Support Document for the Revised National Priorities List Final Rule - Parkview Well April 2006

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EXECUTIVE SUMMARY

Section 105(a)(8)(B) of CERCLA, as amended by SARA, requires that the EPA prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. An original NPL was promulgated on September 8, 1983 (48 FR 40658). CERCLA also requires the EPA to update the list at least annually.

This document provides responses to public comments received on the Parkview Well site in Grand Island, Nebraska, proposed on September 23, 2004 (69 FR 56970. This site is being added to the NPL based on an evaluation under the HRS in a final rule published in the *Federal Register* in April 2006. Several additional sites are being promulgated concurrently.

INTRODUCTION

This document explains the rationale for adding the Parkview Well site in Grand Island, Nebraska, to the NPL of uncontrolled hazardous waste sites and also provides the responses to public comments received on this site. The EPA proposed this site on September 23, 2004 (69 FR 56970). This site is being added to the NPL based on an evaluation under the HRS in a final rule published in the *Federal Register* in April 2006.

Background of the NPL

In 1980, Congress enacted CERCLA, 42 U.S.C. Sections 9601 *et seq*. in response to the dangers of uncontrolled hazardous waste sites. CERCLA was amended on October 17, 1986, by SARA, Public Law No. 99-499, stat., 1613 *et seq*. To implement CERCLA, EPA promulgated the revised National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300, on July 16, 1982 (47 FR 31180), pursuant to CERCLA Section 105 and Executive Order 12316 (46 FR 42237, August 20, 1981). The NCP, further revised by EPA on September 16, 1985 (50 FR 37624) and November 20, 1985 (50 FR 47912), sets forth guidelines and procedures needed to respond under CERCLA to releases and threatened releases of hazardous substances, pollutants, or contaminants. On March 8, 1990 (55 FR 8666), EPA further revised the NCP in response to SARA.

Section 105(a)(8)(A) of CERCLA, as amended by SARA, requires that the NCP include

> criteria for determining priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action and, to the extent practicable, take into account the potential urgency of such action, for the purpose of taking removal action.

Removal action involves cleanup or other actions that are taken in response to emergency conditions or on a short-term or temporary basis (CERCLA Section 101(23)). Remedial action tends to be long-term in nature and involves response actions that are consistent with a permanent remedy for a release (CERCLA Section 101(24)). Criteria for placing sites on the NPL, which makes them eligible for remedial actions financed by the Trust Fund established under CERCLA, were included in the HRS, which EPA promulgated as Appendix A of the NCP (47 FR 31219, July 16, 1982). On December 14, 1990 (56 FR 51532), EPA promulgated revisions to the HRS in response to SARA, and established the effective date for the HRS revisions as March 15, 1991.

Section 105(a)(8)(B) of CERCLA, as amended, requires that the statutory criteria provided by the HRS be used to prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. The list, which is Appendix B of the NCP, is the NPL.

An original NPL of 406 sites was promulgated on September 8, 1983 (48 FR 40658). At that time, an HRS score of 28.5 was established as the cutoff for listing because it yielded an initial NPL of at least 400 sites, as suggested by CERCLA. The NPL has been expanded several times since then, most recently on September 14, 2005 (70 FR 54286). The Agency also has published a number of proposed rulemakings to add sites to the NPL. The most recent proposal was also on September 14, 2005 (70 FR 54327).

Development of the NPL

The primary purpose of the NPL is stated in the legislative history of CERCLA (Report of the Committee on Environment and Public Works, Senate Report No. 96-848, 96th Cong., 2d Sess. 60 [1980]):

> The priority list serves primarily informational purposes, identifying for the States and the public those facilities and sites or other releases which appear to warrant remedial actions. Inclusion of a facility or site on the list does not in itself reflect a judgment of the activities of its owner or operator, it does not require those persons to undertake any action, nor does it assign liability to any person. Subsequent government actions will be necessary in order to do so, and these actions will be attended by all appropriate procedural safeguards.

The purpose of the NPL, therefore, is primarily to serve as an informational and management tool. The identification of a site for the NPL is intended primarily to guide EPA in determining which sites warrant further investigation to assess the nature and extent of the human health and environmental risks associated with the site and to determine what CERCLA-financed remedial action(s), if any, may be appropriate. The NPL also serves to notify the public of sites EPA believes warrant further investigation. Finally, listing a site may, to the extent potentially responsible parties are identifiable at the time of listing, serve as notice to such parties that the Agency may initiate CERCLA-financed remedial action.

CERCLA Section 105(a)(8)(B) directs EPA to list priority sites among the known releases or threatened release of hazardous substances, pollutants, or contaminants, and Section 105(a)(8)(A) directs EPA to consider certain enumerated and other appropriate factors in doing so. Thus, as a matter of policy, EPA has the discretion not to use CERCLA to respond to certain types of releases. Where other authorities exist, placing sites on the NPL for possible remedial action under CERCLA may not be appropriate. Therefore, EPA has chosen not to place certain types of sites on the NPL even though CERCLA does not exclude such action. If, however, the Agency later determines that sites not listed as a matter of policy are not being properly responded to, the Agency may consider placing them on the NPL.

Hazard Ranking System

The HRS is the principle mechanism EPA uses to place uncontrolled waste sites on the NPL. It is a numerically based screening system that uses information from initial, limited investigations -- the preliminary assessment and site inspection -- to assess the relative potential of sites to pose a threat to human health or the environment. HRS scores, however, do not determine the sequence in which EPA funds remedial response actions, because the information collected to develop HRS scores is not sufficient in itself to determine either the extent of contamination or the appropriate response for a particular site. Moreover, the sites with the highest scores do not necessarily come to the Agency's attention first, so that addressing sites strictly on the basis of ranking would in some cases require stopping work at sites where it was already underway. Thus, EPA relies on further, more detailed studies in the remedial investigation/feasibility study that typically follows listing.

The HRS uses a structured value analysis approach to scoring sites. This approach assigns numerical values to factors, that relate to or indicate risk, based on conditions at the site. The factors are grouped into three categories. Each category has a maximum value. The categories include:

- likelihood that a site has released or has the potential to release hazardous substances into the environment;
- characteristics of the waste (toxicity and waste quantity); and
- people or sensitive environments (targets) affected by the release.

Under the HRS, four pathways can be scored for one or more threats:

- Ground Water Migration (S_{gw})
  - drinking water
- Surface Water Migration (S_{sw})
  These threats are evaluated for two separate migration components (overland/flood and ground water to surface water).
  - drinking water
  - human food chain
  - sensitive environments
- Soil Exposure (S_s)
  - resident population
  - nearby population
  - sensitive environments
- Air Migration (S_a)
  - population
  - sensitive environments

After scores are calculated for one or more pathways according to prescribed guidelines, they are combined using the following root-mean-square equation to determine the overall site score (S), which ranges from 0 to 100:

$$S = \sqrt{\frac{S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2}{4}}$$

If all pathway scores are low, the HRS score is low. However, the HRS score can be relatively high even if only one pathway score is high. This is an important requirement for HRS scoring because some extremely dangerous sites pose threats through only one pathway. For example, buried leaking drums of hazardous substances can contaminate drinking water wells, but -- if the drums are buried deep enough and the substances not very volatile -- not surface water or air.

Other Mechanisms for Listing

Aside from the HRS, there are two other mechanisms by which sites can be placed on the NPL. The first of these mechanisms, authorized by the NCP at 40 CFR 300.425(c)(2), allows each State and Territory to designate one site as its highest priority regardless of score.

The last mechanism, authorized by the NCP at 40 CFR 300.425(c)(3), allows listing a site if it meets all three of these requirements:

- Agency for Toxic Substances and Disease Registry (ATSDR) of the U.S. Public Health Service has issued a health advisory that recommends dissociation of individuals from the release;
- EPA determines the site poses a significant threat to public health; and
- EPA anticipates it will be more cost-effective to use its remedial authority than to use its emergency removal authority to respond to the site.

Organization of this Document

The following section addresses site-specific public comments. The site discussion begins with a list of commenters, followed by a site description, a summary of comments, and Agency responses. A concluding statement indicates the effect of the comments on the HRS score for the site.

Glossary

The following acronyms and abbreviations are used throughout the text:

Agency	U.S. Environmental Protection Agency
ATSDR	Agency for Toxic Substances and Disease Registry
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Sections 9601 *et seq.*, also known as Superfund
EPA	U.S. Environmental Protection Agency
HRS	Hazard Ranking System, Appendix A of the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300
HRS Score	Overall site score calculated using the Hazard Ranking System; ranges from 0 to 100
NCP	National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300
NPL	National Priorities List, Appendix B of the NCP
NPL-###	Public comment index numbers as recorded in the Superfund Docket in EPA Headquarters and in Regional offices
PA/SI	Preliminary Assessment/Site Inspection
PRP	Potentially Responsible Party
RCRA	Resource Conservation and Recovery Act of 1976 (U.S.C. 9601-6991, as amended)
RD/RA	Remedial Design/Remedial Action
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision, explaining the CERCLA-funded cleanup alternative(s) to be used at an NPL site
SARA	Superfund Amendments and Reauthorization Act of 1986, Public Law No. 99-499, stat., 1613 *et seq.*

Region 7

1.1 Parkview Well, Grand Island, Nebraska

1.1.1 List of Commenters/Correspondents

SFUND-2004-0012-0065	Comment dated December 17, 2004, from Neil H. Weinfield, of Bell, Boyd & Lloyd, LLC, representing CNH America LLC. CNH America LLC submitted 28 attachments [SFUND-2004-0012-0068 through SFUND-2004-0012-0095] to its comment.
SFUND-2004-0012-0046	Correspondence dated November 15, 2004, from Victoria Van Roden, Chief, State, Tribe, and Site Identification Branch Assessment and Remediation Division Office of Superfund Remediation & Technology Innovation, USEPA.
SFUND-2004-0012-0011	Correspondence dated July 19, 2004, from Honorable Mike Johanns, Governor of the State of Nebraska.

1.1.2 Site Description

The Parkview Well site is located near the southwest corner of the City of Grand Island, Hall County, Nebraska. Ground water in numerous private drinking water wells and one municipal drinking water well is contaminated with volatile organic compounds (VOCs). Two ground water contamination plumes have been identified: (1) a northen plume which extends from the Case New Holland (CNH) facility east into the Parkview/Stolley Park subdivision; and (2) a southern plume which extends from an area near the golf course west of the Mary Lane, Kentish Hills, and Castle Estates subdivisions and extends to the east where it merges with the northern plume under the Parkview/Stolley Park subdivision (See Figure 1 of this Support Document). These two plumes and the commingled region are delineated into three plume areas - Plume Areas A, B, and C in the HRS documentation record as proposed, and in this support document. Plume Area A extends from the CNH facility east toward but does not extend into the Parkview/Stolley Park subdivision. Plume Area B extends from an area near the golf course west of the Mary Lane Kentish Hills and Castle Estates subdivisions and extends to the east but does not include the Parkview/Stolley Park subdivision. Plume Area C represents the commingled portion of the two contaminated plumes at the Parkview/Stolley Park subdivision.

Because the relative amount of contamination in the commingled plume area originating from CNH and the origin of contamination for the southern plume area are still not resolved, two scoring scenarios were considered in evaluating the area for NPL listing. Scenario 1 includes all three Plume Areas (A, B, and C) and reflects that the releases from CNH (the northern plume, primarily chlorinated alkanes) have commingled with the southern plume and have reached the City of Grand Island municipal wells. Scenario 2 covers the possibility that the northern plume is not significantly reaching the targets in the probable commingled Plume Area C. Scenario 2 includes only Plume Areas B and C. Contaminants found in the southern plume include both chlorinated alkanes and chlorinated alkenes such as PCE and

1,1-DCE. This dual scenario approach is presented to reflect that, whether or not the releases from CNH have reached the City of Grand Island Wells in significant quantities, the threat to the users of the City Wells is sufficient to qualify the site for the NPL, to inform the public of the threat and its possible sources, and to demonstrate that further response is necessary to address the problem.

The Scenario 1 scoring assumes the releases of substances found in Plume Area C are partially attributed to Sources 1 and 2 at the CNH facility. Scenario 1 also assumes that the contamination in Plume Area C is also partially attributable to Source 3 at the site, the contaminated ground water plume which has no identified source. However, the Scenario 2 scoring attributes the release of hazardous substances in Plume Areas B and C solely to Source 3 at the site; hence, CNH is not associated with Scenario 2 (pages 103 to 108 of the HRS documentation record as proposed). Both scoring scenarios document an HRS site score above 28.50.

Although further investigation may result in a redelineation of the contamination area, the contaminated ground water has already been shown to extend across Section 25 and 26, Township 11 North, Range 10 West and portions of Sections 28, 29, and 30, Township 11 North, Range 9 West. Ground water in this area moves in an easterly or northeasterly direction, and ground water contamination may be progressing in these directions (see Figures 1 through 4 of the HRS documentation record as proposed; Reference 3 of the HRS documentation record as proposed).

Until 2002, The City of Grand Island, Nebraska, operated four municipal wells near the Parkview/Stolley Park subdivision: PWSW-1, PWSW-2, PWSW-3, and PWSW-4. In October 1999, routine monitoring of municipal wells first detected VOCs in municipal well PWSW-4. This well is approximately 1 mile east of the CNH facility, which manufactured and assembled combines, and immediately west of the Parkview/Stolley Park subdivision. Subsequent sampling of PWSW-4 in August 2001 revealed 1, 1-dichloroethene (1,1-DCE) at a concentration exceeding its maximum contamination level (MCL) and tetrachloroethene (PCE) at a concentration approaching its MCL.

In response to the VOCs detected in PWSW-4 in 1999, the City of Grand Island sampled 77 private drinking water wells and four municipal drinking water wells around the Parkview subdivision in 2001 and 2002. Ground water from 37 private wells contained elevated levels of the following VOCs: 1,1-dichloroethane, (1,1-DCA); 1,1-DCE; 1,1,1-trichloroethane (1,1,1-TCA); tetrachloroethylene (PCE); cis-1,2-dichloroethene (cis-1,2-DCE); 1,2-dichloroethane (1,2-DCA); chloroform; and chlorodibromomethane. Based on past investigative activities, the principal contaminants of concern are 1,1-DCA; 1,1-DCE; 1,1,1-TCA; and PCE. Three private drinking water wells at the Parkview subdivision contained 1,1-DCE at concentrations exceeding its MCL; two of these wells also contained PCE at concentrations exceeding its MCL. Ground water samples from PSWS-4 contained PCE; 1,1-DCE; 1,1-DCA; and 1,1,1-TCA. Concentrations of 1,1-DCE in PSWS-4 exceeded the MCL and concentrations of PCE exceeded the US EPA cancer risk screening concentration. Because of these elevated VOC detections, PSWS-4 was closed in January 2002.

In June 2003, the Nebraska Department of Environmental Quality conducted a combined preliminary assessment /site investigation (PA/SI) to assess VOC contamination in multiple private drinking water wells and Geoprobe™ wells. A total of 76 private wells, 2 city wells and 11 direct push wells were sampled. Twenty private drinking water wells at the Parkview subdivision contained VOCs. Four private drinking water wells contained PCE and/or 1,1-DCE at concentrations exceeding their respective MCLs. In September and October 2003, the City sampled private drinking water wells at Mary Lane,

Kentish Hills, and Castle Estates subdivisions. Analyses revealed the presence of PCE and/or 1,1-DCE in 49 private drinking water wells at concentrations exceeding their respective MCLs.

Information from environmental investigations revealed that waste from the manufacture and assembly of combines was disposed of at the CNH facility from the beginning of operations in 1966 through 1980. Past waste disposal of VOCs occurred in at least two areas near the southern boundary of the facility - the burn and burial areas, which are Sources 1 and 2, respectively, of the Parkview Well site HRS documentation record as proposed.

1.1.3 Summary of Comments and Correspondences

Governor Mike Johanns supported the placement of the site on the NPL. Mr. H. Weinfield of Bell, Boyd & Lloyd LLC, writing on behalf of CNH America LLC [herein referred to as CNH] submitted comments opposing the listing of the Parkview Well site on the NPL. CNH summarized that it is not a source of the volatile organic compounds in the Parkview/Stolley Park Subdivision. CNH submitted 28 attachments in support of its claims. CNH requested that the HRS package be revised and that the site not be included on the NPL based on EPA's scoring Scenario 1 identifying releases from CNH as contributing to the City of Grand Island Wellfield contamination.

CNH also commented that EPA ignored evidence in a rush to judgment and stubbornly adhered to a theory that is contradicted by its own data and analysis. It asserted that EPA took sampling that is heavily biased towards identifying CNH as a source of VOCs. CNH commented that the TetraTech reports along with field data and Conestoga-Rovers & Associates' (CRA) analysis conclusively establish that the CNH Property is not a source of VOCs in the Southern Subdivisions or the Parkview/Stolley Park Subdivision. It added that none of the activities at CNH property resulted in the presence of VOCs in the ground water beneath the Southern Subdivisions and the Parkview/Stolley Park Subdivision.

