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Storm Water Inspection

December 20, 2005

SUMMARY

Ciniza Refinery EPA Stormwater Inspection & OCD Follow-up from September 8, 2005 Inspection

November 10, 2005

Attendees:

Giant Refining Company: Stephen Morris (SM), Ed Riege (ER1) and Ed Rios (ER2)

New Mexico Environment Department (NMED). Surface Water Quality Division:

Richard Powell (RP)

Oil Conservation Division: Carl Chavez (CC) and Wayne Price (WP)

Disclaimer: The following are the minutes of the meeting, and observation notes taken by OCD personnel. These comments do not release Giant of responsibility of any OCD permit condition or rule, or compliance with any other federal, state, or local laws and/or regulations. In addition, these comments are not to be construed to imply enforcement of any permit condition or regulation outside of the authority of the OCD.

Agenda:

I. NPDES Stormwater Inspection (see attached stormwater inspection letter dated December 19, 2005 to Giant from RP)

II OCD September 8, 2005 Refinery Follow-up

I. NPDES Stormwater Inspection of Giant Ciniza's Multi-Site (MS04) General Discharge Permit (NMR05B157)

RP asked for a copy of Giant's general discharge permit and Stormwater pollution prevention plan (SWPPP) with maps of existing stormwater non-contact areas. RP checked the accuracy of the maps in the field and pointed out areas that appear to be missing from the diagram(s). A field inspection was conducted with the assistance of ER and SM.

RP indicated that stormwater (non-contact) is in contact with contact water off-site; this constitutes a non-permitted discharge. Individual NPDES permits are required for contaminated stormwater discharging off-site. Giant has the option to capture or contain contaminated run-off and/or to apply for individual permits for discharge locations with effluent monitoring. If contaminated stormwater leaves the site, Giant is in violation of CWA. Parameters to sample for may include: industry standard contaminants for refinery as specified under 40 CFR 119 and WQCC standards. If concentrations are below regulatory limits, there is no violation.

The conclusions from the stormwater inspection were:

- 1) Need Endangered Species Act and Historical Society information for refinery location.

- 2) Need a more detailed site map with property boundaries (note boundary survey needed for map) and all berms, drainage, etc. depicted to help identify contact areas where contaminated runoff could impact non-contact stormwater drainage areas on the facility. There are several locations where contaminated runoff can discharge into stormwater from ineligible areas. For example, a potential of commingling was observed at the south edge of the refinery process area, east of the railroad lagoon and in the bone yard.
- 3) Parking area and drainage appear to be adequate, but need map depicting all stormwater drainage systems to satisfy NPDES Stormwater requirements.
- 4) Truck staging, warehouse, bone yard and any other areas that are in non-contact or storm drain areas should be depicted on a map with stormwater drainage and outfall areas. Giant will need to address or work to isolate any point source locations within storm drain areas that may impact stormwater areas.
- 5) Truck load-out area drains to sewer process drain and into the new API separator.
- 6) There are areas where refinery process water or contaminated runoff (contact areas) can discharge to stormwater drainage areas (non-contact areas) or to ineligible areas. For example, the refinery process area needs to be bermed all along its perimeter to retain spills/releases that could easily migrate into nearby stormwater (non-contact) drainage areas or features. Any drains within the refinery process area are considered process drains and need to be routed to an API treatment unit with a benzene stripper before it can be discharged into aeration lagoon #1 (AL1). At the south edge of the production area, RR Lagoon Rack and bone yard areas there is potential for commingling of contact with non-contact runoff. Problem areas appear to be located at the NE corner of the site, south process area and north bone yard area.
- 7) A berm encompassing the tank battery (white natural gas liquid storage tanks) at the northeast side of the refinery west of the RR Lagoon Rack and south of the high pressure storage bullets is required that will address SPCC requirements and prevent spills/releases from migrating unobstructed into a non-contact stormwater drainage areas east of the RR Lagoon Rack and toward stormwater outfall #2. At the time of inspection, there was no berm around these tanks.
- 8) During the stormwater inspection, OCD noticed a boiler feed tank west of the RR Lagoon Rack along tank battery pipelines east of the tank battery steaming, leaking and spraying water onto the ground and Giant agreed to fix the pump and bring a vacuum truck in to recover ponded fluids on the ground.
- 9) Giant can opt for individual permits with monitoring at downgradient outfalls for its contact areas or implement local containment controls to eliminate the need for individual NPDES stormwater permits at different locations throughout its refinery. OCD can approve local containment.
- 10) RP decided due to time constraints to take home a copy of Giant's SWPPP for his inspection.
- 11) Individual NPDES stormwater permits are not needed, unless Giant cannot isolate contact areas from stormwater or non-contact areas. If Giant cannot properly isolate stormwater from process areas, then individual permits with more specific monitoring requirements will be required. Giant indicated that it preferred to be under a general discharge permit and will work to isolate contact from non-contact areas.
- 12) RP will send inspection report to Giant with copies to all parties (EPA and OCD) with recommendations.

