

Seaway 200-1d D1-23

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[Redacted]
Eyrnes, Timothy F. | RB

Sent: Monday, November 20, 2000 1:51 PM

[Redacted]

Subject: RE: FUSRAP Seaway: TPP Meeting 26-27 October

After further review, there were a couple of minor changes suggested by the team on the TPP Notes. Attached are the final notes.

Thanks,

[Redacted]



TPP Notes2.doc

-----Original Message-----

Sent: Thursday, November 09, 2000 3:35 PM

[Redacted]

Subject: RE: FUSRAP Seaway: TPP Meeting 26-27 October

Attached are the draft TPP notes that [Redacted] put together for everyone's review. If you have any comments or suggested changes, please let me know by the 17th of November.

We have scheduled 6 and 7 December for our first two subgroups to meet in Buffalo. We will be meeting at the SAIC offices from 8:00 to 4:00 each day. The plan is to meet on the 6th to discuss the additional characterization in areas A, B and C and on the 7th to discuss the groundwater/leachate issue. In preparation for the meetings, SAIC is putting together a brief presentation of the data at Seaway and a draft outline of a proposed sampling plan, including areas to sample, constituents and rationale. This will be our starting point and we will adjust from there. SAIC is also updating the "Skinner Report" to address the potential leachability of the radionuclides in the landfill. Both these items will be available before the meetings and we will provide them to you so you can better prepare for the meetings.

One of the due outs for NYSDEC related to the groundwater was an assessment of the current performance of the landfill and whether the data they have shows any concern for current groundwater problems from the landfill. It would be helpful if this assessment was completed before the meeting so that NYSDEC could give a brief summary of the results to all the participants.

Let me know whether or not you plan on attending the meetings by 17 November.

Thanks,

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<< File: TPP Notes.doc >>

Seaway FUSRAP Site
Technical Project Planning Session
Proposed Plan
TPP Planning Session
26-27 October 2000

EXPECTATIONS:

- Background issues and identify current issues
- Have the regulators expand the concerns on the technical issues on Seaway
- Get up to speed on the TPP process
- General knowledge of program direction of Seaway
- Resolve technical issues that NY State may have
- what additional data is needed to characterize the site
- Identify areas we can work together to resolve and move forward on this project. Be helpful in our advice
- What data can be collected to allow all parties a better understanding of the alternatives and their +/-'s
- Listen to concerns of agencies and work together to identify data that needs to be collected and move forward together
- Reach a consensus on understanding "technical" issues and what "must be done to satisfy all in addressing the technical issues
- Common understanding of existing physical/environmental conditions at the facility including the MED material
- Sharpen understanding of the issues (technical)
- Expect rad contaminated sites in NYS to be cleaned to environmentally compatible level and returned to productive use for NYS society
- Understand more about the site and project
- Identify issues that need to be resolved. Plan steps to resolve them
- Identify radiological sampling needs to address stakeholder concerns and close data gaps
- Better understanding of regulatory agency concerns
- obtain a clear understanding of regulatory concerns for the Seaway site so we can develop a functional plan to move forward on the project
- Agree on a CSM for current and future use at Seaway site
- Develop plan to address state and EPA concerns on the Seaway site
 - Get data needs and data uses on the table to address above issues
- Get to know each other and establish a comfort level to increase informal communication and understanding (i.e. each person will go more than "halfway")
- Come to a fair and implementable action
- Determine technical issues and how they will be resolved
- Create a team with Corps, State, EPA to determine a remedy for site
- Acceptability (?) of Part 360 as a post closure institutional control
- Conflict of solid waste and radioactive waste for cap design

- Listen and learn what regulators have to say and see what road we are going to pursue after this meeting
- Open dialogue between agencies to start process toward resolving issues regarding closure of the Niagara Landfill

General Information:

Seaway proposed plan on hold, no set time frame for revision. Based on working towards obtaining data to close data gaps within the current plan.

Some discussion of ultimate fate of site, timeframe (1000 years) and institutional controls

Conceptual Site Model information:

DRAW PICTURE OF 3-D Picture of Model with cross-section, as well as plan view

- MED waste disposed of in the 1974 timeframe. Solvents reportedly arrived through 1979. However, because of RCRA in 1976, it is thought that most the disposal of industrial wastes containing solvents and hazardous contaminants occurred in the southern half of the landfill, not adjacent to MED areas of A, B, and C. Table 2-2 of FS.
- Co-mingled waste, as used in this meeting, is other material mixed with and in direct contact with FUSRAP rad waste. Material adjacent to (beneath, above, beside) MED rad waste is not co-mingled.