CNH stated that it supplements the Administrative Record with Appendices A through BB of its comments. CNH requested an extension to the comment period. Ms. Victoria Van Roden, Chief, State, Tribal and Site Identification Branch, Office of Superfund Remediation and Technology Innovation, agreed to CNH 's request for a 30-day extension of the comment period.

1.1.3.1 Support for Listing

Governor Mike Johanns of Nebraska supported the placement of the site on the NPL, and his recommendation to list this site is based on written comments received from Grand Island Mayor Jay Vavricek and the Grand Island City Council as well as information supplied by the Nebraska Department of Environmental Quality and the U.S. EPA. Governor Johanns stated that he agreed that listing this site is the appropriate approach to address this contamination, and the State of Nebraska will continue to provide cooperative support to resolve the significant contamination in Grand Island.

In response, the Agency has added Parkview Well to the NPL. Listing makes a site eligible for remedial action funding under CERCLA, and EPA will examine the site to determine what response, if any, is appropriate.

1.1.3.2 Freedom of Information Act (FOIA) Request

CNH stated that EPA refused to provide CNH with any of its communications, memoranda and other documentation related to the HRS package (except for those that compose the package). CNH stated it "expressly reserves the right to provide further comments when this information is produced." CNH provided Appendix F, *Letters of Correspondence to and from Alyse Stoye (U.S. EPA Region 7) and Neal H. Weinfield (Bell, Boyd, & Lloyd) and Table Summarizing the Failure of Withheld Documents to Comply With the Deliberative Process Exemption to FOIA,* in support of its comments.

CNH stated that EPA has unlawfully withheld documents that had to be disclosed pursuant to the Freedom of Information Act. CNH commented that it submitted a request for information pursuant to the FOIA requesting copies of all communications related to the Parkview Well HRS site scoring. CNH said that EPA responded by saying that all of the information requested was being withheld pursuant to the deliberative process exception. CNH stated that the deliberative process exemption applies to "inter-agency or intra-agency memorandums or letters which would not be available by law to a party other than an agency in litigation with the agency [herein referred to as Exemption 5]."

CNH asserted that the "government bears the burden of establishing what agency records are deliberative by meaningfully classifying and identifying those records that are a direct part of the deliberative process in that it makes recommendations or expresses opinions on legal or policy matters." CNH said that EPA has failed to establish that the withheld documents fit within Exemption 5. CNH contended that the withheld documents fail to qualify for the deliberative process because they (1) represent a legal position and/or regulatory interpretation; (2) represent a final agency opinion; (3) contain factual material; and/or (3) were incorporated into a final agency opinion.

In response, EPA made available all necessary documents supporting the listing of the Parkview Well Site to CNH. The documents that were withheld reflect EPA's predecisional and deliberative communications about the site. EPA also extended the comment period by 30 days to allow CNH to provide comments on documents received through the FOIA request. In the November 15, 2004, letter submitted to Mr. Neal H. Weinfield representing CNH, Ms. Victoria Van Roden, Chief, State, Tribal and Site Identification Branch, Office of Superfund Remediation and Technology Innovation of EPA (Docket No: SFUND-2004-12-041) stated, "EPA agrees that extra time is needed to review the lab validation data information now being provided to you. As a result, we agree to the 30-day extension of the comment period for you and any additional commenters on the Parkview Well site. Please note that the electronic docket system may identify your comments as late. Regardless of that designation, the Agency will respond to any comments we receive on the site dated on or before December 22, 2004. With respect to CNH's comment that the withheld documents fail to qualify for the deliberative process privilege, CNH raised these same arguments in its FOIA appeal dated January 13, 2005. In a response to the appeal dated March 30, 2006, EPA released additional non-privileged documents, none of which affect the HRS score for the Parkview Well site. The response can be found in the site docket.

1.1.3.3 Liability

CNH commented that EPA wrongfully assigned liability for the contamination at the Parkview Well site to CNH in scoring Scenario 1.

In response, liability is not assigned by the act of listing a site; or by the HRS scoring of a site; nor considered in evaluating a site with the HRS. The NPL serves primarily as an informational tool for use by the Agency in identifying those sites that appear to present a significant risk to public health or the environment. It does not reflect a judgment on the activities of the owner(s) or operator(s) of a site. It does not require those persons to undertake any action, nor does it assign any liability to any person. Furthermore, liability has no impact on the site score and, hence, eligibility for the NPL. This position, stated in the legislative history of CERCLA, has been explained more fully in the Federal Register (48 FR 40759, September 8, 1983 and 53 FR 23988, June 24, 1988). See Kent County v. EPA, 963 F.2d 391 (D.C. Cir. 1992)

1.1.3.4 Adequacy of HRS Documentation Package

CNH questioned the completeness of the HRS documentation package. It commented that EPA recently produced field data and reports that establish that CNH is not a source of VOCs at the Indian Head Golf Club, Castle Estates, Mary Lane, Kentish Hills, or the Parkview/Stolley Park Subdivision, but that none of the data and reports are discussed in the HRS documentation package. CNH commented that the information substantiating this claim is available in the various trip reports completed by TetraTech, an EPA contractor. CNH submitted these reports as Appendices B[1], C[2], D[3], and E[4] of its comments. It added that the reports and field data were excluded from the administrative record that formed the basis for the HRS Package.

In response, the HRS documentation record as proposed adequately explains and provides documentation supporting the HRS site score for the Parkview Well site. The documents cited and submitted by CNH were not used in the HRS scoring and, thus, were not included in the HRS documentation package. They are now in the site docket and in the NPL listing docket for the site. That these references document that CNH is not contributing to the contamination found in drinking water wells in Plume Area B (e.g., the Indian Head Golf Club, Castle Estates, Mary Lane, and Kentish Hills subdivisions) is not an HRS issue. Neither the HRS scoring nor the EPA have claimed this (see Scenario 2 evaluation). There is sufficient information, however, to provide an HRS score for Scenario 1, and to demonstrate that CNH releases are contributing to the contamination in the Grand Island wellfields (see Section 1.3.12 of this support document, *Likelihood of Release/Attribution*). EPA cannot say that CNH is not part of the site.

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[1]Tetra Tech, EM Inc., *Draft Trip Report and Data Summary, Stolley Park Groundwater Contaminant Site, Grand Island*, April 9, 2004.

[2]Tetra Tech, EM Inc., *Draft Trip Report and Data Summary, Stolley Park Groundwater Contaminant Site, Grand Island*, May 5, 2004.

[3]Tetra Tech, EM Inc., *Draft Trip Report and Data Summary, Stolley Park Groundwater Contaminant Site, Grand Island*, August 2004.

[4]Tetra Tech, EM Inc., *Final raft Trip Report and Data Summary, Parkview Well Site, Grand Island, Nebraska*, November 22, 2004.

1.1.3.5 Purpose of HRS Documentation Package

CNH stated that, contrary to statutory and regulatory authority and judicial precedent, the HRS Package was designed primarily to assign responsibility rather than to quantify risk and identify remedial priorities. CNH explained that of the 134 page HRS Package text, 107 pages are dedicated almost exclusively to the assignment of responsibility, and approximately 70 pages are dedicated to assigning liability.

CNH stated:

> While U.S. EPA's HRS analysis and its decision to list a site on the NPL are evaluated pursuant to an arbitrary and capricious standard, *Kent County, Delaware Levy Court, v. United States Environmental Protection Agency,* 963 F.2d 391, 394 (D.C. Cir. 1992), U.S. EPA is not free to ignore overwhelming evidence contrary to its findings. Rather, just the opposite is true. U.S. EPA must provide a reasoned explanation or substantial evidence to support its conclusion rather than relying upon unsupported assumptions as the basis for its HRS evaluation. *National Gypsum Company v. United States Environmental Protection Agency*, 968 F.2d 40, 44 (D.C. Cir. 1992).

CNH commented that EPA should ensure that its decisions are not arbitrary and capricious because placement of a site on the NPL can have serious consequences for affected parties. CNH stated that EPA acted arbitrarily and capriciously in identifying CNH as a source of VOCs at Parkview/Stolley Park and in its scoring.

In response, the purpose of the HRS documentation package is to present to the public the HRS scoring of the site, the rationale for the assignment of the HRS scores, and the documentation supporting the HRS scoring. In scoring the Parkview Well site, EPA used the information known at the time of listing on the extent of the contamination at the site. This information is well documented in the HRS documentation record as proposed and does not assign liability to the CNH facility. EPA followed the process for listing a site on the NPL, and the HRS documentation record as proposed explains the HRS scoring for the site. The HRS scoring is presented in HRS score sheets; the rationale for assigning the HRS factor values and accompanying citations are presented in the HRS documentation record as proposed; and the documentation (references, maps, figures, etc.) supporting the scoring is attached. The HRS documentation record as proposed is written in a manner that allows the public to reproduce the HRS scoring and comment if desired on the appropriateness of the scoring.

In preparing the HRS documentation record as proposed for this site, the EPA used a standard format that has been used for over 500 sites since the HRS was revised in 1990. The major sections of the HRS documentation record as proposed are structured parallel with the HRS rule; first, a brief site overview is presented; then the hazardous waste sources are discussed; and then the following factors are evaluated by migration pathway: the likelihood of release from the site, the waste characteristics of the sources in relation to the pathway, and the identification of targets (receptors) actually or potentially threatened by site releases.

For the Parkview Well site, a brief overview of the site is first presented. It explains that, because EPA is unsure of all the sources contributing to the contamination reaching the Grand Island wellfields in Plume Area C, the HRS package presents two HRS scores for two different scenarios. One scenario evaluates

the HRS score for the site including a contribution to the contamination in Plume Area C from the CNH operations; the second scenario evaluates the score without any contribution of contamination from the CNH operations (pages 9 through 12 of HRS documentation record as proposed).

The Sources section of the HRS documentation record as proposed identifies and provides a general location of the sources included in the HRS scoring of the site, the hazardous substances associated with the sources, the containment for the source, and an estimate of the source hazardous waste quantity. At this site three sources are identified. Two are associated with the CNH facility where wastes were discharged. The third source is the southern plume; as discussed previously, at the time of proposal, EPA was unsure of the origin of this plume, and it identified the plume as a contaminant plume with unknown source(s) (pages 16 to 53 of HRS documentation record as proposed).

The HRS documentation record as proposed identifies the migration pathway(s) being evaluated - which at this site is the ground water migration pathway. This includes a description of the regional and local setting for that pathway. At the Parkview Well site, a description of the aquifer being evaluated, a discussion of the depth of the aquifer, and the geologic material(s) composing the aquifer are included. If there are discontinuities in the aquifer or interconnections between water bearing strata, they are also discussed in the HRS documentation record. At this site only one aquifer is scored, the High Plains Aquifer. It is scored for each of the two scenarios presented in the HRS documentation record as proposed (pages 54 to 57 of HRS documentation record as proposed).

Following the description of the ground water migration pathway, the HRS documentation record as proposed describes the assignment of the likelihood of release value for both scenarios. For the Parkview Well site, the likelihood of release is based on the observed releases by chemical analysis of hazardous substances to the High Plains Aquifer in Plume Areas A, B, and C (pages 58 to 102 of the HRS documentation record as proposed). The attribution section of the likelihood of release component describes the contaminated plumes and the association of hazardous substances released from sources at the site to the contaminated plumes. The attribution section clearly distinguishes the association of releases in Scenario 1 and Scenario 2. The Scenario 1 section assumes the releases of substances found in Plume Area C are partially attributed to Sources 1 and 2 at CNH facility. Scenario 1 also assumes that the contamination in Plume Area C is partially attributable to Source 3 at the site, the contaminated ground water plume which has no identified source. The Scenario 2 section of the attribution discussion posits that the released substances in Plume Areas B and C are associated only with Source 3, at the site (pages 103 to 108 of the HRS documentation record as proposed).

The waste characteristics and target discussions are presented together for each scenario in the HRS documentation record as proposed. For Scenario 1, the toxicity/mobility factor of the waste characteristics component is based mostly on the presence of 1,2-DCP in Sources 1, 2, and 3 (pages 110 and 111 of the HRS documentation record as proposed). The hazardous waste quantity factor of the waste characteristics component is based on the sum of the hazardous waste quantities of Sources 1, 2, and 3 (page 11 of HRS documentation record as proposed). The targets evaluated for Scenario 1 include the nearest drinking water well, the population subjected to Level I and Level II contamination, the population subjected to potential contamination of other drinking water wells, ground water resources, and a wellhead protection area (pages 113 to 121 of HRS documentation record as proposed).

For Scenario 2, the toxicity/mobility factor of the waste characteristics component is based on the presence of TCE in Source 3 (also referred to as Plume Area B, the southern plume, or the contaminant plume with no identified source) (pages 122 and 123 of the HRS documentation record as proposed).

The hazardous waste quantity factor of the waste characteristics component is based on the assignment of the minimum value of 100 because targets are subject to Level I or Level II contamination (pages 123 and 124 of HRS documentation record as proposed). The targets evaluated for Scenario 2 include the nearest drinking water well, the population subjected to Level I and Level II contamination, the population subjected to potential contamination of other drinking water wells, ground water resources, and a wellhead protection area (pages 125 to 133 of HRS documentation record as proposed).

Finally, the HRS documentation record as proposed presented the overall site score and ground water pathway score for each scenario. Both scenarios are assigned an observed release factor value of 550. The waste characteristics and targets factor values for Scenario 1 are 18 and 12,561.02, respectively. For Scenario 2, the waste characteristics and targets factor values are 32 and 14,080.23, respectively. Both Scenarios 1 and 2 are assigned the maximum ground water pathway score of 100 and an overall site score of 50.00 (page 133 of HRS documentation record as proposed).

As explained above, the HRS package was designed to describe and explain the HRS scoring of the site and allow the public to comment on the scoring. EPA did not prepare the package to assign liability or responsibility which, as explained above, is not established by placing a site on the NPL. The discussion on attribution, a mere 5 pages, not 107 or 70 pages as indicated by the commenter, does link the contamination in the ground water Plume Areas A and partially Plume Area C to CNH but for purposes of attributing the releases to the site, not to establish liability.

According to HRS Section 2.3, *Likelihood of release,* the likelihood of release score is based on an observed release of contaminants that can be attributed in part to the site. The attribution section of the HRS documentation record shows that the hazardous substances in the release are likely to have originated from the sources at CNH. Sources 1 and 2, located on the CNH property, contain 1,1,1-TCA, 1,1-DCA, 1, 2- DCP, PCE, Aroclor-1260 (PCBs), 1,1-DCE, and 1,2-DCP. These substances were also found in observed releases to Plume Areas A and C and meet the HRS requirement that at least some portion of the release must be attributable to the site (see pages 103 to 108 of the HRS documentation record as proposed; HRS Section 2.3, *Likelihood of release*).

1.1.3.6 Adequacy of Site Inspections

CNH commented that the site inspections performed at the site were inadequate because EPA failed to identify all the sources of the ground water contamination plume, because the 2004 sampling performed by TetraTech, an EPA contractor, was biased in that it was designed to identify CNH as the source of the VOC contamination at the Parkview/Stolley subdivision, and because EPA failed to identify all potentially impacted receptors (targets).

Specifically, CNH stated that EPA failed to investigate other potential sources of hazardous substances at or near the site that could be contributing to the ground water contamination, as required in the HRS Section 2.2, *Characterize sources*, despite numerous pleas to the contrary by EPA's contractor. CNH asserted that in April 2004, TetraTech identified a number of companies in the area that used chlorinated solvents like those found beneath the former Chief property, located west and northwest of CNH, but that EPA failed to investigate if these businesses disposed of chlorinated solvents on the former Chief property or elsewhere at the site. CNH listed several companies in the vicinity of the site that it associated with the use of chlorinated solvents. It added that despite the prevalent use of chlorinated

solvents by area businesses, EPA conducted no investigation into whether these businesses or individuals disposed of VOCs at the former Chief property or elsewhere. CNH also stated that to the west of the CNH Property and the former Chief property is the Cornhusker Ammunition Depot facility which is on the NPL, and to the east of the CNH Property is the Brentwood Subdivision Lake which was formerly a sandpit. CNH explained that throughout the country, sandpits have been used for waste disposal. CNH commented that EPA did not investigate these areas to determine if they are a source of VOCs.

CNH asserted that the preliminary HRS package "speculated" that CNH or the former Chief property and/or Southern Upgradient Sources (SUS)[5], or both, could be the source of VOCs in the ground water. CNH continued that EPA directed its contractor, TetraTech, to conduct extensive sampling and analysis heavily biased toward identifying the CNH Property as the source of VOCs at the Parkview/Stolley Park Subdivision. It added that examination of the field data and VOC contouring led TetraTech to conclude that the source of VOCs in the Southern and Parkview/Stolley Park Subdivisions was the former Chief property and/or SUS. CNH then commented that TetraTech was unable to state that the CNH property was the source of VOCs in the Parkview/Stolley Park Subdivision.

