WSMR 92

Lockheed
Engineering & Sciences Company

High Energy Laser Systems Test Facility
P.O. Drawer 130, White Sands Missile Range, New Mexico 88002 (505) 679-5365

92-0079
13 February 1992

Deputy Commander
U.S. Army Strategic Defense Command
ATTN: CSSD-HD-P (Mr. Wright, COR)
White Sands Missile Range, NM 88002-5148

SUBJECT: Contract No. DAAD07-87-C-0013, IRM Progress Report #2, January 1992

Dear Mr. Wright:

As per EPA, NMED and WSMR Agreement on the Interim Remediation Measures (IRM) Work Plan for the Systemic Diesel Spill, HELSTF, (WSMR-SWMU#154), the following is a progress report on the IRM Work. The EPA Approved Plan requires a report on the IRM activities every month. This report includes activities for January 1992. Additional reports and information resulting from these activities will be forwarded as they are available.

Unless directed otherwise, this and future documents on the work progress will be sent to your attention and informal copies provided to EPA and NMED. Copies will also be furnished to WSMR to ensure compliance and communicate on the IRM.

If you have any questions or require additional information, please contact D. Shearer at (505) 679-5971 or J. Giblin at (505) 679-5928.

Fred Cummt

for R. S. Sadler
HELSTF Program Manager

Attachment: a/s

cc: D. Sutton (STEWS-PR-MA)
H. Magallanes (STEWS-ES-E)
S. Chia (USEPA, Region VI)
D. Morgan (NMED)
Col. R. Knox (CSSD-HD)
L. Brown (CSSD-HD-C)
D. Shearer (LESC)
J. Giblin (LESC)

INTERIM REMEDIATION MEASURES

PROGRESS REPORT #2

FOR THE

SYSTEMIC DIESEL SPILL

WSMR - SOLID WASTE MANAGEMENT UNIT #154

HIGH ENERGY LASER SYSTEM TEST FACILITY
US ARMY WHITE SANDS MISSILE RANGE
JANUARY 1992

Submitted by Lockheed Environmental, HELSTF,
for US Army, White Sand Missile Range

January 2
Lockheed attempted to call Mr.J.Peace, geophysicist, regarding Electromagnetic work, but he was not in town. Lockheed placed call to Mr. P.Wirland, NMSU physics department, but the University staff was still on vacation.

Lockheed Environmental began installing protective cover for recovery pump. The pump was shut down for the work.

No word on Work Authorization Order OS-82, limited work on IRM continues under funding for Service Order-L910.

January 3
Lockheed Environmental continued working on installation of recovery pump cover.

January 6
Lockheed Environmental discussed electromagnetic survey, pricing, and availability with Mr. Peace. He can do field review and probably initial EM survey, but needs to obtain special equipment for a detailed survey. Survey will probably only take about 3 days (two field days and one day of office work).

The recovery pump continued operating, moved in plastic drum, labeled and started filling from pump. WSMR photography documented installation.

January 7
Purchase order request prepared for EM survey. Lockheed Procurement contacted him and set up purchase order for survey. Lockheed Environmental had discussion with Precisions Engineering regarding coring and recovery well installation. Cost estimates for mobilizations, drilling rates, and geologic services were requested. Lockheed adjusted pump rate at HCF#1, too fast, picking

up water with oil. Lockheed Environmental contacted analytical Laboratory on method and pricing for analysis of diesel contaminated soil samples.

January 8
Lockheed received questions and pricing information from laboratory. Lockheed had additional discussion with Precision on drilling. Purchase order request for coring was written and submitted to procurement.

January 9
Jerry Peace, Las Cruces, traveled to HELSTF to run a initial Electromagnetic survey. Mr. Peace arrived at HELSTF at approximately 8:00 am and began a review of the utility maps of the proposed survey points and area. Information on locations, type, and specifications of buried structures; water, gas, sewage, and fuel piping; as well as electric and communication line was gathered for later review. Underground utilities were highlighted on the maps and a transparent overlay was prepared to fit over each map. The proposed coring locations were plotted on an overlay in a radial grid pattern from the original discovery well. Per work plan agreement the proposed core and potential well locations are sited at 100 feet increments (to 500 feet) on 45 degree radiants from the discovery well (HCF#1).

After the cursory map review, a initial check out of the electromagnetic detectors was made to determine if terrain, facilities, buildings or structures would restrict or distort readings. Three potential coring locations were examined in the field with two electromagnetic devices. The maps were used as a reference in determining surface location of proposed corings. The reading at the proposed coring locations were checked. No major problems were noted.