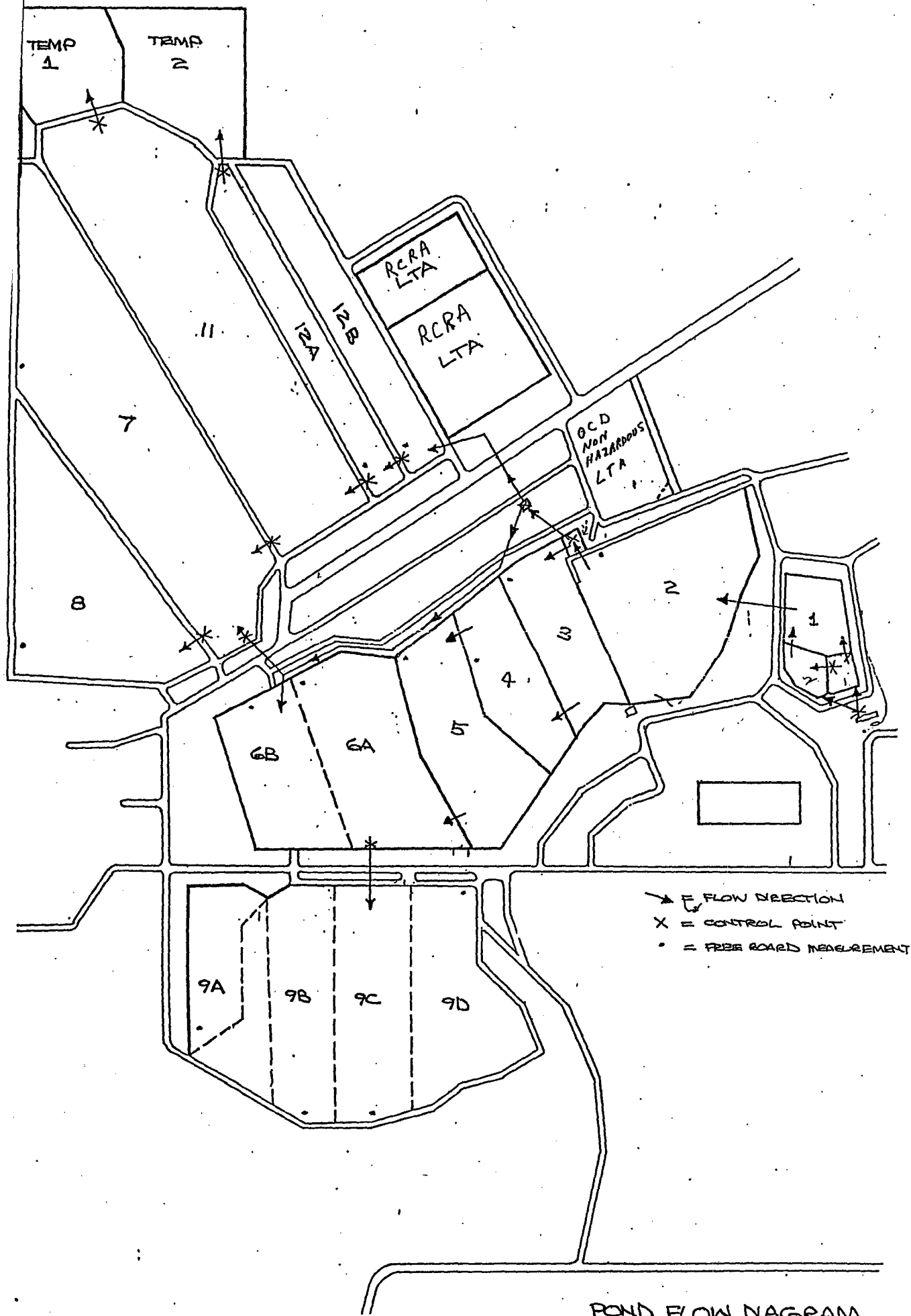
II. OCD September 8, 2005 Ciniza Refinery Follow-up