CNH commented that sampling conducted in August 2004 was heavily biased toward identifying CNH, rather than the former Chief property and or Southern Upgradient Sources (SUS), as the source of VOCs. CNH alleged that EPA collected only one direct push sample at the former Chief property, whereas it collected numerous samples in the Brentwood area. CNH stated that TetraTech still stated in its November Trip Report[6] that its 'investigation determined that CNH's past waste disposal practices on its property are likely not responsible for the contamination of the private drinking water wells in the Mary Lane, Kentish Hills, and Castle Estates subdivisions.' CNH added that TetraTech stated that CNH may be partially responsible for the ground water contamination east of the facility, but did not state that VOCs purportedly migrating from CNH facility reached the Parkview/Stolley Park Subdivision. CNH commented that using the same data and VOC contouring methodology, used by TetraTech, CRA, CNH's consultant, reached the same conclusions as TetraTech.

In addition, CNH commented that EPA also most likely failed to identify all the potentially impacted receptors (targets).

CNH also stated that EPA's contractor made numerous pleas to EPA to conduct further investigations on the source of the southern plume, and these pleas went unheeded. CNH added that in *Kent County,* 963 F.2d at 933 the D.C. Circuit Court held that EPA's disregard for its own expert's advice to use a different ground water sampling methodology was arbitrary and capricious.

In response, the site inspections performed in relation to the Parkview Well site are sufficient for supporting the HRS scoring of the site and its proposal to the NPL. In addition, EPA concurs that all possible sources contributing to contamination at the Parkview Well site were not identified at the time

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[5]VOCs located at the Golf Course and Castle Estates formerly owned by Chief Industries, Inc. ("former Chief property") and/or a potential source located further upgradient is collectively referred to as the Southwestern Upgradient Sources, or SUS in CNH's comments.

[6]Appendix E of CNH comments: TetraTech EM Inc. 2004. *Final Trip Report and Data Summary, Parkview Well Site, Grand Island, Nebraska.* November 22, 2004.

of listing. However, as explained below, this is not a requirement for HRS scoring purposes or promulgation of a site onto the NPL.

Section 300.420, *Remedial site evaluation*, of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) presents the purpose and the reporting requirements of an EPA Site Inspection (SI). It states in Subsection (c)(1) that, as appropriate, the SI shall be performed to:

> (I) Eliminate from further consideration those releases that pose no significant threat to public health or the environment;
> (ii) Determine the potential need for removal action;
> (iii) Collect or develop additional data, as appropriate, to better characterize the release pursuant to the HRS; and
> (iv) Collect data in addition to that required to score the release pursuant to the HRS for more effective and rapid initiation of the RI/FS or response under other authorities.

Section 300.420 (c)(5) describes the report that shall be prepared following a SI. It shall include, among other things:

> (v) A recommendation on whether further investigation is warranted.

EPA considers that the various site investigations meet the appropriate requirements for HRS scoring of the site. As demonstrated in other portions of this support document, CNH has not shown that the HRS scoring is in error or that there is inadequate information to justify the site scoring.

Regarding the identification of <u>all sources and targets</u>, the purpose of the HRS evaluation is to determine if the site warrants listing. If this can be determined by investigating only some of the sources and targets, there is no need to expend additional resources (*See Eagle-Picher Industries, Inc*., v. *EPA* (759 F.2d 905, 921 [D.C. Cir. 1985]); *City of Stoughton* v. *U.S.EPA*, (858 F.29 747, 756 [D.C. Cir. 1988])). In fact, EPA, on pages 106 and 107 in the HRS documentation record as proposed, identified 5 other possible sources of contamination to Plume Area B, and referred readers to the PA/SI report (Reference 5 of the HRS documentation record as proposed) for a full list of potential sources it had identified. Similarly, EPA agrees there may be other receptors (targets). Once the extent of the contamination is known, other targets may well be identified. For additional discussion of the identification of other possible sources of contamination, see text below and Section 1.3.12.3 of this support document, *Continuity of Plume A to Plume C.*

Regarding the identification of a ground water plume as a source, the one specific requirement regarding the identification of a ground water plume as a source for HRS purposes has been met. The HRS documentation record as proposed states that Source 3, Plume Area B consists of a contaminant plume with no identified source (page 33 of the HRS documentation record as proposed). The HRS definition of a source states that sources do not include those volumes of air, ground water, surface water, or surface water sediments that have become contaminated by migration, "except: in the case of either a ground water plume with no identified source or contaminated surface water sediments with no identified source, the plume or contaminated sediments may be considered a source" (HRS Section 1.1, *Definitions*).

EPA has made a significant effort to identify a source but has been unsuccessful. EPA has performed an effort equivalent to an Expanded Site Investigation (ESI) in the attempt to identify the contaminant plume

and its original source at the Parkview Well site. In October 1999, routine monitoring of municipal wells first detected VOCs in municipal well PWSW-4. This well is approximately 1-mile east of the Case New Holland (CNH) facility and immediately west of the Parkview residential subdivision (page 9 of the HRS documentation record as proposed). In response to this finding, the following investigations were performed (see page 13 of the HRS documentation record as proposed for a complete list of the pertinent investigations conducted at the site.):

1. Subsequent sampling of PWSW-4 in August 2001 revealed 1,1-dichloroethene (1,1-DCE) at a concentration exceeding its U.S. Environmental Protection Agency (EPA) maximum contamination level (MCL) and tetrachloroethene (PCE) at a concentration approaching its MCL (page 9 of the HRS documentation record as proposed).

2. The City of Grand Island sampled 77 private drinking water wells and four municipal drinking water supply wells around the Parkview subdivision in 2001 and 2002. Ground water from 37 private drinking water wells contained elevated levels of the following VOCs: 1,1-dichloroethane (1,1-DCA); 1,1-DCE; 1,1,1-trichloroethane (1,1,1-TCA); PCE; cis-1,2-dichloroethene (cis-1,2-DCE); 1, 2-dichloroethane (1,2-DCA); chloroform; and chlorodibromomethane (page 9 of HRS documentation record as proposed).

3. In June 2003, NDEQ conducted a PA/SI in the region near the closed municipal well. The purpose was to collect information concerning ground water contamination, assess the threat posed to human health and the environment, and identify the source(s) of contaminants. A total of 76 private wells, 2 city wells and 11 direct push wells were established and sampled. During the PA/SI, VOCs were detected in ground water samples collected from 20 private drinking water wells in the area at and near the Parkview subdivision and in ground water samples collected from 6 Geoprobe™ wells in the Parkview subdivision, and near the CNH facility (page 9 of the HRS documentation record as proposed).

4. In response to the PA/SI results, the City of Grand Island sampled private drinking water wells in the residential Mary Lane, Kentish Hills, and Castle Estates subdivisions in September and October of 2003. This investigation detected PCE and 1,1-DCE at concentrations exceeding their respective MCLs in ground water samples from 49 residential wells. Ground water samples from these wells also contained TCE; cis-1,2-DCE; 1,1-DCA; 1,2-DCA; and 1,1,1-TCA at concentrations below their respective MCLs, reference dose screening concentrations (RfD), and cancer risk screening concentration (CR) (page 9 of the HRS documentation record as proposed).

5. In November and December 2003, CNH contractors installed 19 Geoprobe™ wells east and southeast of the CNH facility and collected 83 ground water samples at multiple depths to determine the extent and depth of contamination. VOCs detected in ground water during this investigation include 1,1,1-TCA; 1,1-DCA; 1,1-DCE; PCE;1,2-DCA; and chloroform (Ref. 24, pp. 11, 17, 690-698) (page 11 of the HRS documentation record as proposed).

6. In March of 2004, Conestoga-Rovers & Associates, on the behalf of CNH, conducted a private well survey in the Parkview/Stolley Park subdivisions. Samples were collected from 128 residences (page 13 of HRS documentation record as proposed; pages 1 through 3 of Reference 47 of HRS documentation record as proposed).

7. From October 2003 to January 2004, CNH consultants conducted a removal action of contaminated material in the burn and burial area. The excavation removed 5,500 cubic yards of soil and drum remnants from the burn area, and 11,500 cubic yards of soil and drum remnants from the burial area. (Pages 16 and 23 of the HRS documentation record as proposed).

EPA concludes that moving forward with the NPL listing without knowing the actual sources of the plume of contamination is consistent with the purpose of the HRS to identify for the public the need for further investigation. EPA considers it will be necessary to perform studies more like that of a remedial investigation to find the source. Further, finding the source would not alter the listing decision. EPA's activities to identify the source of the southern plume prior to identifying it as a source are also consistent with EPA guidance on this issue. EPA's guidance, *Evaluating Ground Water Plumes Under the Hazard Ranking System,* EPA Publication 9320.8-01FS (USEPA, September 1998), suggests guidelines for evaluating a contaminated ground water plume as a source under the HRS. This document suggests:

> The source of ground water contamination can be designated as unidentified if the Expanded Site Investigation (ESI), or equivalent effort which involves sampling, concludes that the original source of the ground water contamination has not been documented. The ESI should at least include a site reconnaissance, record searches, employee interviews, and sampling to gain information on the possible origins of the ground water contamination. The attempt to identify a source should be discussed in the HRS documentation record and potential sources and potentially responsible parties should be identified to the extent reasonable. (*Evaluating Ground Water Plumes Under the Hazard Ranking System,* EPA Publication 9320.8-01FS (USEPA, September 1998)).

The studies to date exceeded the equivalents to an ESI in time, expense and effort as consistent with EPA guidance when scoring a contaminated ground water plume as a source and the Agency determined that it was appropriate to propose placing the site on the NPL. To assure adequate documentation of site conditions, EPA performed further sampling and site investigations after evaluating the site and decision to move forward with the listing, as discussed above. Regarding the extent of the ground water contamination of the releases from CNH, in August 2004 EPA collected additional supplemental ground water samples at seven locations between the CNH facility and Plume Area C and at one location from the Indian Head Golf Club which is west of the CNH facility. Seven (7) samples were collected in the Brentwood subdivision which is adjacent and approximately 0.6 mile east of the CNH facility. These samples were collected as part of the Agency's ongoing effort to refine the contaminant levels in this location and to determine relative contribution of contamination from CNH to the contamination in Plume Area C. These samples were collected near the Brentwood subdivision, west of the Parkview subdivision (pages 11 and 103 of the HRS documentation record as proposed; pages 21, 24, 43 of Appendix E, *Final Trip Report and Data Summary, Parkview Well Site, Grand Island, Nebraska*) (dated November 22, 2004, prepared by TetraTech EM Inc., for US EPA Region 7, of CNH comments)).

Regarding the claim that EPA performed sampling aimed at identifying whether CNH was a source of contamination in Plume Area C, EPA agrees this was the case. However, as explained above, this sampling was not meant to stand alone to characterize the entire site, but instead was a focused investigation to determine if CNH was contributing to the contamination in Plume Area C. EPA did locate one temporary well in an upgradient area to further support background levels for that sampling event. This sample did not constitute all the information used in the investigation of other possible sources. Figure 8 of the HRS documentation record as proposed depicts 38 direct push wells established to delineate Plume Area B of which 4 are located west of the CNH facility in the vicinity of the Indian

Head Golf Club. Further, during other site investigations, EPA and others conducted research, site investigation, interviews, and established direct push wells with the purpose of identifying the contamination and its source. See also page 13 of the HRS documentation record as proposed for a complete list of the pertinent investigations conducted at the site.

Regarding the recommendations by TetraTech that further sampling was needed to identify the sources of the ground water contamination, the PA/SI report concluded that the previously identified VOC plume around Stolley Park and the City of Grand Island Parkview Well No. 3 is not confined to that area but that concentrations of PCE and 1,2-DCE above their MCLs were identified in residential wells from Marylane, Castle Estates, and Kentish Hills subdivisions. Tetra Tech added in its summary and conclusions that additional work is recommended to further delineate the VOC plume to the west of Castle Estates and determine the source or source areas that have contributed to the plume. It also recommended that residential wells with concentrations above the MCL should be abandoned and these residences should be connected to the city water supply, and that residences in the impacted neighborhoods where VOC concentrations are determined to be below any health based benchmark level should be monitored for increases in VOC concentrations (Pages 62 to 63 of Reference 5[7] of the HRS documentation record as proposed).

These recommendations were made to be consistent with the NCP. As noted above, the NCP states that the SI report(s) should contain a section regarding the need for further investigations. EPA agrees that further investigation is needed to identify the sources of ground water contamination and the relative contribution of each source. This need for further investigation, however, does not make it inappropriate to pursue site listing. The extensive investigations to date demonstrate that finding the sources, and determining the travel routes and rate of migration needed to determine this information are beyond the scope of an SI. Hence, the need for further study verifies the need for listing.

1.1.3.7 Site Delineation

CNH contested the inclusion of its operations and the sources associated with it as being part of the Parkview Well site and in the HRS scoring of this site. CNH requested that EPA revise the HRS Package so that it identifies the former Chief property and/or SUS as the source rather than CNH; strike Scenario 1 from the HRS Package; correct all inaccuracies and faulty assumptions; conduct a through investigation into the use of the former Chief property and/or SUS; determine that no further response is needed with respect to the VOCs migrating from the CNH property; and not list the site on the NPL based on Scenario 1. CNH said that the correct HRS score for the VOCs associated with the CNH property is below the HRS threshold of 28.50. In its calculation, which it presented in Appendix BB to its comments, *HRS Scoring Calculation for the VOCs Purportedly Associated With the CNH Property*, it calculated an HRS site score of 3.46 for Scenario 1. CNH stated that the hazardous waste quantity and waste characteristics for the site score incorrectly assumes CNH as the source. It stated that EPA should have used the hazardous waste quantity for the Southern Plume originating from the former Chief property for the hazardous waste quantity evaluation.

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[7]Tetra Tech, EM Inc. 2004. Stolley Park Ground Water Contamination Site, Grand Island, Hall County, Nebraska, Combined Preliminary Assessment/Site Inspection. Prepared for the Nebraska Department of Environmental Quality (NDEQ). March 26.

In response, as explained earlier in this support document in more detail, the HRS documentation record presents two scoring scenarios for the Parkview Well site. The first scenario assumes that the ground water contamination found under the CNH facility (the northern plume or Plume Area A) has migrated to drinking water wells east of the CNH facility (in Plume Area C), and the contamination found in these wells is at least partially attributable to releases from the CNH facility. The second scenario covers the possibility that the releases from the CNH facility northern plume are not significantly reaching the wells in Plume Area C. The HRS documentation record as proposed contains the HRS evaluation for both of the two possible scenarios.

This two scenario approach is applied to comprehensively consider the site and documents that each scenario receives a site score that significantly exceeds 28.50, qualifying the site for the NPL regardless of the scenario that upon further investigation proves to be the most accurate (pages 1, 2, 3, 11, 133 of the HRS documentation record as proposed).

It is clear that releases to ground water have occurred from the CNH facility, and have been acknowledged by CNH in it comments (See page 12 of CNH's comments, SFUND-2004-0012-0065, December 17, 2004). There are at least two sources of VOC contamination associated with the CNH facility, and the ground water contamination in Plume Area A can be attributed to releases from the CNH operations. In addition, ground water contamination has been found in ground water samples at the CNH facility area operations [Plume Area A at CNH], at the Brentwood subdivision just due east of CNH, and at the wells in Plume Area C, documenting that the contamination is continuous between these areas. CNH is incorrect in its assertion that the sources at CNH are not part of the site in Scenario 1. CNH comments on hazardous waste quantity and its suggestion of a site score of 3.46 are discussed in Section 1.3.9 of this support document, *Removal and Hazardous Waste Quantity*.

CNH's comments questioning whether the contamination in Plume Area A is contributing to drinking water wells are addressed in Section 1.3.12, *Likelihood of Release/Attribution*, of this support document.

Given this situation, it is reasonable to include Scenario 1 in the site scoring and the sources and releases associated with it. To not do so would misinform the public about the possible sources of the contamination and the need for further investigation. Moreover, at the Parkview Well site, two known plumes are migrating toward target wells, and on this basis alone, consideration of both Plume Areas A and B as part of the site is justifiable. If further investigation determines no remediation is needed or that the relative contribution from CNH sources is not posing a significant risk, this will be identified by EPA and presented to the public.

Further, the extent of the contamination need not be fully determined at the NPL listing stage. This is because, as explained below, EPA is not required to have completed sufficient sampling to determine the exact extent of contamination. The inclusion of Scenario 1 in the site scoring is supported by the documentation presented in the HRS documentation record as proposed. While EPA agrees that the relative amount of contamination reaching the water supply wells in Plume Area C is not established, it is consistent with the HRS being based on screening level information to evaluate Scenario 1. This lack of certainty, however, is not a reason to exclude Scenario 1 from the scoring or the CNH sources and Plume Area A as part of the site for scoring purposes. EPA has delineated Plume Areas A, B and C as areas where contamination has come to be located.

