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FAX COVER SHEET

TO: Mary McGehee FROM: Armando I. Gonzalez

DATE: October 13, 1997 NUMBER OF PAGES: 7 (including cover sheet)

I made changes to the Waste Compatibility Test Manual (Exhibit II.A.5/6.-1) in accordance with proposal made during the Oct. 1 meeting and our letter dated October 2, 1997. Changes are indicated by strike-out letters for deleted portions and underlined words for new ones. Please give your preliminary comments.

10/15/97

Thank You

Talked w/ Armando
notes on pages.

Waste fuels

FIGURE 4-1

COMPATIBILITY TEST LOG
CHEMICAL CONSERVATION CORPORATION

OPERATOR NAME _____

TEST DATE _____ TRUCK LOAD NO. _____

STEP	TIME	MIX. TEMP	AMB.TEMP	OBSERVATIONS (Write None if no reaction effects observed)
A				
B				
C				ADD 10% TO AMB.TEMP. AMB.TEMP. + 10% =
D				
E				

RESULTS

Time - of Δ temp. or given for reaction opportunity

How long did you wait?

1. IS STEP A MIX.TEMP. (_____) AMB.TEMP. + 10% (_____)? NO___ YES___
   WERE REACTION EFFECTS OBSERVED IN STEP A? NO___ YES___

2. IS STEP B MIX.TEMP. (_____) AMB.TEMP. + 10% (_____)? NO___ YES___
   WERE REACTION EFFECTS OBSERVED IN STEP B? NO___ YES___

3. IS STEP D MIX.TEMP. (_____) AMB.TEMP. + 10% (_____)? NO___ YES___
   WERE REACTION EFFECTS OBSERVED IN STEP D? NO___ YES___

4. IS STEP E MIX.TEMP. (_____) AMB.TEMP. + 10% (_____)? NO___ YES___
   WERE REACTION EFFECTS OBSERVED IN STEP E? NO___ YES___

INSTRUCTIONS: IF ANY OF THE YES BOXES IN THE RIGHT HAND COLUMN ABOVE HAS BEEN CHECKED, PLEASE ADVISE THE FACILITY MANAGER IMMEDIATELY.

determine the compatibility of waste streams in the truck load with waste stored in the tanks. A reading of the ambient temperature and its reading time is completed in STEP C, which should be entered in the log immediately after STEP B.

STEP D and STEP E consist of recording in the log the temperature, time and visual observations fifteen and thirty minutes, respectively, after temperature and time readings are entered in the log in STEP C. It is suggested that a time alarm watch or clock be used to keep the fifteen and thirty minute time period consistent for every compatibility test. Ambient temperature is to be recorded during last two steps.

~~The next step labeled STEP B consists of adding to the existing mixture that results from STEP A a sample of the waste stored in the tanks. The sample size should be about two times larger than the STEP A mixture and representative of the waste currently stored in the tank. Another record of the mixture temperature, time and visual observations, as described for STEP A should be entered in the log. This step of the test is designed to determine the compatibility of waste streams in the truck load with waste stored in the tanks. A reading of the ambient temperature and its reading time is completed in STEP C, which should be entered in the log immediately after STEP B.~~

~~STEP D and STEP E consist of recording in the log the temperature, time and visual observation fifteen and thirty minutes, respectively, after temperature and time readings are entered in the log in STEP C. It is suggested that a time alarm watch or clock be used to keep the fifteen and thirty minute time period consistent for every compatibility test. Ambient temperature is to be recorded during last two steps.~~

4.2 Wastewater Tank Storage Unit

Acidic and non-corrosive wastewater will be sampled and tested for compatibility in groups of eight to fourteen drums. This is the number of drums that can be accommodated on the section of the drum conveyor that runs along the Northern containment wall of the wastewater tank storage unit.

