



The Shaw Group Inc.™

M60050.003005
MCAS EL TORO
SSIC NO. 5090.3

August 11, 2003

Administrative Contract Officer
Southwest Division
Naval Facilities Engineering Command
Michelle Crook, 02R1.MC
1220 Pacific Highway
San Diego, California 92132-5187

Attention: Ms. Lynn Marie Hornecker

Subject: Technical Memorandum, Approach for Abandonment and Closure of Secondary JP-5 Fuel Pipeline, MSC JP5 Unit 6, Segments 8A, MSC JP5 Unit 4, Segment 11, and 12, Former Marine Corps Air Station El Toro, California, EFA West Contract No. N62474-98-D-2076, Contract Task Order 0024, Document Control Number 6467

Dear Ms. Hornecker:

This Technical Memorandum describes the proposed procedures to conduct pressure-testing and physical closure of the pipeline components at Location of Concern MSC JP-5, the inactive fuel distribution system at Marine Corps Air Station (MCAS) El Toro, California. Investigations of releases to the soil adjacent to the pipeline will be described in a subsequent document, as appropriate.

MSC JP-5 consists of the primary and secondary jet fuel supply pipelines at MCAS El Toro (the Station) as shown in Figure 1. In order to facilitate the closure and abandonment efforts, the various pipelines that comprise MSC-JP5 have been subdivided into Units, based on their location and function. Table 1 lists the components of MSC-JP5. Depending on the use, size, and complexity of the pipeline, it might be broken into smaller segments for the field portion of the work. Table 1 also indicates the segments that make up each Unit.

Shaw Environmental, Inc., with its subcontractor, has completed the field verification activities and based on the results of field verification work, developed this proposed set of procedures and plans to accomplish closure. These procedures are consistent with abandonment and closure activities conducted in September 2001 at MSC JP-5 Units 4 and Unit 5. These closure activities were accepted by the State Fire Marshall's office and Regional Water Quality Control Board (RWQCB).

Background

Jet fuel at MCAS El Toro was supplied via an 8-inch pipeline from a Defense Fuel Supply Center tank farm in Norwalk, California. Jet fuel was piped to Tank Farm 555 on the Northeast corner of the base. From Tank Farm 555 the fuel was piped or trucked to various destinations on the Station including Tank Farm 5, the truck stand immediately south of Tank Farm 5, the day tanks at MAG 11, and the day tanks at the Sharpshooters squadron area.

The main supply lines from Tank Farm 555 to Tank Farm 5, MAG 11 and Sharpshooters were tested and abandoned under a previous project. The remaining pipelines consist of:

- Piping within the former truck fueling stands south of Tank Farm 5 (Segment 8A)
- Miscellaneous piping associated with the old distribution system at MAG 11 (Segments 11 and 12).

This remaining pipeline layout is shown in Figure 2 and this plan addresses the closure and abandonment of MSC JP5-6, Segment 8A, MSC JP5-4 Segment 11, and MSC JP5-4 Segment 12. Attachment 1 provides more details about the pipelines.

MSC JP5 Pipeline Closure and Abandonment Approach

The following describes the procedures for closure and abandonment of pipeline segments 8A, 11, and 12. This approach, which will include cleaning, pressure testing and capping of the pipeline segments, per State Fire Marshall's office, is an accepted practice.

The pipeline closure and abandonment approach includes the following steps:

1. Fuel Removal: Existing fuel will be removed to the extent possible using vacuum trucks connecting to the low point drains in the pipelines.
2. Flushing: Fuel that remains in the pipelines will most likely be removed by one or more methods. Where possible, cleaning pigs may be introduced and used to help remove residual fuel. However, the piping has a number of inaccessible 90-degree elbows and straight tees and branches, which may make conventional pigging difficult or impossible. Rather than installing pig launchers and receivers and dealing with the unknown branches and tees in some lines, residual fuel may be flushed from the pipelines by injecting heated nitrogen gas into one end and recovering it at the other using a vacuum truck to collect any fuel.

