

SOUTHWESTNAVFACENGCOM
BRAC Operations Office
Code 06CC.LMH
Telephone: (619) 532-0783/Fax (619) 532-0780

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Transmittal

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From: Lynn Marie Hornecker

To: Marianna Potacka
BRAC Environmental Coordinator
Southwest Division, Naval Facilities Engineering Command
BRAC Operations Office
1220 Pacific Highway
San Diego, California 92132-5190

James Barton
California Regional Water Quality Control Board
Central Valley Region, Sacramento Office
3443 Routier Road, Suite A
Sacramento, California 95827-3003

Francesca D'Onofrio
California Department of Toxic Substances Control
Office of Military Facilities
10151 Croydon Way, Suite 3
Sacramento, California 95827-2106

Subj: Status Report for Various Environmental Restoration Program Projects
National Aeronautics and Space Administration (NASA)
Crows Landing Flight Facility

The purpose of this status report is to provide an update on work in progress.

Underground Storage Tank (UST) Program

UST Cluster 1 – Tanks CL-1, CL-2, and CL-3

UST Cluster 1 is located adjacent to Installation Restoration Program (IRP) Site 17 (Site 17) – the Demolished Hangar Area. Two portable soil vapor extraction (SVE) treatment units with thermal oxidizers operated at UST Cluster 1 during November and December 2000, and a permit application for a third portable SVE unit is under review at the San Joaquin Valley Air Pollution Control District as of January 2001.

The testing of each vapor extraction well at UST Cluster 1 was completed on 10 January 2001, and preliminary data is summarized in Table 1. Selected radius of influence (ROI) measurements from the testing of individual deep vadose zone wells are shown on attachment 1. Performance evaluation testing is in progress.

Table 1. PRELIMINARY Test Data for Vapor Extraction Wells at UST Cluster 1

Well ID	Screened Interval (feet below ground surface)	Well Diameter (inches)	Flow (scfm) / Vacuum (inches of water) at approximately 48 hours (end of test)	Estimated Radius of Influence in Feet (at 0.1 inch of water /at 0.5 inch of water)	Vapor Concentration at end of 48-hour test TVPH (ppmv)	Comments/Date of Completion of Testing Activities	
CL1-VW-20 (M)	27-32	4	15.2 / 90	85/ 40	5,750 Acetone 22.0 "J" MEK 3.6 "J"	4 August 2000	1
CL1-VW-22 (D)	48-53	4	20 / 70	95/ 50	252 No benzene or acetone	9 August 2000	2
CL1-SV-01 (C)	46-60	4	23 / 110	65/ 35	87,100 Trace Acetone during first 24 hours Benzene 49.6	11 August 2000	3
CL1-VW-04 (M)	36-41	2	10 / 107	55/ 10	1,330 Trace Acetone during first 24 hours	16 August 2000	4
CL1-VW-23 (D)	48-53	4	18/ 110	105/ 45	7,100 Acetone 5.96 "J"	18 August 2000	5
CL1-VW-03 (S)	16-26	2	37.5/ 84	90/ 35	984 Trace Acetone during first 4 hours	23 August 2000	6
CL1-VW-19 (D)	46-56	4	22/ 106	90/ 50	1,630 Acetone 1.3 "J"	25 August 2000	7
CL1-VW-08 (D)	46-56	4	20/ 37	85/ 30	2,610 Acetone 0.863 "J"	30 August 2000	8
CL1-VW-25 (D)	48-53	4	12.5/ 108	80/ 35	4,460 Benzene 4.95 No acetone	1 September 2000	9
CL1-VW-20 (S)	18-23	2	12.4/ 101	70/ 40	1,020 Acetone 2.86 "J"	7 September 2000	10
CL1-VW-07 (M)	34-44	2	10.1/8	50/20	11,200 No acetone	9 September 2000	11
CL1-VW-19(S)	21-26	2	11/92	75/30	914 Acetone 1.35	13 September 2000	12
CL1-VW-03(D)	47-52	4	20/90	90/40	3,500 No acetone, no BTEX	15 September 2000	13
CL1-VW-24 (D)	48 - 53	4	7/105	60/20	7,180 Benzene 4.71 No acetone	20 September 2000	14
CL1-VW-21 (D)	43 - 53	4	20/32	110/45	237 Trace acetone and MEK in samples collected during first 24 hours	22 September 2000	15

