TALES REMARKS L#3534

Need to consider Petrofund Reduction for "Supplemental" Pf applications

submitted for this site. The first RI/CAD was rejected as inadequate.

It is taking a long time (years) to get another RI/CAD submitted. -SJL

8/26/96 SJL: Mike Bares and I met on site with Jack Curtis, Curtis Oil,

and Mark Darby, TPT, to dicuss placement location for new drinking

water well for the site. We were originally aprehesive about placement

of a well on the side of the property where the existing contaminated

well is located. However, because of site constraints and because the

other side of the property is closer to the source area, we agreed that

the east side of the property would be acceptable for a new well. When

we got back to the office, Mike and I discussed the site with Mark

Mulmuger, MDH. To minimize the possibility of the new well becoming

contaminated, we agreed to the recomendtion that the new well should be

cased with a minimum of 30 feet into bedrock and a minimum of 50 feet of

total casing.

4/11/97 SJL: Brian McVain, TPT, left a message on my voice-mail in

response to the 4/09/97 "Wake Up" letter. Brian said that the RI/CAD is

currently being reviewed in-house, and should be submitted soon.

7/10/97 LC Amended CSR sent to Commerce. Reduced for cooperation

issue. 25% reduction recommended.

5/7/98: [MHB] Reviewed site file. The recommended CAD of ORC injection

, new well installation (has been installed) and old well abandonment

should be approved. The ORC injection questions I had were answered in

the TPT 9/15/97 letter. The injection of ORC will aid in reducing the

dissolved phase contaminant levels in the water table aquifer. This is

important because the water table aquifer in this area likely is the

main source of recharge for the fractured gabro unit that the new water

supply well is completed in. The new well has been installed with some

construction techniques that will likely protect it from contamination

in the short term. However, to protect the gabro aquifer and new water

supply well from long term potenntial impacts from the contaminated

water table aquifer that recharges the lower bed rock, corrective

action at the water table should take place.

7/17/98 SJL: Hans Wronka, TPT, left me a voice-mail message to say that

they will be beining the ORC injection begining on Monday, 7/21.

3/29/99 SJL: Hans Wronka, TPT, called concerning this site. They have

been in contact with the ORC Company concerning the apparent lack of

afftect in the wells after the ORC injection. The ORC Company is

surprised by the results and are apparently willing to pay for some

additional sampling. Hans wanted to pass the idea by me in case anyone

questioned costs for their field time (maybe four hours). I told him

that I would support this effort.

4/16/99 SJL: Han Wronka, TPT, called to say that MW-7, the only clean up

gradient well, (a near grade) was damaged during snow plowing recently.

I connected with Mike Bares during the call and we suggested that they

find out the extent of damage to the well itself before we decide if it

should be replaced. Hans asked about bidding requirements for repairing

the pad, monument and cover. I told him to talk to one of the Petrofund

analysts about that.

10.11.02 PRS - reviewed file and TPT's 2.27.02 AMR. ORC injected July 1998 - does not appear to have had effect on dslvd petroleum concentration. TPT recommends another year of quarterly GW mon. I note MW2 concentrations indicating FP and that the TOS of MW2 has been substantially below the water table throughout the investigation and cleanup. This is a bedrock site w/o muni water available and contam may have entered bedrock fracture system presenting a risk to nearby water wells. Bedrock attitude may control flow in overlying unconsolidated sands - E-NE trending, plunging bedrock basin may be main migration pathway to surface water - iI is possible that contam GW is discharing to wetland and creek/ditch just N and E of site. Need to request more information and more MWs in order to further assess risks at this site. Add'l corrective action may be necessary. See email to PM for more details.

10.14.02 PRS - sent file back to S.Lepalla-Duluth via interoffice mail.

11.21.02 PRS - conference call with self, S.Leppala-PCA, and Brian McViegh-TPT. Brian wanted to know if the MPCA would approve excavation of highly contaminated soil during digging of footings for a building addition. He also discussed digging some test trenches away from the bldg addition. Steve and I agreed that removal and treatment of highly impacted soil from the footings was acceptable, especially if the excavation extended down to the water table where it is expected that free product or residual petroleum is located. TPT shoud call the PCA while the excavation occurs and the PCA can issue a speed memo for excavation and treatment of highly contaminated soil, if necessary. At this time, MPCA staff do not feel that enough risk has been demonstrated to warrant full excavation of the site as a corrective action although we acknowledge that once risks has been more fully documented/demonstrated, excavation could be a reasonable CAD alternative.

12.3.02 PRS - phone call from Roger Reeves of Twin Ports Testing. Wanted a Speed Memo indicating MPCA approval for excavating contaminated soil. Site is closed down, no longer an active gas station. So far, they removed the USTs and ~50 cu yds of petroleum contaminated soil. I told Roger that I discussed this site with Steve Leppala-MPCA and Brian MacViegh-TPT on 11.21.02 and only remembered approving removing highly impacted soil from the footings to be excavated under an area where an addition to the existing buidling was to be constucted. I did not remember Steve and I agreeing to a major excavation (as a corrective action) at the site yet, because risks had not been adequately demonstrated - more delination and risk evaluation was requested in the MPCA's recent RAW letter. Roger said he did not have a copy of that letter and would like one to be faxed to him at 715.392.7163. Called Steve Leppala and left voice mail message that we need to discuss this site further. LAter, discussed the situation with S. Leppala, Steve will call TPT.

12/03/02 SJL: Sent a Speed Memo approving the excavation of approximately 60 cubic yards of soil which was encounter during tank removal. The soil was fairly highly contaminated and caused a sheen on the water that came back into the excavation.

1/03/03 SAH: File transferred to Sarah Henderson - file received.