Blind flanges and gaskets will be installed where necessary to isolate the segment being cleaned and tested. Compressed air or nitrogen gas might be used to dry the line by either pushing the pigs through the piping or purging the remaining fuel and/or water in the pipeline. Heated nitrogen gas is injected into the pipeline and then the hydrocarbon content of the exhaust gas is monitored. When the hydrocarbon content in the exhaust gas has a very low LEL, the pipeline is considered purged of hydrocarbons.

1. Pressure Testing – Nitrogen Gas: Pressure testing will be performed to determine whether the pipe is completely sealed or has leakage points. This task will be

accomplished using nitrogen gas in most cases. Nitrogen pressure test was successfully employed at MSC JP5-4, Segment 6 and MSC JP5-5, Segment 7 and was accepted by the State Fire Marshall and Regional Water Quality Control Board (RWQCB). This procedure provides two benefits, in that there is no JP5 fuel contaminated water to dispose of after the tests, and the pipelines are left with a nitrogen blanket after the tests. The pressure test is conducted for four hours and the pipeline is monitored for leaks and pressure changes, in the same manner as the hydrostatic pressure tests.

2. Closure: Following completion of the pressure tests, the closed pipelines will be left with an atmospheric pressure nitrogen blanket inside the pipes. This will reduce the future effort to remove the pipelines and allow metal recovery for the stainless steel pipelines. Blind flanges will be installed on the closest existing flange to the point where the line goes underground. To prevent unauthorized access to the cleaned/tested pipelines, two of the bolts on each flange will be tack-welded so that they cannot be easily removed.

Conclusions

Following your concurrence with the outlined plan, Shaw Environmental, Inc. will proceed with the procurement of a contractor to perform the work. Pressure testing activities are tentatively scheduled to begin during the first week of September 2003. Should you have any questions, please feel free to contact Dhananjay Rawal at (949) 660-7576.

Respectfully submitted,
SHAW ENVIRONMENTAL, INC.



Dhananjay Rawal
Project Manager

cc: Basic Contract Files, 02R1 (Trans Only)
Lynn Adair (2 Copies)
Robbin Gates (2 Copies)

