



DEPARTMENT OF THE ARMY
CAMP STANLEY STORAGE ACTIVITY, RRAD
25800 RALPH FAIR ROAD, BOERNE, TX 78015-4800

May 27, 2009

U-106-09

Mr. Sonny Rayos, P.G., Project Manager
Texas Commission on Environmental Quality
Team 3, Env Cleanup II Remediation Division
PO Box 13087, MC-127
Austin, TX 78711-3087

SUBJECT: Response to Request for Additional Information
Affected Property Assessment Report (APAR) for
Area Concern (AOC) 63
Camp Stanley Storage Activity, Boerne, Texas
TCEQ Industrial Solid Waste Registration #69026
EPA Identification Number TX2210020739

Dear Mr. Rayos,

The Camp Stanley Storage Activity (CSSA), U.S. Army, is providing this response to your letter dated February 26, 2009 requesting additional information in regards to the *Affected Property Assessment Report (APAR) for Area of Concern (AOC) - 63* report dated August, 2008.

These responses were discussed at our meeting at Camp Stanley on May 27, 2009. The CSSA responses to your comments are provided in the attached enclosures. They include the Response to Texas Commission on Environmental Quality Comments Affected Property Assessment Report (APAR) for Camp Stanley Storage Activity Area of Concern (AOC) 63 table, a GCAL letter dated April 23, 2009, Section 9 Ecological Risk Assessment, and the Table 9A AOC 63 - Surface Soil Sample Ecological Screening table.

If you have any questions regarding this information, please contact Glaré Sanchez, CSSA Environmental Program Manager at (210) 698-5208.

Sincerely,



Jason D. Shirley
Installation Manager

Enclosures:

cc: Mr. Greg Lyssy, EPA Region 6
Mr. Jorge Salazar, TCEQ Region 13
Ms. Glaré Sanchez, CSSA
Ms. Julie Burdey, Parsons

**Response to Texas Commission on Environmental Quality (TCEQ) Comments
Affected Property Assessment Report (APAR) for
Camp Stanley Storage Activity (CSSA) Area of Concern (AOC) 63**

The following table presents a summary of CSSA's responses developed to address the TCEQ letter "Affected Property Assessment Report for Area of Concern AOC 63 - Request for Additional Information", dated 26 February 2009, received from Mr. Sonny Rayos. Per direction in the letter, the responses are provided in numerical order of the original comments and separated by TCEQ author (i.e., Mr. Rayos and Mr. John Wilder).