1/9/03 SAH: Rodger Reeves of TPT received invoice for treated soil, and measured amount was 20 yds more than original speed memo approved. Sent speed memo approving treatment of 20 yds additional. Also concerned about the neighboring wetlands that we said may be impacted - on recent visit, he said the wetlands are now a peat-mine and it is just a big mud pit. He thinks an MPCA site visit might be a good idea. He will talk to Paul Stock, hydro, about this while I familiarize myself with the file.

1.15.03 PRS - phone call from Roger Reeves-TPT. We discussed MPCA LUST Program approach to dealing with ecological receptors such as wetlands and swamps. These are considered surface water per MN Rules 7050, discharge criteria determined per classification and flow, criteria applied at sampling point closest to surface water along flow path from source area. Roger also felt that MW2 does nto have asubmerged screen but he admitted his interpretation did nto include looking a origanl well constr log or earlier reports and was based on other assumptions about lenght of screen - I told him PCA wanted MW2 sealed and replaced. As MW1 is also likely submerged, I would be willing to approve sealing and replacingit as well but did not insist on it as it the main reason to replace it was detection of FP, which seems much more likely at MW2. MW2 replacemnt well can be moved closer to the bldg (E). Roger wanted to fax me a new site map and an air photo whcih I rec'd and will forward to SAH for file.

1.21.03 PRS - Roger Reeves-TPT called to say that, according to Jack Curtis, in 1999 the MPCA gave approval to remove MW3 due to sewer line installation work and not to replace it. I told him that they could replace it now if they wanted to as it is a good location for hydraulic control and contamination extent delineation but if we had already approved not installing it, they could document this in their next report and submit the sealing record for MW3. I told them that it was Petrofund's call whether to reimburse for a MW3 replacement well but that I would not recommend against reimbursement.

7.14.03 PRS - rev'd TPT's 3.28.03 AMR. The report contains ommissions that need to be addressed. 3 new MWs installed. MW8 indicates contaminated GW discharge to surface water (wetland/ditch) ENE of the site - additional MWs are likley necessary to the N; alos a CAD may be necessary to mitigate. MW3b indicates additional dissolved contamination migration to the S and W. There are nearby water wells that wee need more information for and should be sampled. We need to request Excavation Reports for the recent removal of the remaining USTs as well the the soil removed during bldg expansion. GW mon should continue. See email to PM for details. Frw'd file to clerical to sent back to St. Paul office PM via interoffice mail/Speedee.

7/17/03 SAH: Completed writing RMW/Rejection letter for this site. Sent to typing. Consultant called regarding a diff. site and spoke about this site and this letter briefly.

7/24/03 SAH: Call from Brian at TPT regarding questions in the RMW letter. Called back and spoke with Irv, spoke briefly about the letter, will have hydro Paul Stock call them next week to further discuss their questions and concerns. Sent annual report to Paul via interoffice mail.

7.24.03 PRS - called Irv at TPT and I answered his questions. Most his quesitons had to do about the ommisions we noted in the RMW letter. Any one of them in and of itself are relatively minor but in sum add up. He may have a point about about Item 1A - GW mon data from 1992 to 3.98 may not have been collected. I will check next time I review this site.

7.31.03 PRS - voice mail exchange w/Irv Mossberger-TPT about sampling GW from nearby water supply wells - only need to do it once for now, with need for add'tl monitoring contigent upon sampling results and add'l investigation to be done including well construction info and delineation. Call MPCA immediately, however, if contam is detected in any of the samples.

8.21.03 PRS - VM message from Irv Mossberger-TPT wanting an extension to deadline for Exc Rep submittals due to his busy schedule. I called Irv an told him we would extend deadline 30 days to 10.1.03. Changed Reporting tab deadline.

9/30/03 SAH: Exc. report was put in the mail to us today, wanted to know if he should fax, etc. I told him dropping it in the mail today with a phone call was acceptable.

1/12/04 SAH: Review of Exc Report dated 10/3/03 as requested in RMW letter from 7/22/03. Removal of 3 USTs - 10k gas, 4k gas and 4k gas - and excavated footings for new development between 11/29/02 and 12/4/02. Onsite drinking water well. Report states that 80 yds removed for excavation only, not footings. GW encountered at 7'bgs in tank basins, 4' in footings. Also notes that a sheen was noted on water entering the tank basins and footings from the sidewalls. Also states soil was temporarity stockpiled on site and froze solid, being sent to industrial landfill. No samples from stockpile, doesn't state why these soils needed to be removed, just says they screened according to guidance. No response needed at this point - will await from work from most recent RMW letter.

4/28/04 SAH: Call from Tim Jefferson at TPT, delays in putting in borings because of snow, many utilities, did them last week, will have report in within a month or so. Changed deadline in report tracking.

9.27.04 PRS - rev'd TPT's 9.30.03 Excavation Report and 5.24.04 AMR. Exc Rep documents removal of UST systems and soil excavation associated with new footings for a buidling addition. 80 cu yds of cont soil removed from USTs basin(s) and taken to a landfill for treatment. It appears the site is no longer an active gas station but is a retail store. It isz likely that that there is heavy contamination (NAPL) located under the existing bldg and addition, and proximal to MWs 1, 2a and 2b. The AMR is not responsive to several of the items in the MPCA's 7.22.03 Rep Rej/RAW letter and shoudl be rejected as incomplete. The AMR includes updated 500 ft receptor survey - 5 water wells within 500 ft of the plume - 3 of the wells were sampled and are ND for petroleum parameters. Water well construction infomraiton is lacking for the 4 off-site wells but the Radco well may be 75 ft deep. It appears the main risk at this site is contaminated GW discharging to a stream. Contamination was found in surf water samples but is only intermittently above stds in MW8 which is the best compliance point. MW5 also shows contamination aobe and below surf wat discharge stds and could be considered a compliance point. I recommend add'l work to include GW monitoring to see what concetrations do over time, especailly at MW8, as well as continued sampling of the nearby water wells to assure safe drinking water supply. May need to request add'l CAD or consider closure after additional mon completed.

