Internal Letter

Rockwell International

8/27/81
Lab.
Recert.
Inspection

Date . August 27, 1981

No .

TO . J.H. Lieb
. D/539-169, AC 10

FROM . SSFL Analytical Chemistry
. D/539-169, SS 11

Subject . Weekly Progress Report

SSME

INFORMATION

Support to A-3- The on-line gas analyzer for measuring O_2/N_2 in the hydrogen supplied to COCA by the compressor station has been installed. M&P lab personnel and members of the SSFL Equipment Lab have begun the initial startup and checkout. It is expected that the instrument should be completely operational within one month. (09373) (MDR)
All other regularly monitored COCA gases (nitrogen, helium) and NVR samples have been within specification during this period. (09373) (CLW,BRH, HMC,RK)

MX

INFORMATION

Support to the SSFL Test Stands- Analyses are still being conducted by outside and inside laboratories on the nature and identity of the greenish crystalline solids that were removed from plugged lines at STL-4. NTO samples from Cell 37, the run tank from Cell 29B, and the run tank from Cell 24B were examined for iron and NVR contents. The results were not unusual (3.5 to 6.5 mg Fe/liter; NVRs 12.3 to 22.2 mg/liter), considering past histories, and the residues in the NVRs, upon visual inspection, did not resemble the crystals found in the 29B plugged line. (95079) (SJE, MDR)

Support to Receiving Inspection/MX- Compatibility tests of the Krytox fluorinated grease from Lot 240-AC, Lot 198 were run with NTO and MMH. No change in color or vigorous chemical reaction was observed on treating the sample with the propellants, and the amounts dissolved were within the solubility limits of 5% for NTO and 2% for MMH per RBO 140-022. (95079) (SJE, MDR)

Support to M&P MX- A member of M&P attended the 12th JANNAF Propellant Characterization Committee Meeting on 19 August 1981 at the U.S. Air Force Academy in Colorado Springs, Colorado. The committee consisted of representatives from both industry and the military and the discussions centered around the proposed changes in the MIL SPECS analyses of NTO and MMH. Rocketdyne has agreed to participate in the technical "round robin" evaluation of methods for determining chloride, iron, and water in the MX oxidizer. (95079) (CLW)

Form 121-B Rev. 3-71

POLLUTION CONTROL

INFORMATION

Recertification of the SSFL M&P Labs for Complete Chemical Analysis with Cal. Dept. of Health Services- Mr. Milton Allen, Water Laboratory Consultant for the So.Cal. area labs due for recertification by 1/1/82 made an official visit to the SSFL M&P lab on 8/27/81. His very thorough investigation of the methods used, the procedures followed, the chain-of-custody documentation, the literature and standards available, the instrumentation utilized, and the personnel working on the assignment occupied four hours and three people very fully. The entire proceedings were very cordial, and Mr. Allen was very helpful about offering contacts for special standards. He made a couple of minor recommendations, purely technical, and one request that we conduct more quality control type statistical analyses and keep them available separately (rather than as part of each discharge analysis) for future reference and inspections. The Berkeley laboratories will be sending performance evaluation samples to the SSFL M&P labs within the next few months. The analysis of the samples shall be considered successful only if the results lie within two standard deviations of the mean of all analyses done on that sample.
(40206) (NSF, MDR, CLW)

Support to NPDES Monitoring @ SSFL- The scrubber overflow incident at LETF months ago resulted in fluoride concentrations which were below levels amenable to treatment but above levels allowed to be discharged in over 2 million gallons of water. Meetings were held with F&IE/ Environmental Task Team management and decisions were made to perform fluoride-in-soil analyses from sixteen locations at SSFL. These site samplings would include specific locations which have been most likely to have been exposed to fluoride deposition as well as areas which should represent indigenous SSFL soil, uncontaminated, and in its natural state. This program is viewed by the Environmental Office as a defense against charges that Rocketdyne has deposited fluorides upon the soil and simply for Rocketdyne to perform an adequate monitoring of its potential environmental impacts since future laser programs contemplate using fluorine gas.
The EPA extraction procedure involves air drying, pH adjustment (5.0 $\pm$ 0.2 units), 24 hours rotation on the mixer, dilution, filtering, distillation, and analysis using the fluoride electrode. This is the simpler of the two procedures that will be utilized. The other is the sulfuric acid digestion of the entire matrix (to include organic fluorides). The chemical analysis effort will amount to about $10K on the sales order accumulation account.
(40206-08000) (NSF, MDR, DJB)

ADVANCED LASER TECHNOLOGY

INFORMATION

Non-volatile residues and iron determinations have been performed on iodine samples submitted by Lasers personnel. The work is being performed so that a method of purification of the I_2 can be simple and effective. The material, as purchased currently, is fouling laser mirrors. (60629) (SJE, MDR)

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