UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION
Office of Energy Projects
Division of Hydropower Licensing

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Lock+ Hydro Friends Fund XLH, LLC : Project 13739-002
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Braddock Locks and Dam Hydroelectric Project
8th Floor Conference Room
11 Stanwix Street
Pittsburgh, Pennsylvania
Wednesday, December 5, 2012

The Daytime Scoping Meeting, pursuant to notice, convened at 1 p.m., before a Staff Panel:

JOHN MUDRE, Project Coordinator, FERC
EMILY CARTER, Environmental Biologist, FERC
ANDY BERNICK, Wildlife Biologist, FERC

with:

MARK R. STOVER, Vice President, Hydro Green Energy, LLC, for the Applicant, Lock+ Hydro Friends Fund XLH, LLC
JIM GIBSON, Vice President, Hydropower Services, HDR Engineering, Inc.

LIST OF ATTENDEES

Conrad Weiser, U.S. Army Corps of Engineers

Jeffrey Benedict, USACE

John Bridge, USACE

Bob John, USACE

Daniel Hawkins, Court Reporter

P R O C E E D I N G S

MR. MUDRE: I'd like to welcome everyone to this scoping meeting for the proposed Braddock Hydroelectric Project. My name is John Mudre, I'm with the Federal Energy Regulatory Commission. Mudre is M u d r e.

Why don't we go around the room, and since it's a small crowd, introduce ourselves, and then we'll get into the meat of things.

MR. STOVER: I'm Mark Stover, Vice President of Corporate Affairs for Hydro Green Energy, the developer of the project.

MS. CARTER: I'm Emily Carter with FERC, and I'm doing the recreation, land use, and cultural resources for the project.

MR. BERNICK: I'm Andy Bernick with FERC, Wildlife Biologist. I'm working on the terrestrial and the threatened and endangered species portions.

MR. MUDRE: For the benefit of the court reporter, go ahead and spell your name if there's any doubt he knows how to spell it.

(Pause)

THE REPORTER: I'm the court reporter. Dan Hawkins is my name.

MR. WEISER: Conrad Weiser, the Army Corps, Planning and Environmental. W e i s e r.

MR. BENEDICT: And I'm Jeff Benedict. I work in Planning as well; I'm in plan formulation, and I'm the Pittsburgh District Hydropower Coordinator.

MR. BRIDGE: Josh Bridge with the Corps, Natural Resource Management.

MR. JOHN: I'm Bob John, also with the Corps, Natural Resource Management. I'm sort of handing things off to Josh.

MR. GIBSON: And Jim Gibson with HDR.

MR. MUDRE: So by my count, we have four Corps, three FERC, one Applicant and his contractor. And the court reporter.

Welcome again to today's scoping meeting. I'm going to briefly go through who FERC is and why we're here. I think most of you know, but if you want any more detail on something that I'm saying or have a question, feel free to interrupt me.

FERC is an independent agency that regulates electric power, natural gas, all pipelines and most importantly, the hydroelectric industry. The Commission is composed of five commissioners appointed by the president and confirmed by the Senate, and the president designates the chairman. And I think we'll be having a new chairman in a couple of months because the term is expiring for our existing one; but that's yet to be seen.

(Slide presentation.)

So as I said, we administer only non-federal hydropower projects that we have jurisdiction of. We don't have any jurisdiction over the federal projects themselves, although we do have non-federal projects at federal facilities, as we do in this instance, at least as proposed in this instance.

As far as hydropower goes, we are in the Office of Energy Projects, as organized; the Division of Hydropower Licensing -- who we are. We have a Division of Hydropower Compliance and Administration, and they're the ones that, once a license is issued, they make sure that all the conditions of the license are being met. And then we have a very good dam safety and inspection division that ensures the public safety at all the facilities.

We are from Washington, D.C., our office; we do have five regional offices that are mainly engineers. There are a few non-engineers at the offices, but for the most part it's the dam safety. The regional office that's pertinent to this is the New York regional office.

We issue licenses to non-federal hydro projects. Licenses can be issued for terms of 30 to 50 years; although at Corps facilities, all the licenses are 50 years in term.

We license projects so that power can be generated, but we also have a broader public interest

determination that we have to make; so it's not just about the generation of electricity, we look at other benefits, non-developmental benefits that may occur.

There are about 2600 licensed and exempted projects that are under our jurisdiction.

So how it works; we get an application filed with us; we issue a public notice that the license has been filed, and that notice requests comments and additional study requests due 60 days after filing, and that deadline was November 16th, so three weeks ago.

We review the application for adequacy, to make sure that everything that's required by the Federal Power Act to be in there was in there, and when we make that determination we issue a notice that the application is accepted and that any protests or motions to intervene are due within sixty days after that notice. And the deadline there is January 1, 2013.

We prepare a scoping document that is sort of the first step in the NEPA process, and the idea there is it guides our environmental review. We prepared Scoping Document 1, which we mailed out to the mailing list; and then 30 days after that, approximately, we have our scoping meeting, which is what we're doing today.

Then based on the application, everything in the record and everything that we hear during scoping, we decide

whether there is a need for any additional information; and if there is, we'll ask for it.

Then we revise the scoping document. If there are significant changes we will prepare a Scoping Document II that incorporates any new information that we developed during the first scoping meeting, and written comments that we might receive.

Once we have everything that we need, we issue a notice that the application is ready for environmental analysis, and that triggers the comments and agency recommendations, sixty days after that notice, Notice of Preliminary Terms and Conditions, that sort of thing.

Deadline for amending the application is 30 days after the issuance of the REA notice. The applicant has to apply for water quality certification within 60 days of that notice; and then we take all that information and prepare our draft environmental assessment. And we'll have a comment period of 30 days on that to get people's stake on whether we did a good job, what we missed, what we may not have considered; and then we take that information and --. The other thing, once we issue, the drafting agencies can revise their terms and conditions that they submitted within 45 days.

As part of our process, we'll also analyze the 10J recommendations from the Fish & Wildlife agencies and

try to resolve any inconsistencies between what we recommend in the draft EA and what their recommendations are.

And once we do that, we'll go ahead and issue the final EA. And the final EA basically provides recommendations to the Commission on whether and under what conditions to issue a license for the project.

So once the Commission issues a license order, any people that are parties to the proceeding, people who have intervened and request rehearing of that order; which means they don't like something in it, they would like some changes one way or another, and those are due within 30 days of the order.

So scoping. We want to identify all the significant issues that need to be analyzed, we want to identify any cumulatively-impacted resources, identify reasonable alternatives for analysis, and also to identify issues and resources that really don't require detailed analysis, because maybe it's apparent from the face of it that there's no way there's going to be any impact on those resources. So we don't waste a lot of time and electrons on something we don't need.

Another thing we want to do during our scoping is to get any information that may be out there that we don't know about. So if you guys know of any reports, data, professional opinion that might be helpful to us; federal,

state or local resource plans that might have some interplay with the proposed project, and any information that may be out there relating to potential cumulative things, like if there's some big development plans in the watershed or other dams or something that we don't know about that could have, could interact with the proposed project. You know, we would like to know about that if there is such a plan.