10/7/04 SAH: Sent Incomplete/Rejection/RMW letter asking for new annual report by 4/30/05 with all of the requested information.

11/2/2004 SAH: Call from Tim Jefferson with TPT, questions re: RMW letter, asked him to call Paul Stock with concerns.

11.2.04 PRS - phone call from Tim Jefferson-TPT. We discussed site and how MPCA woudl make a decision about the need for additional corrective action based on the results of additional GW and water well sampling, especaillyt MW8. We also discussed various CAD approaches should CA be necessary. Time suggested air sparing w/passive or active low flow venting using a sparge system equipment from a nearby site owned by the same RP. I suggested that if add'l CA had to be done it focus on the source (NAPL) and that LIF borings could provide better resolution of the NAPL. We discussed the excavation option but Tim felt that a considerable amoiunt of contamination may exist under the bldg, which I pointed out may also preclude the effectivness of sparging too.

1.18.05 PRS - phone call from Tim Jefferson and Laura Novotsy (sp?) of TPT discussing many of the same items discussed on 11.2.04 (see above). A key item is whther contamination exceeding surface water criteria is consistently discharging to surface water based on MW8. Corrective action may or not be necessary and they shoudl provide a cogent evaluation of data and complelling argument therefrom. However, risks to nearby water wells need to be considered as well as vapor intrusion through the slab-on-grade buidling. If CAD is recommended, it should be in the form of a conceptual CAD in the next AMR and include any plans for pilot testing. Tim also is concerned with the peat (natural organics) intereferring with LIF borings.

2/10/2005 SAL: Received copy of 2004 Annual report with cad recommendations.

3.9.05 PRS - phone call from John Houck-Petrofund who has recieved a Step A cost proposal fo LIF and AS/SVE pilot testing. John wanted to know if the MPCA had or was going to approve the conceptual CAD that is pending review before he spent time reviewing the cost proposal or providing approval. I told John that until I reviewed the new report, there appears to be some uncertainty about whether a CAd is necessary to address surface water impacts but that I would now also have to consider vapor intrusion issues. At hsi point, I did not think he should review the cost proposal until the MPCA had reviewed the latest report.

3.14.05 PRS - rec'd copy of letter from Petrofund to Curtis Oil indicating that Petrofund is not approving CAD Step A cost proposal since MPCA has not decided if CAD is necessary at this time. Sent letter via interoffice mail/Speedee Delivery to St. Paul PM for file on 3.15.05.

5.9.05 PRS - rec'd file in mu DL office.

6.20.05 PRS - rev'd TPT's 2.8.05 AMR that includes a CCAD for AS/SVE to eliminate risks to surface water. Although poorly coumented, report text says that a petroleum sheen was observed on the surface water in a wetland NE of the site and MW8 appears to confirm that petroleum contamination from the site is discharging to surface water although the analytical data show that only benzene and GRO occasionally (less than half the time) exceed their Class 2D CS and Criteria, respectively. The AS/SVE system design is atypical and I am concerned about it efficacy along with the potential hazards of sparging underneath an occupied buidling and the use of passive SVE as a major design criteria. In addition, this site is a potential high risk aquifer scenario with considerable uncertainly about the extent of contamination at depth and nearby well construciton, however it appears potentially addressable by continued off-site water well sampling. Of more concern is the potential for indoor vapor intrusion as it seems likely that NAPL and high dissolved contamiantion, along witha shallow water table, exists under the buidling. I recommend RAW to assess indoor vapor intrusion risks so that any corrective action can take these risks into account while also addressing my concerns about the design and operation of the proposed AS/SVE system, including pilot testing. Returned file to St. Paul PM via interoffice mail/Speedee Delivery.

6/27/2005 SAL: Followed up with MDH regarding an old shallow dug well on the west side of the property, possibly on the neighboring property. Also sent RMW letter with the hydro's recommendations.

10.13.05 PRS - call from Laura Novotny-TPT on-site doing LIF borings. The ahve the LIF rig for 2 days and this is the first day, however, they have found very liitle NAPL, just one area in front of the buidling (it does not appear to extend under the buidling) and she believes they have delineated it. The want to use their 2nd LIF day at a different Leak Site (Curtis OIl) a couple of miles away, if I approve discontinueing LIF work at this Leak Site. We discussed the LIF response and it appears that the response maybe attenuated so I told her to be very careful in interpreting the logs by considering that the NAPL may only be reflecting at 3 to 5% and to use color and waveform, plus Steve Adamek's (Dakota Geophysics) advice to determine if they have delineated. She said that they may have done some of the borings in areas already excavated so I told her to make sure they did boring around those source areas but outside of where the soil has been excavated. I told her to try to get at least 1 boring on the N side of the buidling to as correlation with borings on the S side could be a strong argument that NAPL does not extend under the buidling. Finally, I tod her that if they thought they had adequately invetigated source areas and delineated the extent, I did not have aproblem with them going to the Curtis Oil site tomorrow. However, I reserve the right to carefully review the data myself and there is a possibility that I might ask them to go back and complete more LIF - this will have to wait until I review their report.