TCEQ Comments – Mr. Rayos	CSSA Response																																																						
<p>"1. In Page 4-2 of the report and then again in Page 10- 1 and 10-2 of the report, it stated that Sample Quantitation Levels (SQLs) for [volatile organic compounds] VOCs and [semi-volatile organic compounds] SVOCs are greater than the critical Protective Concentration Levels (cPCLs). As a result, these constituents were not evaluated further as possible AOC-63 constituents. Because the SQLs are greater than the cPCLs, Camp Stanley should have investigated these COCs as potential releases to the environment and subject to additional investigation and/or verification to determine if, in fact, are related to releases from AOC-63. The TCEQ requests Camp Stanley to collect additional soil samples and retest for VOCs and SVOCs. If possible, lower quantitation limits should be requested from the laboratory."</p>	<p>Follow up review of the APAR Section 4 indicates that the following compounds were erroneously indicated to have non-detected concentrations with SQLs exceeding Texas Risk Reduction Program (TRRP) Tier 1 cPCLs (with the exception of 1,2-Dibromoethane, the list of constituents with SQLs exceeding PCLs in Section 10 is correct):</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Constituent</th> <th style="text-align: center;">Max SQL (mg/kg)</th> <th style="text-align: center;">cPCL (mg/kg)</th> </tr> </thead> <tbody> <tr> <td>benzo(b)fluoranthene</td> <td style="text-align: center;">0.00783</td> <td style="text-align: center;">5.7</td> </tr> <tr> <td>benzoic acid</td> <td style="text-align: center;">0.19</td> <td style="text-align: center;">95</td> </tr> <tr> <td>diethyl phthalate</td> <td style="text-align: center;">0.00668</td> <td style="text-align: center;">78</td> </tr> <tr> <td>di-N-butyl phthalate</td> <td style="text-align: center;">0.0824</td> <td style="text-align: center;">1700</td> </tr> <tr> <td>indeno(1,2,3-cd)pyrene</td> <td style="text-align: center;">0.0283</td> <td style="text-align: center;">5.7</td> </tr> <tr> <td>1,2-Dibromoethane</td> <td style="text-align: center;">0.00019</td> <td style="text-align: center;">N/A*</td> </tr> </tbody> </table> <p>* TRRP PCL Tables 1-5 (dated April 23, 2008) do not list PCLs for this compound.</p> <p>As such, these compounds can be screened from further consideration as site chemicals of concern (COCs) based on comparison to Tier 1 cPCLs.</p> <p>VOC and SVOC compounds evaluated during the AOC 63 affected property assessment with non-detect SQLs exceeding their applicable cPCL include:</p> <p>SVOCs</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Constituent</th> <th style="text-align: center;">Max SQL (mg/kg)</th> <th style="text-align: center;">cPCL (mg/kg)</th> </tr> </thead> <tbody> <tr> <td>2,4-Dinitrotoluene*</td> <td style="text-align: center;">0.0334</td> <td style="text-align: center;">0.0027</td> </tr> <tr> <td>2,6-Dinitrotoluene*</td> <td style="text-align: center;">0.00708</td> <td style="text-align: center;">0.0024</td> </tr> <tr> <td>3,3-Dichlorobenzidine</td> <td style="text-align: center;">0.0695</td> <td style="text-align: center;">0.031</td> </tr> <tr> <td>4,6-Dinitro-2-methylphenol</td> <td style="text-align: center;">0.0155</td> <td style="text-align: center;">0.0023</td> </tr> <tr> <td>bis(2-Chloroethoxy)methane</td> <td style="text-align: center;">0.00637</td> <td style="text-align: center;">0.0059</td> </tr> <tr> <td>bis(2-Chloroethyl)ether</td> <td style="text-align: center;">0.0446</td> <td style="text-align: center;">0.0011</td> </tr> <tr> <td>N-Nitroso-di-N-propylamine</td> <td style="text-align: center;">0.00929</td> <td style="text-align: center;">0.00018</td> </tr> <tr> <td>Pentachlorophenol</td> <td style="text-align: center;">0.0364</td> <td style="text-align: center;">0.0092</td> </tr> </tbody> </table> <p>* 2,4-Dinitrotoluene and 2,6-Dinitrotoluene are explosives constituents also included in the EPA Method 8270 SVOC scan.</p> <p>VOCs</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Constituent</th> <th style="text-align: center;">Max SQL (mg/kg)</th> <th style="text-align: center;">cPCL (mg/kg)</th> </tr> </thead> <tbody> <tr> <td>1,2-Dibromo-3-chloropropane</td> <td style="text-align: center;">0.0011</td> <td style="text-align: center;">0.00087</td> </tr> </tbody> </table>	Constituent	Max SQL (mg/kg)	cPCL (mg/kg)	benzo(b)fluoranthene	0.00783	5.7	benzoic acid	0.19	95	diethyl phthalate	0.00668	78	di-N-butyl phthalate	0.0824	1700	indeno(1,2,3-cd)pyrene	0.0283	5.7	1,2-Dibromoethane	0.00019	N/A*	Constituent	Max SQL (mg/kg)	cPCL (mg/kg)	2,4-Dinitrotoluene*	0.0334	0.0027	2,6-Dinitrotoluene*	0.00708	0.0024	3,3-Dichlorobenzidine	0.0695	0.031	4,6-Dinitro-2-methylphenol	0.0155	0.0023	bis(2-Chloroethoxy)methane	0.00637	0.0059	bis(2-Chloroethyl)ether	0.0446	0.0011	N-Nitroso-di-N-propylamine	0.00929	0.00018	Pentachlorophenol	0.0364	0.0092	Constituent	Max SQL (mg/kg)	cPCL (mg/kg)	1,2-Dibromo-3-chloropropane	0.0011	0.00087
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	<p>Correspondence with the analytical laboratory utilized during the investigations has indicated SQLs obtained for these constituents are method detection limits (MDLs) with adjustment for moisture content and (if applicable) for required dilutions (see attached letter from Gulf Coast Analytical Laboratories dated April 23, 2009). None of the SQLs obtained for samples collected during the investigations at AOC 63 were elevated due to dilutions.</p> <p>Based on this response from the laboratory, and in accordance with §350.4(a)(54) and §350.78(c) of the TRRP Rule, use of the SQLs is acceptable for determination of a release requiring a response. No further sampling to attempt to obtain lower SQLs for the constituents in question at AOC 63 is required under the TRRP Rule.</p> <p>It should be noted that all of the laboratory analytical results obtained during the AOC 63 affected property assessment met or exceeded reporting limits required by the CSSA Quality Assurance Program Plan (QAPP), approved by the TCEQ in correspondence dated January 16, 2003.</p>
<p>“2. In Page 4-3 and 4-4 of the report, it stated that hold times for explosives constituents of samples A2, B-1 and A-5 were exceeded. Additionally and as an example, the Non Detect results (for Sample ID No. AOC63A4(0-0.5)) for 1,3 dinitrobenzene, 2,4,6 Dinitrotoluene and 2,6 Dinitrotoluene are 30.4,56.2 and 103 ug/kg. The residential 30-acre PCLs for these constituents are 3.8 and 2.7 and 2.4 ug/kg. The TCEQ requires Camp Stanley to resample and analyze for explosives (i.e., Method 8330) at these areas and request the laboratory to run the analysis within the hold time of the samples.”</p>	<p>Correspondence with the analytical laboratory indicates that the report incorrectly identified that the explosives analytical results referenced were determined after the holding times for the samples had expired (See attached letter from GCAL). Specifically, while the analyses were not conducted within 14 days of collection, the pre-testing extraction was conducted within the required holding time and the follow up analysis was conducted within the required period following extraction. As such, the results in question are valid for the purpose of determining a release at the site requiring an additional response has not occurred and no further sampling will be conducted.</p>
<p>“3. The laboratory analytical reports and Data Usability Summary indicate that soils samples were collected and analyzed for perchlorates (i.e., Method 314). The APAR; however, does not contain any narrative or discussion pertaining to the perchlorates test results. The TCEQ requests discussion of the test results and comparison of the test results with the critical PCLs. Method 314 has an inherent flaw that it is subject to false positives. The TCEQ requires resampling and analyzing the soil samples using laboratory Method 6850 or 6860.”</p>	<p>Perchlorate results obtained for samples collected at AOC 63 were below the cPCL for that compound. Based on the TCEQ concern that the utilized analytical methodology can result in false positives, the current results are considered to be adequate for indicating no impact from perchlorates is present within the samples analyzed.</p> <p>The following information is provided regarding the potential need for additional assessment of potential perchlorate impact at the site. The assessment at AOC 63 was conducted as part of a multi-site investigation at CSSA, during which sampling for perchlorate concentrations was limited to those sites with historical use or the observed presence of</p>