So resources, we have -- I don't know if everyone knows, our eLibrary in which all the documents that we issue are filed with us. You can access them electronically through the FERC website; you just need to enter the 13739 is the Docket Number, and you can see. Another useful feature, we call it eSubscribe. So you sort of sign up for a list, put that docket number in, and then anytime something comes in or something goes out with that docket number on it you will get an e-mail saying that this happened, and it will give you a link so you can click on it and be taken right to the document. So you don't have to go every morning to see if anything's changed; it will be in your in-boxes. So that's really convenient.

We have a Hydroelectric Project Relicensing handbook. The public reference room used to be very important, but with eLibrary and with everyone on the Internet now, we probably don't get a lot of people walking in there to read hard copies of documents.

Okay, procedurally, sign-in sheets, they've gone around. The court reporter, you've met him. So he's busy over there transcribing the meeting; and the transcripts of the meeting will be available in about two weeks. If you need them sooner, talk to the court reporter and they can arrange to get you some sooner; otherwise, they will be on our website under eLibrary in about two weeks or so.

So from now on, then, I'm pretty much done here. Mark or Jim is going to give a brief description of the proposed project. We're going to talk a little bit about Scoping Document 1 and the issues that we identified sort of tentatively. If people have some other ideas at that time, we can talk about that, or receive public input after we're talking to get -- that people have their say and tell us what we want to hear and maybe what we don't want to hear.

I think that's it for me. So Jim or Mark?

MR. STOVER: I'll begin, and then probably about halfway through I'll turn it over to Jim. And this is a presentation I know Jeff has seen on numerous occasions, as have some others; so we'll move through the introduction of the project rather quickly. But go ahead, Jim.

MR. GIBSON: So the objectives today, similar to what John just said, give you a quick overview of the company, Hydro Green Energy; the proposed project, and Braddock Locks and Dam. We'll go through a review of the

licensing activity to date, what we expect going forward, take any more feedback on the studies that we have done so far, or some of the work that we'll continue to file as FERC moves through its process; and then as John said, identify any new issues that haven't been brought to the table to date, as FERC moves down the path of issuing a license sometime next year.

So about Hydro Green, I think everyone here knows as a renewable energy development company based in Westmont, Illinois. Our focus is on powering non-powered dams. We started out in the hydrokinetic industry in the early 2000s, and pivoted into low head hydro development probably about three years ago; when again the focus is to power non-powered dams. You have roughly 80,000 dams in the United States, less than three percent of them have hydropower; that's a big market. So we're focused on that.

We have a lot of projects right now in 15 states, comprising a total of roughly 400 megawatt of capacity. We're not going to develop all of those sites; typically, developers will work on numerous sites with the hope to pick a fair amount of those, the ones that come through development will rise to the top over time. We're also active outside of the United States; I don't think it's a secret to anybody; the power markets in the U.S. are not the friendliest right now, power prices are low, negotiations

with utilities are certainly influenced by the gas prices that we're seeing. So we've started to turn our focus to Latin America as well recently, and we have a handful of projects that should be coming on line over the next year or so, which puts us in a good position to be a little more patient, in the U.S.

I think if you take the long view, a few years out, we'll have a market that makes better sense for independent power producers to develop new projects. So we're slowing down some development activities, but we're keeping a handful of projects very active, including Braddock. Braddock for us will be the first low head hydro project of ours in the country. We have some money from the Department of Energy to help demonstrate a new turbine of ours that we have developed.

And as you can see in the last slide, while I'm Hydro Green Energy, the official applicant or the party for this particular proceeding is the Hydro Friends Fund. We, like every other developer, set up projects as specific entities for the facilities that we're developing. We are the parent company. The Fund is a wholly-owned subsidiary of ours, but that's the official Applicant to the proceeding.

We're taking a slightly new approach to developing low head hydros. We looked at the industry, we

found that there have been a lot of development activities over the past several decades, and we all know that. For a long time, you've seen a lot of permits come and go. The low head market is a big one in the United States, depending on which study you look at; anywhere from 65- to 120,000 megawatts of potential low head hydro.

One of the primary obstacles to developing low head hydro is the cost of installation, and that primarily comes down to your civil costs of installing a project. When you're in a lower head, lower output setting, being able to better control those costs we think is the key to developing new low head assets.

So we learned a lot at our first hydrokinetic project, where we had a modular system that was deployed at Corps of Engineers Lock & Dam No. 2 on the Mississippi River, and we took that technology and have now designed it to be deployed in the low head space. And the key, we think with our system is going to this modular steel frame that is integrated with a non-power dam. In the case of Braddock, it is to integrate that structure which will be assembled, fabricated off-site and floated into place. We want to integrate that technology with the weir next to Gate 4.

By doing that, our belief is that not only do we reduce some of those civil costs that you see with traditional hydropower, but you reduce the development time

frames. Some of those are regulatory in nature, and some of those are in the actual construction process. If you look at how hydro has typically been developed, you see facilities with a 18 to 36 month construction schedule. We believe with our approach, you're looking at somewhere in the neighborhood of 9, maybe 12 months of construction activities. We continue to try to squeeze that down, but as I said, the system is manufactured offsite. There is some site prep that needs to be done at the weir, but we'll float the system in and integrate it with that, the weir today, the soluble portion of the dam.

We don't have penstocks; again trying to reduce some of the simple structure, and they're not really needed in this type of setting. We have minor riverbed excavation, no channeling; we do have some -- as I said earlier -- foundation work for the modular system to sit at the weir. We have some images on that later.

The turbine, this is one that for a variety of reasons we are designing, and we will manufacture the turbine right now. As I said, we did receive some Department of Energy funding through a competitive solicitation in 2011. Really two traunches to that funding; one is R&D work on the turbine with a laboratory test that we're going to do at Alden. That is simply a performance test, just to validate the power and efficiency of the

design work that we've done to date. Then the second traunch of that DOE money is to assist in the installation at the Braddock Locks & Dam. The Department of Energy money will go to some of the civil works and to the turbine. One of the five turbines that will be deployed at Braddock.

We've got some specs there, you've seen it before; roughly seven and a half feet in diameter, low blade spin of 108 rpm. We have four blades, we've done some robust entrainment and survival modeling. This slide actually is talking generically about the turbine, the modeling that we did on Braddock shows higher fish survival rates than what you see on the screen. I think we were at 94, 95 plus. And as you guys know, modeling is conservative by its nature. When we installed our Hastings Hydrokinetic Project, we ran the same model on that machine. We had a predicted survivability of 97.5 percent. We then did some real world fish testing because it was the first hydrokinetic device that actually dropped in a river in the U.S. with a FERC license and a grid connection. We found that in reality that was 99.6 survivability.

So I would anticipate we see higher fish survival than is in our reports that were submitted to FERC. At the end of the day, we're designing what we believe is a very low impact project; not only from a footprint development perspective, but from an environmental perspective. Once

it's operational, our belief is that when you come to water quality specifically, temperature, DO, turbidity have no impact of biological significance; there's been obviously a pretty hardy conversation between Hydro Green and the Corps on water quality, and HDR has done a lot of modeling that has been submitted to FERC. We're also about to file, this week, the results of the summer field study on which we worked with the Corps.