5.31.06 PRS - reviewed TPT's 12.6.05 AMR which includes a CCAD Worksheet and Spatial Data Reporting Form. The report has apparent errors and omissions. 2 GW mon and 1 wat wel lsampling event documented. LIF borings were completed but did not fully delineate delineate hor extent fo NAPL in all directions. Two NAPL layers encounted one shallow the other deep. 4 VIA soil gas samples collected but no rationale for locations included while the borings do not fit std approach including bldg specific, however, applicable stds exceeded in all but 1 sample. Request sub-slab soil gas sample was not collected. CCAD is now for AS system with vertical injection points along with SVE system with modified hor ext wells to address surf water impacts, however, pilot testing is specfically not recommended. I recommend continued GW monitoring and nearby water well sampling, surface water observations, and request Pilot Test Work Plan for AS/SVE. Returned file to St. Paul PM via interoffice mail/Speedee Delivery.

5/31/2006 SAL: RMW letter mailed with recommendations from hydro.

7.11.06 PRS - call from Tim Jefferson-TPT re recent RMW letter. Tim is down in NV and has not had time to work on AS/SVE pilot test work plan. Moreover he wants to further discuss options with the RP regarding hot spot soil excavation to reduce long term risk of petroleum conta GW to surface water, and we discussed this option. Tim requested an deadline extension for the AS/SVE pilot test work plan while acknowledging that they may decide to go with a new CCAD for hot spot soil excavation, to which I agreed I could have merit, especially for a GW to SW discharge scenario. Changed TALES Reporting tab to indicate new deadline of end of Sep-06.

8.31.06 PRS - rec'd 8.28.06 letter report titled "Conceptual Corrective Action Desgn - Soil Excavation" from TPT addressed to me in my DL office. This is not complted using the CCAD Worksheet? This report should have been submitted to St. Paul PM for processing so I sent it to her via interoffice mail/Speedee Delivery.

10.5.06 PRS - email from MDH indicating that the fireplace retailer that occupied the site is defunct and that the on-site buidling is no being converted to a coffee shop/cafe and there were concerns about the water well. Informed MDH that recent sampling of the on-site water indicated no significant contamination.

11.7.06 PRS - rec'd email from TPT. Two old USTs were discovered behind the store during a sewer line installation and may have been used for diesel. Adjacent soil contamination observed. Forwarded email to Nathan Blasing-Tanks for follow-up on tanks compliance end. PRP may need to consider additional follow-up but, at this time, TPT indicates that they are going to contact Petrofund to see if these tanks will qualigy for DOC's "Abandoned UST Removal Program.

11.13.06 PRS - call from K.Mustonen who was assigned a PBP site - former Texas Rust Free Parts (and former MISCO) - that is adjacent the Junction Food-n-Fuel. Kevin is not exactly sure why the site is in the PBP but contaminated surface soil was identifed at the site and ~4 ug/l benzene and ~200 ug/l DRO was detected in a sample from the on-site water well, which a driller reported to be 60 ft deep. TPT did some of the work! Kevin was going to talk with M.Koplitz about management of this situation but it might be appropriate that I am assigned Hydro responsbilities for this. Kevin noted that the location of the Junction Food-n-Fuel on the PRP's Leak Site GIS mapping tool is incorrect. I note that the former Texas Rust Free Auto water well is within 500 ft of the Junction Food-n-Fuel and we have already required that that water well be sampled. This change in ownership may offer an opportunity for the well to be sampled on a regular basis so I called Laura Noviski-TPT and advised her of the situation. Laura indicated she would talk to TPT staff who worked on the contam surf soil asmt at Texas Rust Free Auto.

12.1.06 PRS - email from Mark Koplitz-PBP, who is working a PBP at an adjacent spill site, which has a water well that is to be sampled under the Leak #3534 investigation. Mark requested that he be informed of any sampling completed at that well under the Leak #3534 investigation ASAP. Notified PRP Leak Site PM of this request via email.

12.14.06 PRS - rec'd correspondence file and 2 files with reports file in my DL office. I had requested file be sent by PM's supervisor (PM on extended leave) so that I could review report received 8.31.06. However, the items sent to me did NOT include reports older than TPT's 2.20.01 AMR. I assume that the older reports remain in St. Paul PMs office or filing system?

12.26.06 PRS - email from MDH indicating that they are still pursueing sealing of the unused water well located about 90 ft W of MW7 but have run into property (and well) ownership questions.

12.27.06 PRS - completed review of TPT's 8.26.07 "CCAD-Soil Excavation" letter report. TPT has decided not to pursue AS/SVE and are now proposing soil excavation, essentially hot spot removal of shallow NAPL. I agree with this approach due to many concerns about applying AS/SVe at this site, not the least of which is geology is poorly understood - deeper geology has not been investigated and clay may shallowly underlie the surfical silty sand (and peat) unit. Moreover, I am not so sure that MW8 sample concentrations show a strong need for remediation, although, apparently observed sheens and rainbows on wetland may indicate NAPL discharge? Upon additional review of the LIF boring data, I am not sure that the proposed shallow (7 ft bgs) excavation will result in an effective CAD because it appears that (a) relatively thin deeper (found between 9 to 12 ft bgs) NAPL layer(s) - fresh gasoline - may be the source of contamination. The shallow NAPL found around 5 to 6 ft bgs appears significantly degraded and weathered, although peat layers and oxygen quenching (ORC) may be masking LIF response. Preapred RMW letter requesting submitall of the soon due AMR docummenting additional monitoring data and sub-slab sampling, as well as to begin sampling of now repaired Texas Rust Free Auto water well. Will keep file in my DL office for the time being.

1.26.07 PRS - rec'd remainder of file (older reports) in my DL office. I had requested these to get a copy of a survey map showing a old well on the SW corner of the property that is a potential conduit for deeper contamination migration. A copy of the map was requested by MDH who is trying to determine who owns the well and to determine if the well was properly abandoned.