CERCLA Section 105(a)(8)(A) requires EPA to list national priorities among the known "releases or threatened releases" of hazardous substances; thus, the focus is on the release, not precisely delineated

boundaries. Further, CERCLA Section 101(a) defines a "facility" as the "site" where a hazardous substance has been "deposited, stored, placed, or otherwise come to be located." The "come to be located" language gives EPA broad authority to clean up contamination when it has spread from the original source. On March 31, 1989 (54 FR 13298), EPA stated:

> HRS scoring and the subsequent listing of a release merely represent the initial [emphasis added] determination that a certain area may need to be addressed under CERCLA. Accordingly, EPA contemplates that the preliminary description of facility boundaries at the time of scoring will need to be refined and improved as more information is developed as to where the contamination has come to be located; this refining step generally comes during the RI/FS stage.

The HRS (55 FR 51587, December 14, 1990) elaborates on the "come to be located" language, defining "site" as "area(s) where a hazardous substance has been deposited, stored, disposed, or placed, or has otherwise come to be located. Such areas may include multiple sources, and may include the area between the sources."

Until the site investigation process has been completed and a remedial action (if any) selected, EPA can neither estimate the extent of contamination at the site, the exact number of receptors (targets), nor describe the ultimate dimensions of the NPL site. Even during or following a remedial action (e.g., the removal of buried waste) EPA may find that the contamination has spread further than or not as far as previously estimated. In addition, if another, unrelated area of contamination is discovered elsewhere on the property, EPA may decide to evaluate that release for the NPL.

EPA also notes that if Scenario 1 was dropped from the scoring, the site would still qualify for listing and have a site score for Scenario 2 alone of 50.00, well above the 28.50 cutoff. (CNH comments on HRS documentation record errors are discussed in Section 1.3.14 of this support document, *HRS Scoring Package Errors*).

1.1.3.8 CNH Removal Actions Regarding Sources 1 and 2

CNH objected to the scoring of Sources 1 and 2 (the Burn and Burial Areas) because they had been removed. CNH asserted that the HRS package provided no support for the statement that the removal actions conducted by CNH regarding these two sources are qualifying removals because all releases have not been adequately remediated. CNH added that EPA's own cleanup objectives and subsequent statements by EPA in the HRS package, and NDEQ's public statements, establish that the removal action is, in fact, complete. CNH explained that the removal was conducted according to procedures approved by NDEQ under the EPA-approved RAPMA program. It stated that the removal achieved site-specific cleanup levels and EPA stringent Region 9 preliminary remediation goals (PRGs). CNH cited the TetraTech August Trip Report in support of this claim.

CNH stated that its removal actions met the three requirements of the HRS. CNH listed those requirements as:

- The removal action must physically remove waste from the site.
- The removal action must have occurred prior to the cutoff date applicable to the site.

- The removed waste must be disposed or destroyed at a facility permitted under RCRA or the Toxic substances Control Act (TCSA) or by the Nuclear Regulatory Commission (NRC).

CNH explained that the first and third requirement listed above were successfully accomplished at the Burn and Burial areas at the CNH facility. It said that, with regard to the second requirement, 'the Agency recognizes that some post-SI removal actions can substantially address the threat to human health and environment and should be considered up to the time of NPL listing.' CNH explained that the removal was conducted prior to the PA/SI. CNH also estimated the amount of hazardous substances remaining after the removal was less that 100 pounds.

Burn Area

CNH stated that EPA's Toxicity Characteristic Leaching Procedure (TCLP) test, pursuant to 40 CFR 261.24, conducted on the material removed from the Burn Area establishes that constituent concentrations would not leach to ground water at levels deemed hazardous pursuant to the Resource Conservation and Recovery Act (RCRA), 42 USC 6901. CNH also stated that the VOC concentrations in the soil after the removal action was completed were below US EPA's Region 9 Preliminary Remediation Goals (PRG). [CNH submitted the Region 9 PRG table and User's Guide as Appendix H[8] of its comments.] CNH added that the VOCs in the Burn Area were found at very shallow depth and were not found in a significantly leachable form. It stated that these data are in the March 2004 Final Report Interim Removal Action[9] prepared by CRA, consultant to CNH.

CNH commented that the material in the Burn Area is not near the ground water. It added that the drum remnants were found in the upper 4 feet of soil and contained mostly dried paint and/or soil. It added that in the second stage of excavation, from 4 to 8 feet, no drum remnants were found and very little visually impacted soil was present. CNH stated that the dried paint found in the Burn Area did not contain leachable chlorinated VOCs. It added that many of the VOCs that were originally in the paint waste likely evaporated.

CNH stated that the 51 confirmation samples collected from the bottom and side walls of the excavation did not exceed the EPA Region 9 PRG or the USEPA soil screening levels for leaching to ground water (dilution attenuation factor of 20). CNH added that the excavation was backfilled. CNH submitted Appendix K, *Confirmatory Soil Sampling Results, Burn and Burial Area,* in support of its comments.

Burial Area

CNH stated that the TCLP test on the waste that was removed from the Burial Area show that the chlorinated solvents would not leach to ground water. CNH added that drum remnants and paint residue were found only at shallow depths. CNH stated that no drum remnants were found 4 to 8 feet below ground surface and a slight amount of paint-impacted soil was encountered throughout this area. It added that paint impacted soil was found slightly below 8 feet below ground surface. CNH cited the CRA Final Report, Interim Removal Action (March 2004) and the August 2004 TetraTech Trip Report.

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[8]USEPA Region 9, *Region 9 PRG Tables and Users Guide,* October 2004.

[9]Reference 36 of HRS documentation record as proposed: CRA. 2004. *Final Report Interim Removal Action*, *NDEQ RAPMA Program (I.D. 36-336-4917) CNH America L.L.C. Facility, Grand Island*, March 2004.

CNH commented that EPA incorrectly speculated that VOCs in the Burial Area have contributed to VOCs in the ground water beneath the Parkview/Stolley Park Subdivision. CNH stated that the TCLP test on the waste that was removed from the Burial Area show that the chlorinated solvents would not leach to ground water. CNH stated that the dried paint and soil found in the Burial Area contained no leachable chlorinated VOCs. CNH stated that many of the VOCs evaporated and the remaining VOCs were adsorbed onto the paint and were not capable of leaching to soil or ground water. CNH submitted Appendix J, *TCLP Data, Burn and Burial Areas*, in support of its comments.

CNH commented that 43 confirmatory samples collected from the bottom and side walls of the Burial Area excavation exhibited concentrations that did not exceed the Region 9 PRGs for direct contact (industrial land use) or the EPA soil screening level for leaching to ground water. It added that the excavation was backfilled.

In response, the Burial and Burn Areas are correctly identified as HRS sources although the original source areas have been remediated at least partially. EPA's policy is to consider certain removal actions to increase incentives for rapid response actions at sites. The preamble to the HRS discusses consideration of such removal actions in the assignment of HRS scores (Section Q of the preamble of the HRS, 55 FR 51568, December 14, 1990). According to Section Q, EPA will calculate waste quantities based on "current conditions," which may differ from initial conditions, as the result of a response action; however, the preamble notes that this approach must ensure that "the HRS score reflects any continuing risk at sites where contamination occurred prior to any response action" and that "the accuracy of this approach depends on being able to determine with reasonable confidence the quantity of hazardous constituents remaining in sources at the site and the quantity released to the environment." The preamble further states that "removal actions may not reduce waste quantity factor values unless the quantity of hazardous constituents remaining in sources and in releases can be estimated with reasonable confidence" and that "parties undertaking removal actions will have primary responsibility for collecting any data needed to support a determination of the quantity of hazardous constituents remaining." Thus, the parties arguing for a change in HRS score have the burden of providing the information to support such a score change.

EPA has reviewed the site score in the light of removal actions mentioned by CNH. While the removal actions may have addressed the physical source locations, they have not adequately addressed the risk posed by the migration of the contamination from the sources prior to the removal action. Indeed, since contaminants have been found in the ground water, this would suggest leaching has occurred. That contamination has migrated from these sources is not in question. An observed release of hazardous substances was documented to the High Plains Aquifer at the site. The sources at CNH facility were also not contained to prevent migration of hazardous substances to ground water. A municipal well and numerous private drinking water wells were found to be contaminated with VOCs, at least in part, attributable to these CNH sources (pages 9 to 12 and 62 to 119 of the HRS documentation record as proposed).

With regard to CNH statements that the VOCs in the material removed from the Burn and Burial Areas are below TCLP levels and, therefore, would not leach into ground water, and that the remaining hazardous substance concentrations in the immediate source areas may be below the Region 9 PRGs, this does not demonstrate that leaching had not occurred prior to the removal and that the released substances are not posing a threat to human health.

Thus, EPA does not consider the removal action to be qualifying, and EPA correctly scored the sources based on pre-removal conditions. The issue of waste quantity is addressed below.

These comments have no impact on the site score.

1.1.3.9 Removal and Hazardous Waste Quantity

CNH stated that EPA ignored CNH's removal action when calculating the hazardous waste quantity, and thereby falsely raised the site score. CNH stated that the hazardous constituent quantity in the remaining, low-level impacted soil at the CNH property and the VOCs in ground water at the CNH property can be calculated with reasonable confidence. It said that data demonstrate that the post-removal hazardous constituent quantity for organic chemicals at the CNH site and immediate vicinity is less than 100 pounds, and this quantity corresponds to a hazardous waste quantity assigned value of one (1). CNH did not provide further information on the methodology or calculations it used to estimate the amount of remaining hazardous substances released from the sources. CNH calculated an HRS site score of 3.46 for Scenario 1 and stated that the site score incorrectly assumes CNH as the source. CNH asserted that the hazardous waste quantity of the Southern Plume should be used in the site evaluation.

In response, based on the documentation provided by CNH, EPA cannot establish with reasonable confidence CNH's estimate of less that 100 pounds for the hazardous constituent quantity for several reasons even if it were to consider the removal as qualifying for HRS purposes. HRS Section 2.4.2.1.1, *Hazardous constituent quantity*, states to evaluate the hazardous constituent quantity for the source based solely on the mass of CERCLA hazardous substances allocated to the source. HRS Section 2.4.2.1.1 also defines an constituent quantity estimate to be sufficient if:

> . . . the total mass of all CERCLA hazardous substances in the source and releases from the source [or in the area of observed contamination] is known or is estimated with reasonable confidence . .

While CNH states that post-removal data demonstrate that the hazardous constituent quantity for organic chemicals at the CNH site and immediate vicinity is less than 100 pounds, it failed to demonstrate the mass of all hazardous substances identified in the release from the sources and provides no support for its hazardous constituent quantity, from the sources over their entire operating period, of less than 100. CNH provided no calculations to show how the value of less than 100 pounds of hazardous constituent was calculated. Additionally, only shallow soil samples were collected, and the ground water samples that were collected do not characterize the extent of the plume. There is no information on how many hazardous substances were included in the CNH estimate, nor the depth, concentration, and volume of the plume, thus, making the hazardous constituent quantity in the release unknown.

Furthermore, no change in the overall score for Scenario 1 would result even if the site was scored on current conditions rather than initial conditions. That is, regardless of whether EPA considered the Burn and Burial Areas as eligible sources, the hazardous waste quantity for the ground water pathway for Scenario 1 would still be 100 because Section 2.4.2.2, *Calculation of hazardous waste quantity factor value*, states: "If any target for that migration pathway is subject to Level I or Level II concentrations assign either the value from Table 2-6 or a value of 100, whichever is greater as the hazardous waste quantity for that pathway." For the Parkview Well site a ground water pathway hazardous waste quantity

of 100 was assigned based on sum of the hazardous waste quantity values assigned to Sources 1, 2, and 3 at the Parkview Well site. A total of 1,221.7 people are subjected to Level I contamination and 139.22 targets are subjected to Level II contamination. The ground water pathway score of 100 is still the calculated pathway score, and the resulting site score of 50.00 (not 3.46) is still assigned.

1.1.3.10 Accuracy of Ground Water Pathway Hydrogeologic Description

CNH comments on the accuracy of the ground water pathway hydrogeologic description are discussed below under the *Ground Water Flow* and *Lower Porosity Layer* subsections.

1.1.3.10.1 Ground Water Flow

CNH commented that EPA presents an incorrect and inconsistent description of ground water flow gradient in the vicinity of the site. CNH asserted that the HRS package states that ground water in the area moves in an easterly direction, and ground water contamination may be progressing in that direction. CNH then asserted that EPA makes the contradictory statement that local ground water flow under the CNH facility is to the east and northeast. CNH asserted that the ground water flow from CNH is to the east-northeast, such that ground water from beneath the CNH Property does not migrate eastward and get drawn to the Parkview Well No. 3 in the Parkview/Stolley Park Subdivision (in Plume Area C), and provided several studies it claimed were in support of this assertion.

CNH stated that EPA's uncertainty on ground water flow direction is further expressed in a series of contradictory sentences by stating that ground water flow data from 1962 indicate a flow direction to the northeast; detailed data from 2002 and 2003 show that ground water is flowing to the east; and presumably, ground water flow direction under the entire site is to the east. CNH added that EPA's ground water theory is resplendent with weaknesses and uncertainty and that words like suggest, may, possibly, and probably are indicative of this weakness.

In addition, CNH commented that EPA provided no methodology for the development of Figure 3 of the HRS package, *Approximate Plume Area Boundaries Map.* It contended that no discussion, evidence, or support is presented in the HRS Package on the methodology used to delineate the alleged areal VOC boundary. CNH commented that EPA has no evidence to support its speculation about ground water flow direction illustrated in this figure. It stated that evidence, contrary to EPA's, established that ground water flow from both CNH and the former Chief property is separate and distinct, running parallel to one another and the Platte River, to the east-northeast, such that ground water flowing beneath the CNH Property does not get drawn to the Parkview Well No. 3[10] in the Parkview/Stolley Park Subdivision. CNH commented that the ground water elevation contours establish a continuous ground water flow direction to the east-northeast before and after the Parkview/Stolley Park Well No.3 was shut down.

In support of its claim, CNH pointed out that EPA has firmly established that ground water flow at the Cleburn Well Superfund site, also in Grand Island, Nebraska, also flows to the northeast. It added that City of Grand Island's consultant report on ground water elevations and ground water contours produced

[10]Parkview Well No. 3 is also referred to as municipal well PWSW-4 in the HRS documentation record as proposed. (Reference 39 of the HRS documentation record as proposed).

using data derived from the City of Grand Island piezometer network demonstrates that ground water flow is in the northeasterly direction. It commented that the ground water elevation contours establish a continuous ground water flow direction to the east-northeast before and after the Parkview/Stolley Park Well No. 3 was shut down. CNH cited Appendices S[11], T[12], U[13], and V[14] in support of its comments.

CNH contended that EPA ignored critical ground water flow direction data which is clearly to the east-northeast rather than due east, in an effort to concoct a connection between CNH and Parkview/Stolley Park.

CNH stated:

> The small area of VOCs purportedly migrating in the groundwater beneath the CNH Property passes in an easterly direction for a very short distance, paralleling the southern plume migrating from the Former Chief Property and/or SUS. Flow direction further downgradient from the CNH property is parallel to the large VOC plume migrating from the Former Chief Property and/or SUS as well as the Platte and Wood Rivers, and turns northeast, passing north of the purportedly contaminated wells in the Parkview/Stolley park Subdivision. 'These various studies performed around the City of Grand Island confirm that the groundwater flow direction is unchanged over time and is to the east-northeast. Indeed the earliest available groundwater contours dating back to 1946 confirm groundwater flow to the east-northeast.' [CRA Comprehensive Off-Site Investigation Report and Work Plan for Supplemental Activities, February 2004, p. 14-15 (Appendix L[15])].

CNH also contended that EPA's statement that pumping at Parkview Well No. 3 has caused the ground water to flow from CNH to Parkview Well No. 3 is without support and is in fact contradicted by evidence. CNH commented that the ground water has continuously flowed to the east-northeast, both while the wells were pumping prior to August 2001, and after Parkview Well No. 3 was shut down in August 2001. It provided Appendix V, *Groundwater Contours (1998 Through 2004), City of Grand Island*, as support.