Again, that study required the Corps to modify its operations at the dam over the summer, and we greatly appreciate that; that was very helpful in our efforts to gather some real world data that I think will show the low impact nature of the project.

(Slide)

I've already touched on this a little bit earlier, but this it the proof of concept for modular technology. This is the hydrokinetic turbine that was deployed in '08 in Minnesota. You can see it's a much larger machine than we're planning to develop for Braddock. This was an 100 kilowatt nameplate machine, and that's simply because this was a hydrokinetic project. Those are projects that are driven by current, not head. And so even with roughly 10 feet head, we see at Braddock Your ability to increase your power output is significant; and that's one of the reasons we wanted to do the low head sector.

We liked hydrokinetics; I still believe it has a time and a place, but not for this company right now. That machine performed as expected. We ran through a regulatory process that was quite robust for what it was; it was a non-capacity license amendment. This facility was deployed downstream from an existing hydropower plant, so we did an amendment to add new capacity to an existing facility, but we did a three-stage process that ran about eight months after filing the application. We had roughly four, maybe five months of pre-filing activity. So in some ways, a mini version of what we're doing at Braddock today; but there we did work closely with the FERC, with the Corps.

We recently decommissioned the project. Our feeling was it had served its purpose. We had some interested parties in Europe and Latin America who may take the machine from us; we're also in discussions with Tulane University. They're putting together a river and energy, environmental R&D facility in New Orleans, and they came to us to see if they might get the turbine via donation. So it will find a new home, but it performed well at Hastings, and helped us really see the light on low head hydropower development.

That's just a side view of the facility. At the time we developed this, hydrokinetics was kind of all the rage in the water power industry. We took a very different

approach than some of the other developers; this was a surface-suspended machine. You can see the infrastructure, the vertically stackable system. We would lower the unit down into the water for operations, but as you'll see from some of the images we have later of the Braddock system, there are a lot of similarities.

So project location, I don't even think we need to revisit this; we know where the Braddock Locks & Dam is here on the Monongahela River. I think we have some photos, just another map here of it's location on the Mon.

MR. STOVER: Can I ask a question?

MR. GIBSON: Yes.

MR. WEISER: Maybe you could point out to me -- I know, there's talk of removing one of the existing Lock & Dams in the pool, that we raise -- and just maybe if you could indicate which one it is.

MR. GIBSON: Yes, and the Corps can probably shed some more light on that. But here we have Braddock, which is the last dam on the Mon. LD3 or Elizabeth, Locks & Dam. This is the one that is immediately upstream from us and has been scheduled for removal for -- well, since I was probably in middle school, and I suspect it's going to come down maybe by the time I retire from the hydropower industry.

And there will be a pool raised. I believe, though, you guys are operating the pool up a little bit

higher already; is that correct?

MR. WEISER: Yes.

MR. GIBSON: Okay.

MR. WEISER: Approximately three out of the five is already in place.

MR. MUDRE: Let me mention, too, for the benefit of the court reporter, maybe state your name before you speak. It's inconvenient, but at least we can attribute statements to the correct people.

MR. STOVER: So as Conrad said, the pools come up a little bit already.

MR. GIBSON: I was going to say -- Jim Gibson with HDR -- that diagram there shows the interim pool elevation, I believe, that's currently operating at, 721.0.

MR. STOVER: When we first looked at the project, we were expecting about 718 is what we had -- when we had the preliminary permit and then we did the licensing.

We also, just for what it's worth, have a preliminary permit and an NOI - PAD filed and accepted for the Hildebrand Locks & Dam further upstream. I know since low head development is very attractive right now, all of these have permits on them. My guess is that very few of them will actually get built. Some of the other companies that hold the permits are -- I guess I'm saying, are in a weaker economic position than we are right now; so I'm not

sure how many of these will actually end up getting built out, but by now we do have Braddock to build.

MR. MUDRE: I'll just mention, in the case of people who aren't familiar, the Commission issues preliminary permits for projects, but they don't allow the construction of anything. They allow people to conduct studies to determine feasibility and that sort of thing, but at the same time they reserve that site for whoever has the permit. It's a more orderly process on this.

MR. STOVER: And some of these permits are set to expire -- I forget whose expire when -- but a lot of these were all grabbed about the same time, roughly two, two and a half years ago. So you'll see some permits expire on some of these facilities. And whether or not they get gobbled back up by somebody else, which has been historically how it's operated in the hydro industry, I'm not sure about that. I have seen some permits recently expire at the Commission, and no one has moved to claim the open site.

So I think you're seeing a slowdown in the hydropower industry, mostly driven by the economy and low power prices. So a lot of these development activities probably won't come to fruition anytime soon.

MR. GIBSON: Jim Gibson with HDR. For the folks that were on the site visit today that were asking about where we stand relative to the next downstream dam. You see

that Braddock is at river mile 11.2. River mile zero is really just outside this building, where it meets up with the Allegheny, and then I think it's 6.2 miles roughly downstream from this point you have the Emsworth Lock & Dam.

The other thing worth pointing out here is the Youghiogheny River coming in downstream of Lock & Dam 3. So it's a pretty major tributary into the river here.

MR. STOVER: We're maybe at the point where we're turning it over to you, but let's see what we have on the -- let's jump. Just an overhead here of the location. Okay.

So looking downstream at the facility, our installation point or desired installation point, as I mentioned earlier, is this weir, overflow weir, and see -- and we saw this on the site visit previously and today, highly industrialized area of the U.S. Steel plant at the side of the river, and you have a number of rail yards and some shale pipeline playing around here, all private property, off-limits to the public -- of course you have Kennywood Park up here. But again, our target installation point is this weir -- our hope would be to integrate the technology into that portion of the dam.

The facts. You guys probably know far more about this than we do, so I'm not sure we need to spend a whole lot of time, and it's probably an important point that, certainly from a developer's perspective, you don't see this

very often, a new dam. A lot of these dams, certainly in the Pittsburgh District, in St. Paul and Rock Island, you have some pretty old facilities; and often case is you uncover some things during the preliminary permit phase that make you a little bit nervous. This is a new facility, a facility that is in great shape. We like that from a development perspective, as was mentioned, Jim mentioned mile 11.2 we have one that is immediately upstream, some details on the locks and the elevations.

So quickly, low head and flow impact hydro. Looking to deploy 5,750 kilowatt turbines -- that's the nameplate -- capacity is about 3.75 megawatts. Capacity factor based on historic head and foot aeration curves is around 72 percent; some comparisons on what that would mean versus other small renewable energy projects. Seem to put out enough power for roughly 2200 homes, operate in the run-and-release mode, which is a requirement at a Corps facility. We all know that means you control the water, we use excess water capacity in the Federal Power Act, and this would be deployed completely in the secure zone where public activities should not be taking place. I suspect every once in a while some folks sneak up into that area, but they shouldn't be there.

So we're using roughly, or expecting to use roughly 5500 cfs for maximum hour output; and again just

looking at historic data, you average about 13,000 cfs. At Braddock we have, like all hydro projects, a lot of flexibility to operate one to five turbines, depending on the flow regime that we have.