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CL1-VW-08 (S)	25 - 34	2	20/35	90/25	1,350 No BTEX	27 September 2000	16
CL1-VW-19 (M)	30 - 35	2	12.4/98	65/25	2,600 Acetone 2.06 "J"	29 September 2000	17
CL1-VW-07 (D)	48 - 58	4	12.5/109	65/25	30,100 [No BTEX or acetone]	4 October 2000	18
CL1-VW-04 (D)	45 - 55	4	9.5/102	50/25	3,170 [No BTEX or acetone]	6 October 2000	19
CL1-VW-08 (M)	38 - 43	2	10/8 (at 24 hours)	70/10	1,090 at 24 hours [No BTE compounds]	11 October 2000	20
CL1-VW-17 (D)	46 - 56	4	15/85	95/40	37,800 Benzene 7.39 "J"	13 October 2000	21
CL1-VW-01 (S)	9 - 14	2	20.5/37	70/20	1,630 Acetone 1.87 "J"	18 October 2000	22
CL1-VW-16 (M)	36 - 41	2	12.8/95	65/25	4,350 Benzene 1.3 "J"	20 October 2000	23
CL1-VW-11 (S)	25 - 34	2	7/109	30/10	18,300 No acetone or Benzene	25 October 2000	24
CL1-VW-11 (M)	38 - 43	2	10/31 (at 24 hours)	70/15	27,900 [No acetone or BTEX]	26 October 2000	25
CL1-VW-11 (D)	46 - 56	4	19.2/93	110/40	45,700 No acetone	26 October 2000	26
CL1-VW-12 (D)	45 - 55	4	15.4/102	120/45	41,700	1 November 2000	27
CL11-VW-12 (M)	30 - 40	2	25/14	90/30	24,500 No acetone	2 November 2000	28
CL1-VW-12(S)	17 - 22	2	10/101	55/20	309 Trace acetone	3 November 2000	29
CL1-VW-01(A)	20 - 30	2	28/79	65/20	14,900 Trace acetone	4 November 2000	30
CL1-VW-15(M)	30 - 40	2	10/36	55/20	12,800	8 November 2000	31
CL1-VW-06(M)	38 - 43	2	10/3	90/20	5,560 No acetone	9 November 2000	32
CL1-VW-15(D)	45 - 55	4	21/70	90/40	21,900 No acetone	10 November 2000	33
CL1-VW-06(D)	46 - 56	4	21/116	100/35	21,500 No acetone	11 November 2000	34
CL1-VW-10(M)	38 - 43	2	10/10	80/25	10,700 Trace acetone	15 November 2000	35
CL1-VW-13(M)	37 - 42	2	15/7.5	80/30	15,600 No acetone	16 November 2000	36
CL1-VW-10(S)	24 - 34	2	20/78	70/30	7,440 Trace acetone	17 November 2000	37
CL1-VW-13(D)	46 - 56	4	20/29	100/55	67,900 Acetone at 4-hr reading only	18 November 2000	38