In response, EPA considers its description of the ground water flow directions in the immediate vicinity of the site to be consistent and correct and that it is reasonable to assume that contamination from CNH will migrate to the Parkview area. While there is information that says there is ground water flow direction to the northeast under some parts of the site and nearby, EPA considers it to be reasonable in localized areas for the flow direction to vary with the non-isomorphic, non-homogenous nature of the subsurface materials. EPA considers there to be sufficient rationale presented in the HRS documentation

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[11] *Keech, Availability of Groundwater in Hall County (Map)*

[12] *U.S. EPA Record of Decision, 1996 and 2001, Cleburn Street Well*

[13] *Lutz Report on Groundwater Elevations*

[14] *Groundwater Contours (1998 Through 2004), City of Grand Island*

[15] *CRA. Comprehensive Off-Site Investigation Report and Work Plan for Additional Activities.*

package as proposed to support an eastward flow gradient under the CNH property toward the target wells in Plume Area C. Furthermore, it is reasonable to assume that drawdown associated with the municipal well fields in this area could be drawing this contamination into the city water system.

Page 56 of the HRS documentation record as proposed states:

> Ground water flow data from 1962 indicate a flow direction to the northeast (Ref. 7, p. 1). More detailed data from 2002 and 2003 show that ground water is flowing to the east directly under CNH (Ref. 6, pp. 31, 93, 102). Presumably, ground water flow under the entire site is to the east. The distribution of the contaminant plume suggests ground water may be drawn to the northeast near the Parkview subdivisions, possibly due to seasonal drawdown by the three active municipal wells at that location. The four municipal wells - PWSW 1, 2, 3, and 4 - [and] the numerous private drinking water wells located around the Parkview subdivision may have enough pumping capacity to alter the ground water flow direction (Ref. 27, pp. 1-11).

Reference 7[16] of the HRS documentation record as proposed, *Availability of Ground Water in Hall County, Nebraska, Hydrologic Investigations Atlas HA-131*, also confirms the ground water flow direction discussed in the HRS documentation record as proposed. Figures 3 and 4 of Reference 7 depict that ground water flow in the site vicinity as eastward and northeastward. It explains that most of the ground water in Hall County, Nebraska, moves parallel to the course of the Platte River. Likewise, Reference 6[17] of the HRS documentation record as proposed, *Supplemental Investigation, New Holland, North America, Inc. Facility, Grand Island, Nebraska,* documents that ground water flow at CNH is consistent with the ground water flow description provided on the HRS documentation record as proposed. Also prepared for and supplied by CNH is Appendix L of its comments which confirms that ground water flow is to the east northeast (pages 14 - 15 of Appendix L[18] of CNH comments).

CNH consultant's description of the ground water flow direction is also consistent with the HRS documentation record as proposed. Section 2.1.2, *Groundwater Movement*, of Appendix E[19] of CNH's comments summarizes the ground water flow in the site vicinity. It states:

> Aquifer studies conducted at the CNH facility by Conestoga-Rovers & Associates (CRA) [CNH consultants] and others have provided the following additional information. CNH consultants reported that the groundwater flow direction within the surficial aquifer at the site is to the east, whereas previous site groundwater contours maps indicated a

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[16]Keech, C.F. and Dreeszen, V.H. 1964. "Availability of Ground Water in Hall County, Nebraska. Hydrologic Investigations Atlas HA-131". USGS and State of Nebraska, Conservation and Survey Division, University of Nebraska.

[17]Conestoga-Rovers & Associates (CRA). 2003. "Supplemental Investigation, New Holland, North America, Inc. Facility, Grand Island, Nebraska." April.

[18]*CRA. Comprehensive Off-Site Investigation Report and Work Plan for Additional Activities*

[19]Tetra Tech, EM Inc., *Final Draft Trip Report and Data Summary, Parkview Well Site, Grand Island, Nebraska*, November 22, 2004.

> northeast or east-southeast flow direction. CNH consultants attribute this variation to seasonal changes.

At the time of listing, the general regional ground water flow direction [between CNH and Plume Area C] at the site is to the east. The distribution of the contaminant plumes suggests that the local ground water flow is drawn to the northeast subdivisions, possibly due to seasonal drawdown by the three active municipal wells at that location. The four municipal wells PWSW-1, -2, -3, and -4 located in the Parkview subdivision may have had enough pumping capacity to alter the ground water flow direction (see page 56 of the HRS documentation record as proposed; pages 1 - 11 of Reference 11; Figures 1 through 10 of Reference 24).

Furthermore, the influence of heavy withdrawal of ground water in Grand Island has been known for some time, and current pumping of the ground water in the High Plains aquifer is extensive. (References 7[20] and 27 [21]of the HRS documentation record as proposed). Reference 7 of the HRS documentation record as proposed states the following:

> Heavy withdrawal of ground water at Grand Island has made a local depression in the water table. This depression, which has existed since the early 1930's, was first reported by Lugn and Wenzel (1938) and was subsequently investigated in greater detail by Wenzel (1940). To alleviate the locally overdeveloped condition, Grand Island is now (1963) developing a well field abut 6 miles south of town on an island in the Platte River, where pumping will induce recharge from the river and thus insure a stable supply.

EPA concludes that ground water flow in different parts of the site is east and northeast and is influenced in a northeast direction by local withdrawal.

Regarding Figure 3 of the HRS documentation record as proposed, it is an approximate plume area boundaries map for Plume Areas A , B, and C. As stated earlier, the HRS is a screening tool, and thus, this map is only a preliminary figure of the extent of the contaminant plumes at the site. It does not depict the extent of the site, nor does it establish flow direction but rather provides the public with a general concept of the contaminated water locations. It is sufficient to show for HRS purposes that the site screening data certainly suggest that ground water gradient has at least an eastward component as well as perhaps an east northeast component closer to the Parkview/Stolley Park subdivision areas, although the overall gradient may actually be shown somewhat different if further study, with a broader distribution of information from well locations, is performed. Additional figures in the HRS

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[20]Keech, C.F. and Dreeszen, V.H. 1964. "Availability of Ground Water in Hall County, Nebraska. Hydrologic Investigations Atlas HA-131". USGS and State of Nebraska, Conservation and Survey Division, University of Nebraska.

[21]City of Grand Island. 2004. Well Depth, Screen Depth, Pump Setting, and Pumpage Data for 26 Municipal Wells. Provided by Julie Frandsen, Utility Technician with the City of Grand Island, Utilities Department, 800 East Bischeid Street, Box 1968, Grand Island, Nebraska 68802-1968.

documentation record as proposed also list the approximate locations of the contaminated wells (See Figures 1 - 10 of the HRS documentation record as proposed; Reference 39 of the HRS documentation record as proposed).

1.1.3.10.2 Lower Porosity Layer

CNH objected to the assertion in the HRS documentation record stating that there is an 8-10 foot thick shallow clay layer underlying the CNH property, and that the clay layer has facilitated the migration of VOCs from the CNH Property to the Parkview/Stolley Park subdivisions. CNH stated:

> Figure 5 of the HRS Package, 'MW-11 Geologic Column at Burial Area,' describes the geologic unit at 30 ft to 37 ft bgs [feet below ground surface] as 'inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.'. . . Even the 'clay, high plasticity" unit (38 ft -40 ft bgs) contains 'some fine to very fine sand' and 'trace coarse sand' - - and is only 2 feet thick - - not 8 to 10 ft thick as stated in the HRS Package. There is no evidence to support U.S. EPA's claim that this layer is 'impermeable.' [HRS Package Section 3.1.1 p. 105.] Tetra Tech clearly acknowledges that there is sand throughout the soil profile.

CNH contended that under the Unified Soil Classification System (USCS) relied upon by EPA, and the scientific community, these geologic units fit within the 'dirty sands' and 'silts' classification, rather than the clayey classification. It added that, by definition, these units are not impermeable. CNH explained that Figure 5 of the HRS Package does not show a clay layer above the 80 foot deep aquitard. CNH stated that besides the 80 foot deep aquitard, there is no continuous geologic layer except for sand and gravel beneath the site. CNH commented that the HRS package contradicts itself and states that the clay layer probably has a low permeability. CNH added that the VOCs from the CNH property are limited by biologic and abiotic degradation and other attenuation factors. It added that ground water flow direction from CNH is to the east-northeast rather than due east.

In response, for screening purposes, sufficient information is presented in the HRS documentation package as proposed to support the probable presence of a shallow, lower permeability layer in the High Plains aquifer extending from Plume Area A to Plume Area C. While EPA in the HRS documentation record as proposed says a "clayey layer," it appropriately described this layer elsewhere as a "silty sand and silty clay layer [with] a lower permeability" (page 105 of the HRS documentation record as proposed). Page 55 of the HRS documentation record as proposed states:

> Locally under the CNH facility, the uppermost portion of the Quaternary deposits mostly consist of fine to medium sand to about 12 ft bgs [feet below ground surface]. Under these sands is a thick layer of mostly sand and gravel to about 99 ft bgs. Under these sands and gravels is the impermeable shale and clay layer of unknown thickness. This impermeable shale and clay layer is the basal aquitard for the High Plains aquifer at the site. A representative stratigraphic column of the Quaternary age deposits is provided as Figure 5.
>
> Subsurface investigations at the CNH facility describe a silty clay and silty sand layer of approximately 7 ft [feet] thick at approximately 35 ft bgs deep (Ref. 6, p. 64).

> Preliminary results of an EPA investigation conducted in August 2004 document a similar clayey layer under the Brentwood subdivision east of the CNH facility. This clayey layer of relatively lower permeability is approximately 8-10 ft thick beginning at 34 ft bgs. Preliminary results also indicate that this clayey layer pinches out between the Brentwood subdivision and the Parkview subdivision.

Additionally, Figure 5 of the HRS documentation record as proposed depicts "Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity" at a depth of 30 to 34 feet below ground surface *at the CNH facility* in the vicinity of the Burial Area. EPA has also noted this stratigraphy occurs *at the Brentwood subdivision where it begins at 34 ft bgs and is 8 to 10 feet thick.* Although at differing thickness, this layer of is apparent at 34 ft bgs at both the CNH facility and the Brentwood subdivision (page 103 of HRS documentation record as proposed; pages 21, 24, 43 of Appendix E[22] of CNH comments).

EPA has revised the HRS documentation record to delete reference to a "clayey layer" and refer to this geologic unit as a "silty sands, clayey silts." This revision has no impact on the site score. Regardless of whether this geologic unit is a "clayey layer" or "silty sands, clayey silts," it constitutes a lower permeability layer that could encourge or promote migration horizontally instead of just vertically.

1.1.3.11 Contaminants Below Regulatory Levels

CNH commented that much of the contamination used in the HRS scoring of the CNH area was below regulatory levels, and questioned this data's use. CNH pointed to ground water levels below MCLs, remaining soil levels in two source areas below PRGs, and contamination in materials removed from sources that were below TCLP levels.

CNH stated that hundreds of ground water samples were collected at the site and that the data show the VOCs exceeding MCLs are limited to the CNH property.

In response, that regulatory or screening levels of certain hazardous substances were not exceeded does not eliminate those hazardous substances or their release from consideration when evaluating a site using the HRS. On July 16, 1982, when responding to public comments on the proposed (original) HRS (47 FR 31188), and again on September 8, 1983 (48 FR 40665), the Agency rejected the idea that releases within regulatory limits should not be considered in HRS scoring. For this reason, the hazardous substances documented in the soil and ground water samples at the site are not excluded.

Moreover, when screening a site for HRS evaluation, often only limited grab sampling is available and may or may not be statistically representative of actual contaminant levels at a site. For HRS purposes, finding a substance in a source is sufficient to identify the substance as present, and finding a substance in ground water at observed release levels documents a release has occurred (HRS Section 2.2.2, *identify hazardous substances associated with a source;* HRS Section 2.3*, Likelihood of release;* HRS Section

[22]TetraTech EM Inc. 2004 *Final Trip Report and Data Summary, Parkview Well Site, Grand Island, Nebraska*). November 22, 2004.

3.1.1*, Observed release).* Not until additional sampling and a comprehensive analysis of the site are performed, such as that performed during a remedial investigation, can it be said with confidence that contaminant levels at a site does or does not pose unacceptable risk (47 FR 31188, July 16, 1982).

1.1.3.12 Likelihood of Release/Attribution

CNH contested the attribution of hazardous substances in observed releases in Plume Areas B and C to CNH. CNH claimed the contamination in the target wells was from Source 3, the southern plume. CNH presented several reasons for the claim that the contamination in the target wells was not from releases from the CNH facility. (Additional comments on likelihood of release/attribution are discussed below under the *Attribution of Observed Release to Source 3*, *Attribution of Observed Releases in Plume Area C to CNH*, *Continuity of Plume A to Plume C, Flow Direction, Migration Along a Lower Permeability Layer, Migration Potential of Sources 1 and 2 Contamination,* and *Chemical Fingerprint/Attenuation/Biodegradation* subsections.)

In response, the rationale for attributing at least part of the contamination in the Plume Area C in scoring Scenario 1 to releases from CNH operations is consistent with the HRS. In scenario 1, EPA does not claim CNH is contributing to the ground water contamination in Plume Area B or that CNH is the only source of contamination in Plume Area C. Scenario 2 does not include any attribution of observed releases in target wells in either Plume Area B or C to the CNH facility.

The HRS only requires that some portion of the increase in contaminant concentrations in a release well be identified as attributable to a site. HRS Section 3.1.1 *Observed release*, and Section 2.3, *Likelihood of release*, provide the requirements for identifying an observed release by chemical analysis to ground water, which is scored in both Scenarios 1 and 2. Regarding attribution, HRS Section 2.3 states that "further, some portion of the release must be attributable to the site" (emphasis added). Similarly, HRS Section 3.1.1 states that "some portion of the significant increase [in hazardous substance concentration between background and release sample levels] must be attributable to the site to establish the observed release, except: when the source itself consists of a ground water plume with no identified source, no separate attribution is required" (emphasis added).

For Scenario 1, the rationale for attributing some portion of the significant increase in contaminant concentrations in drinking water wells in Plume Area C to releases from the CNH facility is discussed on pages 103 to 105 of the HRS documentation record as proposed. In summary, it demonstrates that the ground water contamination in Plume Area C is partially attributed to Sources 1 and 2 at CNH because the sources at the CNH facility contain the same VOCs as in both Plume Areas A and C and are upgradient of them; because the background samples upgradient of Plume Area A have non-detect levels of these VOCs; and the ground water contamination appears to be continuous between the sources and the two plume areas. It also indicates on page 103 that the contamination in Plume Area C wells is also partially attributable to Source 3, the ground water plume in Plume Area B with no identified sources. For Scenario 2, the ground water contamination in both Plume Areas B and C is attributed only to the Source 3 ground water plume (see page 105 to 107 of the HRS documentation record as proposed). CNH's specific comments contesting this attribution rationale and the responses to these comments are presented in the following subsections of this support document.

1.1.3.12.1 Attribution of Observed Releases to Source 3

CNH asserted that the source of the contamination in the drinking water wells is the source of Plume Area B. It commented that evidence developed by TetraTech, EPA's consultant, establishes that "the source of VOCs in the Castle Estates, Mary Lane, Kentish Hills, and Parkview/Stolley Park Subdivisions is the Former Chief property and/or SUS" which are located upgradient and sidegradient to the southwest of the CNH Property. CNH added that the April 2004 Trip Report[23], submitted as Appendix B of CNH comments, stated that the source of PCE and 1,1-DCE is located to the south and west of the CNH facility, and 'appeared to be originating from the Indian Head Golf Course or some other location farther west.' CNH stated that TetraTech stated that 'Additional work is recommended to further delineate the VOC plume to the west of Castle Estates and determine the source or source areas that have contributed to the plume.' CNH continued that despite the recommendations of its contractor, and EPA's extensive sampling of the Brentwood Subdivision on August 10 and 11, 2004, EPA failed to take more than one additional sample at the former Chief property.

CNH also asserted that VOC Contouring in Figures 5, 6, and 7 of the April[24] and August[25] Trip Reports further established that the VOC plume originates at the former Chief property and migrates through the Southern and Parkview/Stolley Park Subdivisions. It added that the plume flows parallel to the Platte River in an east-northeast direction. It added that these findings are consistent with ground water contouring performed by CNH's consultant, Conestoga-Rover & Associates (CRA), and included in CRA's Comprehensive Off-Site Investigation Report, February 2004.

CNH further argued that the Southern Plume is long and extends to the Parkview/Stolley Park Subdivision. It explained that this is because field results indicate that ground water in the Southern Plume is most likely influenced predominantly by aerobic conditions, which generally do not result in rapid degradation of highly chlorinated compounds.

CNH also stated that data establish that the predominant VOCs found in the ground water beneath the former Chief property are PCE and 1,1-DCE, and the "fingerprint" is similar to the fingerprint in the ground water beneath the Southern and Parkview/Stolley Park Subdivision.

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[23]Reference 14 of the HRS documentation record as proposed: Tetra Tech. 2004. "Draft Trip Report and Data Summary, Stolley Park Ground Water Contamination Site, Grand Island, Nebraska." Prepared for the EPA. April 9.

[24]Reference 14 of the HRS documentation record as proposed: Tetra Tech. 2004. Draft Trip Report and Data Summary, Stolley Park Ground Water Contamination Site, Grand Island, Nebraska. Prepared for the EPA. April 9.

