal 1: Manage the Nuclear Weapons Mission, At-Risk Fee Allocation: 45%**

Under this Goal, Honeywell FM&T earned a rating of Very Good and 80% of the award fee allocated to this Goal.

Honeywell FM&T exceeded many of the Objectives and Key Outcomes, and met the overall cost, schedule and technical performance requirements of the contract under this Goal in the aggregate. During the year, the accomplishments greatly outweighed issues.

FM&T has overcome significant challenges this year on the B61-12 LEP and the W88 ALT 370 with several components achieving their First Production Unit (FPU). Significant progress was made to improve schedule position and reduce negative float. FM&T implemented controls and processes to address both requirements with minimum impact to schedules.

FM&T completed stockpile surveillance and maintenance requirements for the year and did an excellent job leading a JTA obsolescence analysis and cost evaluation report for the W80 JTA8. FM&T successfully excessed 170 B83 parachutes freeing up ~7,000 square feet of space and did an outstanding job supporting evaluations to qualify modifications to TSSG testing. FM&T's Additive Manufacturing (AM) efforts generated approximately \$31M cost benefit to NNSA. FM&T also deployed the new Customer Order Management System (COMS) application which drove standardization and efficiencies in reimbursable order management.

FM&T ended the year with four red Level 2 Milestones. Some fiscal year performance issues were material availability, inadequate test equipment resources, insufficient gage vendor capacity and delays to some established component recovery plans which resulted in increased B61-12 LEP and W88 ALT 370 programmatic risk. FM&T costed below the planned NA-122 10% threshold by 4%. FM&T experienced continued production challenges on the W76-1 and W87 JTA4.

FM&T had four quality metric goals for FY18; Escapes < 23, Scrap < 2.47%, Rework < 1.58% and Lots Accepted Trouble Free (LATF) > 88.5% (stretch goal). The results were: 33 Escapes which did not meet the goal; 2.43% in Scrap which exceeded the goal; 0.91% Rework, exceeding the goal; and 88.0% LATF which was lower than an established stretch goal.

FM&T continues to execute a responsive weapon quality assurance program that supports NNSA weapon quality initiatives. One example is the creation of a new quality department to improve corrective action management, responsiveness and effectiveness. There was also a significant rise in the number of non-conformances identified for KCNSC shipped product. FM&T failed to meet weapon quality performance expectations in these two areas.

**Goal 2: Reduce Nuclear Security Threats, At-Risk Fee Allocation: 10%**

Under this Goal, Honeywell FM&T earned a rating of Excellent and 95% of the award fee allocated to this Goal.

Honeywell FM&T exceeded almost all of the Objectives and Key Outcomes, and met the overall cost, schedule, and technical performance requirements of the contract under this Goal in the aggregate. During the year, the accomplishments greatly outweighed issues.

FM&T accomplishments include delivery of 20 MC-15 Next Generation Neutron Multiplicity Detectors to NNSA's Nuclear Response Group Readiness Operations Center (NRGROC) for field deployment; 917 technical and intelligence-based assessments that represented 131% assignment goal; support for NA-84 Stabilization Operations Program by maintaining the equipment depot that supports 11 cities; 22 Radiological Dispersion Device (RDD) trainings, 23 Improvised Nuclear Device (IND) trainings, and 8 trainings with an international Stabilization partner; and 14 videos for the international partners in support of the annual OPSIS event hosted at the Nevada Nuclear Security Site (NNSS). FM&T continued to improve process and sourced more efficiently to realize a cumulative cost savings of more than \$1.2M.

FM&T provided good support to the DNN Research & Development mission, proactively provided relevant datasets for inclusion in the Advanced Data Analytics for Proliferation Detection Project, and addressed concerns and provided recommendations to improve performance of the underperforming Ontology Project. FM&T engaged with another NNSA site providing expertise in procurement and manufacturing to evolving work on material management and minimization projects.

FM&T delivered outstanding, high quality work in the areas of: review of missile export licenses; support to the multilateral Missile Technology Control Regime (MTCR) meetings; and timely technical reviews of missile-related interdiction cases.

FM&T provided exceptional technical expertise to International Nonproliferation Export Control Program's (INECP) export control training events. FM&T provided excellent support to execute track 1.5 workshops for NA-24's Regional Analysis and Engagement (RA&E) program. The initiative, creativity, and overall exemplary performance demonstrated by FM&T has been a tremendous advancement for the RA&E program.

FM&T maintained operational readiness to deploy the DOE Forensics Operations Team (DFO), including equipment management and maintenance in support of nuclear forensics missions. FM&T successfully supported Stabilization new city deployments and existing city sustainment trainings, provided critical planning for national level Render Safe exercises, and maintained demanding watch bill support for national level Render Safe exercises. FM&T responded effectively to radiological and nuclear incident and accident exercises and effectively supported all National Special Security Events and Special Event Activity Rating 1 and 2 events.