3.7.07 PRS - rec'd copy of 2 part (A and B) TPT 2.20.07 AMR in my DL office. Sent to me by St.Paul PM per email. Briefly reviewed report and called Laura Novitski-TPT to discuss indoor air sampling recommednation - had to leave NM message. Added AMR to Leak Site file that is also presently in my office. Sent copy of 1964 blueprint from AMR, showing location of potential abandoned well, to Sandra Beck with MDH Duluth. MDH is looking into whether this well was properly sealed and who owns the property where it is located. This well is close to the contaminated area of the Leak Site and could present an opportunity for contamination to the deeper aquifer present in the area from whcih most nearby well appear to derive their water supply.

3.8.07 PRS - phone call with Laura Novitski-TPT. Based on the sub-slab air samples, I agreed that TPT shoudl move ahead with indoor air sampling - provided they follow guidance including the ambient sample collection and buidling survey - prior to full MPCA review of the AMR so that WINTER and summer indoor air samples could be collected yet this year.

3.27.07 PRS - email from L.Navitski-TPT identifying the owner of the abandoned well onthe SW side of the property as Eugene Nelson. TPT indicates that the well was not properly sealed. Forwarded the email to Sandra Beck-MDH Duluth.

4/11/07 (KSM) Hydro duties transferred from Paul Stock to Kevin Mustonen. PRS has file in his DL offive and gave file to DL clerical staff to send to KSM in Duluth.

5/3/07 (KSM) I spoke with Mark Malmanger at MDH-Well Management. He is going to send a letter to the property owner of the unused, unsealed well located at the intersection of Hwy 53 and Lindahl Road. Mark will cc MPCA on any correspondence.

5-7-07 AIK Spatial data entered and feature data sent to Andrew S.

5/14/07 (KSM) I spoke with Laura Novitzki (TPT) regarding the 2-20-07 AMR. Laura received the results from the indoor air sampling last Friday. She said she will email me the results today or tomorrow.

5/17/07 (KSM) I reviewed TPT's 2-20-07 AMR. During the last five monitoring events the groundwater samples continued to exceed the HRLs for benzene (10,000 ug/L) and ethylbenzene (1,200 ug/L). Elevated levels of GRO (21,000 ug/L) were also detected. The contaminant levels in most of the MWs appear to be fluctuating in direct response to changes in the gw levels and are following an overall stable or decreasing trend. The two exceptions to this trend are MW-5 and MW-8, which may be on a mild upward trend. Sub-slab soil vapor and indoor air sampling have shown fairly low levels of multiple compounds. TMBs appear to be the main concern for the indoor air - additional sampling will be needed. TPT mentions that the two "recently" discovered unused fuel oil tanks have had applications submitted to the Petrofund's Abandoned Tanks Program. Based on Figure 2 from TPT's 4-16-97 RI Report Addendum, it appears as if the location of the former fuel oil dispenser was known prior to the December 1998 tank upgrade deadline. I think it is reasonable for the property owner to have known or suspected that there were tanks associated with the dispenser and to have addressed the tanks prior to December 1998. I recommended additional gw monitoring, potable well sampling, sub-slab sampling, and indoor air sampling. I returned the file to SAL via interoffice mail.

5/18/2007 SAL: RMW letter mailed with comments/requirements from KSM - deadline of 2/28/08.

10/23/07 (KSM) Laura Novitzki (TPT) called to let me know that during a recent sampling event the water supply well for Radco had a benzene detection of 1.5 ug/L. I increased the sampling frequency for this well from semi-annually to quarterly.

4/4/08: Rec'd duty officer report for site. John Houck reporting contamination found during tank removal. Possibly contained diesel. Peat, surface water near, gw est at 10' bgs, staining present, high vapor of 467 ppm, analytical pending. (KAF)

5/21/08 SAL: Rec'd copy of excavation report prepared by MSA Prof Services for the UST removed from this site by the Abandoned Tank Program at the Petrofund. Bottom soil samples showed 710ppm GRO, 2100ppm DRO, 1.6ppm ethylbenzene and 5.5ppm xylenes. I'll send this report to Kevin Mustonen for him to consider during his review of the most recent report. Tank was in horrible condition - pictures show it barely recognizable as a tank.

5/30/08 (KSM) I rev'd TPT's 2-5-08 AMR. The groundwater plume appears to be stable and the discharge to the wetlands has been below the surface water standards for 7 out of the last 8 monitoring events. Sampling of the monitoring wells can be discontinued. Testing of some of the nearby water supply wells should continue. The indoor air results have been inconclusive with respect to vapor intrusion and additional testing will be needed. File returned to SAL via interoffice mail.

5/30/08 (KSM) I also rev'd MSA's Excavation Report for the abandoned tanks that were removed from the site. This report does not require a response.

7/21/08 (KSM) Laura Novitzki (TPT) called to let me know that nearby water supply well PW-4621 (MMT Heating) had a recent benzene detection of 7.4 ug/L. This is the second detection for this well. Nearby water supply well PW-5497 (Radco) has also had low-level benzene detections in the recent past. Corrective action(s) will be required at this site.

7/31/08 (KSM) Laura Novitzki (TPT) called to discuss the interim water treatment options. After discussing the installation and sampling of GAC units, we agreed that it may be more cost effective to use bottled water in the near term and to apply those cost savings towards a corrective action (which at this point looks like it may be well replacement). Laura will speak with Jack Curtis and then get back to me.

8/21/08 SAL: Call from Laura Novitzki, TPT. Potable well onsite isn't producing enough water. They are proposing hydrofracking. I suggested she speak to Kevin about the ramifications, and left him a message about it.