List of Attachments

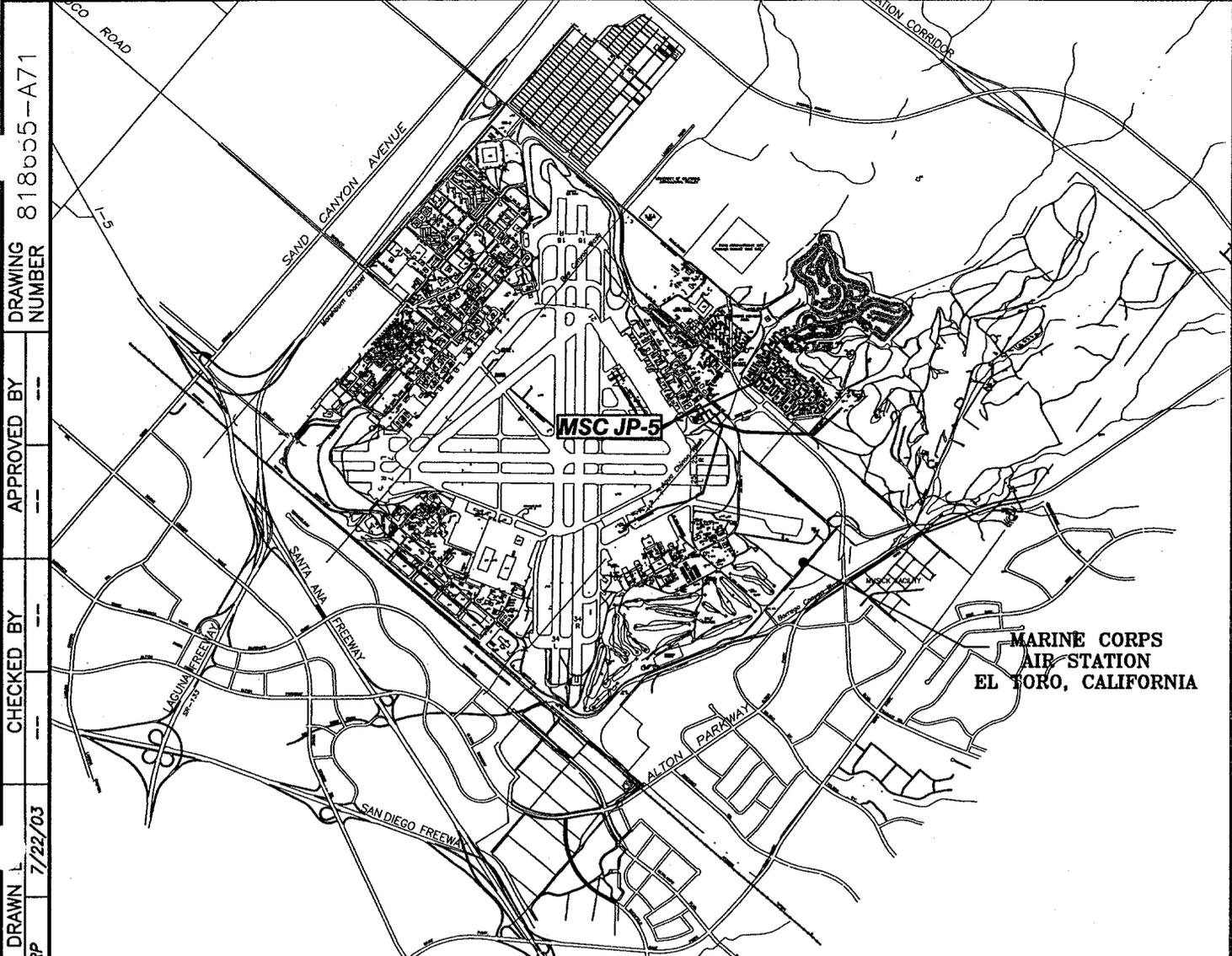
Figure 1 – Facility Location Map – MSC JP-5 – Inactive Fuel Supply Pipeline System

Figure 2 – MSC JP-5 – Inactive Fuel Supply Pipeline System Status

Table 1 – Locations of Concern – MSC JP-5 Unit Designations

Attachment 1 – Pipeline Segment Descriptions and Data

Figures



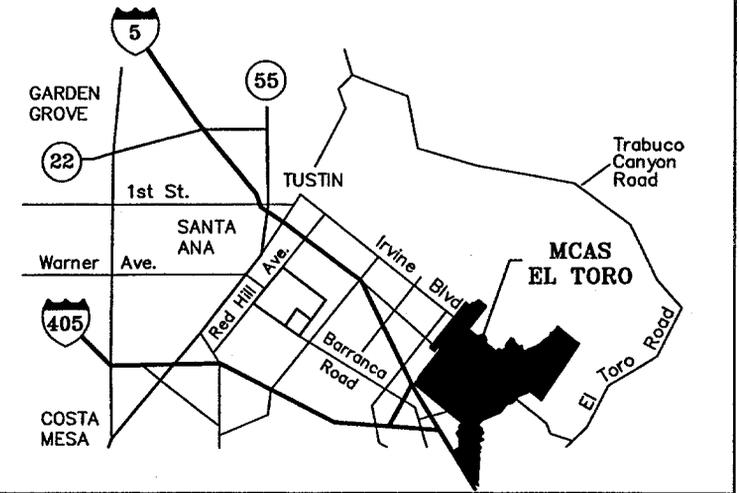
MARINE CORPS
AIR STATION
EL TORO, CALIFORNIA

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CHECKED BY
DRAWN BY RP
7/22/03

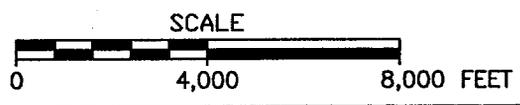
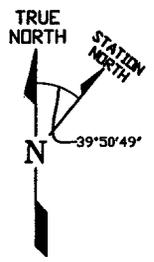