DRAW PICTURE!!!!

- Area B latest characterization to a max of 8 feet was for surface conditions. Use of data was for update of risk for rad. Didn't expect to find rad in the shallow surface and data confirmed it was not present.
- Area B waste is a subset of Ashland 1. It most likely was diluted during the material handling process from Ashland to Seaway. Ashland 1 waste was result of physical/chemical processing at Linde. Filter cake material dumped on Ashland and covered at Ashland. Was dug into to build a tank and the spoils were moved to Seaway and Ashland 2. Linde quantities greatly increased by material dilution/handling.

Generic Project Objectives: (Introduced by facilitator)

Remedial Investigation:

RI-0: Site history

RI-1: Define site physical features and characteristics.

RI-2: Determine the physical, chemical, and toxicological characteristics of the wastes.

RI-3: Determine nature and extent of source areas.

RI-4: Evaluate fate and transport pathways.

RI-5: Define current and future routes of exposure.

RI-6: Characterize risk to current and future exposed human/biotic populations.

Feasibility Study:

FS-1: Determine acceptable risk-based cleanup levels.

FS-2: Determine ARARs.

FS-3: Identify and Screen potentially suitable technologies

- Evaluate effectiveness of technology.
- Evaluate implementability of technology.
- Evaluate cost of technology.

FS-4: Perform a Detailed Analysis of Remedial Alternatives

- Evaluate long-term effectiveness of alternatives
- Evaluate short-term effectiveness of alternatives.
- Evaluate implementability of alternatives (short/long term)
- Evaluate protectiveness of alternatives (toxicity, mobility, volume of contamination)
- Evaluate cost (net present worth and O&M)

George's Summary of Data Uses:

- Fate and Transport
- Nature and Extent
- Risk- Baseline and Short term effectiveness

Identify data we have and identify data gaps

Constraints on data collection

MED IMPACTED AREA: USE OF CHEMICAL DATA

- If removal of waste, then chemical data needed for
 - Disposal
 - Cost estimates
 - Worker H&S (note: 40 hour training already required for Class IV landfill)
- If no removal of waste, then chemical data needed for
 - Fate and transport of the rad
 - Risk evaluation of chemical and rad

FATE AND TRANSPORT OBJECTIVES/DATA NEEDS

How can or will MED move to receptors?

- 1) Erosion (No data needs) Institutional control issues
- 2) Waste Mobility characteristics apply to both surface water pathway and GW pathway
 - of MED material itself
 - of other impacted by co-mingled materials or material located above it
- 3) Radon release (No data needs) Corps redoing the work to address shorter vents, closer receptors, and passive vents

FOR item 2 above:

Data we have:

- Distribution coefficients, used in model at Ashland, the "Skinner Report",
- Represents actual field test as configured (with no cap); two samples taken for radio isotopes data in leachate, (1 sample in 2000, 1 sample in 1993); data in RI also exists, much existing data on chemical components

Data we need:

Sam's approach: Look at historic leachate chemical data and look at variability. Factor in precipitation/environmental factors, then look at current precipitation. If next three samples are similar, compare with variability on chemical side. Don't sample forever, max of 1 year to account for possible seasonal variations, if necessary.

filtered/unfiltered leachate samples, joint NYSDEC/Corps effort

analysis of leachability of radionuclides in a similar fashion to the "Skinner Report" which NYSDEC agreed showed groundwater was not impacted and would not be impacted in the future at the Ashland Site.

Assemble subgroup (Barb, John, Jeanette, Corps) to address sampling procedures and analytical procedures

Is the proposed data and analysis from item 2 (waste mobility) sufficient to answer if GW is impacted or will be impacted in the future? Yes = no additional data needs

Potentially evaluated for all alternatives depending on results.

Impact today? must be defined in Baseline risk assessment

Clay, 40-75 foot, impermeable, evaluate if leachate collection fails or if integrity of clay fails

Assemble Subteam (geologists, 's to look at data needs/and data gaps needed for GW modeling, should modeling be necessary (dependent on the leachate results) The modeling would focus on the impacts to GW based on 1) what the leachate looks like now and 2) what it is predicted to look like in the future

Relook at RI data so that any additional data needs are identified

Future scenario will be contingent on if MED wastes stays or goes, institutional controls, and 1000 year care

FRIDAY MORNING DISCUSSION:

Comment response discussion: Please note there is not a firm Corps position on comment responses. These are open discussion, but not the last position/point of view.