9/4/08 (KSM) Laura Novitzki (TPT) called. The volume of water produced by the (replacement) site well has diminished and a well driller has suggested hydrofracting the open-hole, bedrock portion of the well in an attempt to increase the well's yield. Laura wanted an opinion on doing so. I told her that we wouldn't say that they can't do it; however, I strongly encouraged her to discuss the ramifications of the fracting interval with the driller - i.e., placing the packer deeper into the bedrock in an attempt to limit the chance of opening up fractures to the bedrock/drift interface (areas of known contamination). I told her that if the well is fracted, the sampling frequency should be increased from annually to quarterly. I also said if the well becomes contaminated after fracting, they might not receive Petrofund reimbursement for addressing that issue since the well was already replaced once and the new contamination would be directly attributable to the property owner's actions. Laura said she would discuss these issues with Jack Curtis and the well driller.

4/3/09 (KSM) I rev'd TPT's 12-9-08 CCAD along with additional indoor air/sub-slab data that I received via email on 3-20-09. I agree with TPT's recommendation to replace wells 4621 (MMT) and 5497 (Radco) along with their proposed sampling schedule for the new wells. The indoor air results have shown a steadily decreasing trend since October 2006 and the TMB detections are now less than the ISVs - corrective action is not needed with respect to the indoor air. File returned to SAL via interoffice mail.

4/6/09 SAL: CAD Appr/RMW letter sent with KSM recommendations above.

5/15/09 PBP app requesting Gl for Members Coop. PL=MEK

05/21/09- MEK- GL letter mailed;

9/15/09 (KSM) I rev'd TPT's 6-5-09 AMR. Groundwater sampling has been discontinued at this site and the impacted water supply wells will be replaced in the near future. This report doesn't require a response.

9/17/09 SAL: LM for Laura, TPT stating that there will be no formal letter, but asking her to keep us posted.

12/7/09 (KSM) Site visit with TPT staff and Denny's Drilling staff to discuss installation of the replacement wells at MMT and Radco. Steve Pelto (MMT) is having second thoughts about allowing a new well to be installed. That issue needs to be addressed before the work can start. See the leak file for additional details.

12/10/09 SAL: LM for Steve Pelto, owner of MMT property regarding his concerns about a new well. Gentleman who answered the phone said he'd give him the message, but he would be out until Monday 12/14.

12/16/09 SAL: Phone conversation with Steve Pelto. He's talking with John Clairs, Planning and Zoning for Hermantown - and Steve's plan is to get a city petition started to get muni water extended out their way. He needs to convince 2 of his 3 neighbors to sign it, and then the city will do an assessment. Steve was concerned that the MPCA would waste money drilling new wells while they were pursuing city water. Told him he had a month or two to work on this, and he needed to keep me posted otherwise we would try to move forward with the original plan.

3/18/09 SAL: Called Steve Pelto for an update. Said that with the busy heating season, he hasn't done much and wants 4 more weeks to pursue this before we start 'punching holes'. Wanted a little more information on why he feels so strongly, and Steve mentioned that they all know that no matter how deep of a new well we drill them, the water will still 'reek of rotten eggs', and they really don't want that again. Agreed to the 4 weeks, and gave him my phone # again.

4/23/10 SAL: Have left messages and rec'd messages from Jon Hinckel, TPT - playing phone tag. Discussed with Kevin Mustonen, and decided that unless the RP (Jack Curtis) can and wants to work this out with Steve Pelto in the near future, we've waited long enough and want to see this site move forward. Also, this site will be managed by Andy Eddy while I'm on maternity leave.

4/28/10 AJE: transferred PM from SAL to AJE.

5/13/10 (KSM) Jon Hinkel (TPT) called. Radco is tired of using bottled water and wants a replacement well ASAP. Jon wanted to know if we could install a new well for Radco and continue to let Steve Pelto (MMT) pursue municipal water. I told Jon that I want the same corrective action applied to both sites (either they both get new wells or they both get a muni water hookup). I strongly recommended that he discuss the current situation with Andy Eddy.

5/18/10 (KSM) Call from Gene Nelson, a property owner near the site. Gene is concerned that the planned construction of a nearby WLSSD sanitary sewer pump station/storage tank will draw contaminated groundwater from L#3534 onto his property.

5/18/10 AJE: contacted AG for advice regarding well replacement. AG would like to meet to discuss the site and what our options are.

Spoke with John Hinkle at TPT and discussed the site situation regarding well replacement. I let him know that I would be discussing several options and trying to figure out our best approach. He thought we should enforce the neighboring property and take the site over Fund Financed, and I reminded him that Jack Curtis is the RP and enforcement would be sent to him, not the neighbor.

Called John Klaers at City of Hermantown to discuss municipal water supply and a timeline for this if even an option. Left a message to call me back. 218-729-3600

5/26/10 AJE: called John Klaers, left a message.

6/2/10 AJE: called John Klaers, left a message and my email.

6/14/10 (KSM) Arthur Usan (Radco) called for an update. I told him that AJE's letter should be going out in the near future.

6/15/10 AJE: sent wakeup letter. addresses the need to choose a water supply option, and move forward with this decision.

6/24/10 AJE: returned a call from John Hinkle. Left a message to call me.

6/24/10 AJE: spoke to John Hinkle. He was sure that Mr. Curtis was in compliance with the requested work and deadlines. I let him know that he wasn't, as we hadn't received information regarding the requested work. I let him know that Mr. Curtis needed to work out the differences between the neighbors, and that he needed to take responsibility for this issue and not try to make the MPCA step in and do his work. John said that the MPCA needs to enforce his neighbor, and that there was nothing he or Mr. Curtis could do. I reminded him that I could enforce Mr. Curtis, but not his neighbor. I also told him that this needs to get worked out within the new deadline, and that the new information regarding well replacement needs to be included with the already completed requested work. He insisted that nothing could get worked out, and they had tried already. I told him that I recently spoke with Mr. Curtis, who told me he hadn't spoke to his neighbors recently. Mr. Curtis is the RP, he needs to contact the neighbors, get their final stance on well replacement, and present that to me. If a neighbor refuses a well, get that in writing and I will look at the legality of moving forward without involving his well. John agreed that this could be the solution and that he would be contacting the neighbors as soon as possible.