Table 1. PRELIMINARY Test Data for Vapor Extraction Wells at UST Cluster 1

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CL1-VW-17(M)	36 – 41	2	10/9	70/30	13,700 Trace acetone	22 November 2000	39
CL1-VW-10(D)	45 – 55	4	23/70	120/50	13,000 No acetone	29 November 2000	40
CL1-VW-09(S)	25 – 34	2	20/63	120/40	9,280 Acetone 12.9 "J"	30 November 2000	41
CL1-VW-09(D)	45 – 55	4	33/47	110/60		1 December 2000	42
CL1-VW-09(M)	37 – 42	2	10/6	85/15		2 December 2000	43
CL1-VW-02(M)	30 – 35	2	10/24	90/20		6 December 2000	44
CL1-VW-03(M)	37 – 42	2	20/16	120/35	2,870 No acetone	7 December 2000	45
CL1-VW-02(S)	15 – 25	2	18/94	90/10	4,050 No acetone	8 December 2000	46
CL1-VW-02(D)	40 – 55	4	12/119	70/25	4,290 No acetone	9 December 2000	47
CL1-VW-14(M)	33 - 43	2	22.5/50	120/50	5,400 No acetone	13 December 2000	48
CL1-VW-16(D)	46 - 56	4	28/75	110/50	10,300 No acetone	14 December 2000	49
CL1-VW-15(S)	22 - 32	2	40/68	100/50	4,970 No acetone	15 December 2000	50
CL1-VW-14(D)	46 - 56	4	25/130	100/50	12,400 No acetone	16 December 2000	51
CL1-VW-18(S)	23 - 33	2	17/99	40/10	3,820 No acetone	20 December 2000	52
CL1-SV-01(B)	35 - 40	2	10 / 4	90 / 15	69,300 No acetone	21 December 2000	53
CL1-VW-05(M)	32 – 42	2	10 / 12	70 / 20		4 January 2001	54
CL1-VW-05(D)	45 – 55	4	14.5 / 100	70 / 35		5 January 2001	55
CL1-SV-01(D)	46 - 56	4	18 / 108	80 / 40		6 January 2001	56
CL1-VW-18(D)	45 - 55	4	14.5 / 95	120 / 40		10 January 2001	57

Explanation:

ppmv parts per million by volume
 BTEX Benzene, Toluene, Ethylbenzene, Xylenes
 "J" Laboratory data qualifier for estimated value

TVPH total volatile petroleum hydrocarbons
 MEK Methyl ethyl ketone

UST Site 109

Preparations for vent testing activities are in progress.

Installation Restoration Program

Site 11 – Former Disposal Pits Area

The evaluation of electromagnetic geophysical survey data and plans for future trenching are in progress. One large anomaly and several smaller anomalies were identified.

Procurement of engineering services is in progress to revise the feasibility study for Site 11 to address the surface and subsurface disposal areas and to re-evaluate and/or update Applicable or Relevant and Appropriate Requirements (ARARs) and remedial alternatives.

Site 17 – Demolished Hangar Area and Administration Area Plume

Field work is in progress for the time-critical removal actions for the extraction of contaminated groundwater from the vicinity of a former dry well located within the former UST Cluster 1 facility. Aquifer tests were conducted at wells CL1-MW-10(S), CL1-MW-02(S), CL1-MW-12(S), and CL1-MW-16(S) in late December 2000 and early January 2001, and data is in the process of being evaluated. Recovery rates were very low in wells CL1-MW-12(S) and CL1-MW-16(S).

Comments on the Action Memorandum were received from the RWQCB and NASA in early January 2001, and the Navy is in the process of developing responses to comments. The RWQCB provided Applicable or Relevant and Appropriate Requirements (ARARs) for soil and groundwater remediation, and the Navy is in the process of evaluating these ARARs.

Revisions to the Site 17 Feasibility Study Report are in progress.

Other Projects

Draft Base Realignment and Closure Environmental Business Plan (EBP)

The Draft EBP was distributed to the team members for review and comment in December 2000, and Stanislaus County provided comments pertaining to reuse strategies in early January 2001.

Groundwater Sampling

Groundwater samples were collected at wells identified in the Rev 1 Work Plan during early November 2000 and laboratory data was evaluated and compiled during December 2000 and January 2001.

Sewer Investigation

Geophysical survey data was evaluated, and the videographic survey of sections of the current sewer line was completed in January 2001. The survey identified that gravel and sediment were present in the sewer lines, and the presence of these materials impeded the survey. Planning is in progress for sampling and/or trenching activities.

Closure of Abandoned Water Supply Wells

RWQCB comments dated 3 January 2001 on the planned well destruction procedure for the abandoned water supply well at Building 151 were received in early January 2001 and comments were received from Stanislaus County in early January 2001. The Navy is in the process of identifying a potential strategy that will address the comments of both agencies.