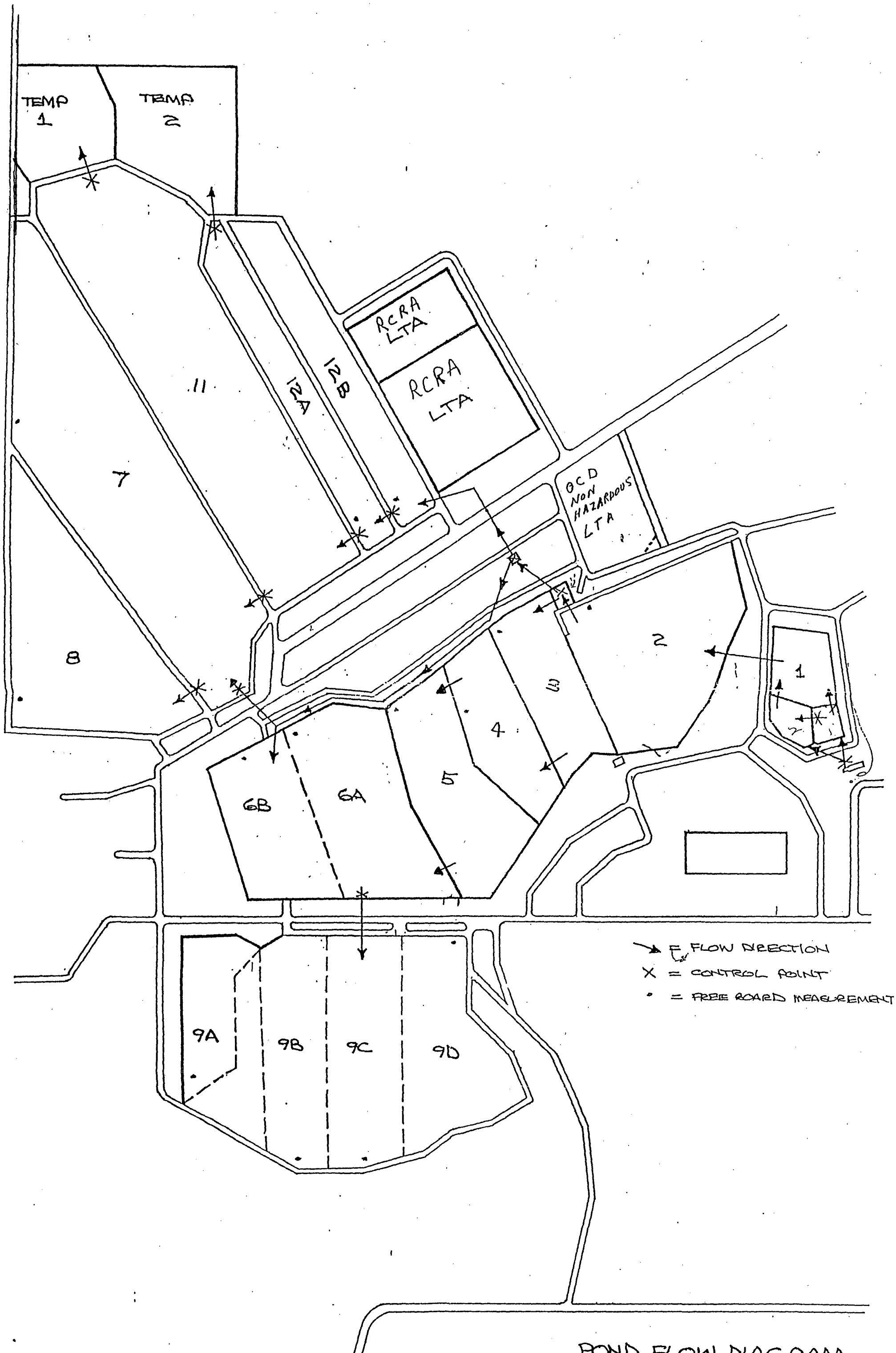
- 1) Status of installation of chopper pump at new API separator (NAPIS) that was scheduled to be installed the week of Nov. 8, 2005? Giant stated that Rinchem is scheduled to install the pump during the week of December 4, 2005.
- 2) Is the secondary containment at NAPIS holding? Some fluctuation in fluid level, but lately the level has remained constant at 1 ft. of head. Giant feels the primary and secondary containment systems have integrity. OCD is concerned about the integrity of the secondary containment system. OCD wanted to evaluate this situation further and discuss with Giant later. OCD concerns are: 1) integrity of the secondary containment system; and 2) geohydrologic connection to the water table aquifer with potential for leaking contaminants to discharge to the surface and/or migrate via groundwater beneath the refinery property.
- 3) Cleanup of shorelines around evaporation ponds? Giant is scheduled to scrape the shorelines and increase fluid level before the end of December 2005. Waste will be characterized for proper disposal and or treatment in the land farm. EPI is skimming oil off the top of the ponds today.
- 4) Status of oil in the OAPIS? Oil (i.e., TPH) and hazardous waste constituents are still being detected in weekly monitoring.
- 5) OCD Data Quality Objectives (DQOs)? Giant needs to be aware of the appropriate regulatory limits based on site sampling to ensure analytical methods and detection limits are adequate for use by the State. For example, sampling at the OAPIS, evaporation ponds, etc. would require detection limits that do not exceed 40 CFR 261.24 Toxicity Characteristic to determine whether hazardous wastes are present where they should not be. Groundwater sampling would require lower detection limits and it is Giant's responsibility to ensure that any dilutions performed by the lab will not exceed the states DQOs.
- 6) Pilot station effluent (PSE) and monitoring per OCD permit? A couple of analytical monitoring reports were provided at the meeting, which showed significantly elevated BOD levels. OCD is not sure why there were only 2 reports provided, since the permit requires quarterly monitoring? The PSE discharges directly into aeration lagoon #1 without any treatment. BOD levels from the PSE were observed to be significantly elevated. OCD requested that Giant analyze PSE for 405.1, 418.1, 6010, 7470, 8015B, 8260, 8270, 8310, etc. to get a better handle on waste loading to the existing treatment system. Giant will need to determine the volume flow rate from the PSE, refinery process water, determine hazardous constituent concentrations, and estimate loading to the current treatment system to compare with the total capacity of the current treatment system. If loading exceeds it's treatment capacity, then Giant needs to undertake actions to operate within its treatment capacity.
- 7) OCD's Nov. 15, 2005 e-mail requirement for Giant to address the OAPIS? There appears to be another point source(s) migrating into the OAPIS. Giant is working to investigate the source(s) of contamination. OCD is concerned about hazardous wastes in contact with stormwater at the OAPIS.
- 8) Rail Road Lagoon Rack excavation map displaying sample locations for verification of soil remediation? Giant is sending the map in its final report.