- 1) Additional data needs and delay release of proposed plan – no set time frame – is based on working with regulators on technical data gaps
- 2) NYSDEC > 9 CERCLA criteria. Only Alternative 2 meets the threshold criteria, Corps needs to better demonstrate that other alternatives may meet criteria
- 3) NYDOH > Alternative 6, doesn't meet protection of human health and meet NCP , additional data needed
- 4) ARAR > Not prepared to address- Michelle Barczak is Corps Lead. Proposed list - NYSDEC, etc. A broader list of ARARs than Corps included
 - open to discussion, not as wide and broad view as state especially on the relevant and appropriate
 - State's concern's are well presented, and Corps response will come
 - Will address at least 200-1000 years, not just 30 years
- 5) Institutional controls
 - Built on existing state institutional controls on landfill. State's position is to remove material and ship offsite/out of state and return site to unrestricted use.
 - From Corps/DOE MOA, DOE is responsible for long term O&M, Corps does 1st 5-year review, and first two years of O&M
 - Additional discussions ongoing with Corps/DOE
 - Determine the type and extent of institutional controls needed on site to provide adequate layering of controls and allow federal implementation of the site remedy
 - Coordinate with state on the institutional controls available on site
 - Update cost estimate to reflect imposition and maintenance of necessary institutional controls for length of remedy
- 6) Partial excavation:
 - may need to reconfigure landfill, including garbage
 - cap with side slope- will need to move material to get under the cap(waste on east side by property line found by Ashland excavation)

- any MED waste moved would be shipped offsite

7) Cost Estimates

- refine with additional data
- 1000 years of cost for institutional controls- based on new EPA guidance
- % considered "mixed waste" 15-25%- greatly affects costs
- potential issue of a disposal site

USEPA COMMENTS:

8) Proper Characterization

- better presentation including graphic of existing data

9) Chemical constituents of materials

10) Institutional controls

11) Local support of alternatives

- some prior alternative involving Ashland are not possible now
- There are not preconceived ideas any more

FUTURE USE OF SITE OVER 1000 years

- Classification of landfill can be challenged by landowner at anytime, so State Class I designation may not be permanent
- Good documentation of material present may not allow reclassification
- Don't rely on the state regulations to protect the Federal waste
- Listed and characteristic waste in drums and other degradable containers that may break down in future
- A notice/posting/zoning doesn't adequately prevent future use
- 4% occupancy rate used in modeling
- EPA faces similar issues on their lead sites
- If Federal Ownership,
 - If decision is to leave on site, State would like Federal ownership of site.
 - If partial excavation, would State still have issues, yes, Your Waste, Your Watch!
- How does ownership make difference in H&S and environmental protection?
- Possible problems after removal actions
- 10CFR 40 Appendix A – technical or legal conflict? State asks
 - technical - such as isotopes of protactinium 231 and actinium 227
 - but mainly "legal"
- *AGREE TO DO MORE DATA ON ISOTOPES*

GW IMPACT:

- NYSDEC will review existing data to make determination if GW is currently impacted?
 - If yes, then more GW Rad data is needed

- If no, then the only sampling needed is baseline sampling to assess O&M effectiveness if waste left in place
- *GW subgroup to look at needs long term*
- Chemical data available, not information available to say the rad comes out at a different rate than chemicals (especially metals)

NATURE AND EXTENT OBJECTIVE/DATA NEEDS – AREAS B and C

- Other potential rad in landfill- natural occurring in flyash, slag pieces and other rad
- *SUBGROUP Work (include Steve as IH for H&S)*
 - *Looking at Disposal options, cost, source term in modeling, H&S in remediation*
 - *Bound areas of B and C*
 - Any rad samples taken would be evaluated as MED or other rad
 - If MED sitting on flyash, standard gamma scan will identify MED and other rad without distinction
 - sampling strategy determination, options are grid or start in middle and work outward
 - Establish lower boundary of sampling
 - Sideways strategy tools- may be useful since know the lower boundary
 - If clean at edge of the cap, agree that no investigation under the existing caps
 - Expect layer is no thicker than 3’-4’ max, pushed out to zero thickness
 - Subgroup to discuss sampling intervals
 - Chemical TCLP for disposal options, cost, H&S, risk –source term
 - Reminder that an FS cost estimate is +50% to –30%

NATURE AND EXTENT OBJECTIVE/DATA NEEDS – AREAS A

- Existing data includes 271 data points, gamma walkover matched historic boundary, thus extent is well documented
- *Possible sampling for radionuclide database for understanding the nature of the MED waste*
 - *Maybe 5 samples Realistic balance of data of “nature” in Area A with Areas B and C*

NOTE: Modeling in Skinner report used most conservative values for chemicals

RISK:

- Use long term effectiveness and short term effectiveness of remedy (CERCLA evaluation criteria)
- No additions to baseline risk assessment
- Long term –residual risk

Is existing risk assessment data sufficient to present to the public? The Corps believes yes, that it proves that there is an unacceptable risk from MED rad at the present time

In Area A, boring through waste in a couple of areas, co-mingled, group to discuss interval of sampling. No significant changes to risk, unless new data is SHOW STOPPER.