Water Level Monitoring

Four (4) automated water level indicators were installed at the following locations: one unit at IRP Site 11, one unit at UST Cluster 2, and two units at the Administration Area Plume (IRP Site 17, UST Site 117, and UST Cluster 1) as described in the Navy's facsimile transmittal dated 1 November 2000. Locations for four (4) additional units are being evaluated.

Record Search Activities

Acquisition of historical and technical documentation continues. An aerial photograph of the former NALF Crows Landing dated 1956 is attached.

Meetings

31 January 2001: The meeting will be held at the RWQCB office in Sacramento, and a draft meeting roster is attached.

Attachments

- Preliminary Data – Selected Radius of Influence Measurements
- Historical Aerial Photograph Dated 1956
- Draft roster for 31 January 2001 meeting

CF:

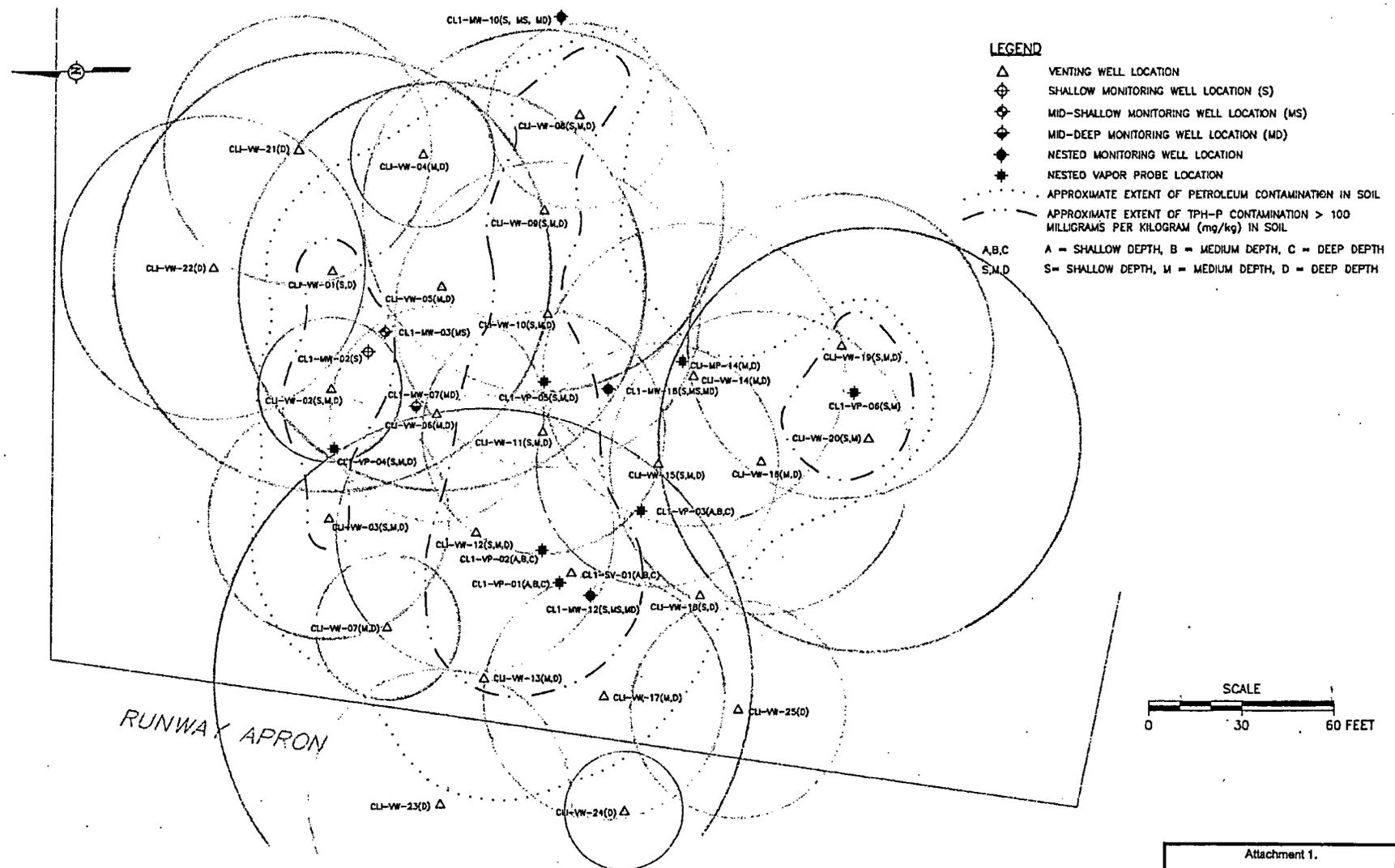
Don Chuck
NASA Ames Research Center
Office of Environmental Services
M/S 218-1
Moffett Field, California 94035-1000