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	<p>materials representing a potential for impact resulting from that constituent. Based on this assessment strategy, AOC 63 was not intended for sampling for perchlorate concentrations. However, field sampling personnel erroneously submitted two samples from the site for determination of perchlorate concentrations. Based on the existing sample results, and the fact that no evidence of perchlorate containing materials was observed during assessment activities at AOC 63, no further samples will be collected.</p>
<p>“4. Based on the above stated request for additional information, it appears that low level soil contamination exists at AOC-63. It appears to be consistent with historical use as disposal area and the constituents, subject to long term exposure, have degraded over time. It is debatable whether the constituents are from road way anthropogenic impact, brush clearing and burning activities. Consequently and while not purportedly an expert in ecological studies, it would appear that these low level constituents could potentially impact ecological receptors (i.e., burrowing animals and other critters) within AOC-63. The TCEQ requests further determination (as soon as better data is available from the above request for additional information (items 1-3)) if this low level contamination presents potential ecological impacts at AOC-63.”</p>	<p>Responses to comments listed above indicate VOC, SVOC, and explosives constituents have been adequately characterized for the purposes of establishing that affected property subject to corrective actions for the protection of human health under TRRP is not present at the site. Based on the revisited review of potential ecological risk conducted in response to Mr. Wilder’s comments listed below, the assessment completed to date is also satisfactory for demonstrating no unacceptable risk to ecological receptors is present at AOC 63.</p>
<p>“5. In addition to the above-stated request for additional information, attached (Enclosure No. 1) please find the comments of Mr. John Wilder, TCEQ Technical Support Section, pertaining to his review of the APAR. The comments are reproduced in its entirety for Camp Stanley's response.”</p>	<p>See responses to ecological risk review comments below.</p>
<p>TCEQ Comments – Mr. Wilder</p>	
<p>“1. <u>Section 3 - Assessment Strategy (Surface Water and Sediment)</u>. Page 3-4: I concur that existing soil data for AOC63 indicates that a surface water and sediment assessment is not warranted. However, comparison of existing data to critical PCLs (apparently human health based values) and laboratory- MQLs is not a sufficient justification due to differences in human and ecological effects levels. No revision to the existing text is necessary, however, please be aware of TCEQ concern that other AOCs at CSSA will likely warrant collection of both surface water and sediment data in order to adequately evaluate these media. I recommend that future project planning incorporate these data needs.”</p>	<p>Comment noted, no revisions to the AOC 63 APAR will be made relevant to surface water and sediment sampling. Responses to comments below address Mr. Wilder’s concern regarding comparison of SQLs to benchmark values as a means of determining the presence of unacceptable risk to ecological receptors.</p>