A wastewater sample is collected from the first inbound container in the group and tested for the parameters described in sub-section 6.0, Waste Verification Process of the Waste Analysis Plan. After the waste verification test is complete, the sample is poured into the vessel to test for compatibility. Previously, a wastewater sample taken from the storage tank has been poured into the test vessel. A sample is collected from the second inbound container in the group and the waste verification and compatibility test is conducted in the manner described in the first two sentences of this paragraph. Wastewater in all the other inbound containers in the group is sampled and tested the same way. Waste samples taken from this group of containers are poured into the compatibility test vessel.

~~Acidic wastewater is an aggressive type of waste that reacts quickly to the presence of incompatible waste. A reaction caused by mixing a sample collected from an incompatible waste with acidic wastewater samples will be noticed immediately. On the other hand, non-corrosive wastewater is the opposite of acidic wastewater. It consists of an inert material containing organic and inorganic constituents in low concentration levels. It requires a highly incompatible material to set off a reaction with non-corrosive wastewater. Such a reaction will have consequences that will be noticed immediately. Therefore, the fifteen and thirty-minute waits for a reaction to develop is not included in steps of the compatibility test for acidic and non-corrosive wastewater for this operation. However, as explained in the previous paragraph and in the one below, test procedures provide a time period long enough to allow a reaction to manifest itself.~~

The ~~sequence followed in pumping wastewater from~~ containers will be the same as the one ~~used in pouring corresponding samples in the test vessel. This way, a considerable time period will elapse between the moment a sample is poured into the test vessel and the corresponding wastewater is pumped into the storage tank. In most instances, this time period may be even longer than the wait time specified for steps D and E in the compatibility test for fuel blending.~~

~~The log used to record results from a compatibility test performed on acidic and non-corrosive wastewater before they are pumped into storage tanks is illustrated in Figure 4-2. The mixture temperature shown in this log refers to the temperature reading taken on the mixture after the verification test has been completed on a waste sample of the next inbound container to be tested, but before it is poured into the test vessel. This will allow an additional time period to detect a reaction in the mixture before the waste is pumped into the tank.~~

If preliminary compatibility test results are negative, waste in this group of containers is pumped into a large container. Then, a second group of containers is rolled onto the conveyor section that runs along the norther wall of the tank farm. The same verification and compatibility test procedure described in the previous paragraph is performed on waste samples collected from this group of containers. Testing for the second group of containers is conducted on a second compatibility test equipment to allow samples from the first group to remain for a longer period of time on the test vessel.

Waste from the first group of containers is still in the large containers at the end of the compatibility test conducted on samples collected from the second group of containers. Wastes in the large container is transferred to a storage tank after a final evaluation of results from the compatibility test indicates that no reaction occurred. Then, the waste in the second group of containers is pumped into the large container, providing that preliminary results from the compatibility test for this waste are negative. The operation described in this and the previous paragraph is repeated until waste in all containers is transferred to the storage tanks.

This method of operation provides an ample time period between the moment the first sample is poured into the test vessel and the time the final evaluation of results from the compatibility test performed on the first group of samples is conducted. This evaluation occurs when all samples from the second group of containers have been poured in the test vessel. This way, samples commingled and stirred in the test vessel have enough time to show reaction effects. Waste from the group of containers are first transferred to the large container to provide space in the conveyor for the next group of containers. The large container provides the retention time needed for the waste samples to show reaction effects in the test vessel before the waste is pumped into the storage tank.

The log used to record results from a compatibility test performed on acidic and non-corrosive wastewater is illustrated in Figure 4-2. The initial temperature reading is taken right after the first sample is poured into the test vessel. The final temperature reading is taken at the end of the compatibility test conducted on samples from the next set of containers. It is expected that the time elapsed between the initial and final readings is not less than 20 minutes. Indication (yes or no) of any bubbling action or gas generation noticed in the test vessel is entered in the log. Every waste container involved in the compatibility test event is identified in the log by its Drum I.D. No. and the size of the container is also entered

For Wastewater

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FIGURE 4-2

Tote-Tank☐ Tanker☐ Tank☐ **COMPATIBILITY TEST LOG** Page ___ of ___

Load No: ________ Date: ____________ Operators Name: ____________________

SET Tote-Tank I.D. No.: _______ Initial Temp.: ______* Time: _____* Final Temp.: ______ Time: _____