Brad Hicks
Stanislaus County
Hazardous Materials Division
Department of Environmental Resources
3800 Cornucopia Way, Suite C
Modesto, CA 95358-9492

SWDIV/EFA-W team members

Project File (Crows Landing)

DRAWING NUMBER 800063-B10
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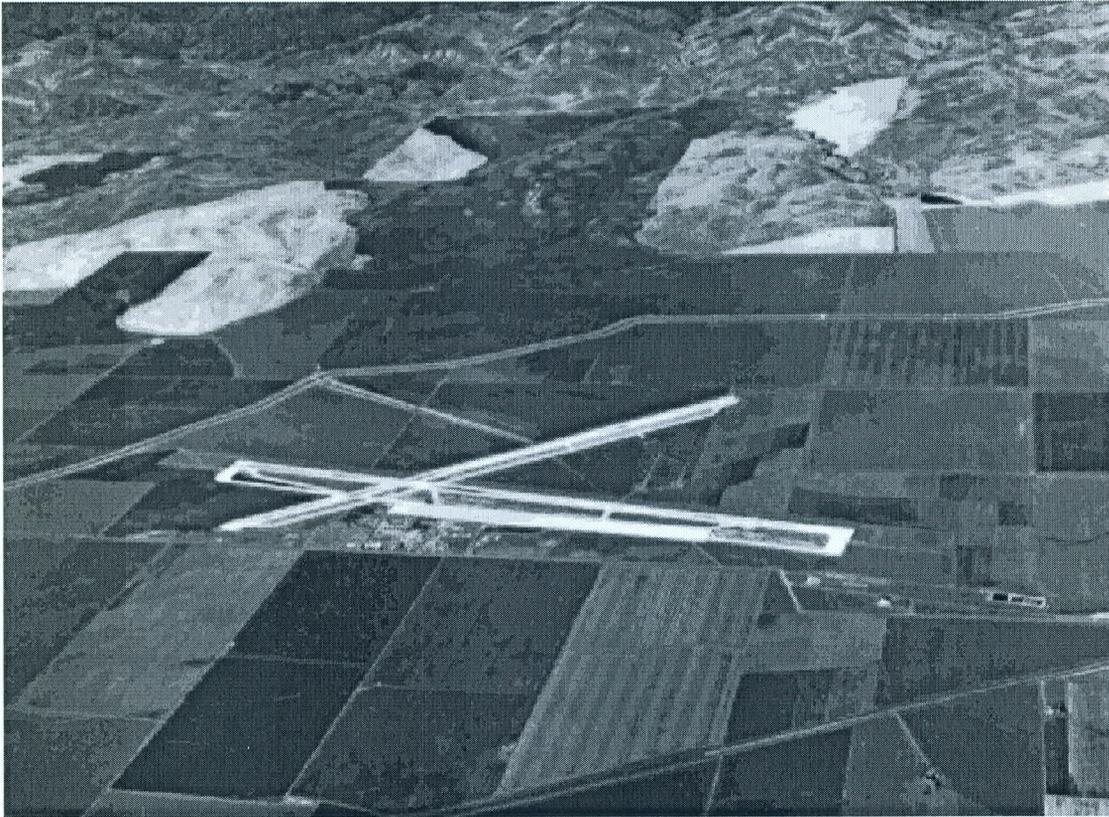


