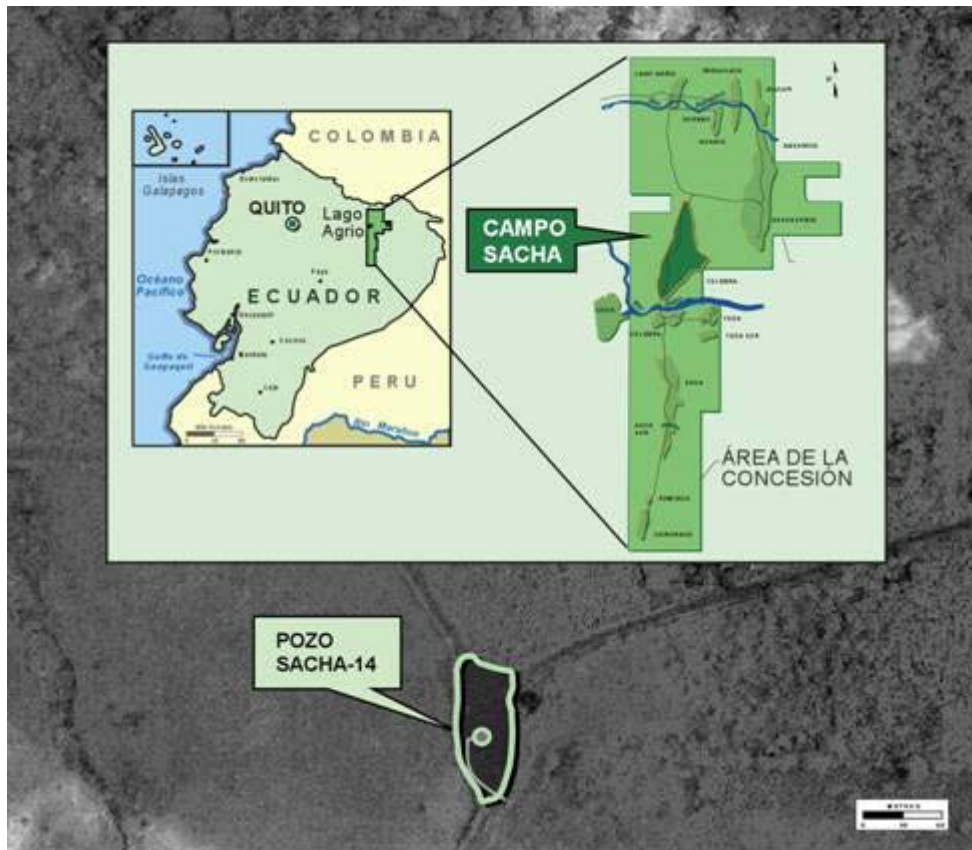

EXPERT REPORT

By Mr. Ernesto Baca, P.E.

Judicial Inspection of Well Site Sacha-14

Maria Aguinda *et al.* vs. ChevronTexaco Corporation,
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Trial No. 002-2003



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Ernesto Baca, P.E.
Groundwater Services, Inc.
2211 Norfolk, Suite 1000
Houston, Texas 77098-4044
713/522-6300