[25]Tetra Tech, EM Inc., *Draft Trip Report and Data Summary, Stolley Park Groundwater Contaminant Site, Grand Island*, May 5, 2004.

CNH also noted that there are clean wells separating the southern plume from the CNH Property, supporting the assertion that CNH is not the source of the Southern Plume. It cited in support page 44 of the 2004 PA/SI for the site (Reference 5[26] of the HRS documentation record as proposed).

In response, EPA stated in the HRS documentation record as proposed that the ground water contamination in Plume Area C is at least in part attributable to Source 3 (the southern plume) in Scenario 1 and ground water contamination in both Plume Areas B and C only to Source 3 in Scenario 2. In neither Scenario 1 nor Scenario 2 did EPA attribute ground water contamination in Plume Area B to CNH. EPA agrees that the southern plume extends to the Parkview/Stolley Park subdivision and that it is at least in part responsible for the contamination in these wells (Pages 103 to 107 of the HRS documentation record as proposed).

With regard to the commenter's claim that there are "clean"wells between CNH property and the southern plume, the HRS documentation record as proposed did not state that CNH is responsible for the contamination of the private drinking water wells in the Mary Lane, Kentish Hills and Castle Estates subdivisions. These wells are not scored in Scenario 1 as target wells. Further, they are located in Plume Area B, and the contamination in them is attributed to Source 3 of the HRS documentation record as proposed in Scenario 2. The HRS documentation record as proposed on page 105 states the following:

> Scenario 2 assumes that the releases in plume areas B and C are associated with source 3–a contaminant plume with no presently identified source. An upgradient source for source 3 has not yet been identified (Ref.14, p. 34). Source 3 may not be attributed to the sources at CNH because this plume is located sidegradient and upgradient of the CNH facility. Scenario 2 evaluates the drinking water wells in plume area C as well as plume area B.

Regarding CNH's comment concerning inadequate sampling at the former Chief property, EPA considers the sampling efforts conducted at the Parkview Well site adequate for purposes of the NPL site proposal. As acknowledged in the documentation record quote above, at the time of proposal no "originating" source of the southern plume had been identified. Additional sampling may be conducted in future investigations to further refine the Agency's understanding of this part of the site. In any case, identification of a source for the southern plume would have no bearing on any contribution to the northern plume from CNH. The likely contribution of contaminants from CNH to Plume Areas A and C are discussed throughout this support document. For additional discussion of the site inspection process at the Parkview Well site, see Section 1.1.3.6 of this support document, *Adequacy of Site Inspections*.

With regards to the "fingerprint" similarity, EPA agrees that the hazardous substances in Plume Area B are also associated with Plume Area C. However, as is discussed in the following subsection of this support document, many of the substances in Plume Area C are also associated with Plume Area A and the CNH sources, and the ratio of the substances to each other cannot be established with confidence given the limited sampling and the number of variables which affect these ratios.

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[26]Reference 5 of the HRS documentation record as proposed: Tetra Tech, EM Inc. 2004. Stolley Park Ground Water Contamination Site, Grand Island, Hall County, Nebraska, Combined Preliminary Assessment/Site Inspection. Prepared for the Nebraska Department of Environmental Quality (NDEQ). March 26.

Regarding the statements on aerobic conditions and degradation rates, the level of site specific information needed to predict contaminant degradation and migration rates of individual substances is not required for HRS purposes, nor did CNH provide this level of information or any detailed modeling of contaminant transport and degradation during the public comment period on the proposal of the Parkview Well site. EPA therefore considers CNH's statements to be unsupported and not relevant to the listing decision.

Regarding the ground water flow direction, as explained in Section 1.3.10 of this support document, *Accuracy of Ground Water Pathway Hydrogeology Description,* EPA agrees that the interpretation that the Southern plume is migrating into Plume Area C is consistent with the flow gradient in the area of the site. However, as discussed, EPA does not agree that the only component in the ground water flow is to the northeast, and that in some areas of the site the flow gradient appears to be east.

1.1.3.12.2 Attribution of Observed Releases in Plume Area C to CNH

CNH stated that the contamination in Plume Area A from CNH releases is not contributing to the contamination in the target wells in Plume Area C. Specifically, CNH commented that EPA incorrectly speculated that VOCs in the Burn Area have contributed to VOCs in the ground water beneath the Parkview/Stolley Park Subdivision. CNH commented that its plume under its property does not extend to these target wells and that the flow direction is such that it would not migrate to these target wells. CNH added that the contaminants are at different relative concentrations in the two areas; the plume is not lengthening and would be expected to recede in the future; and that the remaining contamination in soil after removal actions are at low concentrations, are at a shallow depth, and are not leachable.

In response, as explained below, the record shows that the ground water contamination in Plume Area A originates at sources on the CNH property and that the plume appears to extend into Plume Area C and the target wells in that area.

1.1.3.12.3 Continuity of Plume A to Plume C

CNH asserted that the VOCs migrating from the CNH property are not located near the Parkview/Stolley Park Subdivision.

In response, the HRS documentation record indicates that the contamination appears to be continuous between the CNH property and the target wells in Plume Area C. EPA notes that CNH does not dispute that the contamination below the CNH property is attributable to CNH releases, but only contests the continuity of the plume from there east to the Parkview/Stolley Park subdivision. Between these areas is the Brentwood subdivision. EPA estimates the distance from the boundary of CNH facility to Parkview/Stolley Park subdivision is approximately one mile. Likewise, the distance from CNH facility to the Brentwood subdivision is approximately 0.6 mile (Figure 4 of the HRS documentation record as proposed).

EPA recognized that the sampling between the two areas was minimal when it started preparing the HRS documentation package in the summer of 2004. Therefore, in August 2004, EPA collected additional ground water samples at seven locations between the CNH facility and Plume Area C and at one location from the Indian Head Golf Club which is west of the CNH facility. The 7 samples were collected in the

Brentwood subdivision which is adjacent and approximately 0.6 mile east of the CNH facility; these samples were collected both east and west of the Brentwood pond. The analytical results indicated no VOCs were reported in the sample collected from Indian Head Golf Club. The following compounds were reported in five of the wells sampled in the Brentwood subdivision: 1,1-DCA, 1,1-DCE, 1,1,1-TCA, 1,1-DCP, cis-1,2-DCE, PCE, and TCE (pages 28 and 29 and Figures 5 of Appendix E to the CNH comments). Hazardous substances found in Plume Area C east of the Brentwood and the CNH facility are 1,1-DCA, 1,1-DCE, 1,1,1-TCA, and PCE. Of the samples collected in and around the Brentwood subdivision, 80% of the identified compounds were from depths of less than 35 feet below ground surface (pages 28 and 29 of Appendix E to CNH comments). The farthest east sample collected in the Brentwood Subdivision in August 2004 was sample GGW-556 (Figure 5 of Appendix E). In this sample, 1,1-DCE, 1,1-DCA, were detected, (page 32 of Appendix E of CNH comments), and it is located only 1800 feet from the Parkview/Stolley Park subdivision (Figure 5 of Appendix E[27] of CNH comments; Figure 4 of HRS documentation record as proposed).

This investigation also identified an 8 - 10 foot thick silty sandy clayey silts layer beginning approximately 34 feet below ground surface. It was also determined that the pond at the Brentwood subdivision is only up to 13 feet deep where it overlies Plume Area A. The study concluded that the pond does not completely intersect the contaminated portion of the aquifer and the contamination appears to have migrated underneath and east of the pond (page 103 of HRS documentation record as proposed; pages 21, 24, 43 of Appendix E).

Hence, the same contaminants have been found in samples in the shallow portion of the aquifer extending from the CNH property to the Parkview/Stolley Subdivision and appear to have migrated from the CNH facility and east past the Brentwood subdivision possibly along a semi-impermeable layer (pages 28, 29, and 43 of Appendix E).

1.1.3.12.4 Migration Along a Lower Permeability Layer

CNH commented that the attribution of the contaminants in Plume Area C to CNH in the Parkview HRS documentation record as proposed is premised on EPA's speculation that VOCs in the ground water beneath CNH migrate along an impermeable silty layer or an 8-10 feet thick clay and clayey silty sandy layer, beginning approximately 34 feet below ground surface that extends east from CNH under the Brentwood subdivision and pinches out at the Parkview subdivision. CNH contended that EPA's conclusions are wrong and contradictory to its own data. It stated that there is no clay layer, let alone a continuous clay layer, approximately 34 feet below ground surface beneath the CNH Property or the Brentwood subdivision.

In response, the record shows that ground water contamination from the CNH facility could be migrating eastward along a lower permeability layer. As is explained in Section 1.3.10 of this support document, *Accuracy of Ground Water Pathway Hydrogeology Description*, there appears to be a layer of at least lesser permeability than the surrounding material, although it may not be of clay alone, but instead it is described in several places in the documentation record as proposed as containing silty clay, silty and, or clayey silt. EPA also notes that it was only suggesting that this layer was causing the migration eastward.

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[27]TetraTech EM Inc. 2004 *Final Trip Report and Data Summary, Parkview Well Site, Grand Island, Nebraska*). November 22, 2004.

Even if it was found that this was not the case, contamination has been found to be continuous between the CNH facility and the target wells in Plume Area C, indicating that contamination has most likely migrated from CNH sources eastward to the target wells.

1.1.3.12.5 Migration Potential of Source 1 and 2 Contamination

CNH commented that EPA incorrectly speculated that VOCs in the Burn Area have contributed to VOCs in the ground water beneath the Parkview/Stolley Park Subdivision. CNH stated that EPA's Toxicity Characteristic Leaching Procedure (TCLP) test, pursuant to 40 CFR 261.24, conducted on the material removed from the Burn Area establishes that constituent concentrations would not leach to ground water at levels deemed hazardous pursuant to the Resource Conservation and Recovery Act (RCRA), 42 USC 6901.

Similarly, CNH stated that the TCLP test on the waste that was removed from the Burial Area show that the chlorinated solvents would not leach to ground water. CNH stated that the dried paint and soil found in the Burial Area contained no leachable chlorinated VOCs. CNH stated that many of the VOCs evaporated and the remaining VOCs were adsorbed onto the paint and were not capable of leaching to soil or ground water. CNH added that the TCLP tests on the waste materials revealed that chlorinated VOCs were not detected in the TCLP leachate. CNH submitted Appendix J to its comment, *TCLP Data, Burn and Burial Areas,* in support of its comments.

In response, as discussed in Section 1.3.11 of this support document, *Contaminants Below Regulatory Levels*, that contaminant levels may be below a regulatory level does not prevent their use in HRS scoring. In addition, that the TCLP test indicates that the contaminants in the waste material, after it was removed from the source, may not migrate at significant concentrations from the removed waste does not necessarily indicate that the hazardous substances would not have migrated in situ. The process of waste removal significantly alters the environment that the material is in, including changing the porosity, the oxidation-reduction potential, the available surface area, etc. All of this can effect the migration potential.

Further, even if the contaminants in the source would not migrate today, it does not mean that contaminants did not migrate from the source in the past. CNH did not dispute that contaminants from these sources had migrated at least to the ground water under the facility. The identification of an observed release is based on whether a release "has occurred," not "is occurring" (See Section 2.3 of the HRS, *Likelihood of release*). As demonstrated in the HRS documentation record as proposed, the containment of the sources was not sufficient to ensure contaminant migration from the sources could not occur. Neither source had any ground water containment features, and both were assigned the maximum HRS containment factor value of 10 (pages 21 and 31 of the HRS documentation record as proposed). Also Source 1 was in operation from 1966 to 1975, and Source 2 was in operation from1975 to 1980 (pages 16 and 23 of the HRS documentation record at proposal); thus, the migration could have occurred in the past, and the hazardous substances had at least 24 years to migrate to the target wells in Plume Area C.

1.1.3.12.6 Chemical Fingerprint/Attenuation/Biodegradation

CNH asserted that EPA itself acknowledges that the substances released at the CNH Property are primarily chlorinated alkanes (of which ethanes are a subset) such as 1,1,1-TCA and 1,1-DCA. It then added that the VOCs at the Parkview/Stolley Park Subdivision are predominantly chlorinated alkenes (of which ethenes are a subset) such as PCE and 1,1-dichloroethene (1,1-DCE). It stated that this is supported by TetraTech's April, May, and August trip reports and field data. CNH further explained that the ratio of ethanes to ethenes in the ground water at the Parkview/Stolley Park Subdivision is essentially the same as the ethane/ethene ratio in the ground water at the Southern subdivisions and is substantially different from the ethane/ethene ratio associated with the CNH property. CNH stated that chlorinated ethanes and chlorinated ethenes are completely different chemicals and have different chemical and physical characteristics, risks, and behavior. It added that alkanes are saturated hydrocarbons whereas alkenes are unsaturated hydrocarbons.

CNH also stated:

> The extended length of the VOC plume migrating from the Former Chief Property and/or SUS most likely occurs as a result of the regional aerobic groundwater environment. In an aerobic environment, PCE and 1,1,1-TCA originating from the Former Chief Property and/or SUS degrade much more slowly than in an anaerobic environment. The VOCs with the higher number if chlorine atoms, namely PCE and 1,1,1-TCA, break down to lower chlorinated VOCs relatively slowly in an aerobic environment, all the while degrading into 1,1-DCE, which is the VOC fingerprint observed in the Southern and Parkview/Stolley Park Subdivisions.

CNH added that the VOC-impacted area associated with its facility is not lengthening and would be expected to recede in the future. CNH commented that because of attenuation processes (including degradation) and ground water flow, the VOCs associated with the CNH Property will never reach the Parkview/Stolley Park Subdivisions. It continued that degradation has consumed the VOC in the past and will continue to do so in the future.

CNH commented that the farthest well downgradient from CNH where VOCs were purportedly detected is located just east of Brentwood Lake (GGW-555). It stated that at this location, which is approximately one half mile from the Parkview/Stolley Park Subdivision, there is no evidence that the VOCs came from CNH Property. CNH explained that the limited extent of VOC migration from CNH's Property is due to the low concentration of VOC's in the ground water at the CNH Property and the rapid natural attenuation of the VOCs caused by biotic, abiotic, and other degradation processes. As examples, CNH claimed that 1,1,1-TCA concentrations declined from 800 ug/L at GM-2 to 17 ug/L at MW-3 and to below reporting levels in August 2004 ground water sampling results at GGW555; 1,1-DCE declined between GM-2 and wells farther to the east; also, 1,1-DCE is not detected above MCLs in ground water downgradient from CNH property and not at all in wells CRA-VP-407, CRA-VP-408, CRA-VP-406, and GP-04(0803). CNH asserted that natural conditions are degrading these compounds. CNH stated that the rapid declines in 1,1,1-TCA and 1,1-DCE concentrations are due to: (1) the biological transformation of 1,1,1-TCA to 1,1-DCA and then to naturally occurring compounds, under anaerobic conditions; (2) chemical transformation of 1,1,1-TCA to 1,1-DCE and then to naturally occurring compounds under aerobic conditions; and (3) further ground water attenuation through physicochemical processes.

In response, the 2004 studies used in the HRS evaluation show contamination present in ground water continuously from the CNH facility to the target wells in Plume Area C. This is sufficient to attribute, in part, the release in Plume Area C to CNH releases. If the commenter is suggesting that a remedy might be to allow the contamination to attenuate naturally, this is a remedial decision, not a listing criteria, and is considered in the remedy selection stage of the Superfund process.

At the time of listing there is insufficient data to determine the ratio of the contaminants (alkanes vs alkenes) in Plume Area C that can be attributed to CNH. At this time, the information available indicates that both alkanes and alkenes were identified in the Burn and Burial area and Plume Area A which originates at the CNH facility (pages 19-21, 25- 31 and 58 of the HRS documentation record as proposed; Figure 5). Page 58 of the HRS documentation states:

> Plume Area A releases: Releases associated with the Plume Area A were detected by chemical analysis of ground water from permanent monitoring wells and temporary Geoprobe™ wells. Analysis of ground water from seven permanent monitoring wells (GM-1, GM-2, GM-3, GM-4, MW-3, MW-7, and MW-8) at the CNH facility document an observed release of 1,1,1-TCA; 1,1-DCA; 1,1-DCE; 1,2-DCP; chloroethane; and cis-1,2-DCE to the ground water migration pathway (Ref. 6, pp. 36, 76, 93, 128-131). Analysis of an additional five permanent monitoring wells (NW-02-I, NW-02-d, NW-01-I, NW-01-S, and NW-01-d) located approximately 1,200 ft east of the CNH facility document an observed release of 1,1,1-TCA; 1,1-DCA; 1,1-DCE; cis-1,2-DCE; PCE; and methylene chloride to the ground water migration pathway (Ref. 6, pp. 36, 76, 93, 131, 132). Because the burn and burial areas at CNH are approximately 800 ft apart and contain similar contaminants, releases from these two sources should be indistinguishable (Ref. 6, pp. 33-35, 50). Therefore, for the purposes of this documentation record, releases from source 1 (the burn area) and source 2 (the burial area) are treated as one release. In this release, the principle [sic] contaminants of concern are 1,1,1-TCA; 1,1-DCA; 1,1-DCE; and PCE. The location of these wells with detections of 1,1,1-TCA; 1,1-DCA; PCE; and 1,1-DCE are shown in Figure 5.