January 10
Mr. Peace and Lockheed Environmental personnel ran the EM survey for the initial proposed locations (8 vectors with locations at 100 and 200 feet radius) around the HCF#1 well. Each location was reviewed on the maps and overlay and field checked. The locations were measuring and marked on the ground. Two reconnaissance devices, a Heath LS-800 and a Phoenix VLF-2, were used to evaluated the locations and estimate proximity to buried power, communication and water lines. If electromagnetic distortion was noted, the survey was expanded to determine no-drill areas and an alternate coring location. Each location was adjusted as needed and re-marked with orange flagging.

January 13
Lockheed received preliminary report on EM survey from J. Peace.

Construction work at the Cleaning Facility required that the recovery pump be shut down.

January 14

Lockheed Environmental started process of obtaining HELSTF dig permits for proposed coring locations. Filled out preliminary paper work and contacted government engineers.

January 15
Lockheed's purchase of coring services for initial locations approved by SDC.

January 16
HELSTF dig permit meeting set up for January 17.

January 17
Lockheed received SDC's approval of the proposed work (Phase II) through June 15, 1992 on the Interim Remediation Measures under WAO OS-82, (wait on funding).

Early morning evacuations for range testing delayed dig permit meeting. Meeting reset for 11:00 am. Attendees included Lockheed lead plumber and facility manager, SDC civil and electrical engineers, and WSMR Fire department. SDC safety and Communications did not attend. Lockheed reviewed proposal and EM survey for meeting. Fireman and Lockheed Safety signed permit. Lockheed facility services and SDC electrical engineer reviewed locations in field. Facility services signed off on permit that afternoon.

January 20
National Holiday.

January 21
Preliminary funding authorized for the proposed work (Phase II through June 15, 1992) on the Interim Remediation Measures (WAO OS-82).

Lockheed Environmental obtained final signatures for dig permit for initial coring locations from Army communications officer, SDC safety, and SDC electrical engineer. Precision Engineering with drilling rig arrive at HELSTF about 10:00 am to begin coring. WSMR photography was also on-site to document operations. First coring location is a shallow, water-covered depression, 100 feet south of HCF#1 well.

Lockheed Safety gave site orientation and coring began at approximately 12:30 pm. Facility services and SDC engineers were on-hand. Rig hit object at about 5 feet. Facility and engineering evaluated situation and moved rig 3 feet to south. Coring recommenced at 1:00 pm and at 3 feet the auger penetrated a 4-inch asbestos/cement water line. Water flooded the coring location.

Facility plumber determined that it would be necessary to shut down HELSTF water and fire suppression systems to repair the line. The rig was moved and the crew was dismissed for the day at 3:00. Facilities worked to 6:00 pm to repair water line.

January 22

Precision Engineering crew and WSMR Environmental were on site at 8:00 am. The rig was repositioned next to repaired pipe near first location. Coring samples were removed from surface to 55 feet. Lockheed collected samples for each five feet interval. Eleven core sample sets and one water sample were bottled, labeled, recorded, and sent that evening for analysis. Precision Engineering logged each core. Some thin diesel zones were noted between depth of 20 and 30 feet. Stratigraphy at this location is very sandy and excessive sloughing was noted probably due to high water saturation. Cored to possible water table at 45 feet. Augers removed from borehole and crew shut rig down for evening at 6:00 pm.

January 23
Precision was on site in the early morning. They did not start coring because HELSTF was shut down in the afternoon for testing by WSMR command. They moved rig off-site in order to check out different coring method.

January 24
Precision crew and rig were at HELSTF about 9:00 am and positioned the rig at the second coring location, approximately 100 feet Southeast of the HCF well (HCF-SE100). Coring samples were taken from surface to 70 feet. Lockheed took samples at each five feet interval. Fourteen core sample sets were bottled, labeled, recorded, and sent that evening for analysis. Precision Engineering logged the description of each core. Some thin diesel zones were noted between depth of 10 and 20 feet. Stratigraphy contains more gypsum, less sand than previous location. Little sloughing or water was noted. The section from 20 to 50 feet had much higher percentage of clay than previous hole. Crew worked into evening grouting hole to surface. Crew and rig left HELSTF about 9:00 pm.

January 27
Precision crew brought rig to HELSTF in the late afternoon and set up coring rig at previous (first) location, HCF-S100.

January 28
Precision crew was on site about 7:45 am. They cleaned out hole to 55 feet and set grout from total depth to surface. Two samples of water were taken at 50 feet for analysis. The crew and rig left site about 3:30 pm.

Lockheed convened a bidder meeting for rest of drilling for 10:00. Three drilling contractor were invited to submit drill for a long term drilling program. Bids are due next week.