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ENGINEERING DATA TRANSMITTAL

Page 1 of ____

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		Design Authority N/A									
		Design Agent N/A									
1	1	Cog. Eng. JW Bosley	Jw Bosley	4-21-00	R2-53						
1	1	Cog. Mgr. MW Wells	MW Wells	4-21-00		1	1	DP Dennis		4/21/00	R2-57
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Human Resources Staffing Plan for the Tank Farm Contractor

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CH2M HILL Hanford Group, Inc.
Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-99RL14047

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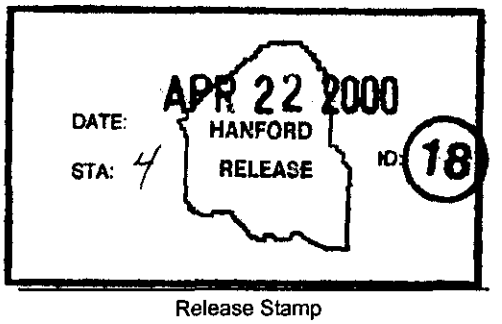
Abstract: The Human Resources Staffing Plan quantified the equivalent staffing needs required for the Tank Farm Contractor (TFC) and its subcontractors to execute the readiness to proceed baseline between FY 2000-2008. The TFC staffing needs were assessed along with the staffings needs of Fluor Hanford and the privatization contractor. The plan then addressed the staffing needs and recruitment strategies required to execute the baseline.



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Document Title: **Human Resources Staffing Plan for the Tank Farm Contractor**

Approved by: C.R. Hutchins 4/21/00

C.R. Hutchins, Vice President
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Date

Approved by: D.P. Dennis For 4/21/00

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Date

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EXECUTIVE SUMMARY

This staffing plan demonstrates that CH2M HILL Hanford Group, Inc. (CHG), can successfully recruit and hire the personnel required to execute the Readiness-to-Proceed (RPT) declaration. The staffing plan addresses fiscal years 2000 through 2008, which coincide with the start-up of hot operations of the vitrification facilities. Staffing needs were determined and strategies developed to ensure that mission objectives can be met with the competing demands from other Site activities.

To determine staffing needs, CHG developed a detailed resource-loaded Primavera Project Planner™ life-cycle baseline. Staffing needs were determined from this baseline. CHG's staffing needs were combined with those of Fluor Hanford, Inc. (FH), for the Plutonium Finishing Plant, Spent Nuclear Fuel, River Corridor, and Waste Management projects and those of the Privatization Contractor for its construction, operations, and maintenance activities. FH project staff requirements are identified in Section 2.3, and the Privatization Contractor's staff requirements are identified in Section 2.4. This staffing plan was developed by CHG to determine its staffing needs. Data provided by FH and the Privatization Contractor are included in this plan for information purposes only. The combined staffing profile for CHG, FH, and the Privatization Contractor appears in Table 2-10.

CHG's baseline staffing profile noted above is summarized by Common Occupational Category System (COCS) codes as identified in Attachment A. This staffing profile is based on an estimated mix of CHG and subcontractor staff to execute the RTP baseline. As these positions are required, CHG will determine the applicability of subcontracting to fulfill the needs, particularly when the need is of limited duration.

CHG identified four non-project areas in which skill needs will experience exceptional growth (increases of 10% or more or an increase of greater than twelve full-time positions in excess of normal attrition, the larger of these overlapping two fiscal years) and will be in demand by competing companies above those levels estimated to be available in the local market when needed. The four areas identified by the application of this threshold are identified in Figure 4-1. The four areas are crafts, engineers, operators, and health physics technicians. Specific recruiting strategies have been developed for each skill area to ensure that appropriate skills can be acquired to meet mission objectives as discussed in Sections 4.0 and 5.0.

Specific recruitment strategies developed to address future staff requirements include on-the-job training programs, targeted recruitment, subcontracting, use of architect/engineer firms, and leveraging construction firms to meet staffing demands. Based on the evaluation completed for this staffing plan, CHG is confident that it can recruit the staff required to execute Phase 1B of Privatization. The recruitment strategies identified are flexible enough to accommodate changes in staff mix and to support changes in the RTP baseline.

When construction staffing needs of CHG are combined with Privatization Contractor's staffing needs, approximately 4,000 construction-related positions are required at its peak in fiscal year 2003 to support feed delivery/storage construction projects. These staffing needs are identified in Table 2-9; the construction/subcontract recruitment process is discussed in Section 5.0. Construction-related staffing needs can be provided through architect/engineer vendors, local union halls, construction resources from Umatilla Army Depot out-year downsizing, and reduced Washington state construction resulting from passage of Initiative 695.

CONTENTS

ATTACHMENTS

FIGURES

TABLES

TERMS

A/E	architect/engineer
BHI	Bechtel Hanford Inc.
CHG	CH2M HILL Hanford Group, Inc.
COCS	Common Occupational Category System
DOE	U.S. Department of Energy
DST	double-shell tank
FFS	Fluor Federal Services
FH	Fluor Hanford, Inc.
FY	fiscal year
HAMTC	Hanford Atomic Metal Trades Council
HPT	health physics technician
HR	Human Resources
ORP	Office of River Protection
P3	Primavera Project Planner
RPP	River Protection Project
RTP	Readiness to Proceed
SST	single-shell tank
Tri-Party Agreement	*Hanford Federal Facility Agreement and Consent Order*