- LEGEND**
- △ VENTING WELL LOCATION
 - ⊕ SHALLOW MONITORING WELL LOCATION (S)
 - ⊕ MID-SHALLOW MONITORING WELL LOCATION (MS)
 - ⊕ MID-DEEP MONITORING WELL LOCATION (MD)
 - ◆ NESTED MONITORING WELL LOCATION
 - ★ NESTED VAPOR PROBE LOCATION
 - - - - - APPROXIMATE EXTENT OF PETROLEUM CONTAMINATION IN SOIL
 - - - - - APPROXIMATE EXTENT OF TPH-P CONTAMINATION > 100 MILLIGRAMS PER KILOGRAM (mg/kg) IN SOIL
 - A, B, C A = SHALLOW DEPTH, B = MEDIUM DEPTH, C = DEEP DEPTH
 - S, M, D S = SHALLOW DEPTH, M = MEDIUM DEPTH, D = DEEP DEPTH

NOTE: RADIUS OF INFLUENCE FOR DEEP WELLS IS BASED UPON REMOTE VACUUM PRESSURE OF 0.1 INCH OF WATER COLUMN.

Attachment 1.
 PRELIMINARY DATA
 Selected Radius of Influence
 Measurements for Deep Vadose Zone
 Wells at UST Cluster 1
 NASA CROWS LANDING FLIGHT FACILITY

Attachment 2. Historical Aerial Photograph dated 1956 Former NALF Crows Landing Looking West



Attachment 3. Draft Meeting Roster

NASA Crows Landing Flight Facility

Meeting Date: 31 January 2001

Name	Affiliation	Phone/Fax	E-mail address
Marianna Potacka	Southwest Division, Naval Facilities Engineering Command	(619) 532-0941/ (619) 532-0940	Potackamk@efdswnavfac.navy.mil
Jim Barton	Regional Water Quality Control Board, Central Valley Region	(916) 255-3050/ (916) 255-3052	Bartonj@rb5s.swrcb.ca.gov
John Russell	Regional Water Quality Control Board, Central Valley Region	(916) 255-3066/ (916) 255-3052	Russelj@rb5s.swrcb.ca.gov
Francesca D'Onofrio	California Department of Toxic Substances Control	(916) 255-3603/ (916) 255-3697	Fdonofri@dtsc.ca.gov
Brad Hicks	Stanislaus County	(209)525-6700/	Bhicks@envres.org
Kirk Ford	Stanislaus County	(209) 525-6330/ (209) 525-5911	Fordk@mail.co.stanislaus.ca.us
Jim Simpson	Stanislaus County	(209) 525-6700 (209) 525-6774	Jsimpson@envres.org
Richard Jantz	Stanislaus County Executive Officer	(209) 525-4307	
Paul Caruso	Stanislaus County Supervisor		
Gordon Dewers	Stanislaus County		
Gary Munkawa	ROICC Moffett	(650) 603-9834/ (650) 603-9838	Munkawagj@efawestnavfac.navy.mil
Sandy Olliges	NASA	(650) 604-3355/ (650) 604-0680	Solliges@mail.arc.nasa.gov
Don Chuck	NASA	(650) 604-0237 (650) 604-0680	Dchuck@mail.arc.nasa.gov
Brian Staab	NASA	(650) 604-0701	Bstaab@mail.arc.nasa.gov
Abdul Hanif	NASA	(650) 604-1001	
Andy Piszkin	Southwest Division, Naval Facilities Engineering Command	(619) 532-0948/ (619) 532-0995	Piszkinfa@efdswnavfac.navy.mil
Carl Bonura	Southwest Division, Naval Facilities Engineering Command		
Regina Blair	Southwest Division, Naval Facilities Engineering Command		
Lynn Hornecker	Southwest Division, Naval Facilities Engineering Command	(619) 532-0783/ (619) 532-0780	Horneckerlm@efdswnavfac.navy.mil

Note:

- ✓ will be used to indicate attendance

TRANSMITTAL

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