- 9) What caused the Tank 232 release? Why the disparity between release and recovery volumes in the C-141 forms? OCD concerns about Giant's response effort in excavating contaminated soils in unlined berm areas? Giant indicated the release occurred due to operator error. OCD mentioned that Giant should consider incorporating a zero loss or pollution prevention goal at its facility to help reinforce and prevent releases from occurring at the facility. OCD is concerned that Giant did not dig down deep enough to recover impacted soils in the unlined berm area. Giant indicated that it has never completely excavated contaminated soil in berm areas after releases occur. Giant collected waste characterization samples of the excavated soil in order to properly dispose or treat it in their land farm. Giant indicated that their general protocol for releases in berm areas is to excavate the bulk of the contamination, but they never excavate deep enough to assess impacts to groundwater. OCD acknowledged the presence of clay substrate underneath the refinery; however, it clarified that all impacted soil, regardless of release location should be properly investigated, removed, and characterized for disposal and/or land treatment. Giant acknowledged OCD's concerns.
- 10) Land farm area status? Giant tills the land farm once per month as specified in the permit.
- 11) Stockpiled soils update? Giant confirmed that cooling tower salt contaminated soil piles observed during the Sept. 8, 2005 inspection were properly disposed.
- 12) Firewater pit status? OCD has not received any information on Giant's request to use an existing facility pit filled with RO reject water for the storage of firewater. Giant indicated that the request is ongoing with permeability test results in hand, etc.
- 13) OCD split-samples with SM from the Old API Separator (OAPIS), the discharge point from Aeration Lagoon 2 to Evaporation Pond (EP) #1, and discharge point from EP #1 to EP #2. OCD is currently awaiting receipt of the analytical sample results from Hall Environmental of Albuquerque. OCD followed all chain-of-custody procedures up to and including delivery to the laboratory the next morning.
- 14) ER2 was present during OCD's agenda discussion and is the new Superintendent of Giant's Ciniza Refinery.

Attachment: NMED Stormwater letter to Giant (December 19, 2005)

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POND FLOW DIAGRAM