**Goal 3: DOE and Strategic Partnership Projects Mission Objectives, At-Risk Fee Allocation: 2.5%**

Under this Goal, Honeywell FM&T earned a rating of Excellent and 95% of the award fee allocated to this Goal.

Honeywell FM&T exceeded almost all of the Objectives, and met the overall cost, schedule, and technical performance requirements of the contract under this Goal in the aggregate. During the year, the accomplishments greatly outweighed issues.

FM&T continues to focus on developing its program management capabilities to better address emerging responsibilities resulting from strong year-to-year demand for Global Security (GS) products and services. As demand is maintained, new processes and capabilities are being integrated in the form of Contractor Order Management System (COMS) and alternative HQ based processes that will continue to increase both rigor and efficiencies. The business has addressed concerns regarding Managed Acquisition operations and continues to improve processes that enable additional execution for industry partners through prioritizing business tool development, as well as standardizing and automating routine tasks. Where once customized software was utilized to extract, transform and load the data sources, upcoming enhancements (COMS) has enabled the campus to start evaluation of business trends with predictive rather than just descriptive analysis. FM&T shared best practices with FM&T Nuclear Weapons Program (NWP) and New Mexico business segments, allowing for a standardized approach across the business. FM&T delivered on commitments resulting in \$355M in mission scope execution through August 2018 with successful completion of 31,137 deliverables and delivery performance of 98.1%.

FM&T continues to grow Additive Manufacturing (AM) capabilities to support potential and future customers in the production of advanced weapon systems and components. Research conducted in FY18 culminated in a patent pending process which allows KCNSC staff to produce dense copper material through AM.

FM&T is beginning a new five year \$15M inter-agency program to design and fabricate Radiological Test Objects (RTOs) on behalf of the Defense Threat Reduction Agency (DTRA). RTOs are a highly valuable resource which are used to test and validate current equipment and procedures, and to provide challenges which can be used to improve and develop new tools and procedures.

**Goal 4: Science, Technology, and Engineering (ST&E), At-Risk Fee Allocation: 2.5%**

Under this Goal, Honeywell FM&T earned a rating of Excellent and 95% of the award fee allocated to this Goal.

Honeywell FM&T exceeded almost all of the Objectives and met the overall cost, schedule, and technical performance requirements of the contract under this Goal in the aggregate. During the year, the accomplishments greatly outweighed issues.

In FY18, the “6.2a and Left” strategy increased coordination in the planning and execution of all programs to enable a seamless progression in Technology Readiness Level (TRL) and to develop the needed technical basis. NNSA objectives and goals for FY18 have been used to revise FM&T’s Grand Challenges that flow down to technology roadmaps. These roadmaps provide transparency and enable FM&T to deploy resources to the most promising and beneficial technologies that will deliver impactful technologies to the weapon programs.

FM&T research strategy utilizes consortiums to manage research that affect multiple partners to ensure that promising new technologies are developed to evaluate and ultimately insert into a weapon system. Recent examples are Direct Ink Write (DIW) pads, metal Additive Manufactured (AM) mass mock/trainers, and polymer AM shells and dams. The DIW team prototyped several complex microarchitectures printed on 3D surfaces. In FY18, FM&T partnered with the University of Oklahoma to launch the first research rocket with FM&T-developed payload.

FM&T continued to heavily use AM to radically transform processes by reducing cycle time, increasing cycles of learning, and maximizing cost benefits. AM has developed new steel formulations with higher mechanical strength and toughness.

Projects initiated in FY14-15 matured high speed video technology for testing stronglink mechanisms resulting in B61-12 LEP and W88 ALT 370 tester qualifications in FY18. Big Data infrastructure was installed this year which will improve access to mechanism high speed video test data while providing for future flexibility.

FM&T has a well-established approach to maintaining a healthy and vibrant research environment that includes 99 PDRD, 50 IDEA projects and 31 Component Manufacturing Development (CMD) projects. Research opportunities also include Sandia engineering residencies, technology symposiums, technical fellowship programs, and job rotations. Multi-partner consortiums allow FM&T to complete increased R&D scope while enabling technical staff to support defense program commitments. The consortiums have resulted in proof of concept hardware, new technologies, high-quality journal publications, and intellectual property. Students involved in consortiums become prime candidates for NNSA, DOE, and other government hiring. Eight patents were issued in FY18 as well as 51 invention disclosures and four software copyrights authored by FM&T.

**Goal 5: Operations and Infrastructure, At-Risk Fee Allocation: 25%**

Under this Goal, Honeywell FM&T earned a rating of Excellent and 91 % of the award fee allocated to this Goal.

Honeywell FM&T has exceeded almost all of the Objectives and Key Outcomes, and met the overall cost, schedule, and technical performance requirements of the contract under this Goal in the aggregate. During the year, the accomplishments greatly outweighed issues.