In Area B and C, rad risk and radon re-calculation only if data shows significant changes.

Risk calculations many done on no action alternatives, no need to redo unless new data is "show stopper"

Have we "bounded" the risk, are there other things that may cause relook? Lead to Exposure Scenario and Exposure Pathway

EXPOSURE SCENERIO

Risk in Feasibility Study

- achieving risk based cleanup number or number from ARARs
- 10^{-4} to 10^{-6} , ARARs, protective of H&S, environment
- If industrial/commercial use in future use, then "institutional control" failed and residential is a conservative assumption
- If land use controls failed,
 - Commercial use-landfill uses land, ski slopes, maybe building to support commercial uses. Controlled use of it, leading to commercial use vs land use controls fails, then residential scenario
- "Reasonable, maximum exposure scenario" -USEPA- this has not been met
- Credibility with regulators about using various exposure scenarios
 - Corps starting point: Current risk assessment shows action is needed
 - In FS alternatives: Corps needs to take under advisement, not only the resident on cap, but offsite exposure pathway
- NYDOH prefers residential scenario use, so cleanup levels can be established. Industrial scenario may change cleanup levels.
- Radionuclides assumed in most soluble forms What is meaning of this?
 - K_d used
 - Not looking at worst possible case, and worst possible scenario

IN AREAS B and C

Exposure pathway for material existing under 40 feet of material

- assume erosion, look at what reasonable and ARARS
- How to do no action alternative
 - Today or 1000years > do both
 - Today- no current exposure pathways??
 - 1000 years- erosion

- Address comments 15 and 16

INITIAL PLAN FOR FRIDAY SESSION:

- Characterization
- ARARS- defer
- Remedy selection/evaluation
- Institutional controls
- Proposed uses of land
- Counsel involvement – want to get them involved, hard to overcome the “legal aspects”
- Layout gameplan – what was accomplished during session and what is left to accomplish

SUBGROUP (more technical than legal) on 10CFR part 40 Appendix A criterion 6(6)

Brian Hearty – pursue conclusions from NRC on how implemented
NRC can't “Concur”

State does see as “relevant and appropriate”

Buffer zone

May have NRC participate

PARKING LOTS ITEMS GATHERED THROUGHOUT THE SESSION:	
Item Addressed?	ITEM
Yes	Determine if landfill constituents have an impact on Areas A, B, and C
Yes	Are MED wastes commingled w/ chemical constituents? YES or NO and where if Yes
Yes	Define nature and extent of chemical constituents of Areas A, B, and C. What are Corps responsibilities for chemical? If rad (MED waste) was not present, no characterization of chemical contents of a hazardous waste landfill would be necessary (i.e., it would be capped (contained) yes?)
Yes/Defer	Maintaining cap for 1000 years <i>Will look at 200-1000 years, Institutional control defer</i>
Defer	Remedy evaluation and screening
Defer	Need to consider additional options (not just what's in the proposed plan?) <i>Corps is open to new ideas</i>
Defer	ARARS
Defer	Institutional controls and other Friday morning brief discussions

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FOLLOW ON ACTIONS: SUBGROUPS

NYSDEC	NYDOH	EPA	Subgroup
Y	?	David/ Jeanette	1. Leachate/Groundwater
Y	?	TBD	2. B & C/A nature/extent sampling
Y	NO	TBD	3. ARARS
Y	Y	Jeanette	4. Institutional Controls <i>DOE? probably won't happen</i>
Y	Y		5. 10 CFR 40 Criterion 6(6) <i>Maybe NRC if site specific and maybe at follow-on meeting</i>

Face to face meetings proposed for subgroups 1 and 2, maybe even 3 and 4 for the first week of December, participants to check calendars. The 10 CFR 40 Criterion 6(6) may be done via videoconference.

The goals of the subgroups have been established. They must now meet and clearly document their outcomes.