Drum I.D. No. / Size	Drum I.D. No. / Size	Drum I.D. No. / Size	Drum I.D. No. / Size
________ / ____ *	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____

*Record initial temp. and time Bubbling action? Yes☐ No☐ Gas generation? Yes☐ No☐

SET Tote-Tank I.D. No.: _______ Initial Temp.: ______* Time: _____* Final Temp.: ______ Time: _____

Drum I.D. No. / Size	Drum I.D. No. / Size	Drum I.D. No. / Size	Drum I.D. No. / Size
________ / ____ *	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____

*Record initial temp. and time Bubbling action? Yes☐ No☐ Gas generation? Yes☐ No☐

SET Tote-Tank I.D. No.: _______ Initial Temp.: ______* Time: _____* Final Temp.: ______ Time: _____

Drum I.D. No. / Size	Drum I.D. No. / Size	Drum I.D. No. / Size	Drum I.D. No. / Size
________ / ____ *	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____

*Record initial temp. and time Bubbling action? Yes☐ No☐ Gas generation? Yes☐ No☐

SET Tote-Tank I.D. No.: _______ Initial Temp.: ______* Time: _____* Final Temp.: ______ Time: _____

Drum I.D. No. / Size	Drum I.D. No. / Size	Drum I.D. No. / Size	Drum I.D. No. / Size
________ / ____ *	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____

*Record initial temp. and time Bubbling action? Yes☐ No☐ Gas generation? Yes☐ No☐

SET Tote-Tank I.D. No.: _______ Initial Temp.: ______* Time: _____* Final Temp.: ______ Time: _____

Drum I.D. No. / Size	Drum I.D. No. / Size	Drum I.D. No. / Size	Drum I.D. No. / Size
________ / ____ *	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____
________ / ____	________ / ____	________ / ____	________ / ____

*Record initial temp. and time Bubbling action? Yes☐ No☐ Gas generation? Yes☐ No☐

Chemist Approval: ______________________________ Date ____________

If yes operator will go to Chemist – Mr. Chemist please tell us what to do,
Chemist may want to decide to run test himself.

What will force operator Temp > 10% ambient
bubbling / gas get written
authorization from chemist

* Burden placed on Chemist – not sure
What the ~~chem~~ chemist will do here Armando
... clarify

Prior to starting the wastewater transfer operation, a list of the waste planned for processing is completed, then review and approved by a chemist. The entire compatibility test operation is supervised by a chemist.

OK 2 S.

4.3 Consolidation Area and Consolidation Pad

Consolidation operations at these locations are similar to the ones conducted in the wastewater tank storage unit. The only difference between these operations is the volume of the receiving vessel. In the storage unit the receiving vessel is a tank as opposed to a tote tank or a drum in the consolidation pad and area. The same compatibility test procedures designed for consolidation operations in the wastewater tank storage unit are used in operations that take place in those two locations. The only deviation affecting these procedures is that a sample collected from waste in tote tanks and drums is placed in the test vessel instead of the one from the storage tank. However, most consolidation operations do not require this sample because they usually begin with an empty tote tank or drum. The log shown in Figure 4-2 is utilized to record results from this test.

Consolidation of waste could take place in a tanker. If that is the case, waste in containers should be transferred into a tote tank before pumping it into the tanker. The same compatibility test operations used for the wastewater tank storage unit that is described in the previous sub-section must be followed for consolidation of waste in tankers. Tote tanks will serve the same purpose as the large container used to transfer waste to storage tanks.

5.0 HEALTH AND SAFETY CONSIDERATIONS

The following precautions and personnel protection equipment should be used when conducting the compatibility test.

Respiratory: Respirators are not needed as long as there is an exhaust fan removing fumes and gases from the test area, otherwise, respirators equipped with cartridges for organic vapor or acid gas should be used for fuel blending or waste consolidation, respectively.

Head Protection: None is needed unless to hold the face shields.

Face Protection: A face shield or full mask respirator should be worn

Hood?

where are they removing fumes to — any type of capturing system or does CCC intend on blowing them out the doors?