This is sufficient information to attribute contamination in Plume Area C at least partially to CNH and include it as part of the HRS evaluation of the Parkview Well site.

1.1.3.13 Targets

Comments on the evaluation of HRS targets are discussed below under the *Flow Direction and Targets*, *Closed Wells*, and *Apportioning* subsections.

1.1.3.13.1 Flow Direction and Targets

CNH commented that EPA's assessment of the ground water targets is based on an area which extends radially from a central point. It added that this approach is not realistic because ground water flow is in a uniform direction, which is east-northeast. CNH contended that many of the wells which were identified have no potential to be downgradient of ground water flow, and this error results in an overstatement of the population number.

In response, EPA correctly evaluated the drinking water wells within 4 miles of the Parkview Well sources. As discussed in the preamble to the revised HRS (55 FR 51551, December 14, 1990), neither the original HRS nor the revised HRS directly considered ground water flow direction in evaluating potential targets. In responding to public comments on the proposed (original) HRS on July 16, 1982 (47 FR 31190), EPA explained that it is generally not practicable to determine the population actually exposed or threatened by using ground water flow information. In many instances, the information is not available, and in others the flow direction varies over time. Even where there is extensive knowledge of geohydrology, interpretation is nearly always subject to dispute. Requiring a precise measure of the affected population would add inordinately to the time and expense of applying the HRS. EPA decided not to use ground water flow information to determine the potentially threatened target population, even when available, because of the need to develop a nationally uniform system for scoring a large number of sites expeditiously with commonly available data. EPA reconsidered this issue when revising the HRS, and determined that the decision not to directly consider ground water flow direction in evaluating potentially threatened targets was still appropriate (See 55 FR 51551, December 14,990).

The HRS and its requirement that wells within 4 miles of the sources at the site be considered as targets was established through notice and comment rulemaking. EPA does not have discretion to deviate from requirements set out in rules. To the extent that CNH's comment questions the adequacy of the HRS and its ability to adequately evaluate targets, CNH's comment is beyond the scope of this rulemaking; the current HRS was promulgated on December 14, 1990 (55 FR 51532) after notice and comment. In as much as this comment is on the HRS itself, this comment is untimely. HRS Section, 3.0.1.1, *Ground water target distance limit*, states the following: "The target distance limit defines the maximum distance from the sources at the site over which targets are evaluated. Use a target distance limit of 4 miles for the ground water migration pathway, except when aquifer discontinuities apply." It does not state to consider flow direction in setting the target distance limit, and is consistent with the preamble to the HRS discussing that the ground water flow direction is not considered directly in the HRS. These rules, as promulgated on December 14, 1990, were followed in evaluating the drinking water wells considered as targets for the ground water migration pathway at the Parkview Well site.

Instead, the HRS considers flow direction indirectly in the method used to evaluate target populations by weighting target populations based on actual and potential contamination of drinking water wells. If wells have not been contaminated by the site, as would be typical of upgradient wells, the wells are considered potentially rather than actually contaminated, and the population factor value drawing from those wells is reduced by a factor of 10 and distance weighted. Conversely, if wells have been contaminated due to site related releases, a stronger likelihood for downgradient wells, the wells are considered actually contaminated and given higher weight in scoring.

At the Parkview Well site, the potential targets are those drinking water wells within the 4-mile target distance limit that are not subjected to actual contamination at Level I or Level II concentrations. For Scenario 1, the 4-mile target distance limit is measured from the outer boundaries of Source 1 and 2 at the CNH facility (page 118 of the HRS documentation record as proposed). Potential targets associated with Scenario 1 are depicted on Figure 9 of the HRS documentation record as proposed. Page 118 of the HRS documentation record as proposed states:

> Potential targets associated with active municipal wells were calculated using an allocated population of 1,195 people per municipal well.

Potential targets from all private wells were calculated using the average number of residents per household for Hall County, 2.57. Distance-weighted population values were determined using the distance category for non-karst topography.

For Scenario 2, the 4-mile target distance limit is measured from the approximate center of Plume Area B. According to HRS Section 3.0.1.1, *Ground water target distance limit*, for sites that consist of a contaminated ground water plume with no identified source, the user is instructed to begin measuring the 4-mile target distance limit at the center of the area of observed contamination. The center of Plume Area B is identified as four private drinking water wells (PW-171, PW-173, PW-221, PW-228) that contain some of the highest concentrations of VOCs (page 130 of HRS documentation record as proposed). Potential targets associated with Scenario 2 are depicted on Figure 10 of the HRS documentation record as proposed and are based on the same allocation assumptions as Scenario 1.

1.1.3.13.2 Closed Wells

CNH commented that in the HRS scoring of the site, EPA failed to consider that numerous residents whose wells had been contaminated had been connected to the municipal city water supply (primarily at CNH's expense) and that a municipal well had been taken out of service. CNH said that EPA stated in November 2004 that "At this time U.S. EPA is planning to connect six homes to the City Water Supply."

CNH commented that Parkview Well No. 3 was taken out of service in 2001. It added that the decommissioning procedure involved filling the well with grout, rendering it completely unusable. CNH commented that Section 3.3.2 of the HRS states that in evaluating the population factor, include those persons 'regularly served' by the drinking water wells. According to CNH, no one has been served by Parkview Well No. 3 since August 2001 and, prior to that, no MCLs were exceeded. CNH commented that EPA has violated HRS Section 3.3.2 by assuming that Parkview Well No. 3 is operating, has contaminated the city's entire public water supply, and has exposed residents to VOC concentrations exceeding Level 1 criteria. CNH concluded that EPA is arbitrary and capricious in its action.

In response, the HRS site score of Parkview Well site correctly evaluated Parkview Well No. 3, labeled as well PWSW-4 in the HRS documentation record as proposed, and the private wells which were replaced by connection to the municipal water supply as eligible targets. HRS Section 2.5, *Targets*, states that the types of targets evaluated in scoring include targets associated with a sampling location that meets the criteria for an observed release (or observed contamination) for the pathway. The HRS does not consider the provision of the alternate water supply and closed wells in evaluating the site score. As explained in the preamble to the revised HRS (55 FR 51568, December 14, 1990), EPA's response action to provide a permanent alternate water supply to the residents with contaminated wells is specifically the type of response activity that EPA originally decided not to consider in HRS scoring because it is a partial response action whose consideration might not fully reflect the risks posed by the site.

As EPA explained, if EPA did not consider the adverse impacts caused by the contamination by taking into account the provision of alternative drinking water supplies, a contaminated aquifer could be forever shielded from having to be cleaned up. The preamble to the HRS states that EPA,

will not consider the effects of responses that do not reduce waste quantities such as providing alternate drinking water supplies to populations with drinking water supplies contaminated by the site. (55 FR 51568, (December 14, 1990).

This position is consistent with CERCLA Section 118 which requires EPA to give high priority in the NPL listing process to those sites where contamination has led to the closing of drinking water wells, 42 U.S.C. § 9618.

Page 9 of the HRS documentation record as proposed states the following regarding the evaluation of the closed municipal well (know as Parkview Well 3, and PWSW-4):

- The City of Grand Island, Nebraska, operates four municipal wells near the Parkview subdivision: PWSW-1, PWSW-2, PWSW-3, and PWSW-4 (see Figure 1; ref. 39, pp. 103). In October 1999, routine monitoring of municipal wells first detected VOCs in municipal well PWSW-4. This well is approximately 1-mile east of the Case New Holland (CNH) facility and immediately west of the Parkview residential subdivision.

- Ground water samples from PWSW-4 contained PCE; 1,1-DCE, 1,1-DCA; and 1,1,1-TCA. Concentrations of 1,1-DCE in PWSW-4 exceeded the MCL and concentrations of PCE exceeded the U.S. EPA cancer risk screening concentration (Ref. 2, p. 15, 16, 31. 32; ref. 5, p. 21; Ref. 8, pp. 182-184, 187-198).

- Subsequent sampling of PWSW-4 in August 2001 revealed 1,1-dichloroethene (1,1-DCE) at a concentration exceeding its U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL) and tetrachloroethene (PCE) at a concentration approaching its MCL (Ref. 8, pp. 182-184, 187-189).

- In response to these elevated VOC detections, PWSW-4 was closed in January 2003 (Ref. 9, p. 1).

In addition to the municipal well, several residential wells were closed due to contamination attributed to the site. As of July 2004, 69 residences signed agreements for connection to alternate city water and 68 were connected (page 11 of HRS documentation record as proposed). These wells are listed in Reference 41 of the HRS documentation record as proposed.

1.1.3.13.3 Population Apportioning for Blended Water Systems

CNH stated that EPA incorrectly made the following assumptions in its targets calculations: (1) Parkview Municipal Well No. 3 is still operating; (2) Parkview Well No. 3 is cross contaminating city water supply wells supplied by 26 other unimpacted wells in Grand Island; (3) Burdick, Kimball, and Roger Reservoir, where waters from the Grand Island's 27 municipal water supply wells are blended, have VOC concentrations exceeding MCLs; and (4) one out of every 27 Grand Island resident have been impacted by VOCs at concentrations above MCLs.

CNH also commented that EPA improperly calculated the 'Target' and 'Population' values in the HRS Package. CNH said that in the HRS package it states that 1,221.7 targets are reported subject to Level I

contamination. CNH commented that U.S. EPA reached this conclusion by totally ignoring the fact that Parkview Well No, 3 was shut down in 2001 due to contamination.

In response, EPA correctly followed the HRS directions in apportioning the population served by the City of Grand Islands water supply system and assigning a Level I Population score. As presented on pages 113 through 115 of the HRS documentation record at proposal, the population apportioned to Parkview Well PWSW-4 (Parkview Well No. 3) and to other city wells prior to its closure in 2001 was 1,195. This value was calculated according to Section 3.3.2 of the HRS, *Population*. It states that:

> [p]opulations served by wells whose water is blended with that from other drinking water sources are to be apportioned based on the well's relative contribution to the total blended system. . . . This change is intended to reflect more accurately the exposure to populations through blended systems.

HRS Section 3.3.2, Population, further explains how to apportion the population for blended systems. It states:

> In determining the population served by a well, if the water from the well is blended with other water . . . apportion the total population regularly served by the well's relative contribution to the total blended system. In assuming the well's relative contribution, assume each well and intake contributes equally and apportion the population accordingly, except: if the relative contribution of any one well or intake exceeds 40 percent based on average annual pumpage or capacity . . . .

The HRS documentation record as proposed apportioned the population associated with all the city wells, including well PWSW-4, based on the following data:

> [T]he number of residents obtaining water from the city water supply is best estimated by using the number service connections for the City of Grand Island. The total number of city water service connections, including residential, commercial, and city government is 14,736. The total number of city water service connections, including only residential is 12,655 (Ref. 40, p. 1). The number of residential service connections will be used to estimate the number of people obtaining drinking water from the city water supply. As described in the HRS rule, the number of residential service connections multiplied by the county average population per household of 2.57 results in a total 32,523 people obtaining drinking water from the city water supply (Ref. 1, section 3.3.2). [Page 114 of the HRS documentation record as proposed].
>
> As described in the HRS Rule section 3.3.2, in determining the population served by a well, if the water from the well is blended with other water, apportion the total population regularly served by the blended system to the well based on the well's relative contribution to the total blended system. In estimating the well's relative contribution, assume each well contributes equally and apportion the population accordingly if no wells contribute more than 40 percent based on average annual capacity (Ref. 1, Section 3.3.2). The water system is served by multiple wells feeding four reservoirs. . . . no individual municipal well contributes more than 40 percent of the water supply. In addition, all municipal wells range from 80 to 135 ft bgs in depth (Ref. 27, p. 1). Because no single well contributes more than 40 percent to the blended

> system, and all wells are screened in the same aquifer, all 27 wells are used to calculate the number targets per municipal well (Ref. 27, pp. 1-3). Total population connected to the city water supply divided by 27 wells equals 1,195 people per municipal well. Because one municipal well is contaminated at level 1 concentrations, 1,195 citizens of the City of Grand Island are subject to Level I contamination. [Page 114 of the HRS documentation record as proposed].

The remainder of the Level I target score came from the private wells with contamination levels above MCLs. Eleven private wells had concentrations of contaminants above their respective HRS benchmark. The remaining score for targets subjected to Level I contamination was calculated as follows:

> Of these 11 private wells, 10 wells serve households with an unknown number of residents (Ref. 5, pp. 73-150). However, the number of targets associated with the 10 wells was estimated using 2000 U.S. Census data for Hall County, 2.57 people per household. Therefore, according to HRS Rule section 3.3.2, 10 private drinking water wells multiplied by 2.57 equals 25.7 individuals subject to Level I concentrations (Ref. 30, p. 1). The remaining private well has 1 resident (Ref. 5, p. 124; Ref. 39, p. 3). The total number of individuals subject to Level I concentrations in all 11 private drinking water wells is 26.7. (Page 113 of the HRS documentation record as proposed).

Hence, a total, 1,221.7 targets are subject to Level I contamination. Because these wells are subject to Level I concentrations, the total number of targets is multiplied by 10 as specified in Section 3.3.2.2 of the HRS, *Level I concentrations,* to produce a Level I targets factor value of 12,217 for the site[28].

1.1.3.14 HRS Scoring Package Errors

CNH listed 38 alleged errors it found in the HRS documentation record as proposed. Twenty four of those alleged errors were not found to be errors and required no change in the HRS documentation record. Fourteen of the errors required some change in the HRS documentation record, but none of these resulted in any change to the HRS score. These comments are listed below with EPA responses provided in italics following each comment.

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[28] The HRS documentation record as proposed incorrectly calculated 1,221.7 targets are subject to Level I contamination. Total population connected to the city water supply divided by 27 wells equals 1204 (32523 ÷ 27 = 1204). The HRS documentation record as proposed incorrectly calculated this value as 1,195. The remainder of the Level I target score came from 11 private wells with contamination levels above MCLs. The total number of individuals subject to Level I concentrations in all 11 private drinking water wells is 26.7. The total number of Level I targets is 1230.7 (1204 + 26.7 = 1230.7). The incorrect Level I targets calculation, as proposed, is conservative. This error has no impact on the site score as the site score was already at the maximum possible for a site with only one migration pathway scored. However, EPA has revised the HRS documentation record to accurately reflect the Level I targets. EPA notes that even if the Level I targets associated with PWSW-4 are not included in the HRS site score, the site would still score above the HRS cutoff. That is, the Level I residential targets, nearest well, Level II targets, resources, and wellhead protection area assigned values are sufficient to score the site above the HRS cutoff.

No Change Required in the HRS Documentation Record for the following comments:

- On pages 100 and 102 of the HRS documentation record as proposed, the sample data listed for Well PW-158 sample number RW-031904-RG-119 was collected from 3002 S. Blaine, not from PW-158 (2710 S. Blaine).

  Pages 100 and 102 of the HRS documentation record as proposed did not list the address at which sample RW-031904-RG-119 was collected. Page 100 of the HRS documentation record as proposed simply cites page 110 of Reference 47 which states that sample RW-031904-RG-119 was collected from 3002 S. Blaine. Table 4.1 also correctly indicated that sample RW-031904-RG-119 was collected from 3002 S. Blaine.

- On page 66 of the HRS documentation record as proposed, the data listed for Geoprobe™ P-13 is from a duplicate sample.

  EPA agrees that the HRS documentation record as proposed lists the results for a duplicate sample from Geoprobe™ P-13 (page 143, Table 4.13 of Reference 6 of the HRS documentation record as proposed). The commenter did not indicate the significance of this comment on the HRS site evaluation. However, the duplicate sample analysis is still within HRS observed release criteria.

- On page 66 of the HRS documentation record as proposed, the data listed for Geoprobe™ CRA-VP-405 is from a duplicate sample.

  EPA agrees that the HRS documentation record as proposed lists the results for a duplicate sample from Geoprobe™ CRA-VP-405 (page 665, Table 3.2 of Reference 24 of the HRS documentation record as proposed). The commenter did not indicate the significance of this comment on the HRS site evaluation. However, the duplicate sample analysis is still within HRS observed release criteria.

- On page 78 of the HRS documentation record as proposed, the data listed for Geoprobe™ GGW-522 is from a duplicate sample.

  EPA agrees that the HRS documentation record as proposed lists the results for a duplicate sample from Geoprobe™ GGW-522 (page 66, Table 6 of Reference 14 of the HRS documentation record as proposed). The commenter did not indicate the significance of this comment on the HRS site evaluation. However, the duplicate sample analysis is still within HRS observed release criteria.