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1.0 BACKGROUND AND PURPOSE

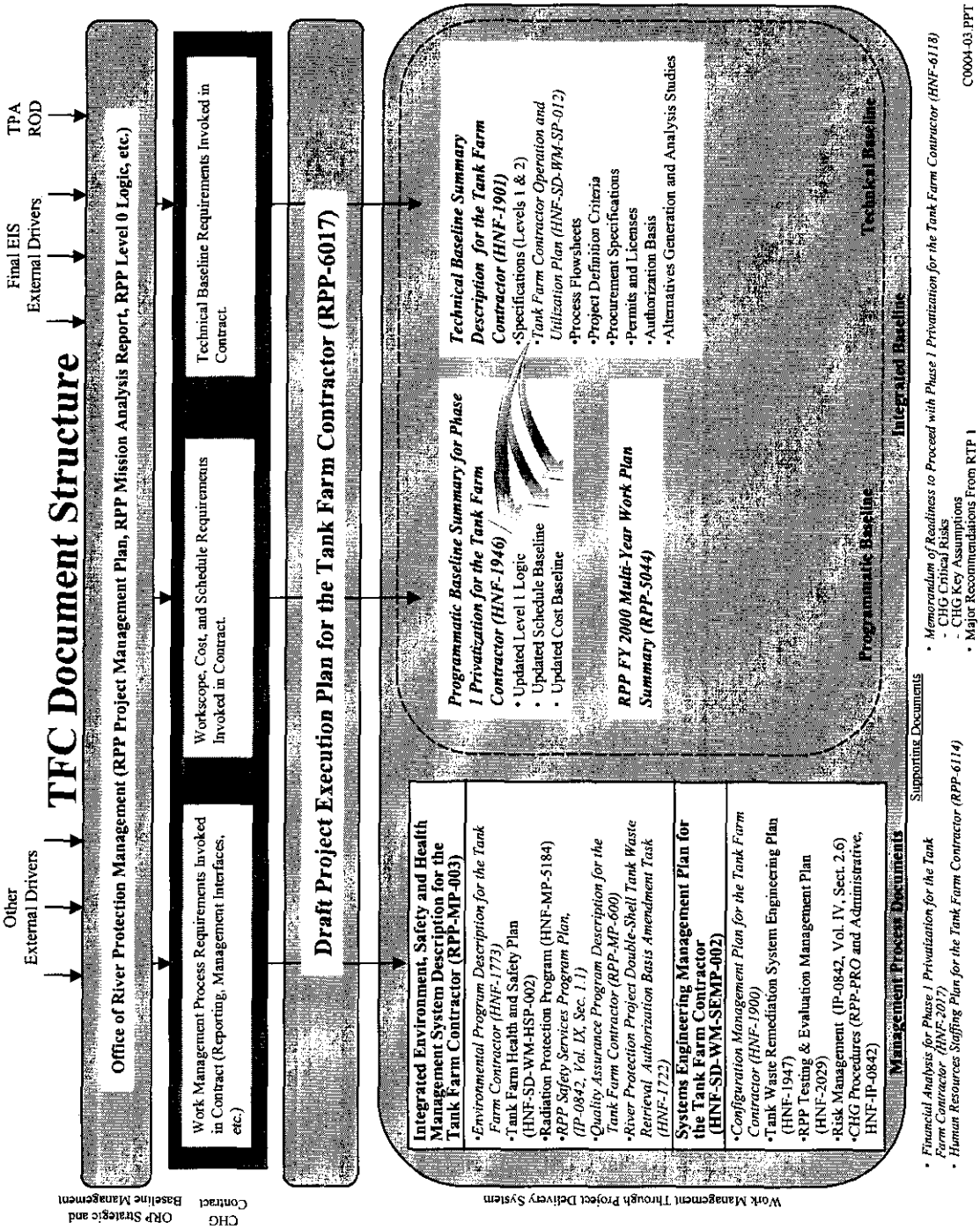
In December 1991, the Secretary of Energy directed that the Tank Waste Remediation System be established to plan and implement the disposal of tank waste at the Hanford Site. A strategy was developed and negotiated, and the revised *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 1996) was signed. The strategy envisioned the following activities:

- Retrieval of waste from both single-shell tanks (SST) and double-shell tanks (DST)
- Separation of waste into high-activity and low-activity fractions
- Immobilization of the low-activity fraction in glass or other suitable form that would reduce volume and meet long-term disposal requirements
- Vitrification of the high-activity fraction for disposal in a national repository for high-level waste.

In 1994, concern about balancing the Federal budget became a national issue. The U.S. Department of Energy (DOE) believed that a new approach was needed for funding and managing the construction and operation of the multi-billion dollar facilities needed for waste treatment and immobilization. After considering past experience and input from the commercial industry, the DOE decided on a privatization approach to accomplish tank waste treatment at the Hanford Site. Privatization is a two-phase fixed-unit-price contracting method for providing waste treatment and immobilization services. The DOE intends to award a contract under which the contractor will design, build, and operate waste immobilization facilities. The Office of River Protection (ORP) was established to manage the Hanford Site's tank waste retrieval, treatment, and disposal, which includes the privatization contract.

The purpose of this human resources (HR) staffing plan is to quantify the equivalent staffing needs required for the Tank Farm Contractor, CH2M HILL Hanford Group, Inc. (CHG), and its subcontractors to execute the Readiness-to-Proceed (RTP) baseline between FY 2000 and FY 2008, based on planned operation of the vitrification facilities. The plan also provides a recruitment strategy for securing specific skills (such as crafts, engineers, operators, and health physics technicians [HPT]), the need for which will grow and who will be in demand by competing companies. The staffing plan is a supporting document within the CHG document hierarchy as identified in Figure 1-1.

Figure 1-1. CH2M HILL Hanford Group, Inc., Document Hierarchy.



2.0 STAFFING NEEDS DISCUSSION

2.1 CH2M HILL HANFORD GROUP, INC., NON-PROJECT STAFF

CHG non-project staff needs are the positions identified in the RTP Primavera Project Planner™ (P3) resource files by Common Occupational Category System (COCS) categories, an estimated need for subcontractor support, and CHG operator, craft, and operating engineer support to the Privatization Contractor. CHG and subcontractor non-project staffing needs are identified in Attachment A. To determine the staffing profile for subcontractor support, CHG converted contract dollars within the baseline to equivalent full-time positions and an estimated skills mix. The subcontractor support was assumed to be of a skills mix similar to that of current CHG staff, excluding bargaining unit employees.

CHG also reviewed the variables associated with labor agreement effects, attrition, and service demands on Fluor Hanford, Inc. (FH), to determine whether further adjustments to baseline staff needs were required.

CHG initially reviewed non-project staff requirements for the effects on labor agreements of the transfer or "bumping" of operators throughout the Hanford Site. Operator reductions planned by FH in FY 2004 are expected to result in the bumping of 25% of CHG's operators from their current positions by operators with greater seniority than CHG operators. Therefore, the FY 2004 baseline data were adjusted to address the effect on CHG of having to train 31 nuclear waste process operators until they are qualified to perform River Protection Project (RPP) activities. This adjustment was necessary to determine the total number of nuclear waste process operators required to execute baseline plans. The adjustment is identified in Attachment A. CHG also evaluated the potential effects on maintenance crafts and HPTs of bumping by seniority. CHG determined that its maintenance crafts and HPTs generally have greater seniority than FH's maintenance crafts and HPTs and would not be affected. Based on this evaluation, adjustments to the baseline were not required for maintenance crafts and HPTs. CHG then evaluated staff requirements to determine whether the average employee attrition rates would affect the recruitment plan threshold levels in COCS categories. CHG determined that the effects of attrition would be minimal, and therefore these categories would not require specific recruiting strategies.

CHG evaluated staff positions that are in the baseline for direct-funded personnel whose services will be purchased from FH and the level of service CHG expects to continue purchasing from Hanford Site service pools. Based on this evaluation, CHG's expectation is that the level of services purchased from FH will remain fairly constant through FY 2008, as indicated in Attachment A. Therefore, no specific strategies were developed to recruit personnel associated with this work scope.

The total CHG non-project staffing profile identified in Table 2-1 is based on the above evaluation.

The CHG baseline for FY 2005 shows an increase of 270 staff among craft, operators, and operating engineers for the Privatization Contractor. The data are included in the staffing plan to highlight the need for these resources at the Hanford Site and to acknowledge the $26,376,000 included in the CHG baseline for labor costs associated with training these individuals. However, the hiring and training for these positions is not the contractual responsibility of CHG. CHG has requested that ORP resolve the issue of who is responsible for hiring and training the staff for these positions through the Integrated Process and Product Development/Interface Control Document process.

Table 2-1. CH2M HILL Hanford Group, Inc., Non-Project Staffing Profile Summary.

Description	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
CHG non-project staff (including FH and NHC support)	1,634	1,599	1,660	1,559	1,402	1,215	1,177	1,282	1,405
CHG subcontractor support	466	458	496	453	413	479	493	580	413
Operator, craft, and operating engineer support for the Privatization Contractor	0	0	0	0	0	270	0	0	0
Totals	2,100	2,057	2,156	1,012	1,815	1,964	1,670	1,862	1,818

1. FY 2005 data include 270 positions that are in the CHG baseline for Privatization Contractor (108 crafts, 108 operators, and 54 operating engineers). The issue of who is responsible for hiring and one year of training requires resolution by the Office of River Protection.