Project Footprint -- and I think this is important for those that have been involved in hydro; this is extraordinarily small. This is roughly 1700 feet of project space that we'll be taking up. As I mentioned earlier, we have the DOE grant.

One of the other drivers for the project is the production tax credit, Section 45, PTC. The hydropower industry has $11 a megawatt hour in a tax credit. Once a project is operational, that credit is in place for ten years after the system comes on line. That PTC expires at the end of next year. Placed in service prior to that would guarantee us a ten year credit at that $11 a megawatt hour.

I wrote that tax credit when I worked in D.C. We couldn't get the full credit; the wind industry gets $22 a megawatt hour. That would make a huge difference in this project, if we had the full PTC, but given where power prices are these days, having $11 a megawatt hour is significant to this project. So we're lucky in the sense that the wind credit expires 12/31/2012. They have big problems right now. We got another year the last time they extended the PTC. There will be conversations in 2013 about

whether or not it should be extended again or perhaps expanded. We always seek parity; we haven't made a whole lot of progress on that in the past ten years, but there will be quite a conversation in Congress next year regarding the PTC. If we could get it extended, that would be great. One of the drivers in our development activity is to try to ensure that not only do we lock in the DOE grant, but we lock in the PTC.

So pre-installation, just a few photos of the project. Most notable, this is where we would like to set up shop. The weir, left if you're looking downstream; you can see here the locks and the spillway gates today. Depending on that photo, you may be looking at the environmental gate that we've been discussing, and again the overhead setting, the facility that side of the river, away from the locks.

Some of the CAD work that we have here; and with the lights on, it's perhaps a little bit difficult to see, but you can see that the plan is to bring the modular system in upstream from the weir. There would be some minor excavation work in the riverbed in this portion of the river; and in here we're simply going to install a concrete pedestal in which the large frame module will sit. You can see the side view where you have the generators in the system.

So similar to Hastings, we have this vertically

stackable system where you have your turbine. We'll have a chain or belt-driven system, and then you have the generators that are up here and dry, and serviceable. In an extremely high water event, something even more severe than Sandy, we could come in and remove our generators, keep those dry and safe if we need. And then draft tubes embedded into the existing weir during the construction activities.

Overhead view, again. You can see we cozy up to Gate No. 4, again; the large frame module, five units, top booms or something similar to keep out debris. Interconnection run here, and them upstream -- we'll talk more about that later. Then you can see a downstream view where this captures the draft tubes, the flow exiting, the facility and what one would see if they were boating downstream from the dam. There's just this little bit of infrastructure on top of the existing weir.

So what we filed with the Commission, and we were working on until November, was a low voltage distribution line connecting here at Kennywood substation -- this is a 23 kV line. The original plan had us coming down Norfolk-Southern's tracks, either over or underground; and then here it's Norfolk and Union Railroad, which is a sub of U.S. Steel.

Coming across, the Steel Valley Trail, owned by

the regional Trail Corp, Through Kennywood, across the street, and into their substation. This was approved by PJM. But then we got out on the site last month, and we found, really at the encouragement of Duquesne, what we believe is a much superior pathway. And so we are now looking at -- same line, 23 kV, low voltage connection to a substation that is shared by Duquesne and U.S. Steel for their operations here; the substation runs the coal barge operation that U.S. Steel has.

You can't see this if you're standing on the hill over looking the river because it's behind the elevated tracks. Duquesne didn't even have this on one of their maps. They had it on another map, and they said "Hey, let's just go down there and see what we've got."

I described all the property owners we would deal with on the previous line; with this, we're dealing with one entity and it is U.S. Steel. I already have a draft agreement in place for the lease. The proposal would be to bring the 23 kV line upstream. This is a shorter path, there is absolutely nothing going on down here other than industrial activities and train tracks, but there's an elevated rail that runs along the river, putting the 23 kV line in conduit, hanging it off the tracks, there's already communications and power lines hanging off the tracks today, as you can see. And HDR put this together to go underneath

the overhead rail here, and then under the rail here. This is a Norfolk rail, this is a U.S. Steel rail; but using all existing infrastructure and then bringing it into the substation. Duquesne has a line that then runs uphill.

So we're tapping the same circuit, of Duquesne's, but at a different substation. This is still on the Rankin circuit. So from PJM's perspective, they have no issue with the same circuit, same impact to the system. But for us, we're going to deal with less landowners, and we have a much cleaner installation in terms of potential for clearing. If we were going uphill through Kennywood and across the path, lots of trimming, a fair amount of clearing -- none of that work will occur here. In fact, we may not even need to install a single pole, we may be able to run it on that whole infrastructure.

So we're quite pleased with this new approach, for a variety of reasons, just falls to the project. This is just the revised Exhibit G that we filed with the Commission after we had this conversation in November, so this is now what is on file with FERC. And HDR yesterday sent a letter to the newly impacted landowners; but they are obviously keenly aware of this since they walked the path just a month ago.

MR. GIBSON: Well, Mark -- Jim Gibson with HDR. If I could just add, so we're in the process of filing this

right now. So what we've done is, in response to Schedule A of the AARs, we've re-sent the letter to the landowners to let them know which properties will be affected. And by this Friday or let's say Monday-Tuesday time frame next week, we'll file the revised Exhibit G drawings with the Commission as a part of the Schedule B response. And at the same time the Commission will receive the electronic files, the disk and everything else associated with that.

MR. MUDRE: Just for clarification, what he's talking about, the Schedule A and Schedule B, we sent him a deficiency letter and additional information request. Schedule A addresses the deficiencies, which are things that are required by our regs and the Federal Power Act to be in the application that weren't there; Schedule B was the additional information request. And that's information that wasn't required by regulation or statute, but it's information that we thought we would need in evaluating the proposed project.

MR. GIBSON: Thank you.

MR. STOVER: So these are a few of the photos that we took while we were out there in November. You can see in the upper left, this is looking down towards the project -- I can't recall how far back we were at this point, but the lock & dam is somewhere down in this area; but you can see very clearly the elevated rail that we plan

to use. This is just simply turning around and shooting. Upstream, the interconnection point is somewhere downstream, this opening. This is the area right near the substation, which we do see here, but coming again upriver, this is -- I think that may be the Norfolk bridge that will be coming underneath; but again you can see you have existing poles, existing wires, existing cabling, power lines, conduit over here; simply to illustrate the existing infrastructure that we plan to use. You can see a lot of clearing has already taken place, so we don't anticipate any clearing. And as I said, we don't anticipate any poles; perhaps one pole for our equipment at the substation, but we think from project to here it's all along this overhead structure.

I'll turn it over to you. We'll get through the licensing activities to date and the study work to date.

MR. GIBSON: Just to bring you up to speed where we are today, back in December of 2011, Notice of Intent and the Pre Application Document was filed with the Commission, and at the same time, Hydro Green requested to use the traditional licensing process.

So FERC granted the authorization to use the traditional licensing process back in January of 2012. We had some stakeholder meetings, we did consultations, and we've been doing some studies since that time -- and we'll talk more about the studies in a moment.