- On page 79 of the HRS documentation record as proposed, the data listed for Geoprobe™ GGW-506 is from a duplicate sample.

  EPA agrees that the HRS documentation record as proposed lists the results for a duplicate sample from Geoprobe™ GG-506 (page 62 Table 6 of Reference 21 of the HRS documentation record as proposed). The commenter did not indicate the significance of this comment on the HRS site evaluation. However, the duplicate sample analysis is still within HRS observed release criteria.

- On page 80 of the HRS documentation record as proposed, the data listed for Geoprobe™ GP-1 is from a duplicate sample.

  Table 3 of Reference 5 indicates that the analytical data listed for Geoprobe™ GP-1 on page 80 of the HRS documentation record as proposed does have a field sample and a lab duplicate of that sample. EPA agrees that the data for Geoprobe™ is from a duplicate sample. The commenter did not indicate the significance of this comment on the HRS site evaluation. However, the duplicate sample analysis is still within HRS observed release criteria.

- On page 20 of the HRS documentation record as proposed, the reporting limit/method detection limit of PCB-1260 samples S-111703-BL-004 and S-111703-BL-014 is listed as 57-70 µg/kg. A review of analytical reports for samples S-111703-BL-004 and S-111703-BL-14 shows the actual reporting limit as 33 µg/kg for PCB-1260.

  The HRS documentation cites Ref. 43, page 2 for the reporting limit/method detection limit for PCBs. This reference states that the MDLs for Aroclors vary in the range of 0.054 to 0.90 µg/L in water and 57 to 70 µg/kg in soils. CNH stated that it performed a review of analytical reports and found that the reporting limit for PCB-12660 is 33 µg/kg. CNH did not state which references it reviewed and provided insufficient information to support its reporting/detection limit. The PCB-1260 source concentrations are above the reporting limit/detection limit listed in the HRS documentation record.

- On page 27 of the HRS documentation record as proposed, the reporting limit/method detection limit for 1,1,1-TCA in samples S-1704-BL-092 and S-1704-BL-095 is 5.0 µg/kg. Review of analytical reports for samples S-1704-BL-092 and S-1704-BL-095 show the reporting limit as 5.1, and 5.3 µg/kg, respectively.

  CNH stated that it performed a review of analytical reports and found that the reporting limit for is S-1704-BL-092 and S-1704-BL-095 is 5.0 µg/kg. CNH did not state which references it reviewed. Page 27 of the HRS documentation record as proposed cites page 35 of Reference 22 for the detection limit for 1,1,1-TCA in samples S-1704-BL-092 and S-1704-BL-095. Reference 22 states that for low soil/sediment samples, the estimated quantitation limit for volatile analytes is 5 µg/kg. Moreover, the concentrations of 1,1,1-TCA in samples S-1704-BL-092 and S-1704-BL-095 are 14 µg/kg and 12 µg/kg, respectively. Both of these concentrations are well over the estimated quantitation limit and CNH's proposed reporting limits. The 1,1,1-TCA source concentrations are above the reporting limit/detection limit listed in the HRS documentation record.

- On page 28 of the HRS documentation record as proposed, the reporting limit/method detection limit for 1,1-DCA in samples S-1704-BL-092, S-1704-BL-093, and S-1704-BL-095 is 5.0 µg/kg. Review of analytical reports for samples S-1704-BL-092, S-1704-BL-093, and S-1704-BL-095 show the reporting limit as 5.1, 5.4, and 5.3 µg/kg, respectively.

  Page 28 of the HRS documentation record as proposed cites page 35 of Reference 22 for the detection limit for 1,1-DCA in samples S-1704-BL-092, S-1704-BL-093, and S-1704-BL-095. Reference 22 states that for low soil/sediment samples, the estimated quantitation limit for volatile analytes is 5 µg/kg. Moreover, the concentrations of 1,1-DCA in samples S-1704-BL-092, S-1704-BL-093, and S-1704-BL-095 are 52 µg/kg, 15 µg/kg, and 23 µg/kg, respectively. All

three of these concentrations are well over the estimated quantitation limit and CNH's proposed reporting limits. The 1,1-DCA source concentrations are above the reporting limit/detection limit listed in the HRS documentation record.

- On page 29 of the HRS documentation record as proposed, the reporting limit/method detection limit for 1,2-DCP in sample S-1704-BL-092 is listed as 5.0 µg/kg. Review of analytical reports for this sample show the reporting limit as 5.1 µg/kg.

  Page 29 of the HRS documentation record as proposed cites page 35 of Reference 22 for the detection limit for 1,2-DCP in sample S-1704-BL-092. Reference 22 states that for low soil/sediment samples, the estimated quantitation limit for volatile analytes is 5 µg/kg. Moreover, the concentrations of 1,2-DCP in sample S-1704-BL-092 is 6.72 µg/kg. This concentration is well over the estimated quantitation limit and CNH's proposed reporting limits. The 1,2-DCP source concentrations are above the reporting limit/detection limit listed in the HRS documentation record.

- For the Background Well Information on page 62,68, 69, 89 of the HRS documentation record, the values listed for well depths for wells MW-1, MW-2, and MW-11 [under the "Depth-ft bgs" and Depth - ft amsl" [feet above mean sea level] columns] are the total well depths of the borings, not the screened intervals (Reference 6, Table 3.3). For Contaminated Well Information, on page 63 of the HRS documentation record, the values listed under the "Depth-ft bgs" and Depth - ft amsl" columns for all the wells are the total well depths of the borings, not the screened intervals.

  Pages 62 and 63 of the HRS documentation record correctly lists the screened interval in ft bgs, the [Total] Depth in ft bgs and the [Total] Depth in ft amls[29]. These measurements were obtained from Table 3.3 on page 93 of Reference 6 of the HRS documentation record and are correctly identified as "Depth" or "Screened Interval." CNH is incorrect in its statement that screened intervals are labeled as [Total] Depth ft bgs.

- For Contaminated Well Information, on page 63 of the HRS documentation record, the total boring depth for GM-4 should be 1851.5 ft amsl, not 1852 ft amsl. For Contaminated Well Information, on page 63 of the HRS documentation record, the total boring depth for MW-07 should be 1848.5 ft amsl, not 1849 ft amsl. For Contaminated Well Information, on page 63 of the HRS documentation record, the total boring depth for MW-08 should be 1846.7 ft amsl, not 1847 ft amsl. For Contaminated Well Information, on page 63 of the HRS documentation record, the total boring depth for NW-02-I should be 1827.4 ft amsl, not 1827.2 ft amsl. For Contaminated Well Information, on page 63 of the HRS documentation record, the total boring depth for NW-01-I should be 1826.9 ft amsl, not 1827 ft amsl.

  EPA notes that any difference in the total boring depths in ft amsl that CNH suggested when compared to the depth in the HRS documentation record are less than a foot. The difference is due to rounding or not rounding the total well depth. This difference does not impact the evaluation of the well being screened in the High Plains aquifer. The wells are still screed in the same aquifer, and background and release samples are still comparable.

[29]ft amls = feet above mean sea level

- For Background Well Information, on page 68 of the HRS documentation record, the total boring depth for MW-2 should be 1851.7 ft amsl, not 1852 ft amsl. For the Background Well Information on page 87 of the HRS documentation record, the values listed for well depth for well MW-2 [under the "Depth-ft bgs" and Depth - ft amsl" columns] are the total well depths of the borings, not the screened intervals. Also the boring depth should be 1,851.7 ft amsl not 1852 ft amsl. (Reference 6, Table 3.3).

  EPA notes that any difference in the total boring depths in ft amsl that CNH suggested when compared to the depth in the HRS documentation record are less than a foot. The difference is due to rounding or not rounding the total well depth. This difference does not impact the evaluation of the well being screened in the High Plains. The wells are still screened in the same aquifer, and background and release samples are still comparable.

- Figure 4 omits various other Chief properties in the Southern Subdivisions.

  Figure 4 of the HRS documentation record is labeled "Source 3 and Plume Area B and C VOC detections in Municipal and Private Wells." This figure is not meant to be a site or local topographic map for the area. While this figure does attempt to depict street, property and lot boundaries, its purpose is to identify the location of wells in Source 3 and Plume B and C of the site. Revising this figure does not affect any HRS assigned value.

- Page references in the HRS documentation record do not correspond to actual page numbers in the referenced document.

  All the pages in each reference were numbered sequentially in each reference starting with the first page and in some cases this may be the cover sheet. Each page contains its number in the bottom right corner of the page. The HRS documentation record as proposed refers to these page numbers when citing a reference. All relevant pages in references cited to support the site score are include in the HRS package references.

The following comments required a revision in the HRS documentation record:

Sampling Information

- Page 25 of the HRS documentation record as proposed lists the sample date as 10/10/03 for samples TP-101-A-6-SW and TP-101-B-6-SW. According to Table B.1 of Reference 36, the sample date is 10/15/03 for both samples.

  Page 74 of Reference 36 of the HRS documentation record as proposed is a "Test Pit Stratigraphy Log" which lists the start and completion date as 10-10-03 for samples TP-101-A-6-SW and TP-101-B-6-SW. CNH is correct that Table B.1 of Reference 36 lists the sample date as 10/15/03 for these samples. Page 14 of Reference 36 states the following: Test trenching was conducted in AOC1 [Burial Area] during the period of October 10 to 15, 2003. A total of 18 trenches were dug. Test trench logs are provided in Appendix A [which is the Test Pit Stratigraphy Log]. Analytical results were provided in Appendix B. Based on this information, EPA concurs with CNH that the sample date is 10/15/03. This error has no impact on the site

score. The sample collection date does not affect the sample analysis, and the sample date still allows for the background and source sample to be collected in a similar time frame. The HRS documentation record has been revised.

- On page 27 of the HRS documentation record as proposed, the sample depth for sample S-100902-JH-017 is listed as 3-7 feet below ground surface (bgs). In Table 4.6 of Reference 6, the sample depth is listed as 3-4 feet for sample S-100902-JH-017.

  EPA agrees that the depth for sample S-100902-JH-017 is 3-4 feet below ground surface. Figure 4.18 on page 73 and Table 4.6 on page 118 of Reference 6 list the soil boring as 3-4 feet below ground surface. This error does not impact the site score. The sample depth does not affect the sample analysis, and the sample depth still allow for the background and source sample to be similar. The HRS documentation record has been revised.

- On page 29 of the HRS documentation record as proposed, the sample date for sample S-101002-JH-058 is 11/04/02. In Table 4.6 of Reference 6, the sample date for this sample is shown as 10/10/02.

  Page 29 of the HRS documentation record as proposed lists the sample date as 11/04/23; however, Table 4.6 of Reference 6 lists the sample date as 10/10/02. EPA agrees with CNH that the HRS documentation record as proposed should list the sample date as 10/10/02. This error has no impact on the site score. The sample date does not affect the sample analysis, and the sample date still allow for the background and source sample to be collected in a similar time frame. The HRS documentation record has been revised.

- On page 79 of the HRS documentation record as proposed, the data listed for Geoprobe™ GGW-504 lists sample depths for two samples as 56-60 ft bgs and 26-30 ft bgs. Instead the sample depths should be 54-58 ft bgs and 24-28 ft bgs, respectively.

  On page 79 of the HRS documentation record as proposed, the sample depth listed for Geoprobe™ GGW-504 with concentrations of PCE, 1,1-DCE, 1,1,1-TCA, and 1,1-DCA as 43, 64, 110, and 13 µg/L, respectively, should be 54-58feet (page 61 of Reference 14 of the HRS documentation record as proposed). This error has no impact on the site score. The sample depth does not affect the sample analysis; the well depth of 54-58 feet still screens in the same aquifer; and the background and releases well samples are still comparable. The HRS documentation record has been revised.

- On page 95 of the HRS documentation record as proposed, the sample date for well PW-150 should be 08/19/03, not 08/20/03.

  Page 95 of the HRS documentation record as proposed lists the sample date as 8/20/03; however, Table 2 of Reference 5 lists the sample date as 08/19/03. EPA agrees with CNH that the HRS documentation record as proposed should list the sample date as 08/19/03. This error has no impact on the site score. The sample date does not affect the sample analysis, and the sample date still allow for the background and release samples to collected in a similar time frame. The HRS documentation record has been revised.

Hazardous Substance

- On page 19 of the HRS documentation record as proposed methylene chloride is listed under the table heading of SVOC. In Table E.7 of Reference 36, methylene chloride is listed under the heading VOC.

  EPA agrees that methylene chloride is listed as a VOC in Reference 36 whereas it is listed as SVOC on page 19 of the HRS documentation record as proposed. Methylene chloride is a VOC under EPA's Contract Laboratory Program Target Compound List and should have been listed as a VOC in the HRS documentation record as proposed (http://www.epa.gov/superfund/programs/clp/vtarget.htm.). This error has no impact on the site score. Listing methylene chloride under the SVOC heading does not affect the sample analysis or sample comparability to background levels. The HRS documentation record has been revised.

- On page 26 of the HRS documentation record as proposed 2-methylnaphthalene is listed under the table heading of VOC. In Table E.7 of Reference 36, 2-methylnaphthalene is listed under the heading SVOC.

  EPA agrees that 2-Methylnaphthalene is listed as a SVOC in Reference 36 whereas it is listed as VOC on page 26 of the HRS documentation record as proposed. 2-Methylnaphthalene is a SVOC under EPA's Contract Laboratory Program Target Compound List and should have been listed as a SVOC in the HRS documentation record as proposed (http://www.epa.gov/superfund/programs/clp/svtarget.htm). This error has no impact on the site score. Listing 2-Methylnaphthalene under the VOC heading does not affect the sample analysis or comparability to background levels. The HRS documentation record has been revised.

- On page 66 of the HRS documentation record, the concentration listed for 1,1,1-TCA and 1,1-DCA in Geoprobe™ P-11 are reversed. The value for 1,1,1-TCA should be 21 µg/L and 1,1-DCA should be 40 µg/L.

  EPA agrees that the HRS documentation record as proposed incorrectly listed the concentrations of 1,1,1-TCA and 1,1-DCA in Geoprobe™ P-11. The concentration of 1,1,1-TCA should be 21 µg/L and 1,1-DCA should be 40 µg/L (page 142, Table 4.13 of Reference 6 of the HRS documentation record as proposed). The error has no impact on the site score. The corrected concentrations still meet observed release criteria. The HRS documentation record has been revised.

- On page 71of the HRS documentation record as proposed, the concentration of TCE in Well PW-181 should be 1.2 µg/L, not 1.8 µg/L.

  EPA agrees the concentration of TCE in Well PW-181 should be 1.2 µg/L and not 1.8 µg/L (Reference 5, Table 4). The error has no impact on the site score. The corrected concentration still meets observed release criteria. The HRS documentation record has been revised.

Background Well Location

- In Figure 4, the symbol for well identifier 258 is located inside the boundary of Chief Industries property. According to the City of Grand Island, this property boundary does not extend as far

east as depicted on this figure. This private drinking well, PW258, is located on a residential lot. CNH also stated that Figure 4 incorrectly identified the Chief Property boundaries.

EPA agrees that Figure 4 of the HRS documentation record as proposed incorrectly depicts the property boundaries of the Chief Industries property and has revised this figure accordingly. Well identifier 258 is not within the Chief Industries property. The revised Figure 4 has been added to the site file. This comment has no impact on the site score. The correct location of Well identifier 258, which is outside of the Chief Industries property, does not change the extent of the site.

Well Depth

- On page 37 of the HRS documentation record as proposed, PW-253 is shown as having a well depth of 110 -120 ft bgs [feet below ground surface]. According to the Nebraska Department of Natural Resources registered wells database, the well depth for this location is 110 ft (NDNR, October 18, 2004).

  EPA agrees that the Nebraska Department of Natural Resources registered wells database [http://dnrdata.dnr.state.ne.us/wellssql/] lists the well depth for this well as 110 ft, whereas page 37 of the HRS documentation record as proposed lists the well depth as a range, 110-120 ft. This error has no impact on the site score. The well depth of 110 feet still screens Well PW-253 in the same aquifer, and the background and release well samples are still comparable. The HRS documentation record has been revised.

Level II Target

- In Figure 4, the symbol for a Level II private drinking water well that lies directly north of well identifier 210 and south of well identifier 209 is not listed on the figure.

  EPA agrees that Figure 4 has an unidentified well north of well identifier 210 and south of well identifier 209. Figure 4 has been revised; the symbol representing this unidentified well has been removed. A revised Figure 4 has been added to the site file. This error has no impact on the site score. This well was not included as a drinking water target well.

1.1.4 Conclusion

The original HRS score for this site was 50.00. Based on the above response to comments, the score remains unchanged. The final scores for the Parkview Well site are:

Ground Water:	100.00
Surface Water:	Not Scored
Soil Exposure:	Not Scored
Air:	Not Scored
HRS Site Score:	50.00