2. Staffing needs for FY 2004 and beyond may be underestimated; not all Privatization Phase 2 activities have identified staffing needs. Out-year decline in planned activities may make operators available for Phase 2 activities.

3. Staffing profile based on a planned mix of CHG and subcontractor staff. As these positions are required, CHG will determine the appropriateness of subcontracting to fulfill the needs.

CHG = CH2M HILL Hanford Group, Inc.
FY = fiscal year.
NHC = Numatec Hanford Company.

2.2 FEED DELIVERY/STORAGE CONSTRUCTION PROJECTS AND OPERATIONS SUPPORT TO PROJECTS

CHG feed delivery/storage construction projects will provide the necessary infrastructure and systems needed to support delivery of waste to the Privatization Contractor. Staffing needs for feed delivery/storage construction projects include staff to perform project management, system design, and construction activities. Staffing requirements for these projects are not identified in the baseline as COCS codes. Therefore, dollars in the baseline for these activities were converted to equivalent skill areas based on historical knowledge of project requirements. This section will quantify the equivalent staff. The active line item budgets, for these projects, needed to meet waste feed delivery objectives are listed in Table 2-2.

Table 2-2. Feed Delivery/Storage Line Item Funding
(Dollars in Thousands).

Project	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08	Totals
W-314 Tank Farm Restoration and Safe Operations	20,516	46,023	57,578	25,447	29,795	9,011	0	0	0	188,370
W-211 Initial Tank Retrieval System	4,060	7,710	37,982	30,654	12,650	13,474	17,276	16,238	16,615	156,659
W-519 Privatization Infrastructure, Phase 1	13,988	7,812	1,081	0	0	0	0	0	0	22,881
W-521 Waste Feed Delivery Systems	0	9,675	82,100	53,000	20,400	27,000	26,400	27,400	23,300	274,275
W-522 DST Waste Retrieval	0	0	0	0	0	857	3,583	3,338	3,432	11,210
W-464 IHLW Storage Facility	0	1,300	3,456	8,212	19,687	35,882	16,768	356	0	85,661
W-520 ILAW Disposal Facility	0	0	0	3,409	10,677	19,604	14,412	0	0	48,102
W-525 Tank Farm Upgrades	0	0	4,264	11,141	20,775	9,980	0	0	0	46,160
W-523 SST Retrieval Systems	0	0	0	6,837	22,648	24,005	36,579	22,940	5,476	118,485
Totals	38,564	72,520	186,461	138,700	136,632	139,813	115,018	70,272	53,823	951,803

Notes: 1) Line item funding amounts are for reference only and will not be kept current as an RPP-6114 update.
2) Line item funding amounts in this table do not include approved FY 2000 carry-over or anticipated FY 2001 carry-over.

DST = double-shell tank.
FY = fiscal year.
IHLW = immobilized high-level waste.
ILAW = immobilized low-activity waste.
SST = single-shell tank.

Over the next nine years (FY 2000 through FY 2008), line item construction projects will account for approximately $950 million of business volume, which will result in increased staffing needs. Of the $950 million, $125 million is contingency and $150 million is for procurement, neither of which convert to equivalent staff, since these are funds for major equipment purchases or costs not assumed to drive requirements for additional staff. The balance of $675 million was converted to equivalent staff requirements for project management, A/E design and construction activities for construction projects, and CHG operations staff for feed delivery storage, as shown in Tables 2-3 and 2-4. Detailed COCS information for Table 2-3 appears in Attachment B. Procurement activities have been addressed in the *Project Delivery Acquisition and Contracting Plan for the Tank Farm Contractor,* RPP-6113 (Mercado 2000).

Table 2-3. CH2M HILL Hanford Group, Inc., Feed Delivery/Storage Construction Staff Requirements.

	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
Equivalent staff	98	288	613	421	464	408	278	171	135

FY = fiscal year.

Table 2-4. CH2M HILL Hanford Group, Inc., Operations Staffing Needs to Support Feed Delivery/Storage Construction Projects.

COCS	COCS Title	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
C000	Crafts	1	1	1	1	1	1	1	1	1
C020	Electricians	1	1	1	1	1	1	1	1	1
C080	Plumbers and pipefitters	1	1	1	1	1	1	1	1	1
C090	Structural and metal workers	2	2	2	2	2	2	2	2	2
E100	Plant engineers	3	4	4	7	8	8	7	5	7
E110	Quality control engineers	3	4	4	7	8	8	7	5	7
E120	Safety engineers	3	4	4	7	8	8	7	5	7
E130	Other engineers	2	3	3	6	7	7	6	4	6
M010	First-line supervisors	4	5	5	8	9	9	8	6	8
P070	Planner/scheduler/estimators	7	10	10	19	22	22	19	13	19
P090	Industrial hygienists	1	1	1	1	1	1	1	1	1
P170	Other professionals	2	3	3	6	7	7	6	4	6
R050	Nuclear waste process operators	8	10	10	16	18	18	16	8	16
T050	Health physics technicians	20	28	28	52	60	60	52	36	52
T060	Industrial health/safety technicians	2	3	3	6	7	7	6	4	6
Totals		59	79	79	139	159	159	139	95	139

COCS = Common Occupational Category System.
FY = fiscal year.

2.3 FLUOR HANFORD, INC., PROJECT STAFFING NEEDS

FH provided CHG with staffing profiles for four major projects (Plutonium Finishing Plant, Spent Nuclear Fuel, River Corridor, and Waste Management) that are required above the support to CHG. Based on its data, FH has determined that it will be shutting down some projects at the same time CHG and the Privatization Contractor will be adding staff for Phase 1B. In FY 2004, FH will be reducing the number of nuclear operator, HPT, craft, and exempt positions. These personnel could be used to fill a majority of the positions expected by the Privatization Contractor in FY 2005 (see Section 3.0). The FH staffing profile appears in Table 2-5.

Table 2-5. Fluor Hanford, Inc., Projects – Staffing Profile Summary (Plutonium Finishing Plant, Spent Nuclear Fuel, River Corridor, and Waste Management).

Description	FY00	FY01	FY02	FY03	FY04	FY05
Exempt	1,262	1,244	1,178	1,133	970	866
Non-exempt	137	132	131	125	111	98
Nuclear operators	319	412	418	412	297	283
Non-nuclear operators	34	35	40	38	32	28
Health physics technicians	170	210	221	218	158	158
Crafts	242	258	256	234	189	192
Totals	2,164	2,292	2,244	2,160	1,757	1,625

Note: *FH staffing requirements do not include FH indirect staffing needs.*

FH = Fluor Hanford, Inc.
FY = fiscal year.

2.4 VITRIFICATION CONTRACTOR OPERATIONS, MAINTENANCE, AND CONSTRUCTION

The Privatization Contractor provided CHG with staffing profiles for operations, maintenance, and construction activities to support tank waste vitrification. The Privatization Contractor's need for operators and HPTs in the FY 2003 through FY 2005 period coincides with FH's planned staffing reductions in the same skill areas (discussed in Section 3.0). The Privatization Contractor's operations, maintenance, and construction staffing requirements are shown in Tables 2-6 and 2-7.