CALIFORNIA

SITE



MCAS
EL TORO



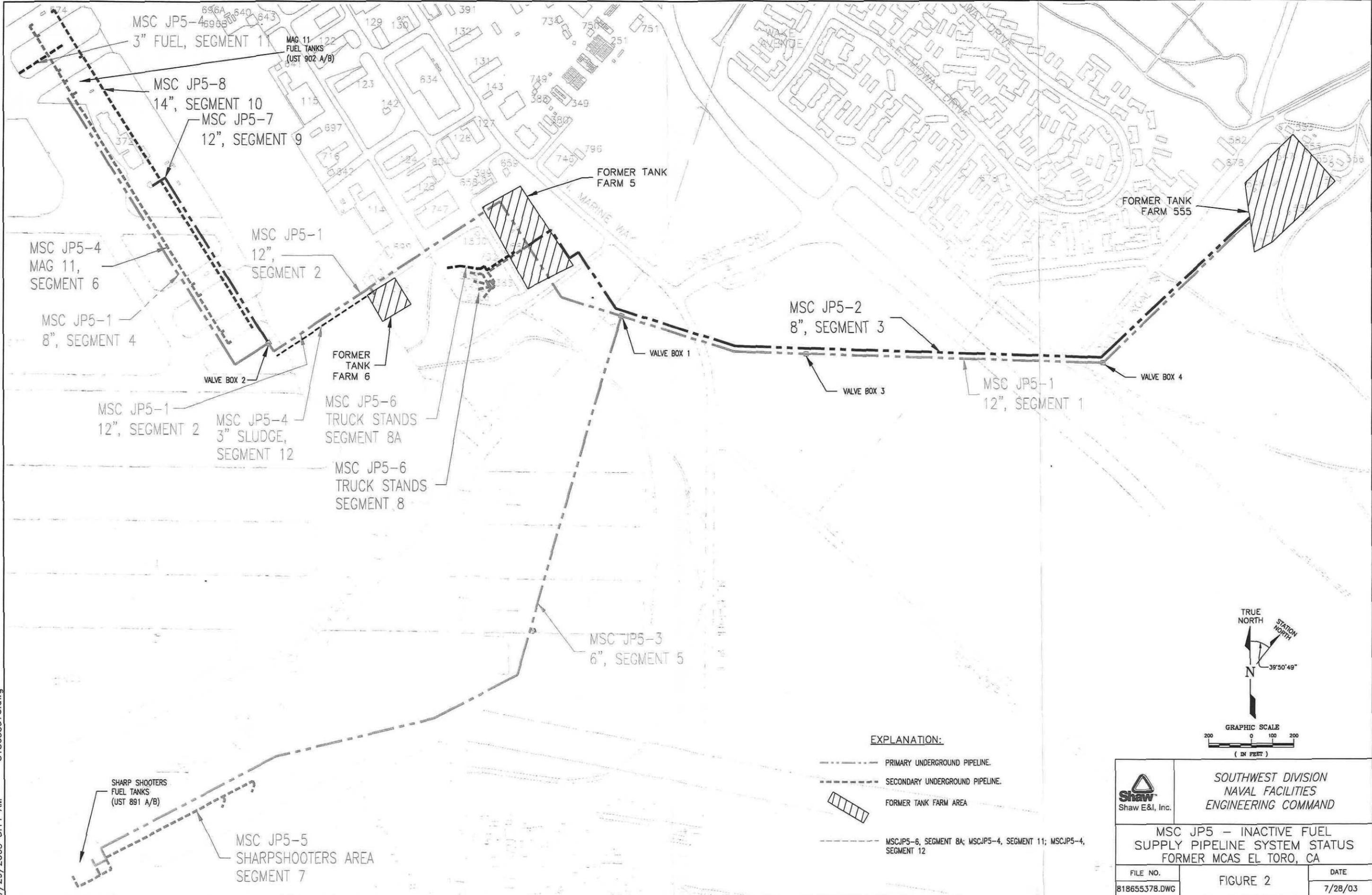
Shaw
Shaw Environmental, Inc.