The final license application was filed in September 2012, and following that, Hydro Green had submitted with that a request to waive the draft license application, and FERC granted that waiver in October of 2012. So that's where we are today; we have a final license application pending with the Commission. FERC accepted that license application in November of 2012. So as John mentioned earlier, back in November was when the period ended to request additional studies, and the Army Corps of Engineers did request three additional studies, Hydro Green Energy is in the process right now of drafting a response letter to those requests -- and I'm sure we'll talk about that in a little bit.

And this is where we are today: The scoping meetings and site visit. We had the site visit this morning at 10 o'clock and we have another scoping meeting this evening at 7 p.m. And then as John mentioned, it's going to be early January 2013 is when motions to intervene and comments on the scoping meeting will be due.

So in terms of information to date, some of this is consistent with the March 7th Joint Agency Public Meeting, information we discussed or was discussed at that meeting. The project is not located within the state's coastal zone, so that's one of those things that FERC will be looking for as they continue through their licensing

process. The only federally-listed species that's been identified associated with the site is the Indiana bat.

We've done some consultation with the Fish & Wildlife Service and also Commonwealth of Pennsylvania, and based on a review of the information gathered from the Pennsylvania Natural Diversity Inventory, it was determined that the warmouth and the lilliput could potentially be found in the proposed project vicinity; however, additional correspondence received from the Pennsylvania Department of Conservation and Natural Resources on November 23, 2011 indicated that no impacts are likely and no further coordination with this agency is needed for this project.

So that's where we sit at this point with regard to threatened and endangered species. We had a meeting at State College with the Fish & Wildlife Service, and this confirmed that Fish & Wildlife Service has identified no federally-listed species associated with this project.

So when we talk about studies, following submittal of the application for, a preliminary application and receipt of the preliminary permit from FERC, Hydro Green started looking into potential studies. We picked up that evaluation and preparation of the PAD, and in the PAD we did suggest some studies, and at the March 7, 2012 Joint Agency Public Meeting, we proposed some studies.

In particular, we proposed to look at fish

entraining, impingement for a desk top study, a desk top water quality study, a desk top modeling study, and I'll jump down one -- we talked about cultural resource consultation. So those were the four activities associated with the Joint Agency Public Meeting we discussed doing.

Following the Joint Agency Public Meeting, we received comments from the Army Corps of Engineers, Pittsburgh District, also requesting some additional water quality study activities; so then we performance consultation with the Pittsburgh District, and coming out of there we did some additional water quality monitoring over the summer, and we'll talk about each of these in a moment.

So there's really five study areas that have been evaluated at this point. We did consider wetlands, we considered additional recreation, we did consider some additional studies; but given the environment in which the project is being proposed -- for example the lack of wetlands, no additional studies were done.

The other activities that are taking place right now are, Hydro Green Energy is performing engineering studies and evaluations in support of the Corps' 408 process. We'll be working on the Section 404 and 401 applications, so those are going to be ongoing. And then, Hydro Green Energy continues to consult with local recreational stakeholders regarding potential recreational

enhancements, in particular associated with the trail located on the river, left side of the project.

MS. CARTER: So who are you working with on -- what stakeholders are you talking to? Is it just the trail, or who all is involved.

MR. GIBSON: Mark, do you want to --

MR. STOVER: It's the original Trail Corporation, and then the parent corporation to that. We had, when we came out here for the meetings -- I guess that was in March -- I had heard some comments from folks that -- because also at the time, our distribution line was going to cross Steel Valley Trail, so we figured that would be a natural point of discussion regarding interpretative signage or some modest recreation or enhancement. Obviously we're no longer crossing that path.

But we had also heard from some folks that 'Hey, look, the area of the Trail that's adjacent to the project doesn't really have anything in terms of signage or a rest area or potential bicycle tune-up kit, and so that's something that y'all might want to think about.'

So that seemed to make sense to us; when we were out here in November, we had four or five folks from the various Trail Corporation entities; we walked the project site, walked down to where the Corps has an interpretive sign today, and there is a rest bench that was installed

recently. And we talked about a number of options at that point in time. I've since informed them that our distribution line is not going to interact with the trail, but that we're still interested in talking or continuing the conversation; and I haven't heard back from them.

But one thing that we did seem to really zero in on while we were at the trail was a bicycle tune-up kit at the entrance of the trail near the -- well, where we met earlier today.

MR. GIBSON: Pumphouse?

MR. STOVER: Yes, near the pumphouse. That was something that they seemed to be most interested in. We talked about a number of things while we were out on the trail, but they kept coming back to that. And so, like I say, I haven't heard back from them. I'm going to ping them again. There is some information that I was needing from them so I can make that decision about which path we might want to choose; but those have been very positive conversations so far.

MR. GIBSON: I think the only other thing that I can think of in terms of recreation, we looked at the project as a whole, there is the downstream boat launch -- we saw that today during the site visit. There's also an upstream boat launch. We used both in support of the study activities over the summer; they're both very functional

boat launches.

Like Mark said, it seems as we talk with individuals about recreation, the primary recreation asset in the area is the trail, so it seems like it keeps coming back to the trail about potential enhancements like the bike servicing equipment that Mark's talking about, or signage or something along that trail.

MR. STOVER: Yes. They had some interest in maybe a kiosk -- and that portion of the trail was just opened approximately a year ago. So it's new for them, and they're working to, as we discussed earlier, to extend that to downtown Pittsburgh.

MR. GIBSON: And the boat launch that we visited today, we looked into -- it is the town of Braddock that maintains that. So they seem to actively -- I think we're out of the season right now; we've been down there at other times; seems to be a little bit cleaner.

To talk briefly about the studies, I introduced the five studies that were performed, just to give you an overview. Each of these studies, a report has been developed and either a report has been provided already as a part of the application, or in the case of the water quality work that was done over the summer, will be provided as early as next week; and there's also the cultural resources which we'll talk about briefly.

In terms of fish entrainment and impingement, we performed the Electric Power Research Institute or EPRI-based desktop database study consistent with other relicensings and licensings that have occurred throughout the country. We worked with the Pennsylvania Fish and Boat Commission. Coming out of the Joint Agency Public Meeting we got a comment from -- well, let me take a step back.

It was actually during the March 6th meeting with the DEP. We met at their offices in Pittsburgh. Joe Snyder in particular made the comment that if we're going to be doing any kind of fish work to make sure that we're in consultation with the Pennsylvania Fish and Boat Commission.

So in the April - May time frame, we spent a fair amount of time talking to that group, and that's how the target species were identified. Coming out of those consultation activities, the study included a site-specific evaluation of potential impingement, entrainment, intake avoidance, light strike and survival rates relative to site-specific flows and operations. So it was not just a generic study of a generic dam on a generic river; but we looked at Braddock, how water flows through Gate No. 1, how it's being proposed that water would flow through Gate No. 1 relative to the turbines, and we looked at target species there associated with the Braddock project.

The results indicate survival rates exceeding 95

percent -- this is what Mark was indicating earlier -- but the highest mortality rates associated with Gizzard Shad and Rock Bass and Bluegill. This report was finalized in August 2012, and is included as Appendix E2 of the final license application.

MR. MUDRE: Question. Highest mortality, are you talking a rate or are you talking a total number of fish?

MR. GIBSON: Total number of fish. So when you look at the survival rates and you look at the fish that are potentially being impacted, it's those species that had the highest mortality rates.