Table 2-6. Privatization Contractor's Staffing Profile Summary - Operations and Maintenance.

Description	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
Cold commissioning N-M	0	10	28	90	115	117	105	15	0
Cold commissioning craft	0	3	16	73	209	194	37	0	0
Operations N-M	0	37	66	61	170	268	265	265	265
Nuclear chemical operator	0	0	0	9	30	101	146	151	0
Stationary operating engineer	0	0	0	5	11	30	49	54	54
Janitor	0	0	0	0	0	0	0	0	0
Instrument – lead	0	0	0	0	5	39	49	49	49
Instrument craftsman	0	0	0	0	0	0	20	20	20
Electrician	0	0	0	0	5	20	26	26	26
Plumber/pipefitter	0	0	0	0	5	44	70	70	70
Health physics technician	0	0	0	0	0	6	25	36	36
Chemical technician	0	0	0	1	1	4	6	6	6
Totals	0	50	110	239	551	823	798	692	526

FY = fiscal year.
N-M = non-manual

Table 2-7. Privatization Contractor's Staffing Profile Summary – Construction.

Description	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY87
IJV other project office	221	377	392	332	287	239	151	115	0
SPC other project office	84	106	120	149	195	234	266	268	252
Design engineering	620	870	720	465	260	210	120	0	0
Construction, N-M	7	228	371	410	319	107	0	0	0
Construction, craft	0	882	1,455	2,121	907	141	0	0	0
Totals	932	2,463	3,058	3,477	1,968	931	537	383	252

FY = fiscal year.
IJV = Integrated Joint Venture
N-M = non-manual
SPC = Special Purpose Company

Detailed recruitment strategies for the Privatization Contractor are under development.

2.5 OVERALL SUMMARY OF STAFFING NEEDS

2.5.1 Non-Project Staffing Needs

The combined non-project staffing needs for CHG, FH, and the Privatization Contractor are shown in Table 2-8. These data are analyzed in Section 3.0.

Table 2-8. CH2M HILL Hanford Group, Inc; Fluor Hanford, Inc.; and Privatization Contractor Staffing Profile Summary – Non-Project.

Description	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
CHG non-project staff - including FH and NHC support to RPP	1,634	1,599	1,660	1,559	1,402	1,215	1,177	1,282	1,405
CHG subcontractor support	466	458	496	453	413	479	493	580	413
FH projects staff	2,164	2,292	2,244	2,160	1,757	1,625	1,625	1,625	1,625
Privatization Contractor operations and maintenance staff	0	50	110	239	551	823	798	692	526
Operator, craft, and operating engineer support for the Privatization Contractor	0	0	0	0	0	270	0	0	0
Totals	4,246	4,399	4,510	4,411	4,123	4,412	4,093	4,179	3,969

1. Staffing needs for FY 2004 and beyond may be underestimated; not all Privatization Phase 2 activities have identified staffing needs. Out-year decline in planned activities may make operators available for Phase 2 activities.

2. FH staffing needs for FY 2006 through FY 2008 were not available. CHG assumed that FH staffing needs for FY 2006 through FY 2008 would be at same level as FY 2005 staffing needs.

3. Staffing profile based on a planned mix of CHG and subcontractor staff. As these positions are required, CHG will determine the appropriateness of subcontracting to fulfill the needs.

CHG = CH2M HILL Hanford Group, Inc.
FH = Fluor Hanford, Inc.
FY = fiscal year.
RPP = River Protection Project.
NHC = Numatec Hanford Company.

2.5.2 Construction Staffing Needs

The combined feed delivery/storage construction staffing needs for CHG, FH, and the Privatization Contractor are shown in Table 2-9. These data are analyzed in Section 3.0.

2.5.3 Combined Non-Project and Construction Staffing Needs

The combined non-project and feed delivery/storage construction staffing needs for CHG, FH, and the Privatization Contractor are shown in Table 2-10.

Table 2-9. CH2M HILL Hanford Group, Inc.; Fluor Hanford, Inc.; and Privatization Contractor Staffing Profile Summary – Construction.

Description	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
CHG operations staff for feed delivery/storage construction projects	59	79	79	139	159	159	139	95	139
Feed delivery/storage construction staff	98	288	613	421	464	408	278	171	135
Privatization Contractor construction staff	932	2,463	3,058	3,477	1,968	931	537	383	252
Totals	1,089	2,830	3,750	4,037	2,591	1,498	954	649	526

CHG = CH2M HILL Hanford Group, Inc.
FY = fiscal year.

Table 2-10. CH2M HILL Hanford Group, Inc.; Fluor Hanford, Inc.; and Privatization Contractor Staffing Profile Summary.

Description	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
CHG non-project staff – including FH and NHC support to RPP	1,634	1,599	1,660	1,559	1,402	1,215	1,177	1,282	1,405
CHG subcontractor support	466	458	496	453	413	479	493	580	413
CHG feed delivery/storage A/E and construction staff	98	288	613	421	464	408	278	171	135
CHG operations staff for feed delivery/storage construction projects	59	79	79	139	159	159	139	95	139
CHG Subtotal	2,257	2,424	2,848	2,572	2,438	2,261	2,087	2,128	2,092
FH projects staff	2,164	2,292	2,244	2,160	1,757	1,625	1,625	1,625	1,625
Operator, craft, and operating engineer support for the Privatization Contractor	0	0	0	0	0	270	0	0	0
Privatization Contractor operations and maintenance staff	0	50	110	239	551	823	798	692	526
Privatization Contractor construction staff	932	2,463	3,058	3,477	1,968	931	537	383	252
Totals	5,353	7,229	8,260	8,448	6,714	5,910	5,047	4,828	4,495

1. Staffing needs for FY 2004 and beyond may be underestimated; not all Privatization Phase 2 activities have identified staffing needs. Out-year decline in planned activities may make operators available for Phase 2 activities.

2. FH staffing needs for FY 2006 through FY 2008 were not available. CHG assumed that FH staffing needs for FY 2006 through FY 2008 would be at same level as FY 2005 staffing needs.

3. The staffing profile is based on a planned mix of CHG and subcontractor staff. As these positions are required, CHG will determine the appropriateness of subcontracting to fulfill the needs.

A/E = architect/engineer.
FH = Fluor Hanford, Inc.
FY = fiscal year.
CHG = CH2M HILL Hanford Group, Inc.
RPP = River Protection Project.
NHC = Numatec Hanford Company.

3.0 ANALYSIS OF STAFFING NEEDS

3.1 NON-PROJECT STAFFING ANALYSIS

Once total baseline staff requirements were developed, a threshold level was applied to target recruitment plans for specific skill need areas with exceptional growth (increases of 10% or more, or an increase of greater than twelve full-time positions in excess of normal attrition, the larger of these overlapping two fiscal years). COCS increases below these levels are considered routine and will be managed as part of the current CHG recruiting process.

Non-project staffing needs within CHG will remain fairly constant through FY 2003, then gradually decline through FY 2008. Near-term increases (above assumed threshold) are for 21 HPTs in FY 2001, and an additional 25 HPTs in FY 2002, as outlined in Section 4.0. Attachment A identifies specific COCS requirements for all categories and quantifies the FY 2001 and FY 2002 growth in HPT staffing needs. CHG has the HR staff available to recruit and hire the individuals for these positions.