Issued: July 4, 2005

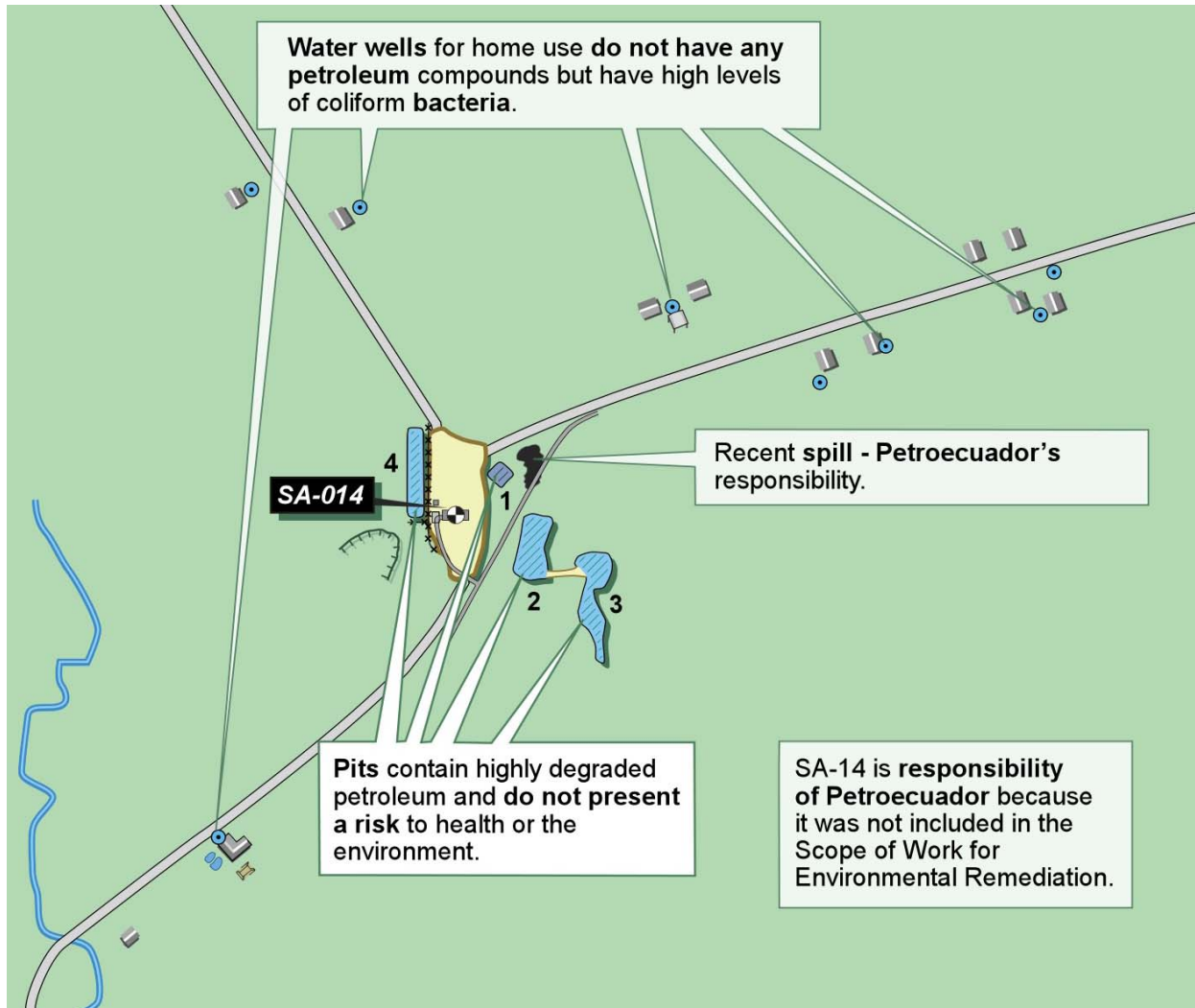
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1 EXECUTIVE SUMMARY

Illustration of Summary of Judicial Inspection Conclusions



The well site SA-14 was not part of the Remedial Action Plan of September 1995 that was agreed upon by Texaco, the Government of Ecuador and Petroecuador, which indicates it was the sole responsibility of Petroecuador. This location was not remediated by Texpet.

The SA-14 site consists of a producing well which is still in operation. Around the well site there are four pits (see Figure 2), and a recent spill to the east of pit 1. The soils around the wellhead

are stained with oil. In addition, there is garbage in various places. Three roads with moderate traffic cross the platform.

The main conclusions from the Judicial Inspection in well site Sacha-14 (SA-14) are detailed in the report and as follows:

- **All of the soil samples from the pits are below the international evaluation criteria**

Samples were collected from four (4) pits identified in SA-14 during the Judicial Inspection of November 17, 2004 (see Figure 2). All of the samples yielded values below the international evaluation criteria for petroleum (see Tables 3A and 3B). The well site SA-14, which includes all of its four pits, was excluded from the Remedial Action Plan and thus, they were not remediated by Texpet. The whole site is unique responsibility of Petroecuador (see Appendix B).