MR. MUDRE: Which are also probably the most abundant.

MR. GIBSON: That is correct. And the report -- I hate to summarize this in such a short statement. The report goes into much more detail. Yes, this is where it seems like, due to the population size, especially with Gizzard Shad -- there was a lot of Gizzard Shad found, particularly near the locks.

I don't have the information with me today, but it was either some DEP reports we received, or Fish and Boat Commission. There seems to be a high Gizzard Shad population associated with this area, so that's why I think we're seeing the higher mortality with Gizzard Shad.

During the March 7 Joint Agency Public Meeting,

we talked about doing a desk top water quality study. And coming out of that, this is what we ended up doing. Once again, this is presented in the license application that's been filed with FERC and distributed to the stakeholders as Appendix E1A of the application.

Here we looked at an area from Emsworth up to Charleroi, which is also known as Lock & Dam No. 4. So 6.2 miles downstream of the confluence -- because like we said, we're at river mile 11.1, up to river mile 41.5. We tried to look at a rather large and robust area, based on some of the consultation that was ongoing with the Pittsburgh District regarding the removal of Lock & Dam No. 3. So we tried to look at a larger area.

We obtained data from USGS, 3R2M, which I think is Three River, Two Nation, I think is the group that we received that data from; Pennsylvania DEP, ORSANCO and the Army Corps. And that provided some discrete spatial data, discrete vertical profile data and continuous data.

So we took that data, we evaluated it, particularly focusing on dissolved oxygen. We also looked at water temperature, pH, and specific conductance and turbidity.

The results indicated that deal levels exceeded instantaneous levels, which is 4.0 milligrams per liter; and daily average of the 5.0 milligrams per liter, which are the

State criteria even during the low flow, critical summer conditions.

So once again, this has been summarized in that report. But if we just looked at it historically, deal levels throughout the system were routinely above those levels. And we ended up using this data in support of the modeling work and the additional water quality work that we ended up doing.

So it's with regard to the water quality modeling study, we performed in response to -- twofold. We went ahead and we proposed it in the PAD, plus we also got a request from the Corps to do water quality modeling. So we looked at the potential effects of downstream dissolved oxygen resulting from proposed project operations.

We evaluate a site-specific baseline condition as well as a proposed operational condition, and we ran what we consider a conservative model run, which would represent the worst case scenario. So this was under low flow summer conditions.

And once again, I'm really summarizing here, and this is all in the report, but there's talk in the report about using oxygen transfer efficiency for the environmental gate, ranging from a very conservative 48 percent, which was found in the literature, up to 80 percent oxygen transfer efficiency.

At the most conservative, that 48 percent, results indicate a slight reduction of DO enhancement of .05 milligrams per liter to 0.13 milligrams per liter. Point being is, Braddock Lock & Dam has the environmental gate which is intended to increase or to enhance oxygen, water quality as water flows through that gate.

We took the most conservative approach, using that 48 percent oxygen transfer efficiency. We looked at that under the baseline versus the proposed operations, and our model indicates that immediately downstream of the discharge point you do get a slight reduction, but you're talking about a reduction in the neighborhood of .05 milligrams per liter to .13 milligrams per liter. So that's what the modeling shows.

So then we turn to the water quality work that was performed over the summer. And this was in response to a request from the Pittsburgh District, and to further evaluate potential effects of downstream dissolved oxygen resulting from the proposed project operations.

We deployed four continuous DO monitors, two upstream and two downstream, from a period of June 27th through September 27th. The idea here is we were focusing on trying to obtain data during that low flow critical period during the summer. Once again, this report will be coming out later this week or early next week; a rather

robust report, a lot of data, a lot of graphs, so it's taken some time to put that together. We'll be seeing that within about the next week.

What we did there was two things: We collected continuous dissolved oxygen levels as well as some other water quality parameters during this time period from June 27th through September 27. We were going out approximately every two weeks to recalibrate and service the monitors.

About a third to 40 percent of the way into the project, we decided to start going out weekly. Just decided that there was enough variability that we wanted to make sure that every week we were going out there and getting that data; and we did that. And then there came a point where we came ahead and worked with the Corps to have water diverted from Gate No. 1, the environmental gate, to Gate No. 4, to try to mimic project operations, and we collected water quality during that time.

During that time then we took additional, continuous water quality samples. We also went out with an ABCP to get a better understanding of the flow patterns from upstream to downstream of the facility and what was happening in terms of potential mixing of water immediately downstream as well as further downstream.

As noted, the report is going to be coming out next week, you're getting a copy of the Army Corps, the DEP,

to FERC and all the other stakeholders. In summary, what's been indicated, there is time that we're actually having better water quality when the water is flowing through Gate No. 4 as compared to current operations; and we're seeing a mixing zone that occurs before you get to the end of the lock wall that water has mixed and you're seeing no effect to project operations once you get downstream of the current lock wall.

So once again, you're getting that report to everybody, it's just a quick summary of what we're seeing, but we'll get that out to everyone here shortly.

Lastly, with regard to cultural resources, consistent with NEPA, consistent with the FERC licensing process, Hydro Green Energy understands that Section 106 of the Historic Preservation Act applies to this project. So consultation was initiated with the Pennsylvania State Historic Preservation Office on October 11, 2011. We had additional consultation through the spring of 2012, and based on additional information that is provided, on April 17, 2012 the SHPO will provide their determination that the proposed project will have no effect on either archaeological sites or on the National Register of Listed Monongahela River Navigation System.

So that's where we stand with cultural resources right now; and that's summarized in Section E-5 of the final

license application. I think a lot of this gets down to the fact that the project was recently replaced, in 2002 with 2004 time frame. Somewhat different than if this was being proposed at Mon-4 or Mon-3 where you have a facility that's over 50 years old.

Consistent with the information that was provided on March 7th at the Joint Agency Public Meeting, we took a look at a number of comprehensive plans, and both the pre application document and the license application provide a summary of all the comprehensive plans that were looked at. But based on the comprehensive plans that were available, we found seven that could be potentially applicable to the project.

So in the course of the licensing process, we've compared the project with each of these plans and to date have found that the proposed project is consistent with these plans.

And this is the last slide of this presentation. I think everyone has Mark's contact information as well as my own, but we'll leave this up here in case anybody needs any additional information.

So with that, I'll turn it back over to Mark and John.

MR. MUDRE: Thank you, Jim and Mark.

I think what we'll do now, let's go through the

resource issues that we identified in Scoping Document 1 briefly; but I want to come back to the studies that they've conducted and will be filing reports, because we did receive a request for additional studies from the Corps, and we want to talk about that, too. But let's get through the scoping part.

And again briefly, we're interested in determining the effects of project construction, operation and maintenance on a number of environmental resource areas, including geologic and soil resources. Aquatic resources, we identified some specific issues; water quality, effects of project construction, operation on DO in the Monongahela River. Effects of project construction on aquatic resources in the Monongahela River in the vicinity of the Lock & Dam; effects of project operations, specifically entrainment and mortality of fish resources, and we'll have information from the studies that you just mentioned to help us evaluate these issues.