FM&T continues to lead the National Security Campus (NSC) in safety performance. They launched a Situational Awareness campaign to establish benchmark performance regarding worker injuries and illnesses. As a result, FM&T experienced fewer OSHA Recordable Injuries and Days Away From Work Cases (DAFWC) at KCNSC in FY18 than in FY17 while the site population increased by over 800 personnel (25%). KCNSC New Mexico Operations (NMO) exceeded 5 years without a DAFWC.

The NSC was issued a first-of-its-kind-for-Missouri special case De Minimis Air Permit. FM&T identified state regulations that allows a facility to avoid the cost and delays associated with the normal air construction permitting, resulting in an approximate annual cost savings of \$45K.

FM&T's anticipated small business achievement of 50.58% fell just short of the target of 52%. FM&T exceeded targets for Small Disadvantaged Businesses, Women-Owned Small Businesses, and Small Disadvantaged VOSB, but did not meet targets for HUBZone or Veteran Owned Small Business.

FM&T proactively worked to improve clearance backlogs at the site. Working collaboratively, FM&T facilitated visits by OPM target teams that reduced clearance times from 260 to 150 days and reduced the uncleared population at KCNSC by one third.

FM&T Protective Force performance issues were identified following an incident at the site; management provided an effective response. The identified corrective actions are being implemented.

There has been a higher-than-expected security incident rate for Category B incidents. FM&T is working to understand the increase, and has conducted targeted activities to rectify the issues. These actions have reduced the number of Category B incidents over the last three reporting periods.

FM&T successfully managed and executed projects in support of the rapid growth in mission workload. This included installing over 110 pieces of production equipment within 45 days of delivery, completion of the Advanced Manufacturing Facility, supporting short-term (bridge) and long-term office and manufacturing expansion, expanded parking facilities, and implementing energy savings modifications to the data center.

FM&T exceeded expectations of the Federal CAP for Anti-Phishing Defense activities. These



activities have been shared across the complex as a model program.

FM&T provided excellent support on the Bannister Disposition Project.

FM&T maintained effective and efficient business systems, earning the highest possible ratings from NNSA in financial management on FY 2018 Performance Measures.

The KCNSC Emergency Response Organization (ERO) conducted its first offsite Tabletop Emergency Exercise, with the Grandview fire and police departments participating. Observing were representatives from DOE Headquarters (HQ) NA-41 and the Missouri Department of Natural Resources. FM&T and KCFO also participated in the DOE RICE/SLICE Continuity of Operations drill, with an 80% KCNSC accountability response. FM&T developed innovative process solutions in a collaborative effort involving ES&H and Security to ensure compliance with new requirements around the Design Basis Threat associated with chemicals stored and used at KCNSC facilities.

**Goal 6: Leadership, At-Risk Fee Allocation: 15%**

Under this Goal, Honeywell FM&T earned a rating of Very Good and 90% of the award fee allocated to this Goal.

Honeywell FM&T exceeded many of the Objectives, and met the overall cost, schedule, and technical performance requirements of the contract under this Goal in the aggregate. During the year, the accomplishments greatly outweighed the issues, and although there are a few areas of concern, FM&T has been implementing corrective measures to address the issues.

FM&T has been a leader in the success of the NNSA Nuclear Weapon Enterprise-wide infrastructure initiatives. Sharing best management practices around project planning, contracting, and execution, FM&T executed over \$46M in RAMP projects and provided planning and design services across the complex as follows: the KAFB Intersection upgrade, Control Point Hill Waterline and 138KV Transmission at Nevada National Security Site; and Supervisory Control and Data Acquisition and Electrical Upgrade Projects at LLNL.

FM&T was successful in defining and implementing a strategic vision by achievement of the following key results: FM&T Total Overhaul of the Customer Order Experience (TOCOE)/Customer Order Management System (COMS) is now managing all reimbursable orders. The number of expired orders in the execution phase is down by 72% (from 461 to 129) for FY18. In addition, FM&T implemented a process improvement that reduced the days to receive an Interim Q after start date from 122 days to 22 days (82% reduction).

FM&T established the Tier 6/7 meetings to provide a regular cadence to review the progress of emerging programs. Tier 6/7 meetings involve the integrated Senior Leadership across FM&T, SNL, LANL, and the NNSA. Through the Tier 6/7 process, FM&T leadership has made decent strides in working with NNSA Program Offices and SNL to address new and ongoing issues; however, continued collaboration between NTESS, LANL and Honeywell FM&T is needed to resolve design and pre-production issues to ensure First Production Unit (FPU) and sustained production cost, schedule and quality performance requirements are met.

FM&T's Supply Chain Management Center (SCMC) enabled strategic sourcing cost savings at NNSA and EM sites totaled \$298.5M; surpassing their year-end goal of \$174.9M, exceeding the goal by \$123.6M or 41.5%. SCMC has increased membership with the addition of Oak Ridge National Laboratory (ORNL) and began a partnership with National Renewable Energy Laboratory (NREL) to use SCMC agreements.