- **There does not exist evidence of petroleum migration from the pits**

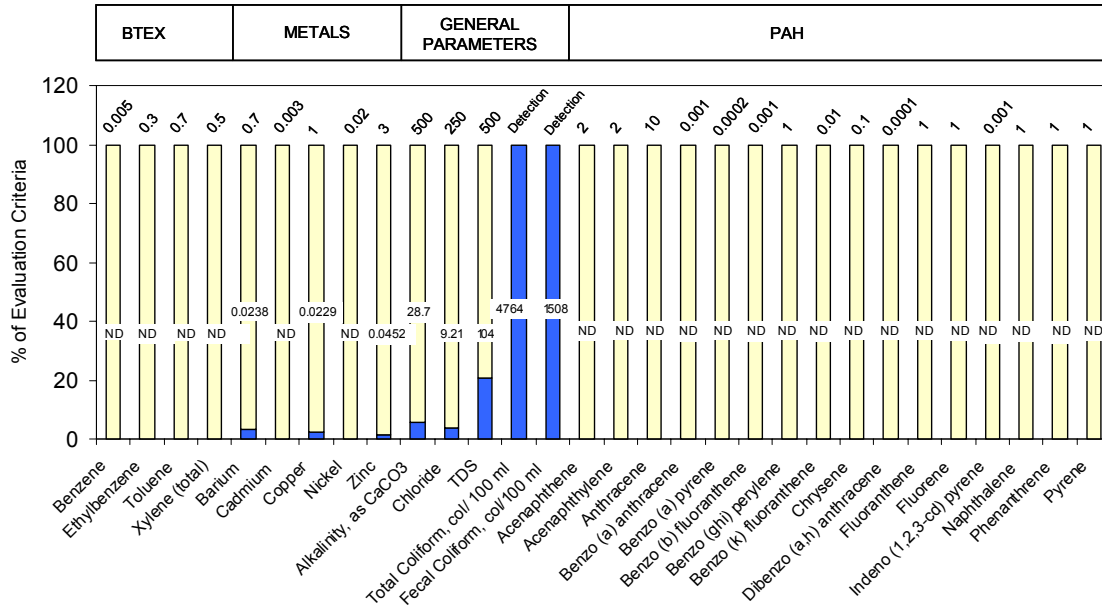
Soil and water samples were collected from the surrounding areas of SA-14. All of the samples confirmed that there was no migration of petroleum from the surrounding pits (see Tables 3A and 3B). The remaining crude in the pits is of low concentration and is found in a state of high degradation. The degraded petroleum is immobile and is not bioavailable as is described in Appendices N, O, P, Q and X. The petroleum around well site SA-14 does not represent a health risk since it is in a highly degraded state and does not contain the most toxic components of petroleum Polycyclic Aromatic Hydrocarbons (PAHs or HAPs by its Spanish acronym) or benzene, toluene, ethylbenzene or xylenes (BTEX) over the international evaluation limits.

- **None of the water wells used for consumption have been affected by petroleum**

The platform is located in a flat area. Three roads cross the platform. There are two houses along the southern road, two on the road to the northeast, and more than seven houses along the entrance road to the east. The majority of these families use well water, which were sampled and were found not to have any traces of petroleum. However, the levels of fecal and total coliforms, although variable, were present in all of the home wells.

All concentrations from the water samples were below the international evaluation criteria, except for the analysis of coliform bacteria. The concentrations that are presented in the following graphic correspond to the maximum detected in the water samples. As we have found in other parts of the Oriente, the bacterial level is very high. All other concentrations are well below the international evaluation criteria.

Maximum concentration of BTEX, general parameters, metals and PAHs in water samples as a percentage of the international evaluation criteria.



There are no significant sources of *surface* water near well site SA-14. The closest body is a river that was sampled as part of the SA-21 judicial inspection, which is located about 450 meters south of the platform, and is clean (see Section 3.3.1 of this report).

• **There is no risk to health or the environment**

As we can see in Figures 11 and 12, all of the soils concentrations are below the international evaluation criteria, except for the solid asphalt piece. The solid asphalt sample exceeds the limits for benzo(a)pyrene and dibenzo(a,h)anthracene (see Table 3B). The asphalt is inert, not bioavailable, and is immobile, for these reasons it does not cause risk. As mentioned above, none of the other samples exceed the international evaluation criteria, and therefore, there is no risk to health or the environment.

To confirm the lack of risk, tests and scientific assays were performed, which allowed the demonstration of the following:

- A depletion of between 97% and 100% of TPH — GRO in relation to fresh Sacha crude in all of the soil samples analyzed (see Table 1 in Appendix N.1).
- The components of interest in Sacha crude with potential toxicity are common in all crudes of the world: BTEX and PAHs (see Appendices O and U). These components are degraded in a significant and rapid manner by natural mechanism of degradation in tropical environments such as Ecuador's Oriente region, therefore diminishing the potential for toxicity and mobility of the hydrocarbons (see Appendices N, O and Q).
- The chemical composition of Sacha petroleum indicates that the metals are found in even lower concentrations than typical soils and they would not cause a significant increase to the metals concentrations of soils.

- The solubility of degraded crude is extremely low in water. For this reason, no hydrocarbons were found above the drinking water levels established by the United States Environmental Protection Agency (US EPA) or the guidelines of the World Health Organization (WHO), even in temporary wells which were installed a few meters from the pits (see Tables 4A and 4B, and Appendix K).
- Conservative estimates of hydrocarbon volatilization indicate that the volatile fractions have already been degraded and the projected concentrations are minimal.