There is also an increase in staff requirements in FY 2005 of 108 crafts, 108 operators, and 54 operating engineers that are in the CHG baseline for the Privatization Contractor. The data are included in the staffing plan to highlight the need for these resources at the Hanford Site to acknowledge the $26,376,000 included in the CHG baseline for labor costs associated with training these individuals. However, the hiring and training of the individuals for these positions is not the contractual responsibility of CHG. CHG has requested that ORP resolve the issue of who is responsible for hiring and training the staff for these positions through the Integrated Process and Product Development/Interface Control Document process.

CHG will incur additional training-related costs for operator transfers and bumping in FY 2004 and additional recruiting costs for planned staffing increases for HPTs in the FY 2001 to FY 2002 period. These costs are not included in the RTP baseline, but will be addressed in the *Financial Analysis for Phase 1 Privatization for the Tank Farm Contractor*, HNF-2017 (Basche 2000). Recruiting, hiring, and relocation costs for the additional HPT staff in FY 2001 and FY 2002 are estimated to be approximately $1,250,000. These costs are in addition to CHG's normal recruiting and hiring budgets. Recruiting and hiring costs for additional crafts, engineers, operators, and HPTs beyond FY 2005, including the staff identified for turnover to the Privatization Contractor, were not calculated. CHG has requested that ORP assist in preparing interface agreements between CHG and the Privatization Contractor regarding staffing and training responsibilities for the Privatization Contractor-related positions.

In addition, CHG will incur additional costs associated with operator reductions planned by FH in FY 2004. CHG estimates that 31 nuclear waste process operators will bump CHG operators with a resulting cost increase of approximately $3,250,000 to the FY 2004 baseline. These costs are associated with training the new nuclear waste process operators who come from FH and the requirement to maintain an additional 31 operators in CHG until the new operators are trained and qualified to perform RPP activities. These costs were not included in the RTP baseline but will be addressed in HNF-2017 (Basche 2000).

CHG has identified key positions in its contract with ORP, in addition to other positions considered key to CHG, and has filled these positions with qualified staff.

Currently, the Privatization Contractor has no Hanford Atomic Metal Trades Council (HAMTC) employees nor a labor contract. CHG has assumed that Privatization Contractor bargaining unit hiring practices would not affect CHG staff. Costs for training and qualifying bargaining unit personnel as they transfer to the various companies would require CHG to add resources.

3.2 CONSTRUCTION STAFFING ANALYSIS

An executability analysis was performed for Feed Delivery/Storage construction projects. Field crosscutting activity (i.e., SST stabilization, transfers, and characterization) constraints were inserted into construction schedules and work activities were logically tied to support transfers to the Privatization Contractor. Resources and scope were "smoothed." Follow-on work in resource validation is planned.

In addition, CHG is implementing a farm-by-farm construction concept. The executability analysis grouped work activities by farm and developed logic-driven schedules for work optimization. Projects and operations were integrated into these logics. Upcoming actions include the hiring of tank farm construction managers who will coordinate field construction work activities in these areas.

Design activities will multiply four-fold beginning in FY 2001. Expanded A/E pool use is planned for schedule design activities. Design has been identified as a skill that will need to be expanded through use of the A/E pool and corporate resources. To prepare for expanded A/E pool use, an information session on upcoming (FY 2001 through FY 2002) design work will be held in June 2000. The session will have two main objectives:

- Inform potential vendors of upcoming work and make preparations for upcoming proposals.
- Give CHG feedback on the ability of the current A/E pool to meet its design objectives.

Activities to optimize the design schedule for construction projects, through the executability analysis and the *Project Delivery Acquisition and Contracting Plan for the Tank Farm Contractor*, RPP-6113 (Mercado 2000), have been completed. These activities included integrating project design activities for leveling and packaging of similar designs for awards with options for sustained design support from vendors, through establishment of a consistent acquisition process and adoption of a farm-by-farm construction concept that will leverage similar tank designs and reduce duplication.

Field construction activities will expand the need for construction resources currently available through Fluor Federal Services (FFS), CHG's construction vendor. Obtaining these resources, particularly journeyman electricians and pipefitters, will be a top priority worked with construction contractors. Consideration is being given to expanding the construction pool through a competitive bidding process and to using CHG corporate alliances and resources.

A preliminary analysis by FFS shows the resource availability in construction crafts. Local union halls, which represent southeastern Washington and northeastern Oregon crafts, show that sufficient number of pipefitters, electricians, and laborers are available to meet the Hanford Site construction staffing requirements. Local union halls have 48 hours to dispatch needed construction craft to a construction vendor. If the union halls are unable to meet required needs, a construction vendor has the right to use other resources. Other resources include recruiting from other union halls, national and local advertisement, and recruitment through corporate subsidiaries. However, FFS has commitments from unions to provide the craft workers needed for the Hanford Site work. The plumbers and steamfitters' union hall has agreed to provide up to 1,200 steamfitters to the Site within 48 hours of notification of the need. In addition, Local 348 of the Laborers' International Union of North America in Pasco, Washington, has approximately 1,200 laborers, with many of them available within 48 hours of being notified of their need at the Hanford Site. Should these resources fail to provide the needed labor, FFS is affiliated with most national unions through corporate agreements and can obtain the required resources.

Other factors will aid the Hanford Site in obtaining necessary construction craft resources. There are no non-Hanford Site construction projects larger than $100 million planned in southeastern Washington in the next seven years. Construction by Raytheon Corporation at the Umatilla Army Depot in northeastern Oregon has peaked, and Raytheon will begin downsizing over the next two years. Passage of Initiative 695 has reduced the number of state and municipal construction contracts in Washington state; this reduction has increased resource availability. A number of local union members are working out of the local area. Increased construction activity at the Hanford Site will lure many of them back. By working with local unions, A/E vendors can encourage startup of apprenticeship programs to provide staff for the anticipated demand. Logistical support such as training and support from the Hanford Environmental Health Foundation is being set up for the expected increase in construction-related staff.

Bechtel Hanford, Inc. (BHI), the construction contractor for the vitrification facility, has completed a demographics analysis of the Pacific Northwest that concluded that it will need an apprenticeship program for some crafts; BHI also is expected to bring a number of construction-related staff on Site. BNFL Inc. has indicated that BHI has notified the various local unions about staffing requirements and that the unions are beginning to prepare for the work force required for construction.

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4.0 KEY STAFFING NEEDS

CHG has identified four skill needs areas that will experience growth beyond the assumed threshold and within which contractors will be competing for staff the four areas identified by the application of this threshold are identified in Figure 4-1. These areas are crafts, engineers, operators, and HPTs. Specific recruiting strategies for each area have been developed, or will be developed, to ensure that appropriate skills can be acquired to meet mission objectives. The staffing profile for these areas is shown in Table 4-1, and specific recruitment strategies are discussed in Section 5.0.

Figure 4-1. CH2M HILL Hanford Group, Inc., Skill Areas Requiring Recruitment Strategies.