EFA WEST
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CTO 24

FIGURE 1
FACILITY LOCATION MAP
LOCATION OF CONCERN MSC JP-5
MARINE CORPS AIR STATION
EL TORO, CALIFORNIA

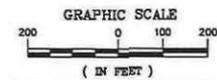
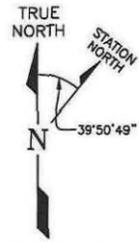
Jul 22, 2003 - 12:55:49 H:\NT_CORP\EFA_West\818655\818655A71.dwg

7/29/2003 8:11 AM 818655378.dwg



EXPLANATION:

- PRIMARY UNDERGROUND PIPELINE.
- SECONDARY UNDERGROUND PIPELINE.
- [Hatched Box Symbol] FORMER TANK FARM AREA
- MSCJP5-6, SEGMENT 8A; MSCJP5-4, SEGMENT 11; MSCJP5-4, SEGMENT 12



	SOUTHWEST DIVISION NAVAL FACILITIES ENGINEERING COMMAND	
	MSC JP5 - INACTIVE FUEL SUPPLY PIPELINE SYSTEM STATUS FORMER MCAS EL TORO, CA	
FILE NO. 818655378.DWG	FIGURE 2	DATE 7/28/03

Tables

Table 1
Location of Concern – MSC JP-5 Unit Designations

Unit Designation	Pipeline Description	Primary or Secondary Pipeline	Pipeline Segments Included
MSCJP5-1	JP-5 pipeline (12") from Tank Farm 555 to UST 902A/B (MAG 11)	Primary	1, 2, 4
MSCJP5-2	Old Aviation Gas/JP-5 Pipeline (8") from Tank Farm 555 to Tank Farm 5	Primary	3
MSCJP5-3	6-inch Pipeline from Valve Box 1 to UST 891A/B (Sharpshooters)	Primary	5
MSCJP5-4	Hot Fueling Pipelines at MAG 11	Secondary	6, 12
MSCJP5-5	Hot Fueling Pipelines at Sharpshooters	Secondary	7
MSCJP5-6	Truck Fueling Stands at Tank Farm 5	Secondary	8, 8A, 11
MSCJP5-7	Old 12" Feed from Valve Box 2 to Former UST 398	Primary	9
MSCJP5-8	Old Hot Fueling Pipelines at MAG 11	Secondary	10

Attachment 1
Pipeline Segment Descriptions and Data

Attachment 1 - Pipeline Segment Descriptions and Data

Pipeline Segment Descriptions

The fuel distribution pipeline system at MCAS El Toro was responsible for providing the aviation gas and jet fuel to a number of different areas within the Station. The pipelines have been classified into primary and secondary, depending on the main service they provided. Primary pipelines transported fuel to a series of storage tanks located throughout the Station. Secondary pipelines transported fuel from the storage tanks to the dispensing stations, for either aircraft or truck loading. The pipeline system has been divided into pieces, referred to as Units, for closure. Within each Unit there may be multiple segments of pipelines. This project is the second in a series to address the closure of the fuel pipelines at MCAS El Toro.

The pipelines covered by this project include Segments 8A, 11 and 12 and descriptions of the segments are provided below.

Segment 8A, MSC JP5-6

Segment 8A consists of an 8-inch carbon steel JP-5 pipeline that extends from Valve Box 5-28 at Tank Farm 5 to the truck stands area just south of Tank Farm 5. This pipeline and truck stand system was built in various stages between 1953 and 1957.

Segment 11, MSC JP5-4

Segment 11 is a carbon steel 3-inch pipeline that starts at an old truck loading filter/separator skid and ends underground between Lanes 1 and 2 at the MAG 11 area.

Segment 12, MSC JP5-4

Segment 12 is a carbon steel 3-inch sludge pipeline, that starts from Valve Box 2 and ends at Tank Farm 6.

Pipeline Data

The following section provides data, including pipe size, length, volume, and maximum operating pressure for each segment.