Evaluation of the effects of construction operation of the proposed project on freshwater mussels, downstream and in the vicinity of the dam. We have a list of terrestrial resource issues in SD-1. That list probably will change with the change in the transmission line, because most of them are related to the effects of clearing and getting the distribution line up to the Kennywood

substation.

So we'll probably revisit that. But what we're interested in is state-listed species, wetland, riparian - littoral habitat, introduction to spread of invasive plant species and maybe any transmission line potential for electrocution or collision with birds that might be flying by -- a lot of those are going to go away if the line is in a conduit underneath a bridge.

So we may do some revisions to these, but at the time that's what we thought might be appropriate.

Threatened and endangered species. Then we get to recreation, we're interested in affects of the proposed project on recreation, including use of the trail there, so, and enjoyment of people using the trail. The comprehensive plans, consistency with those, and any potential effects on adjacent land uses.

The cultural resources, as Jim mentioned. We listed Kennywood Amusement Park, but with the realignment that may fall away. Socioeconomics, effects on the local economy from the plant.

And then developmental resources, we're interested in the effects of any proposed or recommended environmental protection enhancement measures on the hydroelectric economics.

So that's in a nutshell the issues that we've

identified; some of them may be changing a little. Request for information, we went over that with the slides. Deadline, comments on SD-1 January 4th, 2013. In SD-1 there's a PA preparation schedule, I'm not going to read it because any of you guys can read it.

MR. BENEDICT: Excuse me, a question. Jim had a deadline of January 2nd for something. I'm a little confused on your deadline.

MR. GIBSON: That was the notice to intervene.

MR. BENEDICT: What was that?

MR. GIBSON: To be an official party to the proceeding.

MR. MUDRE: Which gives you the opportunity to seek rehearing of a license that's issued. The January 4th date is based, the scoping comments is based on 30 days from the last scoping meeting.

MR. BENEDICT: Okay.

MR. MUDRE: Yes, it's just a coincidence that they fall right next to each other like that.

And that's pretty much it for our part of the meeting. Again, we'd like to hear any comments that you may have, any issues you may see; and then at some point, talk a little bit about studies and what may remain needed.

MR. BENEDICT: I'll start. I guess I have two questions; one for Mark, one for John.

Mark, my input at production of Craig PTC. Do you also have to conclude all commissioning and testing activities that qualify for that?

MR. STOVER: No; the language pertaining to what constitutes 'placed in service' is a little bit soft. You can be in a start-up testing mode to qualify for the PTC, to officially be in the position of selling power to the grid. But they do anticipate you being very close to that. I mean, if you're in a soft start-up phase, you're not going to put power on the grid officially.

MR. BENEDICT: Okay, appreciate that.

And for John, where I come from I'm more of a planner type, and this gets back to your introductory -- Jeff Benedict -- and talk about that your EA will consider alternatives, reasonable alternatives.

Could you expound on that a tad, but make sure where -- I asked this quite frankly at another meeting that FERC was not there, it was another developer; one has all those Mon projects you were alluding to, Mark, who will remain nameless -- and I asked about alternatives and got a very, what I considered a pretty harsh response. And from the FERC perspective, I wonder if you could expound on that a little bit.

MR. MUDRE: I can try. I guess the suite of alternatives that might be up for consideration varies from

project to project. Some projects, non-Corps projects, for example, you might consider different minimum flow releases into the bypass reach or things like that.

Since it's a run of release project, operating with the releases you have, we don't consider alternatives to that, really. We can consider an alternative to a powerhouse on the other side of the river from where it's being proposed, or in the middle or something like that maybe; but really for -- I think you'll see more opportunities for alternatives for relicensings or something like that.

The No Action alternative, for example here is you don't get the project. So the whole issue goes away.

MR. BENEDICT: So the primary variable may be -- is this minimum flow over the dam vis-a-vis the --

MR. MUDRE: Yes.

MR. BENEDICT: -- is that primary --?

MR. MUDRE: I suppose the distribution of flows, let's say between what goes through the project versus what's released through your conservation gate. That's something that could be considered if we had -- if someone presented an alternative that they wanted considered, for example.

MS. CARTER: I just wanted to add that alternatives are sort of depending on the recommendations

that we get from other agencies and commenters.

MR. MUDRE: Yes.

MS. CARTER: So if we don't get a lot of comments, then our alternative will mostly be the applicant's proposed project.

MR. BENEDICT: Okay.

MR. MUDRE: That's sort of what we're doing here, too; it's sort of asking if there are alternatives that people think are a better way of doing things than that. That's my best answer on that.

Anybody else have any comments or recommendations, suggestions?

MR. WEISER: Well, I do have some comments. Conrad Weiser.

First, on the cultural resource side, the Monongahela River navigation system is not yet listed on the National Register; they have prepared the nomination forms. But it is eligible for the Register, so it is subject to 106. So the distinction from a compliance standpoint is no different. It's just not listed, so that's the important point there.

MS. CARTER: And we look at it, as long as it's eligible. It doesn't have to be listed for our purposes.

MR. WEISER: Exactly, so it's just a point of fact.

You show the new transmission line going along the Two Port Perry Bridge; one is I think the Union Railroad, the other one Norfolk Southern. As part of the Lower Mon Project we looked at the Norfolk Southern bridge's historic significance, and it is eligible; it's been determined eligible by the Pennsylvania Bureau for Historic Preservation.

MS. CARTER: What was that again? I'm sorry.

MR. WEISER: The Port Perry Norfolk Southern Bridge is eligible for the National Register.

And so I'll let you folks determine if it qualifies as an undertaking to attach a pipeline. It will be involving that structure. I would presume perhaps the Union Railroad Bridge might also be found eligible, but we've not done that ourselves.

MR. MUDRE: That's good to know.

MR. WEISER: One question now, I don't see any land access to the turbines. Is there any planned land access, or will it all be on access from the river, once it's operational?

MR. GIBSON: We'll have land access to the project right along here. There's a road that runs next to -- between the tracks and the river. And so we'll have our agreement with U.S. Steel to use that pathway to the project. And there is a spot underneath the rail that we

talked to them about cleaning up and clearing out so that we can park vehicles there, potentially store some equipment if needed; that's probably not going to be necessary, but we'll have access to this U.S. Steel property.

MR. WEISER: Okay. But this existing rights-of-way which we use for the Braddock construction, too, it sounds like. So I presume there won't be any major development other than maybe cleaning up of some debris?

MR. GIBSON: No. Not anticipated, no.

MR. WEISER: And I guess finally, for FERC's benefit, now that you're here, we made a number of comments on the Braddock Dam. It is unique, is one of our navigation dams, and it was mentioned it was recently constructed; it's been operational since May of '04.

It was authorized partly as a mitigation feature, not just for navigation but also to mitigate for the removal of Dam 3 and modifications at Lock & Dam 4 that will reduce the total of dissolved oxygen levels in the river upstream of Braddock. And so the water quality gate is a feature that's authorized to perform that mitigation, and its intent is to maximize DO levels of particularly the low flows going through the dam. It's most critical during the warm summer low flow season.