7/12/10 AJE: called John Hinkle after receiving a voicemail regarding water supply.

He has done some recent research and spoke to neighboring property owners, and would like municipal water supply extended to these properties. He believes everyone is on-board and ready to go. He called Petrofund, and they have committed 54,000 dollars to the project (however this was for well replacement). He asked Petrofund if they could use the 54K towards municipal water supply, and John is looking into it. He also mentioned that after talking with Steve Pelto, he would be ok with a new well drilled.

I told him either way, make a decision and submit that to the MPCA as soon as possible.

7/21/10 AJE: called John Hinkle to see where things were at. He was out, I left a message asking him to submit the RP's decision as soon as possible. Asked him to make this a priority as water supply is being affected by these delays.

9/7/10 AJE: called John Hinkle, left a message asking for a date of his decision to be submitted.

9/9/10 AJE: John Hinkle called. He has the 51% of necessary signatures for the municipal water supply connection. A hearing with the city is TBD at this point, but the connection should happen this spring.

He told me to expect a report in ~ 2 weeks.

10/8/10 AJE: Called John Hinkle, asked about progress. He is waiting to hear back from the city about a date for municipal supply. I told him that I need something submitted, which includes their decision for water supply and any work completed since the last submittal. I also mentioned that I didn't want to hear that a report is coming in 2 weeks unless something is actually going to be submitted, and that I was needing something very soon.

He said that he will submit something within a week.

10/18/10 AJE: received a letter from TPT. This letters describes the new plan, which involves Municipal water supply.

11/4/10 AJE: spoke to Chris Shaw of Halo Engineering. He is putting together some information for the City regarding the well replacement.

218-727-8796

11/9/10: Rec'd duty officer report for site. WLSSD reporting contamination discovered during development of property in the road row at 5489 Miller Trunk Highway. Site has a private well, unknown depth to gw, 1340 ppb GRO in gw. Will send report to PM for open site. AET took gw and soil samples. (KAF)

12/6/10 (KSM) I rev'd TPT's 10/14/10 Project Update letter report. The correcitve action plan may have changed from installing new water supply wells to extending the municipal waterline. If they wish to proceed with this new approach they will have to submit an updated DCAD (i.e., their current CAD Approval cover the installation of new wells, not municipal water hookups).

12/14/10 AJE: sent a RMW letter asking for an updated DCAD.

12/29/10 AJE: spoke to Laura Novitski at TPT. She said there is a public hearing scheduled for February or March, and after that meeting she will have more details. The DCAD would be more complete if she can wait until after the meeting happens.

6/21/11 AJE: sent Laura Novitzki an email requesting a status update on the public hearing, and where things are at with the well replacement. Stated that we want this moving as quickly as possible.

6/21/11 AJE: Laura emailed that the public hearing occured. The motion did not pass to extent municipal water supply. They pushed for an extension, and they feel that is what caused it not to pass. She says they would like to retry without the extension.

6/28/11 AJE: I emailed Laura and let her know that we don't want to wait another year to present the same information again. Let her know bottled water was meant to be a short term solution.

Asked her to discuss a time frame and let us know. If the delay is considerable, we need to explore other options.

8/8/11 AJE: followed up with Laura. Asked her if she discussed anything with Mr. Curtis.

10/25/11 AJE: contacted Mr. Curtis and let him know that a well replacement option needs to be chosen and submitted for approval. He wanted something in writing showing we prefer the municipal option, however well replacement and municipal supply could both potential remove the risk at this site.

12/7/11 AJE: followed up with Jack Curtis. Asked him about the City Council and their decision regarding municipal water supply.

1/10/12AJE: received email from RP Jack Curtis:

Hi Laura and Andy,

Good news. The Hermantown City Council approved the extension of the water line so we can hook up to city water versus drilling wells. I will let you know the possible timing when they figure it out. Please let me know how we make sure that we have Petrofund approval to cover the cost of the projects.

Jack

AJE followed up by asking for updated DCAD before proceeding.

2/1/12 AJE: received email from TPT:

Good morning, Andy

Im pleased to say that things are moving ahead with the Junction Food-N-Fuel project:The Hermantown city council has passed the resolution to extend their municipal water supply line to the area of the Junction Food-N-Fuel site. Salo Engineering is presently generating a design plan for the water lines extension.

I have completed a draft proposal to Petrofund to create a DCAD for the environmental aspects of the project. My proposal calls for the various (environmental) project responsibilities to be divided between Curtis Oil and the city of Hermantown. The draft proposal is presently being reviewed by Curtis Oil and the city of Hermantown. With their approvals, I will finalize my proposal and forward it to John Houck of the Petrofund probably next week.

Of the two DCAD options, I believe the EDCAD (excavation based) format fits the project better than the SDCAD (remediation system based) format; I expect to be going with the EDCAD format.

We expect to undertake and complete the projects fieldwork this 2012 season

7/10/12 AJE: sent Jon Hinkel an email asking if he expected to submit a DCAD or EDCAD soon.

7/27/12 AJE: received EDCAD

8/21/2012 [jdp] General File Review: I have not been able to locate an investigation report for this site and Paul Stock who reviewed the entire file about 10 years ago said that there probably never was a formal investigation report. There are several annual reports and CAD reports that appear to be missing from the file. I have reviewed hydrologist comment pages in the correspondence file that provide a fair documentation of technical issues at the site. One of the concerns for the site was discharge of contaminated groundwater to a wetland/ditch north of the site. But, groundwater quality has improved in the well nearest this surface water body and this risk no longer appears to be a concern. The main risk is to local drinking water wells. The onsite well was contaminated and was sealed. A new onsite well was installed and cased into the granite bedrock. Surface soil and vapor intrusion do not appear to have been a concern, based on the comments I read in the correspondence file.