Segment 8A, MSC JP5-6

Size and Schedule	8-inch, Standard Schedule Carbon Steel
Lengths	560 ft. of 8-inch (approximate)
Volume	1459 Gallons / 195 cu. Ft. (approximate)
Maximum Operating Pressure	50 psig

Segment 11, MSC JP5-4

Size and schedule	3-inch Standard Schedule Carbon Steel
Length	275 ft. of 3-inch (approximate)
Volume	97 gallons/13 cu. ft. (approximate)
Maximum operating pressure	50 psig

Segment 12, MSC JP5-4

Size and schedule	3-inch Standard Schedule Carbon Steel
Length	600 ft. of 3-inch (approximate)
Volume	1496 gallons/200 cu. ft. (approximate)
Maximum operating pressure	50 psig

Material and Pressure Rating

The material and pressure rating for all pipelines are as follows:

Pipe material	A 53, Type I (assumed), or 316 S.S.
Nominal flange rating	150# ANSI
Design pressure (limited by flanges)	225 psig
Normal operating pressure	35-40 psig
Normal operating temperature	70°F
Maximum operating pressure	50 psig
Normal product	JP-5

030821 Status of SWMUS-DTSC.txt

From: Morley, Theresa L (NRSW N4512)
Sent: Thursday, August 21, 2003 3:58 PM
To: Isaac Hirbawi; Ryan, Monica S (EFDSW)
Cc: Brian Davis; Laurie W (E-mail); Gordon, Brian S (NRSW N4512)
Subject: RE: SWMUS

Isaac, here is the story on the SWMUS. On July 16, 2001 the RWQCB sent us a letter asking for a schedule by September 7, 2001 to comply with the EI goals. The deadline for these goals had been moved up a couple of years by the State from what the EPA was requiring and the water Board had been given lead agency status for the Point Loma complex by DTSC headquarters. On September 7, 2001, the Navy responded to the water Board's letter by stating we would do our best to meet the unreasonable time frame put forth by the State considering funding and contractual hindrances. An attachment was included with this letter that refuted a lot of misinformation regarding the environmental condition of the base that was made by a DTSC RPM that had never seen the facility or reviewed any reports. In particular, the Navy took offense at the statement made by this RPM that the Navy would most likely not meet the EI goals because the Navy was "uncooperative."

The Navy immediately requested our major claimant move money around to fund these sites. In the early part of 2002 Laurie Walsh and I surveyed all 55 SWMUS listed in the RFA. Based on the verbiage in the RFA and our visual inspections of the sites, we put a table together of SWMUS we recommended for follow-up. On March 27, 2002, after review of additional records and research, the Navy forwarded the water Board our proposal. We stated that 16 SWMUS were being addressed under other regulatory programs, 26 were recommended for no further action based on no evidence of a release and that 14 SWMUS go forward in the process. At an April 11, 2002 meeting the water Board asked the Navy questions relating to the SWMUS discussed in the March letter. Additional information was provided and on June 4, 2002 the water Board sent a letter concurring with the Navy with the exception of adding another SWMU. Funding was provided by our major claimant and we awarded a contract to Sullivan Group. A Draft Work Plan for Environmental Assessment of 15 Solid Waste Management Units was sent to the water Board in early September. The water Board asked us to forward a copy of the work plan to DTSC who, although not a lead on this project, are lead at Subbase and SPAWAR.

On October 24, 2002 and October 30, 2002, we received comments from the water Board and DTSC respectively. In lieu of providing responses to comments, Sullivan Group, DTSC, RWQCB and the Navy met on November 13, 2003 to walk all 15 SWMUS. During the site walk we explained that the work plan would be reformatted to not include CERCLA-type risk decisions which were the bulk of DTSC's comments in October. The work would simply determine if a release had occurred and if further action was necessary. We walked all of the sites and added and moved borings here and there according to the direction of DTSC. Also we showed them additional data we had collected for SWMUS 16, 18 and 23 to show they were 'no further action' sites, closed by the County. At the time, DTSC said they would not require further assessment of these sites if we included that data as an appendix to the work plan, which we did.