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<p>“2. Section 9.4.2 TRRP Tier 2 COC Screening Analysis. Page 9-9: Ecological screening benchmarks are not provided for COCs listed with a maximum reported concentration of non-detect (ND). Absent the actual less than reporting value (provided in Table 4D) and the screening benchmark, it is not possible to determine the appropriate disposition of the COC. Although, screening out of non-detected COCs has been practiced previously - it is typically done within the context of the reporting limit and any available screening benchmark, and a discussion provided in the uncertainty analysis for those COCs with reporting limits exceeding the screening benchmark or for those COCs lacking a screening benchmark. I note that Section 4 - Soil Assessment discusses the SQL for non-detected COCs in relation to their respective critical PCL with supporting justification for COC screening from a human health perspective. Such an approach is appropriate to include in the SLERA from an ecological perspective.”</p>	<p>An addendum to the AOC 63 APAR Section 9 including a summary discussion of the comparison of SQLs to available ecological risk screening benchmark values has been attached to this letter. If screening benchmarks were not available an appropriate surrogate was used. A discussion of the resulting uncertainties is provided in the addendum. Based on this comparison, no unacceptable risk to ecological receptors is present from compounds evaluated during the AOC 63 affected property assessment.</p>
<p>“3. Table 9A - AOC63 Surface Soil Sample Ecological Screening: Data are presented as ND and described as not evaluated because results were below the laboratory reporting limit. See Comment No. 2 regarding providing screening benchmarks when available.”</p>	<p>An addendum to the AOC 63 APAR Section 9 including a revised Table 9A presenting constituent SQLs has been attached to this letter. Based on this comparison of the SQLs to available screening benchmark values, no unacceptable risk to ecological receptors is present from compounds evaluated during the AOC 63 affected property assessment.</p>
<p>“4. Table 9A - AOC63 Surface Soil Sample Ecological Screening: The Table provides a frequency of detection based on 3 samples, but text (Page 9-7) indicates ten surface soil samples were collected from six different locations. Please correct the discrepancy. Further screening of ecological COCs should include data for the upper five feet of the soil column, rather than exclusively that collected from the upper 6 inches.”</p>	<p>Results from samples collected to the depth of five feet below ground surface will be added to the screening table for the purpose of identifying constituents of potential ecological concern. The frequency of detection will be updated in the text and table appropriately. Only surface samples from 0-6 inches will be used in the risk evaluation based on the TRRP rule of ecological exposure pathways as the soil zone extending from ground surface to 0.5 feet in depth as surface soil (§350.4 (a)).</p>