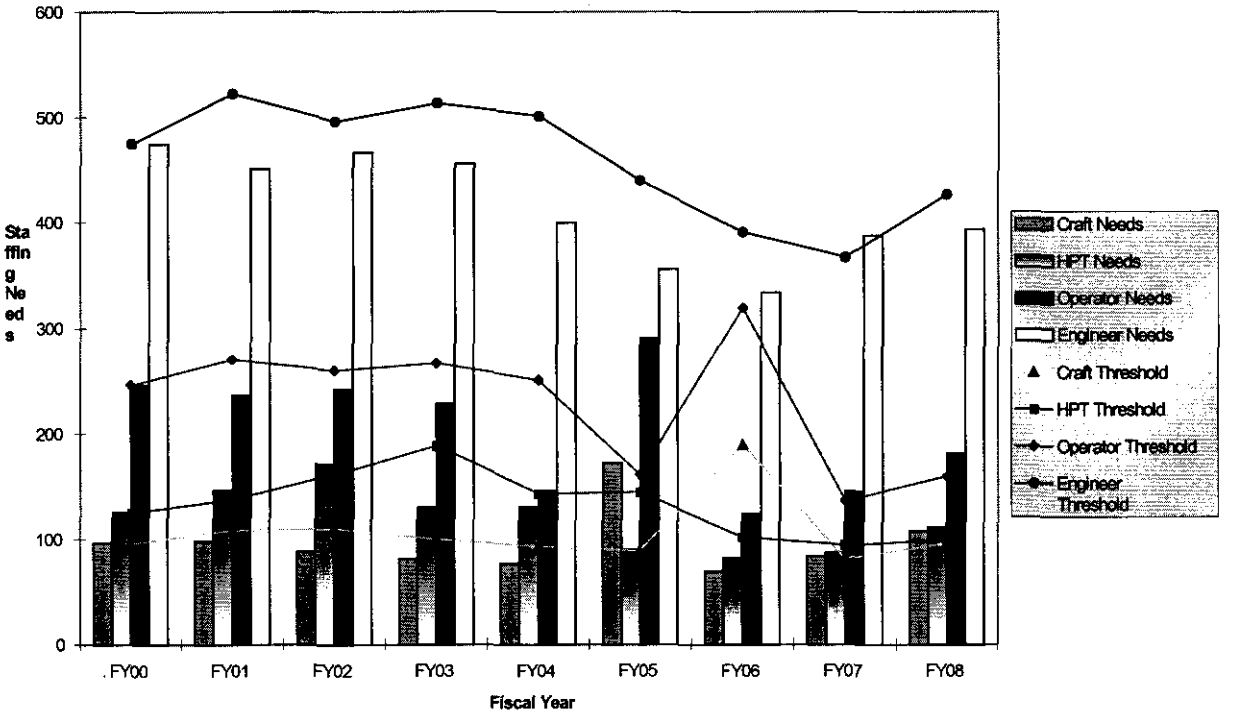

Table 4-1. CH2M HILL Hanford Group, Inc., Non-Project Staffing Profile Summary for Crafts, Engineers, Operators, and Health Physics Technicians Requiring Specific Recruitment Strategies.

Tailored Recruitment Strategy Subsection No. in Section 5.0	COCS	COCS Title	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
5.1.1	CXXX	Crafts	96	98	88	81	77	172	69	83	107
5.1.2	EXXX	Engineers	475	451	467	456	400	356	334	388	394
5.1.3	RXXX	Operators	246	236	242	228	146	290	124	145	181
5.1.4	T050	Health physics technicians	125	146	171	130	131	90	82	87	111

1. FY 2005 data include 270 positions that are in the CHG baseline for Privatization Contractor (108 crafts, 108 operators, and 54 operating engineers). The issue of who is responsible for hiring and one year of training requires resolution by the Office of River Protection.
2. This table does not include CHG subcontractor staffing needs.

CHG = CH2M HILL Hanford Group, Inc.
COCS = Common Occupational Category System.
FY = fiscal year.

5.0 STRATEGY TO MEET HIRING NEEDS

CHG recognizes that success in achieving contract objectives depends, in part, on those personnel who perform to the day-to-day requirements of each assigned delivery order. Based on this understanding and on experience in similar efforts, CHG uses a management approach that will attract and retain current employees and facilitate the hiring of new personnel. This fully qualified and experienced staff ensures a smooth, risk-free transition when new employees are hired as well as attainment of ORP's objectives throughout the contract life cycle. The approach is designed to

- Emphasize local hiring
- Minimize hiring of project-oriented staff into CHG by drawing on the skills resident in the subcontractors available locally to CHG
- Provide flexibility to respond to changing workloads by implementing a cross-training program tailored to long-term service-level delivery orders
- Provide a rapid-response team surge capability from sources outside the core Hanford Site employee base
- Quickly provide qualified replacements for departing employees.

CHG emphasizes a planned, controlled approach to staffing and staff increases. CH2M HILL has been successful in this approach and expects to repeat its success at the Hanford Site to attract and retain talented, dedicated technical personnel. Members of the CHG team will coordinate this staffing plan to provide initial and continued staffing of delivery orders with skilled personnel. The significant elements of this approach include the following:

- Establishing lines of communications with other Site contractors to define staffing requirements clearly
- Identifying and codifying the skills, experience, and educational requirements for each position
- Identifying specific labor categories that may be difficult to fill and aggressively pursuing individuals who already meet the requirements or who can meet them with special training or assignments
- Determining the applicability of subcontracting to fulfill the needs, particularly when the need is of limited duration
- Maintaining strong relationships with local subcontractors and holding periodic briefing sessions outlining staffing needs so as to alert them of upcoming needs
- Maintaining a skills database containing names both internal and external applicants who meet Hanford Site requirements

- Using corporate resources and internal newsletters to attract required talent from other CH2M HILL projects
- Using established CH2M HILL relationships with major universities in the Pacific Northwest to "track" top students into CHG through a combination of summer internships and direct recruiting
- Recruiting and advertising via the Internet
- Attending job fairs
- Reassessing staffing needs with FH and the Privatization Contractor quarterly.

This staffing plan addresses the periodic need to meet peak staffing requirements. In addition, CHG has contracts with temporary placement services to help supply highly trained personnel. CHG measures strategies and methods for efficiency and effectiveness by the following performance measures: cost per hire, offers per hire, applicants per hire, applicant acceptance rate, comparison analysis, compensation ratios, and effectiveness in time as it relates to days to hire. The general recruiting process for full-time staff is shown in Table 5-1.

Table 5-1. Recruitment Process.

Activity	Description
Define resource requirements.	Identify resource requirements based on baseline in P3.
Determine skills area gaps and develop recruitment plan for those skill areas with increases greater than the assumed threshold.	Compare resource requirements by COCS codes to planned staffing levels. Develop recruitment plans for COCS codes that have annual increases over an estimated threshold. Tailor recruitment plans for each COCS code and identify recruitment approach, wage incentives, and training requirements and costs. Update the MYWP to cover recruitment and training costs.
Implement recruitment strategy.	HR implements recruitment plan for needed resources and coordinates these efforts with the appropriate project managers and other Hanford Site contractor HR departments.

COCS = Common Occupational Category System.
HR = human resources.
MYWP = multi-year work plan.
P3 = Primavera Project Planner™.

The general recruiting process for construction project management, design and construction activities is shown in Table 5-2.

Table 5-2. Construction/Subcontract Recruitment Process.