On January 15, 2003, we sent out the revised work plan. We were expecting comments only if an agreement we had made in the field was not included. On February 3rd, 2003, the RWQCB replied they had no comments. The field work started on January 29th and continued until February 8th, 2003. I had called Quang and notified him that we would be starting and he said okay.

On February 14, 2003 we received six pages of comments from DTSC. Since we had completed field work and none of the comments affected the field work we decided to respond to the second set of comments as an appendix to the report. Okay, that's all the news to date! Take care,

Theresa L Morley
Environmental Engineer
Navy Region Southwest
(619) 524-6399 fax: (619) 524-6349

-----Original Message-----

From: Isaac Hirbawi [mailto:IHirbawi@dtsc.ca.gov]
Sent: Tuesday, May 27, 2003 10:42 AM
To: Morley.Theresa.L@asw.cnrsw.navy.mil; RyanMS@efds.w.navy.mil
Cc: Brian Davis
Subject: SWMUS

Goodmorning,

Sure, we can pass by and check out the Taylor Street fieldwork, but let us save it until the end of the day...Also, I was going through the SWMUS file and could not find any responses to comments on the "workplan for Environmental Investigations of SWMUS dated January 15, 2003"...can you please check on this and let me know...thanks

Isaac Hirbawi
Project Manager
Office of Military Facilities
5796 Corporate Ave.
Cypress, CA 90630

Phone (714) 484-5445
Fax (714) 484-5437
Email: ihirbawi@dtsc.ca.gov

"The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our web-site at www.dtsc.ca.gov."

TRANSMITTAL

Date: 12 August 2003

From: Lynn Marie Hornecker

To: **John Broderick**
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, California 92501-3339

Subj: Technical Memorandum
Location of Concern MSC JP-5
Approach for Abandonment of Segments of Secondary JP-5 Pipeline
Former Marine Corps Air Station, El Toro

Transmitted as the attachment is the subject technical memorandum for various segments of the secondary JP-5 pipeline at the former Marine Corps Air Station, El Toro. We propose to conduct pressure tests for the following pipeline segments: MSC JP5-6 (Segment 8A), MSC JP5-4 (Segment 11), and MSC JP5-4 (Segment 12).

We will submit the results of the pressure tests to you following the completion of the testing activities. We hope to discuss potential soil sampling requirements with you at that time.

Please do not hesitate to call me at (619) 532-0783 if you have comments or questions pertaining to this transmittal.

Thank you very much.

Attachment:
Technical Memorandum (Shaw August 2003)

CF w/attachment:
Andy Piszkin (BRAC Environmental Coordinator, MCAS El Toro)
CSO/El Toro
Project File (MCAS El Toro)
ADMIN COPY (2 copies)



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CONTRACT N62474-98-D-2076

DOCUMENT CONTROL NUMBER 6467.0

TO: Administrative Contract Officer
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Naval Facilities Engineering Command
Michelle Crook, 02R1.MC
1230 Columbia St., Suite 870
San Diego, CA 92101-5817

Date : August 12, 2003

CTO : 0024

Location: MCAS El Toro

FROM:

Dhananjay Rawal
Project Manager

DESCRIPTION *Technical Memorandum, Approach for Abandonment and Closure of Secondary JP-5 Fuel Pipeline, OF MSC JP5 Unit 6, Segments 8A, MSC JP5 Unit 4, Segment 11, and 12, dated August 11, 2003.*

ENCLOSURE :

TYPE : CTO Deliverable

VERSION : Final

REVISION No : 0

ADMIN RECORD : No

SCHEDULED DELIVERY DATE August 12, 2003

ACTUAL DELIVERY DATE August 12, 2003

NUMBER OF COPIES SUBMITTED TO THE NAVY: 1/O, 2/C, 2/E
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Scott Kehe, (1C/1E)

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Dhananjay Rawal, Irvine (1C/2E)

Other

Date/Time Received _____ / _____