I have reviewed the Excavation Detailed Corrective Action Design Report (EDCAD), dated July, 25, 2012, submitted by Twin Ports Testing.

This report provides the proposed connection of municipal water to the community as a solution to the ongoing issue of high levels of contamination at this leak site and the likelihood that contamination has migrated into shallow quaternary deposits and the bedrock both of which are the source of water for these wells. The proposed work appears reasonable to me. Since the water table is four or five feet below the surface and the water line is to be at nine feet, they may want to put a little more thought into dealing with groundwater which might fill in the excavation, making it difficult to place the water line. We probably should indicate that in in our approval letter as a heads up. I don't think we need a revised EDCAD.

8/22/12 AJE: sent CAD approval letter. requested they consider depth to GW while completing the work, as GW may fill in the excavation.

also requested a confirmation indoor air sample for the on-site building.

11/27/12 AJE: Jon Hinkel emailed with some questions regarding reporting and the piping material for well hookup.

12/11/12 [jdp] Discussed installing water lines through contaminated soil. Recommend that plastic not be used in contact with contamination to avoid water line permeation. Recommended metal--consultant recommended copper. Consultant should document what was done concerning water lines in contaminated soil.

6/7/13 AJE: checked into the progress of the well connection.

6/25/13 AJE: private water line to Radco property is in and operational. No excavated soils had PID above 10 ppm, so were returned to the original areas.

MMT connection should be happening today.

Summa work will be completed soon as well.

9/18/13 AJE: received report.

10/30/13 [jdp] Rev. CAD dated 9/2013. MSA reports on the extension of the Hermantown water main along Highway 53 and the installation of water lines to the Turbo Diesel (former Radco, Inc.) at 5497 Miller Trunk Highway (Highway 53) and the MMT building at 4621 Lindahl Rd. The water lines replaced the private water wells at these locations which were sealed in July 2013. MSA also checked soils excavated along the water main to allow connection of the water line to the Turbo Diesel building. The excavated soils did not exceed 10 ppm as measured by a PID so the soils were returned to the excavation. The groundwater level at MW-7 is roughly three to six feet below the surface and the water line is probably passes through the contaminated groundwater that extends across a portion of the route of the new water line to the Turbo Diesel property. It does not appear that the two new lines are in contact with contaminated soil. The new water line on the MMT property should not contact contaminated soil or groundwater. Since the new water lines are copper, water line permeation should not be a concern.

The indoor air at the Casa Late (Former Junction Food N Fuel building) was also sampled. Exceedances of two chlorinated compounds, 1,2-dichloroethane and trichloroethene were found in the building; a TCE indoor air concentration of 19ug/m3 and a 1,2-dichloroethane concentration of 1.3. The industrial indoor air ISV is 8 for TCE and 1 for 1,2-DCA. Traces of TCE was detected in two subslab samples, but not in previous indoor air samples. Petroleum compound detections in the building have declined since 2007 when the last indoor air sample was collected in the building. These compounds could be related to residues of these compounds in petroleum products used or sold in the building in the past. The residues of these compounds may be volatilizing from the building floors and walls. Because of the chlorinated solvent detections, I submitted a site referral form...

10/30/13 [jdp] Remark 181 cont. ... to the Site Assessment staff.

I recommend that another subslab sample be collected as well as an ambient, outdoor air sample and an indoor air sample. The Casa Late building should be surveyed for sources of petroleum and chlorinated solvents.

10/31/13 AJE: sent RMW letter.

1/24/14 AJE: received monitoring report.

3/20/2014 [jdp] Review of letter from J. Hinkel, MSA,dated 1/24/2014. The letter summarizes the results of additional sub-slab, indoor air, and ambient air sampling in the Casa Latte restaurant building (the former gas station building). MSA also inventoried chemical substances stored in the restaurant and researched the site and neighborhood history since 1946. The purpose of these efforts was to determine a source for the occasional chemical vapors found in indoor air samples of the restaurant. Only cleaning compounds are stored in the building and none of them appeared to contain chlorinated solvents or BETX compounds. There was no evidence of a former dry cleaner at this site or the immediate neighborhood. Several sub-slab soil vapor, indoor air, and outdoor ambient air samples were collected since 2006 with the latest sample collected in December, 2013. Over the years, petroleum compound concentrations in indoor air and sub-slab samples have declined. Trace levels of several chlorinated compounds, some of which may have been used for vehicle servicing such as parts washing with tetrachloroethene and trichloroethene were detected in the indoor and sub-slab samples, but the sporadic detection of trace levels does not indicate a significant source beneath or near the building. Freon compounds and other compounds which may be related to refrigeration, ambient air contamination, or lab contaminants were detected sporadically in sub-slab, indoor, and ambient vapor samples are probably not related to the former service station release. Examination of groundwater quality data collected from monitoring wells and private wells at the site indicated only a very few trace detections of chlorinated compounds which may also be artifacts unrelated to the release at this site. The indoor vapor samples of petroleum compounds have not exceeded the ISV since 2007 and all other vapor compounds are well below the ISV. ...cont. on Remark 186..

3/20/14 [jdp] Remark 185 cont...

Since public water has been supplied to the homes whose wells were affected or potentially affected by the release at this site, this risk has been mitigated. Vapor intrusion is also not a risk. I recommend closure of the file.

3/20/14 AJE: site closure.