Activity	Description
Develop contract specifications for the design and construction phases of construction projects.	CHG will develop annual contract projections for design (A/E) and construction activities. This data will be incorporated into MYWP planning activities.
Review staffing profiles for executability by the planned work and subcontractor.	Staff requirements will be optimized from an execution standpoint, by FY, to ensure project completion and optimum use of personnel.
Identify subcontractor labor requirements.	Labor requirements are discussed with local labor officials, A/E firms, and vendors to determine availability of non-CHG personnel.
Subcontractors recruit required personnel.	Unions, A/E firms, and vendors will recruit labor from local union halls, professional firms, and nationally as required.
Provide required training to personnel.	CHG will specify the training required to qualify personnel to work on the assigned activities. Training will be the responsibility of the construction subcontractor who will use the personnel.

A/E = architect/engineer.
CHG = CH2M HILL Hanford Group, Inc.
FY = fiscal year.
MYWP = multi-year work plan.

5.1 TAILORED RECRUITMENT METHODS FOR IDENTIFIED SKILL AREAS

5.1.1 Crafts

FY 2005 shows an increased need for craft workers in the baseline for the Privatization Contractor. The data are included in the staffing plan to highlight the need for these resources at the Hanford Site. However, the hiring and training of the individuals for these positions is not the contractual responsibility of CHG. CHG has requested that ORP resolve the issue of who is responsible for hiring and training the staff for these positions through the Integrated Process and Product Development/Interface Control Document process. When responsibility for hiring these workers is assigned, recruiting strategies can be developed.

5.1.2 Engineers

A number of strategies will be used to recruit engineers. The primary methods of recruitment include advertising openings on the Internet; having established recruitment teams attend local job fairs; and establishing a rotational engineer program designed to attract new college graduates. CHG has established relationships with schools that identify engineering candidates who have climate and geographical preferences that are in keeping with the climate and geography of the Hanford Site area. CHG will attend national job fairs on an as-needed basis while maintaining an emphasis on local hiring. CHG also ensures its competitiveness by conducting and updating its compensation surveys. Other tools and strategies include the following:

- The completion of a skills area needs analysis, by engineering discipline, conducted by HR and the Chief Engineer's Office
- The establishment and maintenance of a resumé database categorized by skill mix and engineering discipline
- Initiation of an employee referral award program to provide incentives for CHG employees to refer engineering applicants
- Establishment of a transfer process within the CHG family of companies that provides incentives for engineers to transfer to CHG when their current assignments are completed
- Use of CHG employees as staff augmentation to address short-term spikes in staffing needs.

5.1.3 Operators

The major increase in FY 2005 staffing needs is for operators that are in the baseline for the Privatization Contractor. The data are included in the staffing plan to highlight the need for these resources at the Hanford Site. However, the hiring and training of the individuals for these positions is not the contractual responsibility of CHG. CHG has requested that ORP resolve the issue of who is responsible for hiring and training the staff for these positions through the Integrated Process and Product Development/Interface Control Document process. When responsibility for hiring these workers is assigned, recruiting strategies can be developed.

It is expected that the Privatization Contractor's need for nuclear operators can be met by the supply of out-placed operators from FH. Expectations are that the number of full-time staff needed by FH will be reduced by more than 114 in FY 2004, which will be enough to ensure that the Privatization Contractor's staffing demands can be met.

5.1.4 Health Physics Technicians

A number of strategies will be used to recruit HPTs. The primary methods used by CHG will include recruitment near commercial and DOE nuclear facilities and via the Internet. If necessary, CHG can hire personnel and restart the HPT Technical Training Program at Columbia Basin College in Pasco, Washington, to train them. One strategy for the FY 2002 peak in demand is the use of temporary subcontractor HPTs. Because the work is under union jurisdiction, the effects will have to be negotiated between CHG and the International Brotherhood of Electrical Workers Local 984 and HAMTC. If necessary, CHG will team with FH to develop an integrated strategy for recruiting and hiring HPTs.

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6.0 SUMMARY

Based on this staffing plan, CHG is confident that it can recruit the staff required to execute Phase 1B of Privatization. Specific recruitment strategies are presented in detail in Sections 3.0 and 5.0 of this document.

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ATTACHMENT A

CH2M HILL HANFORD GROUP, INC., NON-PROJECT STAFFING PROFILE SUMMARY

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ATTACHMENT A

CH2M HILL HANFORD GROUP, INC., NON-PROJECT STAFFING PROFILE SUMMARY

COCS	COCS Title	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
	Crafts									
C000	Crafts	8	9	7	7	8	112	7	9	41
C010	Carpenters	3	3	3	3	3	3	3	3	3
C020	Electricians	44	48	42	40	35	34	34	38	36
C030	HVAC-heating/refrigeration	0	0	0	0	0	0	0	0	0
C040	Machinists	8	4	4	1	3	1	4	6	1
C060	Millwrights	5	5	6	5	5	5	5	6	6
C070	Painters	4	4	5	5	5	5	5	5	5
C080	Plumbers and pipefitters	22	23	18	17	16	10	10	12	12
C090	Structural and metal workers	2	2	2	3	2	2	1	2	1
	Engineers									
E000	Engineers	47	36	45	44	33	29	28	43	54
E010	Chemical engineers	92	70	82	69	46	50	46	56	58
E020	Civil engineers	2	4	3	4	1	1	2	3	3
E040	Electrical engineers	35	33	31	32	27	22	24	25	25
E050	Environmental engineers	36	38	36	36	33	32	31	32	30
E060	Industrial engineers	2	2	2	2	2	2	2	2	2
E070	Mechanical engineers	44	41	46	29	29	22	18	20	18
E080	Nuclear engineers	13	10	12	12	12	12	13	14	15
E090	Petroleum/mining engineers	2	1	1	1	1	1	1	1	1
E100	Plant engineers	78	79	78	77	76	58	61	67	67
E110	Quality control engineers	29	30	29	27	26	22	21	26	34
E120	Safety engineers	42	48	41	44	40	44	35	37	37
E130	Other engineers	53	59	61	79	74	61	52	62	50
	General Administration									
G000	General administration secretarial, clerk	2	0	0	2	0	0	0	0	11
G010	Administrative assistants	24	22	24	25	23	22	21	20	19
G020	Office clerks (general)	35	36	37	35	31	30	31	29	29
G030	Office clerks (specialized)	15	15	14	12	13	12	12	12	12
G030	Office clerks (specialized) - BU	0	0	0	0	0	0	0	0	0
G040	Secretaries	64	64	66	61	61	58	58	59	55