So that's been a point of contention here; if flows are diverted, and that portion of the flow won't be

reoxygenated. And the conditions that have been historic, which we have some data on, don't represent the future conditions after Dam 3 is eliminated, which is the major change which will also require the pool elevation equalizations and changes. That's going to significantly change the dynamics of pools 2 and 3, which will become the new Braddock pool. There's two coal-fired power plants which put a lot of heat, waste heat into the river; that will be dispersed of, and so forth.

So we anticipate the DO levels will drop, and there may be more stratification in the future. And those are the things that we wanted to see modeled as best as we could, and not using historic data to try and represent future conditions.

MR. GIBSON: Has the Corps done any modeling on removing its dam?

MR. WEISER: No, we have not, as far as water quality.

MR. MUDRE: And as I understand, the date for any removal is uncertain. I mean, it could happen; we just don't know when it may happen. I'm just thinking ahead; there may be ways that the license could take that into effect, whereby if this dam is removed then we need to maybe re-look at something, and maybe change some of the terms of the license.

MR. STOVER: I brought that up with the Colonel in -- November, December -- I can't remember when we met. He seemed to be agreeable to that. I mean, we understand that situations may change at some point in time, and I think it would be something worth revisiting by everybody; but it's a little difficult to commit to something we don't know will happen or what the impacts of that are.

MR. WEISER: If I threw out a date it wouldn't be correct, probably. It is dependent on our completing the first operational lock chamber at Charleroi. Once that's operational, then we will have the ability to lower the pool below Charleroi and finish raising the Braddock pool, subject to some other relocations.

MR. STOVER: And that work is underway now, right, the Charleroi work?

MR. WEISER: Charleroi, it's in construction. But it's become a very prolonged construction process.

MR. GIBSON: Is there an anticipated completion date?

MR. WEISER: Right now I'm hearing 2030 for the completion of the Lower Mon project. Which includes two chambers at Charleroi, the removal of Lock & Dam 3.

MR. GIBSON: 2030, okay.

MR. WEISER: But the removal of 3 will occur after the first chamber and before the second chamber

starts, more than likely. So the end date of the project is not the removal of 3.

MR. GIBSON: Jeff, I don't remember, I know I asked for this at some point in time, but did you share -- the congressionally-authorized language for the purposes of Braddock after '04? Have we seen that?

MR. BENEDICT: Did that not appear in the feasibility study? No, I don't know.

MR. WEISER: The word of the language is very general. It authorizes new projects. The language for the mitigation and all the specific project features is in the feasibility report. And I think we provided that to you, but we can do that again.

MR. GIBSON: Yes.

MR. BRIDGE: You have the Lower Mon main report, don't you, Mark?

MR. STOVER: Why don't we double-check and we'll follow up with you guys.

MR. GIBSON: Jim Gibson with HDR.

And to Conrad's point, this is a topic that's been discussed over the last six months. And this shows up in the license application, shows up in the water quality reports we've been preparing, but we've done a fair amount of research on both Mon 2 and Mon 3. And back in the Eighties when a number of developers were looking to develop

hydro within the Ohio River Basin, a fair amount of valuation was done of each of the lock and dams to evaluate their DO enhancement potential.

And I think we passed this literature along, but it was determined based on research by an outside entity that Lock & Dam 2 and Lock & Dam 3 provide very little DO enhancement due to the shape of the spillways and the limit plunge of water coming over those spillways.

So we understand that Lock & Dam 3 is going to come out some day, but everything that we're seeing at this point between the percent saturation of the water approaching Braddock, the limited aeration that Lock & Dam 3 is providing currently, the interim pool elevation that the pool is currently being operated at, and then the modeling, the water quality work that we've been doing, we're just not seeing that impact by proposed operations and we're not seeing that some day when Lock & Dam 3 may come out where you have this drop in water quality that has been discussed at this point.

So I think to John's point, it may make sense in a license article that when Lock & Dam 3 comes out for some further water quality evaluation or some additional monitoring to occur, at least on the work that's been done to date, we're not seeing how Lock & Dam 3 coming out is going to greatly change the water quality that's coming to

the project today, or would leave the project under the proposed operations.

MR. WEISER: Again, it's a distinction in looking at it. We're not operating at Braddock just to pass the water that comes in in the same quality it goes through the dam; we're trying to maximize aeration of the water, particularly at low flow. And if you take water out of the water quality gate, you're not maximizing the re-aeration.

So we're looking at maintaining that function, that authorized function.

MR. MUDRE: I think what would be important to look at then is percent saturation values. Because if you're at 100 percent to start with, you won't really be able to increase it. You wouldn't want to, put it that way.

MR. WEISER: And for much of the year, that may be the case. But during the --

MR. MUDRE: And that's what we need to look at.

MR. WEISER: -- hot summer, low flow periods that's critical, and that's when most of the water is going to be diverted to the turbines, because of the low flows.

MR. MUDRE: I think, though --

MR. STOVER: As a percentage of overall, yes.

MR. MUDRE: Yes.

MR. STOVER: Which is why we grabbed that data. That was painful to my investors, I'll be very clear about

that. That cost us $100,000 that delayed us three months in licensing. We felt it was appropriate; the data we gathered, we were glad to gather it, but when you're developing a project with small margins and you're trying to watch your development dollars, you're being asked to do study after study for issues that may or may not exist, it can be rather difficult to do and to justify to the people that run our company.

MR. MUDRE: I might suggest, rather than spending time talking about whether or not at this point we still want to see these studies or we don't want to see them, why don't we wait until after they've made their filing. You can see the water quality report and then maybe you guys can get together and talk, and if you wanted to revise this; and if you agree that some of these may not be needed, let us know. Or if you still think they're needed, let us know that.

Because I think under our regulations they have until December 16th to file a response to your study request. And the Commission has a month from that, which will be like January 16th or 17th, to make a final determination on whether these studies should be done.

So maybe if between -- before that date, if we can come to an agreement on what should be done, then it will be an easier decision for the Commission to make, and

people should be happy with it.

MR. GIBSON: We're happy to get back on the phone with you guys after we file that, and see if there is any difference anywhere.

MR. WEISER: You said there would be, that summer study report is available in a week or two, right?

MR. STOVER: Yes. I reviewed the draft last night, and they have my comments.

MR. GIBSON: Yes, I would say if not Friday, Monday - Tuesday next week.

MR. WEISER: Okay. We'll look forward to reviewing that.

MR. STOVER: I couldn't even email it to you; it's 50 megabytes. There's a lot of information in it.

MR. MUDRE: That's smaller than our SD-1 that got put up on eLibrary.

(Laughter)

MR. MUDRE: Anything else anyone wants to talk about, comments?

Okay, well if not, I think we had a productive meeting, and we'll look forward to you guys talking about the study some more, and then we'll make that determination based on what we hear from you guys, and what the Commission thinks is appropriate.

MR. BENEDICT: This may not bear saying, but

we're filing formally on, by the 4th of January comments on the document.

MR. MUDRE: Okay, great.

I thank everyone for attending, and if you want to come to our meeting tonight, feel free. But I'm not expecting to see any of you.

Thank you very much, Mr. Court reporter, the meeting is adjourned.

(Whereupon, at 2:35 p.m., the Daytime Scoping Meeting adjourned.)