COGS	COGS Title	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
	Laborers and General Service Workers									
L000	Laborers and general service workers	4	3	2	3	3	2	2	2	2
L030	Janitors and cleaners	7	7	7	7	7	7	7	7	7
L070	Light vehicle drivers	4	5	4	4	4	4	4	3	3
	Managers									
M000	Managers	3	2	2	2	2	2	2	2	19
M010	First-line supervisors	80	80	76	77	59	55	52	58	55
M020	Managers and executives	135	129	133	128	126	112	110	113	112
M030	Project and program managers	44	38	40	39	43	42	41	37	35
	Professional Administration									
P000	Professional administration and related occupants	7	4	4	4	4	4	5	5	15
P010	Accountants and auditors	42	40	41	40	40	38	38	37	33
P030	Buyers/procurement/contracting	5	4	4	4	5	6	4	3	1
P040	Communications specialists	13	11	11	11	11	10	8	8	8
P050	Compliance inspectors	0	0	0	0	0	0	0	0	3
P060	Computer systems analysts	5	7	6	5	5	5	5	4	4
P070	Planner/scheduler/estimators	48	50	49	44	38	33	32	35	34
P080	Health physicists	21	21	27	23	18	19	20	20	21
P090	Industrial hygienists	6	4	4	4	4	5	4	4	5
P110	Personnel and labor relations	8	8	8	8	8	8	8	8	1
P140	Safeguards and security specialists	2	1	1	1	1	1	1	1	1
P150	Trainers and instructors	16	16	16	21	18	16	17	19	16
P160	Technical writers and editors	13	15	23	20	19	9	10	14	9
P170	Other professionals	9	9	9	9	9	8	8	8	8
	Operators									
R000	Operators	8	3	3	4	2	110	5	13	34
R030	Material moving equipment operator	0	1	0	1	1	1	2	1	1
R040	Nuclear plan operators	1	0	0	0	0	0	0	0	0
R050	Nuclear waste process operator	226	221	228	212	135	172	110	123	138
R070	Utilities system operators	11	11	11	11	8	7	7	8	8
	Scientists									
S000	Scientists	0	1	1	0	0	0	0	0	0
S010	Chemists	6	7	14	8	5	5	5	4	4
S020	Environmental scientists	6	6	5	5	5	5	5	5	5
S030	Geologists/geophysicists/hydro	2	1	1	1	1	1	1	0	0
S050	Materials scientists	1	1	1	1	1	1	1	1	1

COCS	COCS Title	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
S060	Mathematicians	1	1	1	1	1	1	1	1	0
S070	Physicists	0	1	1	1	1	1	1	1	1
S090	Other scientists	1	1	2	2	2	2	2	1	1
	Technicians									
T000	Technicians	2	0	0	0	0	0	0	1	10
T030	Engineering technicians	8	8	8	7	5	6	5	5	5
T050	Health physics technicians	125	146	171	130	131	90	82	87	111
T060	Industrial health/safety technicians	9	6	6	5	5	6	4	6	6
T070	Instrument and control technicians	36	37	36	38	34	36	38	40	44
T080	Laboratory technicians	3	3	4	4	4	4	4	4	4
T110	Other technicians	5	4	4	2	1	1	1	1	1
CHG staffing profile from P3		**1,634**	**1,599**	**1,660**	**1,559**	**1,371**	**1,485**	**1,177**	**1,282**	**1,405**
Adjustment for operator bumping (R050)						31				
CHG Staffing profile after adjustments		**1,634**	**1,599**	**1,660**	**1,559**	**1,402**	**1,485**	**1,177**	**1,282**	**1,405**
Subcontractor support – engineers		252	248	269	245	223	259	267	316	223
Subcontractor support – general administration		85	83	90	82	74	87	89	106	74
Subcontractor support – managers		15	15	15	15	15	15	15	15	15
Subcontractor support – professional administration		107	105	114	104	94	110	113	134	94
Subcontractor support – scientists		7	7	8	7	7	8	8	9	7
Subtotal subcontractor support		**466**	**458**	**496**	**453**	**413**	**479**	**493**	**580**	**413**
CHG staffing profile after adjustments, including subcontractor support		**2,100**	**2,057**	**2,156**	**2,012**	**1,815**	**1,964**	**1,670**	**1,862**	**1,818**

1. In FY 2005 P3 baseline incorrectly identified 54 engineers (E000) for turnover to the Privatization Contractor, instead of 54 operators (R050). Baseline data was adjusted to correct this error.

2. This staffing profile is based on a planned mix of CHG and subcontractor staff. As these positions are required, CHG will determine the appropriateness of subcontracting to fulfill the needs.

3. Estimated subcontractor support was based on the dollar value of contracts included in the CHG baseline.

BU = bargaining unit.
CHG = CH2M HILL Hanford Group, Inc.
COCS = Common Occupational Category System.
FY = fiscal year.
P3 = Primavera Project Planner™.

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ATTACHMENT B

STAFFING NEEDS FOR FEED DELIVERY/STORAGE CONSTRUCTION PROJECTS

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ATTACHMENT B

STAFFING NEEDS FOR FEED DELIVERY/STORAGE CONSTRUCTION PROJECTS

COCS	COCS Title	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
	Crafts									
C010	Carpenters	1	4	15	4	10	9	7	2	2
C020	Electricians	1	19	70	33	44	37	28	15	10
C030	HVAC-heating/refrigeration	1	1	0	1	0	0	0	0	0
C050	Masons	0	0	1	1	1	1	1	1	1
C060	Millwrights	0	2	6	6	7	9	6	1	1
C070	Painters	1	4	8	3	8	5	3	1	1
C080	Plumbers and pipefitters	8	41	90	38	41	47	29	17	13
C090	Structural and metal workers	1	4	8	4	11	18	13	4	2
C120	Other crafts	0	10	25	18	20	25	20	15	13
E000	Engineers	1	1	2	4	4	4	2	1	1
E010	Chemical engineers	2	1	2	1	2	1	1	1	1
E020	Civil engineers	1	4	9	11	11	9	6	4	2
E040	Electrical engineers	4	7	15	27	21	14	9	5	2
E050	Environmental engineers	1	2	3	4	4	4	1	1	1
E070	Mechanical engineers	10	8	10	6	8	6	5	3	1
E080	Nuclear engineers	2	2	3	1	1	1	1	1	1
E100	Plant engineers	1	1	3	1	2	1	1	1	1
E110	Quality control engineers	2	5	7	4	4	4	1	1	1
E120	Safety engineers	1	8	12	8	8	8	5	2	2
E130	Other engineers	15	28	49	71	59	42	35	25	18
E140	Construction engineers	1	8	11	7	8	7	4	2	2
G000	General administration secretarial, clerk	1	1	1	1	1	1	1	1	1
G010	Administrative assistants	1	1	1	1	1	1	1	1	1
G020	Office clerks (general)	2	1	3	1	2	2	1	1	1
G040	Secretaries	2	15	27	19	20	16	8	4	2
L000	Laborers and general service workers	6	31	107	51	67	67	49	35	30
M000	Managers	10	22	23	22	20	15	10	5	3
M010	First line supervisors	2	9	7	1	1	1	1	1	1
M020	Managers and executives	4	3	5	4	3	2	2	2	2
M030	Project and program managers	6	5	6	6	6	5	3	2	2
P010	Accountants and auditors	2	8	13	10	9	8	4	2	2
P020	Architects	0	1	1	6	5	4	1	1	1
P030	Buyers/procurement/contracting	2	5	7	5	6	6	3	1	1

COCS	COCS Title	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
P050	Compliance inspectors	0	1	1	1	1	1	1	1	1
P070	Planner/scheduler/estimators	3	5	6	4	4	2	2	1	1
P080	Health physicists	1	2	19	6	20	3	2	2	2
P090	Industrial hygienists	0	0	0	0	0	0	0	0	
P150	Trainers and instructors	0	1	2	3	2	2	1	1	1
P160	Technical writers and editors	1	7	17	14	10	8	2	1	1
P170	Other professionals	1	0	1	1	1	1	1	1	1
R000	Operators	0	10	17	12	11	11	7	5	5
Total Equivalent Staff		**98**	**288**	**613**	**421**	**464**	**408**	**278**	**171**	**135**

COCS = Common Occupational Category System.
FY = fiscal year.
HVAC = heating, ventilation, and air conditioning.

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